

**CONFIRMATION BIAS IN INDIVIDUAL-LEVEL PERCEPTIONS
OF PSYCHIC DISTANCE: AN EXPERIMENTAL INVESTIGATION**

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ABSTRACT

In this article we draw from social cognition theory to explore the influence of confirmation bias on perceptions of psychic distance. Despite the prominence of psychic distance, and other forms of distance, as potential predictor variables in international business research, very little work has been done exploring the factors and processes that shape a decision maker's perceptions of distance. We argue in this paper that social cognition theory can help fill that void. Specifically, we hypothesize that confirmation bias may influence managers' processing of information concerning differences between cultures. Such a bias may cause managers to attend more to information that confirms pre-existing beliefs, and discount information that contradicts pre-existing beliefs, thus biasing their perceptions of psychic distance. Using an experimental approach, the impact of confirmation bias on perceptions of psychic distance is confirmed in a sample of 200 Australian managers. The observed changes in perceptions are also associated with changes in perceptions of risk and preferences for entry modes in a hypothetical business scenario. As a result this paper demonstrates how the application of social psychology theories and methods can provide new theoretical perspectives to explain when, how, and why individual-level perceptions of psychic distance might diverge from national-level averages.

Keywords: Social cognition, psychic distance, country risk, foreign market entry, experiment, confirmation bias

INTRODUCTION

In this article we explore the role that confirmation bias, or a tendency to focus more heavily on information which confirms one's beliefs (Nickerson, 1998), may play in the processing of information about cross-national differences and thus, in the formation of managers' perceptions of psychic distance. Working with the assumption that a lack of foreign market knowledge is an obstacle to international expansion, Johanson and Wiedersheim-Paul (1975: 308) defined psychic distance as "the sum of factors preventing or disturbing the flow of information between firm and market. Examples of such factors are differences in language, culture, political systems, level of education, level of industrial development, etc." This observation initiated a new wave of research in international business (IB) research in which distance, as a metaphor for cross-national differences, has become a key predictor variable. Indeed, Cho and Padmanabhan (2005: 309) assert, "almost ... no international business study can be complete unless there is an explicit variable controlling for cultural distance." Since 2005, the inclusion of various forms of distance in international business research has accelerated even further, more than doubling between 2005 and 2010 (Em, 2011). However, this stream of research is not without its controversies.

As the trend to incorporate distance into empirical international business studies began to increase, criticisms emerged regarding how the concept of distance should be conceptualized and measured (e.g. Harzing, 2003; Shenkar, 2001; Stahl and Tung, 2015; Tung & Verbeke, 2010). In particular, many of these calls have argued for distance to be measured as an individual-level perception. This is in response to the fact that, to date, distance has typically been measured using exogenous national-level indicators (Zhao, Luo, & Suh, 2004), without considering individual level characteristics, differences and biases. We agree with the aforementioned criticism, and argue that because it is individuals who make decisions, the perceptions of those decision makers are critical elements in any model of how distance may impact managerial decisions (Harzing, 2003; Shenkar, 2001; Sousa & Bradley, 2006; Tung & Verbeke, 2010; Zaheer, Schomaker, & Nachum, 2012). Exogenous national-level measures of distance may be a useful starting point for some research

questions, but it is also important that we are able to explain when, how, and why individual-level perceptions of the decision makers might diverge from such national-level averages.

The preceding arguments highlight a significant gap in the distance literature. To our knowledge, only four papers (Dow, 2008; Håkanson & Ambos, 2010; Sousa & Bradley, 2006; Williams & Gregoire, 2015) have begun to explore the factors and processes that shape decision makers' perceptions of distance, or more specifically psychic distance. To date, no overarching theoretical perspective or framework for exploring these issues has been developed. For assistance in this task, we turn to the field of social psychology. The research on social cognition within the field of social psychology provides rich descriptions of perceptual processes and biases that can provide insights into the formation of individual perceptions. In particular, the concept of confirmation bias predicts how individuals might process information in a biased manner (Klayman, 1995; Nickerson, 1998; Wason, 1960). For this article, we define confirmation bias as an individual-level process whereby individuals seek out and give more credence to information that confirms preexisting beliefs while ignoring or discounting information that disconfirms preexisting beliefs (based on Klayman, 1995). With respect to international business, we believe that confirmation bias may play an important role in explaining how managers process new information about foreign markets, thus shaping their perceptions of the distance of each market, and in turn influencing their preferences for particular business decisions. Recent work (Monteiro, 2015) affirms this, as it finds that pre-existing knowledge influences country choice for market entry.

