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# Explorations of Negotiation Behaviors in Ten Foreign Cultures Using a Model Developed in the United States

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The universality of a problem-solving model of business negotiations is explored using 700 business people from 11 cultures as participants in a bargaining simulation. Both theoretical and measurement issues are considered using structural equations and partial least squares as the primary data analysis approaches. The results regarding the universality question are equivocal—findings varied across cultural groups in most cases. However, the theoretical model still appears to be a useful tool for understanding how business negotiations vary across cultural groups.

*(Negotiation; Cross-cultural; Business Executives)*

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## Introduction

What the U.S. does best is understand itself. What it does worst is understand others.

*Carlos Fuentes (1986)*

Traditionally, most of the research conducted on business negotiations has embodied the social psychology perspective (e.g., Thompson 1990, Graham 1986, Greenhalgh, Neslin, and Gilkey 1985, Hofstede 1980, Rubin and Brown 1975). Focusing on human behaviors and interaction processes, this perspective has almost always been examined within the context of *American* business negotiations (Perdue and Summers 1991, Adler 1983). Despite criticisms of this unicultural approach for its ethnocentric emphasis (Adler and Graham 1989, Campbell et al. 1988, Tse et al. 1988), empirical studies that validate the merits of the approach for use in other countries have been sparse. On the other hand, conceptual arguments and anecdotal evidence regarding behavioral differences between American and foreign executives are quite common (e.g., Clark 1990, Ghuari 1986).

One area of the topical research in negotiation pertains to the problem-solving approach (hereafter PSA). PSA assumes that negotiators are oriented toward cooperation, integration, and information exchange (Pruitt 1981, Rubin and Brown 1975). Such an approach emphasizes asking questions and exchanging information about negotiators' and their partners' needs and preferences in order to achieve mutually beneficial outcomes (Gulliver 1979). A PSA has often been viewed as the opposite of an individualistic or distributive approach to negotiations (cf. Pruitt 1981). Several studies have shown that American negotiators tend to operate under the PSA framework (e.g., Perdue and Summers 1991, Graham 1986, Pruitt 1981, Walton and McKersie 1965).

While the PSA appears to make sense for the American negotiator, its application by foreign executives has been understudied in the discipline. That is, when comparing negotiation behaviors, researchers have not fully examined the three possible scenarios: (1) the American PSA framework is universal and thus well fits foreign negotiators' behaviors; (2) there exist variations within the PSA framework when applied to foreign groups;

and, (3) the American PSA framework does not work [at all] when applied to foreign negotiators. This third scenario, a poor fit of foreign data to the American model, might itself be explained in three ways: (1) measurement problems; (2) an under-specified model; or (3) a lack of conceptual correspondence such as that identified by Adler, Campbell, and Laurent (1989).

To address the aforementioned deficiencies, this study investigates the PSA framework across ten foreign groups. We examine whether the same set of independent variables influences negotiation encounters in the same ways across the various cultures. Therefore, the purposes of this study are fourfold. First, the study fills a substantive gap in the negotiation literature by analyzing the PSA framework across different cultural groups. Second, the study empirically investigates the generality/universality of a western-based model and associated constructs vis-à-vis other cultural groups. Third, a new approach for ameliorating potential translation/measurement problems in comparative research is demonstrated. Finally, we briefly explore our data for patterns of culture suggested by Hofstede (1984) and Hall (1976).

This study consists of a structural theory embedded within a simulation context. It thus combines advantages of correlational and simulation research into a single design. The study is also unusual in its dyadic approach—each case considers attitudes and behaviors of *both* negotiators and their partners. The setting of the simulation is an improvement over most negotiation research. Face-to-face bargaining between business people is used, rather than the more typical passing of notes between students. Finally, the structural equation and partial least squares analysis approach is more rigorous and robust than approaches used previously with these sorts of data.

The remainder of the paper will be divided into five sections. First, the role of negotiation in international business is examined. Next, a literature review is provided regarding the different variables of interest and their hypothesized interrelationships. Third, the methodology is described. Findings are reported in the fourth section. The paper is concluded with an interpretation of the findings, including a discussion of broader cultural issues and suggestions for future research.

## **The Role of Negotiation in International Business**

The increasing economic interdependence among nations stresses the significance of cooperative behaviors in international commerce (Tung 1988, Sheth 1983). Interdependent relationships are established through trade and commercial activities, such as cross-national mergers, acquisitions and investments, the sale of capital equipment, licensing agreements, and distribution and service contracts. These transactions are almost always initiated through some form of face-to-face negotiations. Webster (1981) asserts that the negotiation process is one of the principal influences at work in the buying and selling interaction process (in Neslin and Greenhalgh 1983). Negotiations include iterations of face-to-face interactions initiated by parties at the inception of any relationship and developed as the relationship progresses over time (Karrass 1970).

Since business transactions and relationships increasingly transcend national and cultural boundaries, managers need to recognize the potential implications of cultural differences on the decision-making process (Clark 1990, Tse et al. 1988). According to Clark (1990), “. . . people of each nation have a distinctive, enduring pattern of behavior and/or personality characteristics” (p. 66). Clark and others contend that the culture within which an individual is socialized, educated, and reinforced exerts a significant influence on negotiation behavior (Sheth 1983, Tung 1982, Harnett and Cummings 1980, Hamner 1980, Shekar and Ronen 1985, Hofstede 1984). Previous studies have shown that misinformation and misinterpretation of these cultural idiosyncrasies are among the major factors causing the failure of American companies in the international business arena (Copeland and Griggs 1985, Tung 1982).

## **Theoretical Background and Hypotheses**

### **The Negotiation Phenomenon**

Negotiation is an exchange activity which promotes the possibility of mutually beneficial outcomes (Evans and Beltramini 1987). The negotiation activity is a unique encounter because of the simultaneous presence of the elements of cooperation and conflict (Mathews, Wilson,

and Monoky 1972). The negotiator is moved to cooperate in order to secure some joint outcome. Likewise, s/he must be competitive in order to ensure a relatively favorable individual settlement (Gulliver 1979).

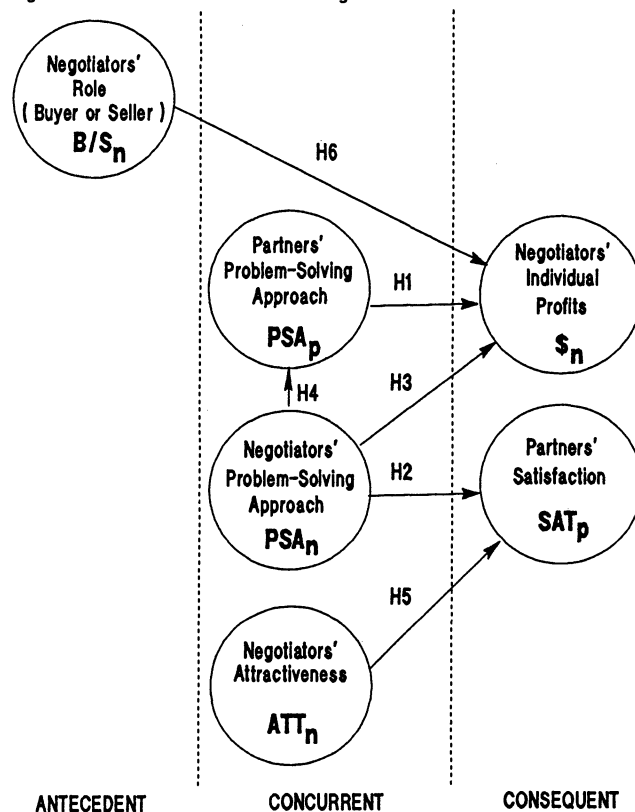
The literature suggests three sequential phases in business negotiations: an antecedent phase, a concurrent phase, and a consequent phase. Within the antecedent phase are independent variables that pertain to bargainer characteristics and situational constraints (Sawyer and Guetzkow 1965, Rubin and Brown 1975). The concurrent phase comprises process-related measures (often endogenous variables) of bargaining, such as the strategies and behaviors used by negotiators during the process itself (Graham 1985). The consequent phase includes the outcomes, that is, dependent variables, generated by/after the negotiation activity (Tung 1988). The extent of such outcomes is influenced directly or indirectly by factors in the antecedent phase and directly by factors in the concurrent phase (Greenhalgh, Neslin, and Gilkey 1985).

Figure 1 presents a proposed model of negotiation. It represents the variables and relationships to be examined in this study. In particular, we focus on the impact of the buyer-seller role, problem-solving approach, and attractiveness (as independent variables) on the negotiation outcomes (the dependent variables). A set of hypotheses are developed to serve as the basis for the comparative analyses of the negotiation patterns of managers from the 11 cultures.

### Negotiation Outcomes

In practice, outcomes of business negotiations are often difficult to measure and compare. Sale versus no sale is one obvious measure of bargaining effectiveness and has been used by Pennington (1968) in a field study of buyer/seller interactions. However, researchers have sought richer measures which make possible comparisons to a variety of effectiveness criteria. Negotiation outcomes have been employed in a number of ways in different studies. In the hundreds of bargaining experiments conducted by social psychologists, an often used measure is economic reward or profit attained by bargainers in negotiation simulations (cf. Rubin and Brown 1975). Profits (both individual and joint) in business negotiation simulations have been used as dependent

Figure 1 A Model of Business Negotiations



measures in several of the studies (e.g., Pruitt and Lewis 1975, Lewis and Fry 1977, Dwyer and Walker 1981). Dwyer and Walker (1981) also suggest negotiator satisfaction, measured using a post-exercise questionnaire, to be a meaningful negotiation outcome. In the present study, *profits*<sup>1</sup> attained by bargainers in a negotiation simulation and *satisfaction* measured using a post-exercise questionnaire are the dependent variables.