As a result, the purpose of the present research is to demonstrate, using individual-level experiments, the role that confirmation bias plays in how managers change their perceptions of psychic distance and in turn, how these changes in perceptions may be related to changes in the managers' preferences in hypothetical scenarios involving international expansion. Thus, our core research question is: How does confirmation bias affect perceptions of psychic distance? By so doing, this paper contributes to the international business literature in a number of ways. In particular, it demonstrates that individual perceptions of psychic distance are malleable and subject to individual-level biases and importantly, are linked to managers' preferences when making international business

decisions. This point re-emphasizes the need for further research into the micro foundations of the role that psychic distance plays in IB decisions. The research also draws on social psychology theories, and specifically the concept of confirmation bias, to provide new theoretical perspectives to explain when, how, and why individual-level perceptions of distance might diverge from national-level averagesⁱ. The study also demonstrates how a methodological technique that is underutilized in IB research – individual-level experiments (Leung, Bhagat, Buchan, Erez, & Gibson, 2005) – can be utilized to explore such issues.

We divide the remainder of the paper into six sections. In the literature review, we briefly review the history of the measurement of psychic distance, establish a working definition of the term *perceived psychic distance*, and explain how this research represents what Beugelsdijk (2013) describes as “the new wave of cultural research” in that literature. We then discuss the factors that may shape an individual’s perceptions of distance and provide a brief review of the concept of confirmation bias. Next, we develop three hypotheses concerning confirmation bias and perceptions of psychic distance. In the subsequent two sections, we explain our methodological approach and present the results of the experiments. Our paper closes with an analysis of the contributions, implications, and limitations of the research.

LITERATURE REVIEW

Psychic Distance: A Brief History and Definition

Beckerman (1956) often receives credit for the origin of the concept of psychic distance; however, the concept did not capture significant attention until two articles, which are now referred to as the Uppsala model included psychic distance as one of the key drivers of the internationalization process (Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975). From that point, psychic distance and related concepts such as cultural distance (Kogut & Singh, 1988) and institutional distance (e.g. Xu & Shenkar, 2002) began to grow in prominence.ⁱⁱ Research associates these various distance constructs with a broad range of international business issues ranging from export market selection (Ellis, 2008), FDI flows (Davidson, 1980), and entry mode choice (Hennart & Larimo, 1998), to

establishment mode choice (Brouthers & Brouthers, 2000), cross-border acquisitions (Cuypers, Ertug, & Hennart, 2015), adaptation in foreign markets (Dow, 2001), performance in foreign markets (Evans & Mavondo, 2002) and the use of human resource management practices (Boyacigiller, 1990).

Over this period, the vast majority of researchers operationalized distance using exogenous national-level indicators. Specifically, Kogut and Singh's (1988) index of national cultural distance became the most popular choice (Harzing, 2003). Several recent efforts to broaden the range of national-level measures occurred (e.g. Berry, Guillen, & Zhou, 2010; Dow & Karunaratna, 2006; House, Hanges, Dorfman, & Gupta, 2004; Schwartz, 1999). There are some exceptions to this trend, most notably in terms of some researchers collecting self-reported perceptions of distance (e.g. Brouthers, 2002; Evans & Mavondo, 2002; Håkanson & Ambos, 2010; Sousa & Bradley, 2006). However, such self-reported measures are a minority of the instruments used.