### Problem-solving Approach

The problem-solving approach involves first an emphasis on questions and getting information from clients about their needs and preferences. Second, once the buyer's requirements and circumstances are fully understood, then the seller accommodates the product or

<sup>1</sup> The concept of "profits" can differ across cultures (Hofstede 1984). For example, Rajan and Graham (1991) report that Soviet interpretation, compared to American, of the word "profit" (*prybl* in Russian) connotes exploitation more than creativity.

service offering to the client's needs. The focus is on cooperation and an integrative approach, wherein the needs of both parties are discussed and eventually satisfied. Despite a variety of labels used for the PSA concept (e.g., cooperative orientation by Rubín and Brown 1975, problem-solving orientation by Pruitt and Lewis 1975, representational bargaining strategies by Angelmar and Stern 1978, and direct/open influence tactics by Weitz 1978), most researchers have reported a positive relationship between PSA and *joint* negotiation outcomes.

Relative to the most recent social psychological literature on negotiation, the PSA construct used here is perhaps too broadly defined. For example, one might distinguish between a cooperative orientation (i.e., willingness to make concessions) versus a needs focus (i.e., exploring the needs of each party before making concessions). However, in the business literature, empirical support for a more broadly defined construct is provided by Saxe and Weitz (1982). They described a construct, "customer orientation of salespeople," and developed an associated measure (i.e., SOCO scale):

Largely on the basis of the literature review and interviews, a customer-oriented selling was initially characterized as follows:

1. A desire to help customers make satisfactory purchase decisions.
2. Helping customers assess their needs.
3. Offering products that will satisfy those needs.
4. Describing products accurately.
5. Adapting sales presentations to match customer interests.
6. Avoiding deceptive or manipulative influence tactics.
7. Avoiding the use of high pressure.

(Saxe and Weitz 1982, p. 344)

Clearly, a cooperative orientation and a needs focus are evident not only in its conceptual foundation (above) but also in its subsequent operationalization (cf., our Methods section). Saxe and Weitz (1982) report that the SOCO scale performs well relative to reliability (i.e., internal consistency using Cronbach  $\alpha$  and test-retest approaches), analysis of its factor structure, and content, convergent, and discriminant validities. That is, for the American sales representatives in Saxe and Weitz's sample, a needs focus and a cooperative orientation coincide, yielding a "customer orientation" which is conceptually quite close to our definition of a problem-solving approach.

Rubin and Brown (1975) provide a comprehensive review of research in negotiation prior to 1975. They conclude that a key determinant of negotiation outcomes is a concept also analogous to PSA: motivational orientation (MO) of bargainers. They define MO as an "attitudinal disposition" toward one's bargaining opponent, ranging from individualistic to cooperative. Individualistic bargainers seek to maximize their individual negotiation outcomes with no regard for their opponents' outcomes. Alternatively, cooperative bargainers have a positive interest in their clients' welfare, as well as their own. Several studies they cite investigate the influence of MO on negotiation outcomes in laboratory experiments in which MO is the experimental effect. That is, MO is *manipulated* through the use of differing negotiation task instructions, reward structures, or pay-off matrices, or by pre-measurement of MO attitudes using paper and pencil instruments for the purpose of composing experimental groups. In other words, MO is a determined antecedent to the actual negotiation process.

Not surprisingly, such manipulations have been found to affect both negotiation behaviors and outcomes. For example, subjects given task instructions, including such phrases as "you are interested in your partner's welfare," tend to behave more cooperatively and achieve higher *mutual* outcomes than subjects given individualistic instructions (Deutsch 1960, Pruitt and Lewis 1975). A limitation inherent in such approaches is the constraints on behavior resulting from the manipulations. Subjects are not permitted to choose or adapt their own bargaining approach. Indeed, Rubín and Brown (1975) suggest that another key determinant of negotiation outcomes is Interpersonal Orientation (IO), the degree to which bargainers adjust their behavior in reaction to opponents' behaviors. Yet the studies investigating MO do not allow such "natural" variations in bargaining behaviors. Rather, the variation in MO is manipulated beforehand and functions as an individual characteristic or situational constraint, rather than as a process variable.

Using mail survey methods, Frazier and Summers (1984) studied the relationship of salespersons' influence strategies and automobile manufacturer/dealer agreements. They found that the use of PSA strategies

(i.e., information exchange and requests) had a positive influence on the occurrence of interfirm agreements, while individualistic strategies (i.e., recommendations, promises, threats, and legalistic pleas) had a negative influence. Thus, Frazier and Summers' survey findings tend to support the importance of PSA negotiation behaviors when the goal (dependent variable) is an interfirm agreement.

Weitz (1979) proposes that the use of open influence techniques (analogous to a PSA) positively influences the negotiation outcomes. He qualifies the proposition by suggesting possible interaction effects of three situational constraints: power relationships, level of interpersonal conflict, and the prospect of future interactions. That is, PSA will be more effective when power relationships are equal, when interpersonal conflicts are minimal, and when long-term relationships are sought. Graham (1986) has investigated relationships between PSA and sources' individual profits and targets' satisfaction. Statistically significant relationships were discovered between sources' PSA and targets' satisfaction with the negotiation and targets' PSA and sources' individual profits. This study is, in part, a replication of that work and therefore the following hypotheses are proposed:

H1. *Negotiators' individual profits are positively affected when partners use strategies that are more oriented toward problem-solving.*

H2. *Partners' expressed satisfaction with agreements is positively affected when negotiators use strategies that are more oriented toward problem-solving.*

In the former case, bargainers who encourage targets to provide information about themselves and their needs and preferences can be expected to achieve higher negotiation outcomes.

Walton and McKersie (1965) suggest the opposite of PSA strategies to be distributive or individualistic bargaining strategies, the goal of which is to change a target's attitudes, attributions, or actions. Promises and threats are examples of distributive or instrumental appeals (cf. Angelmar and Stern 1978). Williams and Lewis (1976) and Rubin and Brown (1975) suggest that distributive strategies induce concession-making by the other party. Consequently, bargainers using distributive

or instrumental strategies can be expected to achieve higher individual negotiation outcomes, or,

H3. *Negotiators' individual profits are negatively affected when negotiators use strategies that are more oriented toward problem-solving.*

Another relationship to be investigated in this study is the influence of negotiator's approach (i.e., behaviors and attitudes) on partner's negotiation approach. Both Rubin and Brown (1975) and Weitz (1979, 1981) suggest the importance of adjusting one's bargaining tactics based upon impressions of opponents. Specifically, Weitz suggests that adaptive behavior will enhance bargaining effectiveness. Rubin and Brown posit that an interaction effect between adaptive behavior and PSA positively influences negotiation effectiveness. That is, high adaptability, coupled with cooperativeness, will favor higher negotiation outcomes. Pruitt and Kimmel (1977) describe the mechanism involved as reciprocity. When negotiators give information about needs and preferences, their partners will be likely to reciprocate. Gouldner (1960) explains that a "reciprocity norm" establishes a stable set of mutual rewards that guides interactions such as negotiations. Pruitt (1981), Putnam and Jones (1982), and Walton and McKersie (1965) are among several other researchers who describe a tendency of negotiators to imitate or match one another's bargaining strategies. Although empirical support for these latter propositions is limited at best, the following hypothesis is suggested:

H4. *Negotiators' use of strategies that are oriented toward problem-solving positively influences partners to use strategies that are oriented toward problem-solving.*

We have modeled the relationship here as "reflective," that is, the partner reflects, imitates, or reciprocates the behavior of the negotiator. The wording is conceptually important. The distinction between the terms "reflective" and "reciprocal causation" should be clear. The latter term is used by Joreskog and Sorbom (1981) to define a causal feedback loop or cycle as "a causal chain going from one  $\eta$ , passing over some other  $\eta$ 's, and returning to the original  $\eta$ " (p. 409). The relationship suggested in Hypothesis 4, however, is unidirectional.

The reader will appreciate the importance of the structural relations presented in Figure 1 and the necessity of the partial least squares analysis. For example, as conceived, Hypotheses 3 and 4 should suppress the relationship represented by Hypothesis 1 (cf., Bagozzi 1980). A simultaneous equation approach will help us to sort out which relations are the most meaningful within the complex model proposed.

### **Attractiveness of Negotiator**

Another important concurrent construct is attractiveness of the negotiator. Graham (1985) has shown target attractiveness to influence source's satisfaction positively in a negotiation simulation. Simons, Berkowitz, and Moyer (1970, p. 9) suggest "the relationship between attraction to a source (like-dislike, friendly feelings, etc.) and attitude change has received scant attention." Rubin and Brown (1975), in their review of the negotiation literature, conclude that, generally, interpersonal attraction enhances bargaining outcomes. Therefore, to the extent that a person receives social rewards from a relationship with an attractive other, that person will be more satisfied with the relationship (or the negotiation agreement).

H5. *Partners' satisfaction is positively affected by negotiators' attractiveness.*

Negotiators' attractiveness might be conceived as an antecedent construct, determined before negotiations begin, as a part of the combination of the negotiators' characteristics. For example, Kahn, Hottes, and Davis (1971) found that females tend to vary their bargaining behaviors depending on their male counterpart's attractiveness. They (female negotiators) cooperated more with an attractive counterpart. One also may argue that attraction is a consequence of the negotiation, a dependent construct. However, in our study, attractiveness of the negotiator is considered a process-related construct, which is consistent with the views of Evans (1963) and Zunin and Zunin (1972). That is, negotiators judge interpersonal attraction *during* negotiations.

### **Role of the Negotiator**

The final relationship represented in Figure 1 is between role of the negotiator (i.e., buyer or seller) and individual profits. Status (cf. Rubin and Brown 1975) and role (cf.

Davis 1966) have been found to influence negotiations. For example, Putnam and Jones (1982) report differing strategies were used by students assigned to either labor or management roles in an intraorganizational negotiation experiment. Graham (1983) reports that Japanese buyers achieved significantly higher individual profits than did Japanese sellers in Kelley's (1966) simulation. That is, the role of the negotiator, a situational constraint, made a significant difference in individual outcomes. No differences were found between American buyers and sellers in the individual results achieved. Graham (1983) explains that for Japanese negotiators the role of the negotiator determines the outcome *directly*, by putting substantial constraints on the behaviors of both sellers and buyers. That is, in Japan, sellers readily *defer* to the preferences and needs of the buyers. Alternatively, American buyers and sellers treat one another more as equals.