Concerned with the widespread use of exogenous national-level indices, numerous researchers have criticized the practice (e.g. Evans & Mavondo, 2002; Harzing, 2003; Shenkar, 2001; Tung & Verbeke, 2010). They assert that individuals or small groups ultimately make managerial decisions. Consequently, the perceptions of those individuals are most relevant. Zhao et al. (2004) reinforce this line of argument in their meta-analysis that finds that survey-based approaches to measuring cultural distance, while less common, result in significantly stronger effect sizes when predicting entry mode choice. This difference between national-level indices and individual perception measures represents a consistent finding of the various meta-analyses on the topic (Magnusson, Baack, Zdravkovic, Staub, & Amine, 2008; Reus & Rottig, 2009; Stahl & Voigt, 2008; Tihanyi, Griffith, & Russell, 2005).

We agree with these concerns about the use of national-level indices, and argue that distance does not affect international business activities except through the decision-making processes of individual managers. Thus, to understand how distance affects decisions, we must understand how the perceptions of distance are formed or revised in the minds of individuals. As a result, in this study, rather than focusing on distance in the abstract, we focus on individual perceptions of psychic distance. We adopt the concept of *perceived psychic distance* that has precedence in the IB literature (e.g. Dow & Larimo, 2009; Ellis, 2008; Evans & Mavondo, 2002), and we borrow heavily from the

preceding Uppsala definition to define perceived psychic distance as: “*an individual’s perception about the collective magnitude of the factors preventing or disrupting the flow of information between firm and market.*”

A direct implication of the preceding arguments is that if a decision maker's perceptions of psychic distance are important, and do at times diverge from exogenous national-level indices, then we need to understand when, how, and why such deviations might occur. We must understand the factors and processes that shape individual perceptions of distance.

The Factors and Processes That Shape Individual-Level Perceptions of Psychic Distance

To date, the research on the antecedents of individual-level perceptions of distance is very limited (Dow, 2008; Håkanson & Ambos, 2010; Sousa & Bradley, 2006); however, a moderately consistent pattern does seem to be emerging. While national-level factors are statistically significant predictors of individual-level perceptions of distance, the overall effect sizes remain quite small. Thus, an important issue is the identification of the other factors and processes shaping individual perceptions of psychic distance above and beyond national-level differences.

One potential factor shaping individual-level perceptions is within-country diversity (Dow, 2008; Shenkar, 2001; Sivakumar & Nakata, 2001; Tung & Verbeke, 2010). Each nation contains variance in language, religion, and ethnicity. For example, while substantial linguistic differences exist between Japan and the United States, many Japanese business people are fluent in English, and some Americans are fluent in Japanese. For these individuals, national-level indicators of distance may be inconsistent with their own circumstances. Shenkar (2001: 525) labels this concern with individual differences as the "assumption of spatial homogeneity." Challenging this assumption constitutes a valid criticism of exogenous national-level indicators. However, the underlying problem is not a divergence between perceptions and reality, but instead an issue regarding the appropriate unit of analysis. The question emerges as to how much accuracy a study loses if the research employs a national average rather than incorporating the actual characteristics of the decision makers. This complication receives a moderate acknowledgement conceptually in recent work (e.g. Tung &

Verbeke, 2010) although empirical investigation continues to be quite limited (Beugelsdijk, Maseland, Onrust, van Hoorn & Slangen, 2015; Beugelsdijk, Slangen, Maseland, & Onrust, 2013).

A second potential factor shaping individual-level perceptions is the accumulation of international experience. At the level of the firm, international experience has long been acknowledged as a distance-bridging factor (Child, Ng, & Wong, 2002; Zhao et al., 2004). Indeed, in the Uppsala internationalization model, international experience embodies one of the two key factors moderating the impact of psychic distance on firm behavior. At the level of the individual, it appears that the same processes may be at work. As an individual travels internationally, he or she may become more comfortable with other nations. This in turn may reduce perceptions of the degree of distance in those countries, and also reduce the individual's perceptions of the distance of all foreign countries. Once again, little research exists that pertains to this issue. The available studies (Dow, 2008; Sousa & Bradley, 2006) indicate that both of the aforementioned factors (i.e. individual-level attributes and international experience) are statistically significant predictors of the individual-level perceptions about distance, but once again with small effect sizes.