H6. *Buyers achieve higher individual profits than do sellers.*

Hall (1976) provides a deeper explanation for the effects of role on outcomes when he describes high and low context cultures. By "context," he means a broad variety of what negotiation researchers (cf. Sawyer and Guetzkow 1965) would call "situational constraints," including the physical environment, status/power relationships, *roles of participants*, and even the nonverbal aspects of communication. The *content* of communication (usually the words used) can be understood only in the *context* of all these factors. Hall states, "In cultures in which people are deeply involved with each other . . . in which information is widely shared—what we will term high-context cultures—simple messages with deep meaning flow freely" (p. 30). Cateora (1990) interprets Hall's ideas: "Communication in a high-context culture depends heavily on the context or nonverbal aspects of communication, whereas the low-context culture depends more on explicit, verbally expressed communications" (p. 133). Hall (1976) specifically states that the importance of context can be generalized to negotiation situations (cf. p. 129). In a high context country like Japan, the words used in negotiations (i.e., process variables) are not as important as the role re-

**Table 1** Group Characteristics, Means (S.D.)

| Country and Sample Size                               | Characteristics |                          |   | Measures                |                    |                                |                                 |
|---|-----------------|--------------------------|---|-------------------------|--------------------|--------------------------------|---------------------------------|
|   | Age             | Years of Work Experience | Percentage of Work Involving Contact with People Outside Firm | Individual Profits (\$) | Satisfaction (SAT) | Problem-solving Approach (PSA) | Negotiator Attractiveness (ATT) |
| United States, <i>n</i> = 160                         | 32.8 (9.5)      | 9.6 (8.1)                | 51.7 (30.3)   | 44.9 (11.1)             | 14.6 (3.2)         | 9.6 (2.6)                      | 11.9 (2.3)                      |
| Canada (Anglophone),<br><i>n</i> = 74                 | 32.0 (8.0)      | 8.3 (8.0)                | 42.1 (27.2)   | 45.2 (10.0)             | 14.8 (2.7)         | 9.9 (2.5)                      | 12.5 (2.2)                      |
| Canada (Francophone),<br><i>n</i> = 74                | 32.3 (6.6)      | 8.6 (5.8)                | 39.3 (28.3)   | 43.2 (9.3)              | 14.6 (2.7)         | 9.3 (2.9)                      | 12.2 (2.5)                      |
| Mexico, <i>n</i> = 68                                 | 32.4 (6.7)      | 9.2 (6.4)                | 54.8 (22.4)   | 43.1 (13.1)             | 15.5 (3.0)         | 10.7 (2.4)                     | 12.8 (2.3)                      |
| United Kingdom, <i>n</i> = 44                         | 32.7 (6.3)      | 11.3 (8.0)               | 52.5 (23.1)   | 47.2 (8.5)              | 14.5 (2.5)         | 8.5 (2.4)                      | 11.4 (2.5)                      |
| France, <i>n</i> = 48                                 | 33.4 (7.0)      | 7.3 (6.8)                | 33.2 (17.6)   | 45.5 (12.3)             | 13.6 (2.3)         | 9.3 (2.0)                      | 12.5 (2.1)                      |
| Germany, <i>n</i> = 44                                | 31.5 (7.1)      | 9.9 (7.8)                | 64.5 (26.1)   | 40.9 (12.6)             | 14.0 (2.8)         | 9.1 (2.1)                      | 10.9 (2.2)                      |
| Union of Soviet Socialist<br>Republics, <i>n</i> = 56 | 43.1 (10.0)     | 19.8 (9.8)               | 52.5 (24.3)   | 43.0 (11.2)             | 14.6 (3.0)         | 11.4 (2.5)                     | 12.4 (2.3)                      |
| Taiwan, <i>n</i> = 52                                 | 37.6 (12.1)     | 14.2 (8.3)               | 46.9 (21.8)   | 42.2 (10.7)             | 14.1 (3.2)         | 10.3 (2.2)                     | 11.4 (2.2)                      |
| China, <i>n</i> = 40                                  | 35.6 (8.6)      | 16.0 (8.9)               | 55.6 (23.8)   | 46.1 (8.6)              | 16.1 (3.3)         | 12.4 (2.3)                     | 12.7 (2.0)                      |
| Korea, <i>n</i> = 40                                  | 39.0 (7.6)      | 12.1 (5.6)               | 55.0 (19.6)   | 42.4 (11.1)             | 13.7 (2.9)         | 10.9 (2.7)                     | 11.6 (1.9)                      |

relationships of negotiators determined before bargaining begins (i.e., situational constraints).

## Research Methods

### Participants

The participants in the simulation were 700 business people from 11 cultural groups.<sup>2</sup> All had been members of executive education programs or graduate business courses and all had at least two years of business experience. Because Fouraker and Siegel (1963) report that the bargaining behaviors of students and business people differ, the sample was limited to experienced business people. On average, the 700 participants were 34.8 years of age and had 11.5 years of experience, and 50.0% of their work involved contact with people outside their firms. A detailed comparison of the groups on these characteristics is provided in Table 1. Participants were randomly paired and assigned to play the role of either buyer or seller in the negotiation simulation.

<sup>2</sup> Data have also been collected in Japan and Brazil. However, shorter scales were used for key measures, so these data have not been included in the study.

### Negotiation Simulation

The negotiation simulation, developed by Kelley (1966) and used by Pruitt and Lewis (1975) and Clopton (1984), involves bargaining for the prices of three commodities. Each bargainer receives an instruction sheet, including a price list with associated profit for each price level. Participants are allowed 15 minutes to read the instructions and plan their bargaining strategies. As is evident in the payoff matrices in Appendix A, the simulation has both competitive and cooperative characteristics. That is, the solution AEI produces the highest *joint profit* (i.e., buyer profit + seller profit = 104); AAA and III maximize individual buyer and seller profit, respectively. Though simple enough to be learned quickly, the simulation usually provides enough complexity for one-half hour of interaction. Within the one-hour time limit, bargainers use face-to-face, free communication. No explicit rewards (e.g., grades, money) were associated with performance or participation in the simulation. Several other negotiation and bargaining simulations were considered, but Kelley's game was selected primarily because it best simulates the essential elements of actual commercial negotiations observed in preliminary field research, including multiple issues (i.e., integrative and distributive) and the potential for a variety



of negotiation strategies, including logrolling and cooperation (cf., Pruitt and Rubin 1966, Pruitt 1983, Froman and Cohen 1970).

### Data Collection Instruments

After the bargaining session, each individual completed a questionnaire. To ensure equivalence, the translations of the simulation instructions and questionnaire were back-translated into English by different translators; the original and back-translated versions were compared and discrepancies resolved.<sup>3</sup> Separate translations were made for each cultural group with one exception. The same American English version was used in the United States, Canada (for Anglophones) and the United Kingdom. Bargainers conducted all negotiations in their respective languages.

We considered two negotiation outcome variables. Negotiators' individual profits ( $\$_{n}$ ) were derived directly from the agreed-upon bargaining solutions. Partners' satisfaction ( $SAT_p$ ) with the negotiation was measured on a four-item scale included on the postsimulation questionnaire (see Appendix B for the actual items.)

Process-related measures also were derived from post-exercise questionnaires. Participants rated their own PSA bargaining strategies. The items listed in Appendix B demonstrate good face validity for the PSA measure. Indeed, the four items used correspond quite closely with several items used in Saxe and Weitz's (1982) SOCO scale: e.g., (1) "I try to bring a customer with a problem together with a product that helps him solve that problem"; (2) "I keep alert for weaknesses in a customer's personality so I can use them to put pressure on him to buy" (negatively stated); (3) "I answer a customer's questions about products as correctly as I can"; and (4) "A good salesperson has to have the

customer's best interests in mind" (pp. 345-346). Finally, partners rated the interpersonal attractiveness ( $ATT_n$ ) of their respective negotiators. See Appendix B for details.

### Data Analysis

The measurement problem was attacked first by calculating Cronbach  $\alpha$  reliability coefficients as suggested in Davis, Douglas, and Silk (1981). The four-item PSA scale included in Appendix B performed rather poorly regarding absolute  $\alpha$  scores and the comparative criterion outlined by Davis, Douglas, and Silk (1981). In accordance with Churchill (1979), the reliability of the PSA measure was improved separately for each country by eliminating the one item which then maximized the new three-item scale  $\alpha$ . For the American, both Canadian, French, Chinese in Taiwan, German, and Korean groups, PSA item #4 was deleted. For the rest of the groups, PSA item #2 was eliminated. The Cronbach  $\alpha$  statistics (including 90% confidence intervals) for all the variables are reported in Table 2.

Previous studies of these kinds of data have ordinarily taken a correlational or bivariate approach to analysis. We began with that, but we have augmented the correlation analysis with regression analysis and an even more rigorous approach to assess the generality of the model represented in Figure 1. As suggested by Bagozzi (1980), a structural equation analysis approach can be useful in experimental and simulation settings. In that vein, loading pattern coefficients and parameter estimates were calculated for each cultural group using partial least squares (PLS). Then the statistical significance of the parameter estimates was determined using a maximum likelihood estimation technique (Joreskog and Sorbom 1981), with the PLS latent variable correlation matrix as input, to calculate the t-value for each parameter estimate. The significance levels present some evidence that relationships do exist, in fact, as opposed to the hypothesis that they are the result of a spurious arrangement (Fornell and Robinson 1983).

Using PLS as the primary analysis approach is appropriate for three reasons. First, using PLS, parameters can be estimated independent of sample size. Given that sample size varies for our cultural groups from 160 to 40, PLS seems more appropriate for parameter com-

<sup>3</sup> The reader should note that the back-translation (sometimes referred to as double translation) process here is really the second best approach to the translation of research instruments. The best approach, called "decentering," was proposed by Werner and Campbell (1970) and is well described by Marin and VanOss Marin (1991). Briefly, research instruments are developed and tested in both (all) cultures simultaneously, with no "base" culture as in our study. Obviously, in multicultural studies such as ours, this process becomes quite cumbersome and, in any case, it was not the approach used in the initial stages of this study.

**Table 2** Cronbach  $\alpha$ 's (90% Confidence Interval) of Multi-Item Measures

| Country and Sample Size                          | Measures               |                                |                                 |
|--|------------------------|--------------------------------|---------------------------------|
|  | Satisfaction (SAT)     | Problem-solving Approach (PSA) | Negotiator Attractiveness (ATT) |
| United States, $n = 160$                         | 0.80<br>(0.76 ~ 0.84)  | 0.71<br>(0.65 ~ 0.76)          | 0.78<br>(0.74 ~ 0.82)           |
| Canada (Anglophone),<br>$n = 74$                 | 0.80<br>(0.74 ~ 0.85)  | 0.73<br>(0.65 ~ 0.80)          | 0.77<br>(0.70 ~ 0.83)           |
| Canada (Francophone),<br>$n = 74$                | 0.72<br>(0.64 ~ 0.79)  | 0.73<br>(0.65 ~ 0.80)          | 0.70<br>(0.61 ~ 0.78)           |
| Mexico, $n = 68$                                 | 0.82<br>(0.77 ~ 0.87)  | 0.53<br>(0.39 ~ 0.65)          | 0.83<br>(0.78 ~ 0.87)           |
| United Kingdom, $n = 44$                         | 0.74<br>(0.64 ~ 0.83)  | 0.52<br>(0.33 ~ 0.68)          | 0.80<br>(0.72 ~ 0.87)           |
| France, $n = 48$                                 | 0.71<br>(0.60 ~ 0.81)  | 0.39<br>(0.16 ~ 0.60)*         | 0.75<br>(0.65 ~ 0.83)           |
| Germany, $n = 44$                                | 0.77<br>(0.68 ~ 0.85)  | 0.37<br>(0.12 ~ 0.58)*         | 0.61<br>(0.46 ~ 0.74)           |
| Union of Soviet Socialist<br>Republics, $n = 56$ | 0.78<br>(0.70 ~ 0.87)  | 0.66<br>(0.54 ~ 0.76)          | 0.65<br>(0.53 ~ 0.76)           |
| Taiwan, $n = 52$                                 | 0.81<br>(0.74 ~ 0.85)  | 0.57<br>(0.42 ~ 0.70)          | 0.73<br>(0.64 ~ 0.81)           |
| China, $n = 40$                                  | 0.89<br>(0.85 ~ 0.93)* | 0.47<br>(0.26 ~ 0.65)          | 0.64<br>(0.50 ~ 0.76)           |
| Korea, $n = 40$                                  | 0.82<br>(0.75 ~ 0.80)  | 0.73<br>(0.62 ~ 0.82)          | 0.54<br>(0.36 ~ 0.70)*          |

\* 90% confidence intervals do not overlap with American 90% confidence intervals.

parisons across groups than LISREL by itself. Second, PLS avoids parameter estimation biases inherent in regression analysis (Fornell, Rhee, and Yi 1991) and some of the restrictive assumptions underlying LISREL (Fornell and Bookstein 1982). Third, and perhaps most important, PLS provides the most flexibility regarding measurement of the constructs. That is, in both correlation and regression analyses, additive scales must be used as measures of the SAT, ATT, and PSA constructs. LISREL can be used with either additive scales or with a reflective indicator measurement approach wherein each item is modeled as one of a set of multiple indicators of an unobservable construct. Using LISREL, the internal consistency of the measures (i.e., degree of correlation between the separate items) can be determined simultaneously with parameter estimation.

PLS allows not only for additive scales and reflective

indicators but also for a formative indicator measurement approach. In a formative indicator model, individual items are viewed as representing multiple causes of the constructs. This is an important distinction as Fornell and Bookstein (1982, p. 441) describe:

. . . unobserved constructs can be viewed either as underlying factors or as indices produced by the observable variables. That is, the observed indicators can be treated as reflective or formative. Reflective indicators are typical of classical test theory and factor analysis models; they are invoked in an attempt to account for observed variances or covariances. Formative indicators, in contrast, are not designed to account for observed variables; they are used to minimize residuals in the structural relationship.

Indeed, the formative indicator approach appears to be best suited for our data for two reasons—one conceptual and one regarding the imprecision inherent in the translation process.

**Avoiding reductionism by using formative indicators.** Despite our careful translations of the questionnaires and our scale trimming of the PSA measure, the range in the Cronbach  $\alpha$ 's suggests a differential loading of the items across groups. This is quite consistent with the findings of Adler, Campbell, and Laurent (1989) in a study of Chinese managers. For example, in our American data, within the PSA measure, the correlation of the solving a problem/self-interested item and the honest/deceptive item is  $r = 0.438$ ,  $p < 0.05$  (see Appendix B). For the German data, the correlation between the two items is  $r = 0.059$ , n.s., contributing to the lowest  $\alpha$  for the PSA construct. Apparently, based upon our data, self-interest and deception are two different issues in Germany, while they are covarying parts of an underlying construct with our American negotiators.

One might argue that the PSA construct for the German participants is defined too broadly and should, therefore, be reduced to its more basic elements. However, we believe important information can be unnecessarily lost by such "reductionism." A formative indicator approach allows us to retain and test the hypothesized theoretical model while providing information about the differential impact of the separate indicators of constructs. Perhaps Fornell, Rhee, and Yi (1991, p. 315) explain it best:

The choice of indicator mode should be made primarily on the basis of the substantive theory behind the model: the way in which variables are conceptualized (e.g., Fornell and Bookstein 1982, pp. 441-442). Constructs such as "attitude" or "personality" are typically viewed as underlying factors that give rise to something that is observed. In such a case, the reflective indicator model would be used. In contrast, constructs such as "socioeconomic status (SES)" might be conceived as composites rather than as factors. That is, instead of SES generating variables such as education, income, and occupational prestige, these variables are more appropriately seen as causing changes in SES. In such a case, constructs can be seen as explanatory combinations of indicators, and their indicators should be represented as formative.

Particularly our PSA construct is perhaps best conceived as a "composite" rather than as a "factor."

**Managing translation imprecision through formative indicators.** A second reason a formative indicator approach is most suitable for our data regards the imperfections of all translation processes, including our own. Long ago, Cervantes (circa 1604) put it best:

"Que, por mucho cuidado que pongan y habilidad que muestren, jamás llegará al punto que ellas tienen en su primer nacimiento." ["However much care they take, and however much skill they show, they can never make their translations as good as the original" (as translated by Cohen 1950, p. 59)].<sup>4</sup>

The point is that translated items are never more than approximations of the original items. Moreover, Marin and VanOss Marin (1991, p. 82) argue:

A central concern of every translation is to produce the *cultural equivalent* of an instrument (Werner and Campbell 1970). A culturally equivalent version of the original instrument is one that has equivalent connotative meaning. In this sense, the translation process needs to go beyond finding the equivalent denotative meaning of the words used in the original version (literal translation) in order to capture the connotations or implied associations of the words. The identification of the connotative meaning is a process that surpasses finding the words' explicit (denotative) meaning in order to reflect properly their implied meaning as used by the researchers when drafting the instruments.

So, the best tests of the generality of our theories across cultures will involve constructs which are as close to culturally (connotatively) equivalent as possible. We

<sup>4</sup> We considered using only the translated version of Cervantes, but the irony was too great.

can get some information about this equivalence *when* constructs are measured using underlying factors (reflective indicators)—Cronbach  $\alpha$ 's should be in overlapping ranges (Davis, Douglas, and Silk 1981). Alternatively, when constructs are conceived as composites (formative indicators), internal consistency, as measured by Cronbach  $\alpha$  statistics, becomes meaningless. That is, lack of overlapping ranges of  $\alpha$  may be due to translation problems or to actual cultural differences in responses.

The formative indicator approach available using PLS allows us to focus on the theoretical qualities of our model while minimizing and assessing conceptual/measurement problems. The "regression" approach underlying construct definition with formative indicators in PLS uses all the information available while avoiding an assumption of highly correlated indicators. Additionally, inspection of the PLS loading pattern coefficients can suggest which items are *most definitive* in defining the constructs for each culture *in the contexts* of the proposed model and the specific language used.

Accordingly, results from four separate analyses of the data are reported in Table 4: (1) Pearson correlation

**Table 3** Examples of Loading Pattern Coefficients for Multiple Measures

| Country (model type) | Measures         |                  |                  |
|----------------------|------------------|------------------|------------------|
|                      | SAT <sub>p</sub> | ATT <sub>n</sub> | PSA <sub>n</sub> |
| America (reflective) | 0.82             | 0.69             | 0.87             |
|                      | 0.78             | 0.61             | 0.78             |
|                      | 0.73             | 0.95             | 0.72             |
|                      | 0.76             |                  |                  |
| America (formative)  | 0.37             | 0.39             | 0.97             |
|                      | 0.59             | 0.07             | 0.50             |
|                      | 0.32             | 0.90             | 0.29             |
|                      | 0.88             |                  |                  |
| Germany (reflective) | 0.75             | 0.20             | 0.86             |
|                      | 0.75             | 0.90             | 0.62             |
|                      | 0.76             | 0.77             | 0.66             |
|                      | 0.77             |                  |                  |
| Germany (formative)  | 0.26             | 0.31             | 1.00             |
|                      | 0.62             | 0.93             | 0.27             |
|                      | 0.45             | 0.43             | 0.25             |
|                      | 0.89             |                  |                  |

coefficients using additive scales; (2) regression analysis beta coefficients and adjusted  $R^2$  statistics, this approach takes into account the simultaneous influence of the independent variables; (3) PLS parameter estimates and squared multiple correlations using reflective indicators, taking into account the structural relations theorized and the measurement error simultaneously; and (4) PLS parameter estimates and squared multiple correlations using formative indicators, avoiding the assumption of highly correlated items. The last test is the most appropriate here because it avoids unreasonable measurement assumptions while assessing fit and measures in the contexts of the hypothesized structural relations and language domain of each culture.

## Results

### Measurement

The Cronbach  $\alpha$  statistics reported in Table 2 suggest the measures of problem-solving approach (PSA) and negotiator attractiveness (ATT) vary substantially in reliability across the cultural groups. For PSA, the  $\alpha$ 's for six of the cultures were below 0.65. For ATT, three  $\alpha$ 's were below 0.65. All the  $\alpha$ 's for partner satisfaction (SAT) exceeded 0.70.

In only four cases did 90% confidence intervals for the  $\alpha$  statistic not overlap the 90% confidence intervals for the American group. Such substantial differences in  $\alpha$ 's across cultures suggest either translational or, perhaps, conceptual nonequivalence of the measures used.

Two measurement approaches were used in the partial least squares analysis. We have reported in Table 3 the loading patterns for the American model and the German model, the latter representing the lowest Cronbach  $\alpha$ 's. As can be seen there, the reflective indicator approach was satisfactory for the American data. The loading pattern coefficients change substantially when a formative indicator approach is used. In the latter case, as should be expected, the measurement loading is unbalanced, with coefficients of some items being quite low (e.g., 0.07, 0.29, 0.32), while others are quite high (e.g., 0.90, 0.91, 0.97). For the measures used with the German subjects, both the reflective indicator approach and the formative indicator approach yield unbalanced measurement loading.

### Hypothesis Tests

Please see Table 4. Hypotheses were tested focusing on the PLS formative indicator estimates as the primary criterion.

Hypothesis 1, partners' problem-solving approach, positively affecting negotiators' profits ( $PSA_p \rightarrow \$_n$ ), received support for five groups: American, Anglophone Canadian, French, Soviet, and the mainland Chinese.

Hypothesis 2, negotiators' problem-solving approach positively affecting partners' satisfaction ( $PSA_n \rightarrow SAT_p$ ), was not well supported. Statistically significant relationships were found for the United States, Anglophone Canada, and Germany. Statistically significant inverse relationships were found for the U.K. and China.

Hypothesis 3, the antithesis of Hypotheses 1 and 4, suggests that negotiators' problem-solving approach will have a direct and negative influence on negotiators' profits ( $PSA_n \xrightarrow{(-)} \$_n$ ). This hypothesis was well supported by the Mexican data, but not by any other culture group. Alternatively, statistically significant positive relationships were found for Korea and Taiwan.

Hypothesis 4 indicates that negotiators' problem-solving approach will positively influence partners' problem-solving approach ( $PSA_n \rightarrow PSA_p$ ). Such a relationship was supported by the data for eight groups: American, Anglophone Canadian, Mexican, French, German, Soviet, mainland Chinese, and Korean. Negative relationships were found for Francophone Canadians and Chinese on Taiwan.

Hypothesis 5, negotiators' attractiveness positively influencing partners' satisfaction ( $ATT_n \rightarrow SAT_p$ ), consistently was supported across all groups and analysis alternatives.

Hypothesis 6 predicted that role of the negotiator (buyer or seller) would influence the negotiators' profits, buyers achieving higher profits than sellers ( $B/S_n \rightarrow \$_n$ ). This relationship was supported for seven of the groups: American, Anglophone Canadian, Mexican, British, French, Chinese on Taiwan, and Korean.

## Discussion

Five main research issues are addressed here. First, measurement problems and solutions are discussed. Next, the substantive findings are interpreted. Third,

**Table 4 Results: Parameter Coefficients and Variance Explained**

| Country and Sample Size      | Correlation, Beta and Path Coefficients  |   |   |   |   |  | Squared Multiple Correlations |                  |
|------------------------------|--|---|---|---|---|--|-------------------------------|------------------|
|                              | H1<br>PSA <sub>n</sub> → \$ <sub>n</sub> | H2<br>PSA <sub>n</sub> → SAT <sub>p</sub> | H3<br>PSA <sub>n</sub> <sup>(-)</sup> → \$ <sub>n</sub> | H4<br>PSA <sub>n</sub> → PSA <sub>p</sub> | H5<br>ATT <sub>n</sub> → SAT <sub>p</sub> | H6<br>B/S <sub>n</sub> → \$ <sub>n</sub> | \$ <sub>n</sub>               | SAT <sub>p</sub> |
| United States, n = 160       | 0.22** <sup>a</sup>                      | 0.14**                                    | -0.06   | 0.16**                                    | 0.21**                                    | 0.17**                                   | —                             | —                |
|                              | 0.27** <sup>b</sup>                      | 0.12                                      | -0.13   | —   | 0.20**                                    | 0.22**                                   | 0.09*** <sup>e</sup>          | 0.05***          |
|                              | 0.32** <sup>c</sup>                      | 0.15*                                     | -0.10   | 0.22**                                    | 0.26**                                    | 0.21**                                   | 0.12'                         | 0.10             |
|                              | 0.28** <sup>d</sup>                      | 0.14*                                     | -0.01   | 0.29**                                    | 0.39**                                    | 0.19**                                   | 0.10'                         | 0.18             |
| Canada (Anglophone), n = 74  | 0.12                                     | 0.22**                                    | -0.12   | 0.31**                                    | 0.22**                                    | 0.27**                                   | —                             | —                |
|                              | 0.36**                                   | 0.21*                                     | -0.20*  | —   | 0.20*                                     | 0.20*                                    | 0.16**                        | 0.06**           |
|                              | 0.33**                                   | 0.25**                                    | -0.23*  | 0.34**                                    | 0.21*                                     | 0.20*                                    | 0.18                          | 0.12             |
|                              | 0.30**                                   | 0.18*                                     | -0.21   | 0.46**                                    | 0.32**                                    | 0.18*                                    | 0.14                          | 0.16             |
| Canada (Francophone), n = 74 | 0.19*                                    | 0.24**                                    | -0.17*  | -0.09                                     | 0.08                                      | -0.10                                    | —                             | —                |
|                              | 0.17                                     | 0.23**                                    | -0.15   | —   | 0.09                                      | -0.01                                    | 0.02                          | 0.04*            |
|                              | 0.16                                     | 0.18*                                     | -0.14   | -0.17                                     | 0.39**                                    | -0.02                                    | 0.06                          | 0.19             |
|                              | 0.11                                     | 0.07                                      | -0.10   | -0.30**                                   | 0.52**                                    | -0.06                                    | 0.04                          | 0.28             |
| Mexico, n = 68               | 0.11                                     | -0.02                                     | -0.27**   | 0.08                                      | 0.64**                                    | 0.42**                                   | —                             | —                |
|                              | 0.14                                     | -0.07                                     | -0.28**   | —   | 0.64**                                    | 0.42**                                   | 0.22**                        | 0.39**           |
|                              | 0.16                                     | -0.16                                     | -0.22*  | 0.08                                      | 0.61**                                    | 0.41**                                   | 0.25                          | 0.40             |
|                              | 0.01                                     | -0.01                                     | -0.23**   | 0.27**                                    | 0.66**                                    | 0.45**                                   | 0.24                          | 0.44             |
| United Kingdom, n = 44       | 0.07                                     | -0.09                                     | -0.13   | 0.22*                                     | 0.29**                                    | 0.34**                                   | —                             | —                |
|                              | 0.09                                     | -0.09                                     | -0.14   | —   | 0.29*                                     | 0.33**                                   | 0.07                          | 0.04             |
|                              | 0.10                                     | -0.11                                     | -0.19   | 0.24                                      | 0.48**                                    | 0.33**                                   | 0.15                          | 0.24             |
|                              | -0.17                                    | -0.40**                                   | -0.12   | 0.24                                      | 0.59**                                    | 0.29**                                   | 0.16                          | 0.54             |
| France, n = 48               | 0.03                                     | 0.02                                      | -0.07   | 0.04                                      | 0.37**                                    | 0.28**                                   | —                             | —                |
|                              | 0.09                                     | 0.06                                      | -0.12   | —   | 0.37**                                    | 0.31**                                   | 0.04                          | 0.10**           |
|                              | 0.24*                                    | -0.15                                     | -0.18   | 0.27*                                     | 0.49**                                    | 0.31**                                   | 0.15                          | 0.24             |
|                              | 0.24*                                    | -0.05                                     | -0.16   | 0.27*                                     | 0.57**                                    | 0.29**                                   | 0.15                          | 0.33             |

**Table 4** *Continued*

| Country and Sample Size                        | Correlation, Beta and Path Coefficients  |   |  |   |   |  | Squared Multiple Correlations |                  |
|--|--|---|--|---|---|--|-------------------------------|------------------|
|  | H1<br>PSA <sub>n</sub> → \$ <sub>n</sub> | H2<br>PSA <sub>n</sub> → SAT <sub>p</sub> | H3<br>PSA <sub>n</sub> → \$ <sub>n</sub><br>( <sup>-</sup> ) | H4<br>PSA <sub>n</sub> → PSA <sub>p</sub> | H5<br>ATT <sub>n</sub> → SAT <sub>p</sub> | H6<br>B/S <sub>n</sub> → \$ <sub>n</sub> | \$ <sub>n</sub>               | SAT <sub>p</sub> |
| Germany, n = 44                                | 0.10                                     | 0.16                                      | -0.15  | 0.08                                      | 0.33**                                    | 0.15                                     | —                             | —                |
|  | 0.12                                     | 0.16                                      | -0.17  | —   | 0.33**                                    | 0.17                                     | 0.01                          | 0.09*            |
|  | 0.20                                     | 0.23*                                     | -0.18  | 0.24                                      | 0.39**                                    | 0.14                                     | 0.08                          | 0.20             |
|  | 0.23                                     | 0.33**                                    | -0.19  | 0.34**                                    | 0.42**                                    | 0.13                                     | 0.08                          | 0.29             |
| Union of Soviet Socialist Republics,<br>n = 56 | -0.07                                    | 0.11                                      | -0.20*   | 0.06                                      | 0.55**                                    | 0.22*                                    | —                             | —                |
|  | -0.07                                    | 0.15                                      | -0.19  | —   | 0.56**                                    | 0.22                                     | 0.02                          | 0.29             |
|  | 0.08                                     | 0.23**                                    | 0.00   | 0.35**                                    | 0.66**                                    | 0.06                                     | 0.01                          | 0.49             |
|  | 0.24*                                    | 0.14                                      | 0.10   | 0.40**                                    | 0.72**                                    | 0.10                                     | 0.09                          | 0.56             |
| Taiwan, n = 52                                 | 0.07                                     | -0.21*                                    | -0.15  | -0.41**                                   | 0.51**                                    | 0.20*                                    | —                             | —                |
|  | -0.01                                    | -0.07                                     | -0.11  | —   | 0.49**                                    | 0.17                                     | 0.01                          | 0.24**           |
|  | 0.06                                     | -0.06                                     | 0.00   | -0.52**                                   | 0.59**                                    | 0.20                                     | 0.05                          | 0.37             |
|  | 0.16                                     | -0.04                                     | 0.28*  | -0.57**                                   | 0.70**                                    | 0.22*                                    | 0.10                          | 0.51             |
| China, n = 40                                  | 0.26*                                    | 0.23*                                     | 0.20   | 0.26*                                     | 0.62**                                    | -0.06                                    | —                             | —                |
|  | 0.27                                     | 0.09                                      | 0.10   | —   | 0.60**                                    | -0.11                                    | 0.01                          | 0.36**           |
|  | 0.35**                                   | -0.13                                     | 0.05   | 0.44**                                    | 0.67**                                    | -0.12                                    | 0.14                          | 0.45             |
|  | 0.37**                                   | -0.25**                                   | 0.01   | 0.44**                                    | 0.65**                                    | -0.09                                    | 0.14                          | 0.53             |
| Korea, n = 40                                  | 0.09                                     | -0.05                                     | 0.14   | 0.02                                      | 0.54**                                    | 0.38**                                   | —                             | —                |
|  | 0.02                                     | -0.16                                     | 0.16   | —   | 0.57**                                    | 0.38**                                   | 0.07                          | 0.26**           |
|  | 0.17                                     | -0.27**                                   | 0.47**   | -0.03                                     | 0.73**                                    | 0.46**                                   | 0.37                          | 0.49             |
|  | 0.05                                     | -0.17                                     | 0.45**   | 0.32**                                    | 0.72**                                    | 0.44**                                   | 0.34                          | 0.52             |

<sup>a</sup> Pearson correlations coefficients, additive scales.  
<sup>b</sup> Regression beta coefficients, additive scales.  
<sup>c</sup> PLS path coefficients, reflective measures model.  
<sup>d</sup> PLS path coefficients, formative measures model.  
<sup>e</sup> Regression adjusted R<sup>2</sup>, including statistical significance.  
<sup>f</sup> PLS Square multiple correlations, statistical significance is unavailable.  
\* p < 0.10.  
\*\* p < 0.05.

the generality of an American theory of business negotiations is considered. Fourth, our results are briefly reviewed for evidence of patterns in variation across the cultural groups. The paper is concluded with brief mention of the limitations of the study and suggestions for future research.

### Measurement in Comparative Studies

The measures used in this study were developed in the United States using American subjects. The measures of problem-solving approach (PSA), negotiator attractiveness (ATT) and partner satisfaction (SAT) all have proven reliable using Cronbach  $\alpha$  statistics as the criterion for the American group. However, the  $\alpha$ 's for the original four-item PSA measure for several of the foreign groups were unacceptably low. This measurement problem might be caused by any one (or all) of three, not unrelated problems: (1) Translation difficulties may be a cause (cf. Davis, Douglas, and Silk 1981). There might be errors made by translators, although we have been quite careful in all translations (i.e., back translations and resolution of identified discrepancies). Relatedly, some words and concepts simply do not translate. For example, recall that the word *profit* in Russian connotes something quite different than the American notion (Rajan and Graham 1991). (2) The concept itself, although its components are highly correlated for Americans, is really more properly modeled as a formative indicator model (cf. Fornell and Bookstein 1982). Indeed, the PSA concept as measured here, unlike the ATT and SAT measures, uses items which might not coincide (i.e., are not correlated) yet may, indeed, add up to an index of PSA. (Please see Appendix B.) (3) Finally, the PSA concept itself may be inappropriate for use in other cultures. Indeed, Adler, Campbell, and Laurent (1989) demonstrate this problem of being "outside, looking in."

We have dealt with this measurement problem(s) using a three-step approach: First, we pruned the four-item measure in accordance with the suggestions of Churchill (1979). For each separate cultural data set, the single items were deleted which served to maximize the Cronbach  $\alpha$  for the remaining three-item scales. Next, we assessed the reliability problem by calculating  $\alpha$ 's and their 90% confidence intervals. The latter pro-

vide information about the equivalence of the translations (Davis, Douglas, and Silk 1981, Feldt 1965), assuming an additive scale or a reflective indicator measurement model. A few nonequivalencies were discovered, including the  $\alpha$  for the SAT measure being higher for the mainland Chinese group than for the American group! The several  $\alpha$ 's below 0.65 would be expected to attenuate the precision of the parameter estimates and to reduce the power of associated statistical tests. Finally, it appears to have been worthwhile to impose a formative indicator measurement model on the data. The formative versus the reflective indicator analyses yielded different findings 13 times across the 66 relationships (i.e., 6 hypotheses  $\times$  11 countries) in Table 4. The multiple indicator model (PLS) outperforms the regression models in explanatory power. And, as suggested by Fornell and Bookstein (1982), the explanatory power of the theoretical model (particularly so for the SAT portion) was generally higher for the formative approach than for the reflective, as judged by a comparison of the squared multiple correlations.

Finally, examination of the several loading pattern matrices and the path coefficients reveals that the formative indicator measurement model is not unreasonable. The findings of our study suggest that a formative indicator measurement approach may be a useful tool (among others) for mitigating measurement problems associated with comparative international research. Moreover, another advantage of the formative indicator approach is well demonstrated by the data in Table 3. The most definitive element in the PSA measure for the American group is the "honest/deceptive" item (see Appendix B). Alternatively, for the German group, the most definitive element is the "accommodating/exploitative" item (in German: "*ausnutzend/gefällig*"). Indeed, when communicating findings of this study to German readers, it may well be important to define the PSA concept emphasizing the later terms.

### Substantive Findings

A series of other studies have been published using a similar set of hypotheses (Adler et al. 1987, Campbell et al. 1988, Graham et al. 1988). The previous studies used different measurement approaches and analysis techniques. The findings of the previous studies closely

resemble the findings here using correlation analyses. However, among our findings, the partial least squares analysis of the structural relations is the most rigorous test of the hypotheses. Thus we compare the findings of the PLS with formative indicators to the extant literature.

For the American and Anglophone Canadian data sets, the problem-solving approach seems to positively affect negotiators' profits via partners' problem-solving approach. Taking an information exchange (Weitz 1978) or a cooperative approach (Rubin and Brown 1975) appears to yield positive negotiation outcomes when partners reciprocate. However, different from Adler et al. (1987), the relationship between negotiators' problem-solving approach and partners' satisfaction ( $PSA_n \rightarrow SAT_p$ ) appears to be partially attenuated by the relative strength of the negotiator attractiveness/partner satisfaction relationship ( $ATT_n \rightarrow SAT_p$ ), thus demonstrating the added value of testing the model in a more comprehensive way.

For the Francophone Canadian participants, a problem-solving approach appears to have no influence on negotiation outcomes. Instead, negotiator attractiveness appears to strongly influence partner satisfaction ( $ATT_n \rightarrow SAT_p$ ), and partners do not reciprocate PSA strategies ( $PSA_n \rightarrow PSA_p$ ). Both these findings using PLS are in stark contrast to the reports of Adler et al. (1987) and our own correlation analysis. The results of the more rigorous structural equation analysis suggest that the people (i.e., attractiveness) influence outcomes more than the negotiation process.

The results for the Mexican group appear to be quite robust across studies and analysis approaches (cf. Adler et al. 1987). The people (i.e., role and attractiveness) are important, as is the process (problem-solving approach). However, how the constructs are related varies somewhat for the Mexican group vis-à-vis the other North Americans. Mexican negotiators achieved higher profits when they were buyers (different from the Francophone Canadians) and when they took a competitive approach (the opposite of PSA). The lack of support for Hypothesis 1 may indeed be a reflection of the previously described suppressor effect evident when Hypotheses 3 and 4 are supported.

For both the British and French groups, negotiator attractiveness and role all appear to make a difference;

these findings are consistent with those reported by Campbell et al. (1988). For the British group, however, the PLS analysis of the structural equations yields an inverse relationship between negotiators' problem-solving approach and partners' satisfaction ( $PSA_n \rightarrow SAT_p$ ). This is the opposite of the hypothesized relationship; it defies simple explanation, and thus it deserves greater attention in future studies of British negotiation behavior.

Also, in contrast to the Campbell et al. (1988) findings, the PSA model (i.e., H1 and H4) appears to fit the French data, although the relationships are borderline. For the French, the findings are very different across analysis approaches—correlation and regression versus PLS.

Attractiveness was found to be important for the German negotiators, while role was not. Different from the correlation and regressions analyses and the findings of Campbell et al. (1988), the formative indicator PLS approach suggests that a problem-solving approach (i.e., H1, H2 and H4) may indeed be working in the German negotiations.

Among the Soviet negotiators, attractiveness dramatically enhances partners' satisfaction. Moreover, in contrast to the correlation analyses, the PLS approach suggests that the problem-solving strategies work in the Soviet group in a similar way to the American.

The findings for the three Asian groups are quite different from one another. The only consistency is the importance of negotiators' attractiveness on partners' satisfaction, which was strongly positive for all three groups. For the Chinese managers on Taiwan, buyers achieved marginally higher profits than sellers. For the Chinese managers from the mainland, the opposite was true. Different from the hypothesis and the reports of Graham et al. (1988), a direct *positive* relationship was discovered between negotiators' problem-solving approach and negotiators' profits ( $PSA_n \rightarrow \$_n$ ) for the negotiators from Taiwan and Korea. This discrepancy across analysis approaches deserves further attention and underscores the importance of a structural equation approach. Finally, reciprocity appears to work very differently in the two Chinese cultures. A strong positive relationship was found for the mainland group in contrast to a strong inverse relationship for the Chinese on Taiwan.



### The Generality of Our Model

The key issue we have addressed here is the universality of a model of business negotiations. Not surprisingly, the answer our study provides is equivocal. In one aspect, *the American model works* quite well—negotiators' attractiveness positively influences partners' satisfaction in all eleven cultures. Obviously, some of this consistency is due to a common methods bias (i.e., both are attitude measures from the same sources), but the relationship is quite robust and quite strong across cultures, studies, and analysis techniques.

The model *appears to work differently* in seven cases. That is, relationships proved to be the opposite of those hypothesized based upon American theories and previous findings. For both British and mainland Chinese participants, negotiators' problem-solving approach was found to negatively influence partners' satisfaction ( $PSA_n \rightarrow SAT_p$ ). Hypothesis 3, a negative relationship between negotiators' problem-solving approach and negotiators' profits ( $PSA_n \rightarrow \$_n$ ), was clearly not supported for the American group, but was for the Mexican group. Moreover, for the negotiators from Taiwan and Korea, statistically *positive* relationships were discovered between the same two constructs. Lastly, inverse relationships were found between negotiators' and partners' PSA negotiation strategies for the Chinese and Taiwanese and the Francophone Canadians.

Of the remaining 53 relationships, 36 are consistent with the American findings. Or, of the 60 relationships studied (6 hypotheses  $\times$  10 foreign cultures), 36 proved to be consistent with the American findings, 7 were different, and in 17 cases, no relationships were found where they were found with the American group (i.e., *the model does not work*).

Another way of assessing the performance of the American model is the explanatory power of the PLS equations. For the negotiators' profits ( $\$_n$ ) equation, the American squared multiple correlation was 0.10. For six of the foreign groups, the squared multiple correlations were higher. For the partners' satisfaction ( $SAT_p$ ) equation, the squared multiple correlation for the American group was 0.18, and it was higher for nine of the ten foreign groups.

Based upon this test of an American model in ten foreign cultures, we cannot make a claim to universality. Yet, despite measurement problems and the substantial

diversity among the cultures and business systems of the groups included, the model does help us understand how business negotiations proceed in other countries, and to that extent it does appear quite useful.

### Dimensions of Culture Explored

This paper was conceived and is presented in the context of the editors' focal questions regarding "the generalizability of what we know." However, it is quite worthwhile to consider briefly our data and analyses in the context of an equally important question: Are there patterns or dimensions of cultural variation discernable across the 11 groups? Had this latter question been the impetus and focus of the study, different approaches may have been taken in the design, execution, and analyses. However, we can take a "quick look" for patterns suggested by a few of the key thinkers in the area.

While numerous authors have described a wide variety of dimensions of culture, only a few have defined cultural variations in ways particularly relevant to our study. Limaye and Victor (1991), based on their review of business communication literature, conclude that the most important ways cultures vary in business settings regard (1) cognitive frames, (2) subjective and objective culture, and (3) concepts of time. Clark (1990) discusses in great depth the notion of national character and defines three emerging domains of cultural variation: (1) relations to authority, (2) relations to self, and (3) relations to risk. Sheth (1983), in his excellent review article regarding international business negotiations, posits several key dimensions of culture which separately impact the content and style of communication.

Many of these ideas are based upon more fundamental thinking. For example, variations in negotiation behaviors can be expected due to the underlying differences inherent in each culture's value system and orientation. Kluckhohn and Strodtbeck (1961) contend that these variations emanate from value-orientation systems. That is, value orientations "give order and direction to the ever-flowing stream of human acts and thoughts as these relate to the solution of 'common human' problems" (Kluckhohn and Strodtbeck 1961, p. 4). These "common human" problems are generally variations in traditions according to five orientations: (1) human nature orientation, e.g., good-evil; (2) man-nature orientation, e.g., mastery over nature; (3) time

orientation, e.g., past, present and future; (4) activity orientation, e.g., being and doing; and (5) relational orientation, e.g., within vs. between. Rokeach's (1973) study of human values provides avenues along which to pursue salient cultural variation. Gouldner (1960) posits that norms of reciprocity vary across cultures. Finally, perhaps most useful in this genre is Hall's (1959) explication of the silent languages of time, space, friendship, and business agreements.

While all these authors provide important ideas about where to look for patterns across cultures, not many of them have done the actual looking in a way that informs the present study. That is, none of the literature cited provides information about how the cultures we have studied might fit along the various dimensions defined. Indeed, even Harnett and Cummings' (1980) study of international bargaining behavior considers a set of countries and regions incompatible with our own. Fortunately, two researchers have conducted studies which provide enough data to support hypotheses about how our 11 cultural groups may be arrayed on key dimensions of culture: (1) Hofstede (1984, 1991) and (2) Hall (1976). Discussion of their research follows brief consideration of potential culture/methods interactions in our study.

**Culture/methods interaction.** We can think of at least two ways in which culture may affect the very methods used in our study. First, it may be that businesspeople from command economies (i.e., the People's Republic of China and the Soviet Union) will be unfamiliar with the activity of bargaining. However, this hypothesis is not borne out by examination of the profit (\$) and/or satisfaction (SAT) levels attained by bargainers in each group as listed in Table 1.

A second culture/methods interaction may regard the ease of translation of our instrument. That is, linguistic theories suggest that it should be easier to produce more accurate translations from source languages (i.e., English) to target languages when the languages are from more similar language groups (Fuller 1987). So we might expect the qualities of our instrument to deteriorate as we move from English users to Germanic (both English and German) to Romance (French and Spanish) to Slovak (Russian), to Asian languages (Chinese and Korean). We have examined the various

Cronbach  $\alpha$  statistics in Table 2 as well as the loading pattern coefficients for all cultural groups, and we found no such pattern of deterioration in the qualities of our measures.

**Hofstede (and Bond).** Hofstede's (1984) study of the personal values of IBM executives around the world is unique in its scope and consequent influence. Based upon the study, he defines four central dimensions of cultural variation in work-related values: (1) power distance (PDI)—the interpersonal power of superiors as rated by subordinates; (2) uncertainty avoidance (UAI)—high versus low; (3) individualism (IDV)—as opposed to collectivism; and (4) masculinity (MAS)—more assertive, less nurturing. Hofstede (1991) and Hofstede and Bond (1988) describe a fifth dimension as being crucial in business settings: Confucian dynamism or a long-term orientation (LTO). Four out of five of the dimensions are related conceptually to various aspects of our negotiation study, uncertainty avoidance being the only seemingly irrelevant dimension. The ratings on Hofstede and Bond's indices are listed in Table 5.

Although Hofstede's work involves internal management relationships, he states that, "a Power Distance norm spills over from one sphere of life—work organizations—into others; in fact, it helps us to find the origin of a Power Distance norm in early socialization by the family, the school, and other institutions of Society" (1984, p. 72). By implication, cultures with higher PDI might be expected to place more emphasis on the importance of role relations (i.e., buyer-seller) and their influence on negotiation outcomes. Related to our own study, we would expect the parameter coefficients (i.e., formative indicator model) for the  $B/S_n \rightarrow \$_n$  to be higher for the higher PDI cultures. As reported in Table 6, the correlation between the PDI and the Hypothesis 6 coefficients is 0.75 ( $p < 0.05$ ).

Hofstede's concept of individualism might be reflected in our study in three ways: Bargainers from higher IDV cultures might be expected to achieve higher individual profits, behave more individualistically (i.e., the opposite of PSA), and achieve higher profits when behaving individualistically (i.e., Hypothesis 3). The correlation coefficients comparing IDV scores to  $\$_{n, PSA_n}$ , and the H3 parameter coefficients are 0.673,

**Table 5**    **Dimensions of Culture**

| Country                             | Hofstede (1984)      |                     |                   | Hofstede and Bond (1988)    | Hall (1976)      |
|-------------------------------------|----------------------|---------------------|-------------------|-----------------------------|------------------|
|                                     | Power Distance (PDI) | Individualism (IND) | Masculinity (MAS) | Long-Term Orientation (LTO) | High/Low Context |
| United States                       | 40                   | 91                  | 62                | 29                          | 2                |
| Canada (Anglophone)                 | 39                   | 80                  | 52                | 23                          | 4                |
| Canada (Francophone)                | —                    | —                   | —                 | —                           | 3                |
| Mexico                              | 81                   | 30                  | 69                | —                           | 7                |
| United Kingdom                      | 35                   | 89                  | 66                | 25                          | 6                |
| France                              | 68                   | 71                  | 43                | —                           | 5                |
| Germany                             | 35                   | 67                  | 66                | 31                          | 1                |
| Union of Soviet Socialist Republics | —                    | —                   | —                 | —                           | —                |
| Taiwan                              | 58                   | 17                  | 45                | 87                          | 8                |
| China                               | —                    | —                   | —                 | 118                         | 9                |
| Korea                               | 60                   | 18                  | 43                | 75                          | 10               |

$-0.827$ , and  $-0.640$  (all  $p < 0.05$ ). All are in the predicted direction and are statistically significant.

The masculinity dimension (MAS) might be related to our study also in two aspects. We would expect the behavior of businesspeople from higher MAS cultures to be less nurturing, thus satisfaction levels ( $SAT_p$ ) and

the importance of the  $ATT_n \rightarrow SAT_p$  link should be lower. Neither relationship is confirmed by the results in Table 5.

Hofstede and Bond's (1988) explication of their fifth dimension—long-term orientation—suggests two possible links to our study. The behaviors of businesspeople

**Table 6**    **Exploratory Results**  
(Pearson Correlation Coefficients)

| Variable/Relationship            | Hofstede (1984)      |                     |                   | Hofstede and Bond (1988)    | Hall (1976)      |
|----------------------------------|----------------------|---------------------|-------------------|-----------------------------|------------------|
|                                  | Power Distance (PDI) | Individualism (IND) | Masculinity (MAS) | Long-Term Orientation (LTO) | High/Low Context |
| $\$n$                            | -0.212               | 0.673**             | 0.066             | -0.078                      | 0.113            |
| $SAT_p$                          | 0.121                | 0.101               | 0.680**           | 0.403                       | 0.195            |
| $PSA_n$                          | 0.635**              | -0.827**            | -0.336            | 0.892**                     | 0.676            |
| $ATT_n$                          | 0.595*               | 0.026               | -0.079            | 0.334                       | 0.218            |
| H1 ( $PSA_p \rightarrow \$n$ )   | -0.142               | 0.148               | -0.317            | 0.279                       | -0.229           |
| H2 ( $PSA_n \rightarrow SAT_p$ ) | -0.203               | 0.147               | 0.147             | -0.434                      | -0.741**         |
| H3 ( $PSA_n \rightarrow \$n$ )   | 0.136                | -0.640**            | -0.614*           | 0.598*                      | 0.634**          |
| H4 ( $PSA_n \rightarrow PSA_p$ ) | -0.208               | 0.528*              | 0.328             | -0.278                      | -0.059           |
| H5 ( $ATT_n \rightarrow PSA_p$ ) | 0.666**              | -0.785**            | -0.306            | 0.760**                     | 0.858**          |
| H6 ( $B/S_n \rightarrow \$n$ )   | 0.751**              | -0.569*             | -0.096            | -0.355                      | 0.309            |

\*\*  $p < .05$     \*  $p < .10$ .

from higher LTO cultures should reflect "ordering relationships by status and observing this order" (Hofstede 1991, p. 165), or our Hypothesis 6 should be better supported in the higher LTO cultures. Alternatively, those from *lower* LTO cultures should behave in accordance with "reciprocation of greetings, favors, and gifts" (p. 166), and, in turn, parameter estimates for Hypothesis 4 ( $PSA_n \rightarrow PSA_p$ ) should be higher. In neither case are our data consistent with the predictions regarding LTO.

**Hall (high/low context).** Hall's (1976) ideas about high versus low context cultures were described previously (see Hypothesis 6). According to Cateora (1990), Japan is ranked highest on Hall's "context" continuum. Hall's comments support this view: "I can think of few countries Americans are likely to visit and work in . . . where life is more filled with surprises than Japan" (p. 57). Hall's writings imply that in Japan, the context of interpersonal communication will be a more important determinant of interpersonal interactions than in other countries. A careful reading of both authors' studies suggests that ten of the eleven cultures considered in this study would fall along the continuum presented in Table 5's "High Context/Low Context" column. Neither Hall nor Cateora explicitly mention Korea, Taiwan, or Canada. Based upon our perusal of several sources (i.e., Moran and Stripp 1991; Steers, Shin, and Ungson 1989; Snowdon 1986; Copeland and Griggs 1985; and Schmidt 1979), we ranked them as listed in Table 5. Korea was rated higher because of its physical and cultural proximity to Japan. For example, Copeland and Griggs (1985) state, "Korean society is highly structured; great respect is paid to age and tradition" (p. 241). Taiwan was ranked on the "American side" of Mainland China to reflect historical ethnic roots and recent, substantial contact with the United States. Likewise, the two Canadian cultures were ranked between the United States and their European counterparts.

Two aspects of our study are related to Hall's concept of cultural context. That is, we should expect behavior in higher context cultures to be more consistent with our Hypotheses 5 ( $ATT_n \rightarrow SAT_p$ ) and 6 ( $B/S_n \rightarrow \$_n$ )—personal and status relations are more important. The parameter coefficients for H5 and H6 are positively re-

lated to the ranking of cultural context, the former statistically significant at  $r = 0.858$  ( $p < 0.05$ ).

Obviously, the magnitudes of the various correlation coefficients reported in Table 6 mean little because the sample sizes are so small. However, statistically significant relations are meaningful and reflect a pattern in our results consistent with the ideas of both Hofstede and Hall. These findings not only suggest the validity of their ideas but also the validity of the concepts and relationships in our own study.

### Limitations and Future Research

The strengths of this study are twofold: First, the number and diversity of the cultures studied are unusual. Second, the rigor of the structural equation approach applied to such data from 11 cultures is unique.

Of course, the study has important weaknesses. The measures are relatively weak, a problem due largely to the shortness of the scales. Also, the sample sizes are small for some of the countries, making parameter estimates less stable. Certainly, more careful analysis of discrepancies across groups and analysis techniques is possible and worthwhile. However, the focus of this study is on the universality issue, necessitating the "mass production" approach to the data analysis.

Insight into the causal mechanisms is limited to inferences derived from quantitative analyses of participants' self-reports and further deductions by the researchers. The use of observational methods to measure negotiation process variables is a crucial next step. Content analysis techniques such as those employed by Pennington (1968) and Rogers and Farace (1975) or those described by Angelmar and Stern (1978), Bonoma and Felder (1977), and Seldow and Thomas (1984) should be used to analyze either negotiation simulations or real negotiations in the United States and other countries. Then the self-report and judgment measures (i.e., from questionnaires) can be validated against more objective and precise measures of interaction processes. Two obstacles stand in the way of such approaches. First, executives are unwilling to have actual business negotiations videotaped. Second, the expense and time involved in transcriptions, translations, and coding are prohibitive. For example, the cost of translation and transcription of one-half hour of simulated negotiations between Germans is approximately \$250 to \$300. De-

tailed coding of that 30-minute negotiation, including recording of nonverbal behaviors and classifying verbal tactics, has taken up to 20 hours in other studies (cf. Neu and Graham 1987).

Substantive issues that should be given special attention in future comparative studies are (1) the relative strength of the American reciprocity norm, and (2) the relative importance of Hall's (1976) and Hofstede's (1984) concepts and their influence on both negotiation processes and outcomes. Finally, the cultural differences discovered here pose the question, "What happens during intercultural as opposed to the more commonly studied intracultural business negotiations?" That is, what happens when the negotiation partners are from different cultures? Graham (1985) and Adler and Graham (1989) report that negotiators' behaviors differ between intra- and intercultural interactions. Francis (1991) provides key insights regarding intercultural adaptation. Few others have considered intercultural negotiations. For example, if German business people adjust their culture-specific approaches to negotiation when their client is American, do they adopt an American approach or some third approach? Bateson (1935) provides a still relevant theoretical perspective for studies of cross-cultural negotiations. More recently, Moran and Harris (1982) have suggested that cross-cultural differences can be complementary.

Because the study of intercultural business negotiations is new, another, more inductive research approach also may be appropriate. Graham and Andrews (1987) have applied methods first developed by sociolinguists to the study of Japanese/American marketing negotiations. Videotaped negotiations were viewed and reviewed by several researchers *and* the negotiators themselves. All reviewers independently identified short problem sequences for detailed analysis, including verbal and nonverbal coding and consideration of the comments and personal characteristics of the negotiators. The generality of the problems discovered and associated antecedents and consequences then were checked across several other interactions. The primary advantage of such methods is the broad array of theoretical perspectives that can be brought to bear. Indeed, even the naive theories of the negotiators themselves can be considered, as ethnomethodologists advocate (cf. Lincoln and Guba 1985).

In emphasizing the face-to-face aspects of business negotiations, we obviously ignore a plethora of other important issues and influences—that is, our model of business negotiations is by no means comprehensive. For example, three points are pertinent regarding the use of buyer-seller dyads. First, decision-makers in "real" negotiations often represent constituents whose interests must be accounted for (Frey and Adams 1972). Second, often there exists a third party whose influence can affect those of the primary disputants, such as those in union management negotiations (Bartos 1967). Third, in general, "real" world negotiations often include more than two parties. While all the above criticisms to the dyadic approach are valid, we contend that the approach advocated in this exploratory study provides the researchers insights which can be examined in future studies. Finally, variables such as power relations, short-term versus long-term relations, market structures, and orders from higher authorities have been the subject of fruitful studies by American management scientists and should be considered with subjects from other countries.

Deserving additional attention are the PSA construct and the negotiation simulation profit schedules. For example, one of the anonymous reviewers suggested decomposition of both to examine the separate effects of strategies on the cooperative and competitive elements of the profit schedules. Another reviewer suggested additional efforts in building a more reliable PSA construct using factor analysis. Both approaches may be particularly useful in improving our understanding of how PSA works in negotiations in other cultures.

Hopefully, future studies can overcome the weaknesses described above. Lastly, perhaps the focus of future studies should not be on the universality of American theories. Future studies might shift their foci to the discovery and understanding of the similarities and differences which we will *always* find in comparative studies of this sort. Certainly, more information accumulated in these regards will help managers deal with the realities of the increasingly global business environment. Equally important, meaningful patterns in the variations in managerial behavior across cultures may become more discernable.<sup>5</sup>

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**GRAHAM, MINTU AND RODGERS**  
*Negotiation Behaviors in Ten Foreign Cultures*

**Appendix A Payoff Matrices for Kelley's (1966) Negotiation Game**

| Prices | Buyer Profits |           |           | Seller Profits |           |           |
|--------|---------------|-----------|-----------|----------------|-----------|-----------|
|        | Product 1     | Product 2 | Product 3 | Product 1      | Product 2 | Product 3 |
| A      | 40            | 24        | 16        | 0              | 0         | 0         |
| B      | 35            | 21        | 14        | 2              | 3         | 5         |
| C      | 30            | 18        | 12        | 4              | 6         | 10        |
| D      | 25            | 15        | 10        | 6              | 9         | 15        |
| E      | 20            | 12        | 8         | 8              | 12        | 20        |
| F      | 15            | 9         | 6         | 10             | 15        | 25        |
| G      | 10            | 6         | 4         | 12             | 18        | 30        |
| H      | 5             | 3         | 2         | 14             | 21        | 35        |
| I      | 0             | 0         | 0         | 16             | 24        | 40        |

**Appendix B Measures**

Partner's Satisfaction

1. If an agreement was reached, how satisfied were you with that agreement?

*satisfied*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *dissatisfied*

2. How satisfied are you with the agreement relative to your pregame expectations?

*satisfied*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *dissatisfied*

3. How satisfied were you with your individual profit level?

*satisfied*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *dissatisfied*

4. How satisfied were you with your performance during the game?

*satisfied*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *dissatisfied*

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Attractiveness of Negotiator

1. How comfortable did you feel with the particular person with whom you were paired?

*comfortable*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *uncomfortable*

2. How interested were you in the person with whom you were paired?

*interested*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *uninterested*

3. How interested would you be in seeing the person with whom you were paired again?

*interested*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *uninterested*

Problem-solving Approach (PSA)

1. Were you more interested in solving your mutual problem, or more self-interested?

*solving mutual problem*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *self-interested*

Rate your own bargaining strategies on the following scales:

2. *accommodating*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *exploitative*

3. *honest*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *deceptive*

4. *unbiased*  $\frac{\quad}{5} \frac{\quad}{4} \frac{\quad}{3} \frac{\quad}{2} \frac{\quad}{1}$  *biased*

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