In our view, a third set of potential factors contains the greatest potential to advance our understanding of how individual perceptions about psychic distance are shaped. These factors are drawn from the social psychology literature and, more particularly, the social cognition literature. This perspective emphasizes the fundamental processes that shape people's beliefs, along with the potential biases in how people form those beliefs. As applied to psychic distance, this perspective has received very limited attention within the international business literature - the work of Williams and Gregoire (2015) on similarity comparisons being one of the few exceptions. However, it can be argued that one of the more famous articles in the field, specifically O'Grady and Lane's *Psychic Distance Paradox* (1996) partially reflects some of these arguments. While O'Grady and Lane did not cite any social cognition literature, elements of their argument have strong parallels to the concept of confirmation bias (Klayman, 1995). Specifically O'Grady and Lane (1996) suggested that because the USA is so close to Canada in multiple dimensions, Canadian managers may focus excessively on the similarities and underestimate the differences. In turn, these managers under-prepare for entry into the

US market, detrimentally affecting their firm's performance (Evans & Mavondo, 2002; Magnusson, Schuster & Taras, 2014).

The Implications of Social Psychology and Social Cognition Theories for Psychic Distance

Despite the dearth of literature addressing the role of perception from a psychic distance perspective, social psychology research regarding individual-level perceptions of differences between people dates back to the beginning of the field. Augoustinos, Walker, and Donaghue (2014: 15) describe social cognition as a field “with a short history but a long past.” This previous work focuses on a range of perception-based topics (e.g. biases, cultural norms, attraction, group behaviors/dynamics, stereotypes, perception, attitudes, and cultural intelligence) and clearly applies to any discussion of managerial perception of psychic distance. This work also suggests the need for a shift in the view of perceptions of differences for international business scholars. Psychic distance can no longer be captured by a single set of national-level scores. Further, perceptions of distance are not fixed and cannot be taken as pre-specified for individual decision makers. Perceptions of psychic distance may be altered by new experiences, and are likely in a constant process of revision in the minds of individual managers.

Of the many possible perception-based topics in social psychology, we focus here on confirmation bias. As one of the oldest concepts in psychology, confirmation bias traces its origins to the original writings on the philosophy of science by Francis Bacon, Karl Popper, and others (Nickerson, 1998). By examining individual-level processes, these writings root the bias in how an individual's existing beliefs influence the process by which they seek out and process new information. The overarching premise is that when individuals have a hypothesis about a particular issue, the hypothesis then influences the inferences they draw about any new information. This premise forms a key foundation of the social constructionist school of thought (Jussim, 1991). As a result, we argue that confirmation bias may play a potentially important role in the formation of perceptions of psychic distance.

Wason (1960, 1968) conducted the original experimental work on confirmation bias. In these social cognition studies, individuals completed a selection task wherein they attempted to establish a

rule. This early work revealed that individuals tend to have what was later called a “positive test strategy” (Klayman & Ha, 1987). This strategy means that individuals tend to seek information that confirms the rule they have established, while not seeking or even avoiding information that disconfirms the rule. Subsequent authors have debated the precise definition of confirmation bias. For example, Klayman and Ha (1987) and Larrick and Wu (2007) view confirmation bias as individuals skewing the testing of hypotheses in ways that conform to their already-held beliefs. Other researchers, such as Jones and Sugden (2001), Nickerson (1998), and Jonas, Schulz-Hardt, Frey, and Thelen (2001), view confirmation bias as a tendency to search for evidence that confirms an already held belief. Still others take the perspective that the bias involves both processes (Friedrich, 1993; Mynatt, Doherty, & Tweney, 1977). To deal with this proliferation of definitions, Klayman (1995) breaks confirmation bias down into five elements:

1. An individual might start out overconfident in an initial belief.
2. An individual may search for evidence in a way that biases the data to favor the individual’s hypothesis.
3. The individual’s interpretation of the information received might be biased in favor of the individual’s hypothesis. For example, the individual may regard hypothesis-confirming data as trustworthy and disconfirming data as dubious.
4. The individual might revise his or her confidence in his or her hypothesis insufficiently given his or her beliefs about the strength of the data.
5. The individual may have trouble generating viable new hypotheses even when the individual feels like abandoning an old one.

Confirmation bias has been linked to many different business topics. Within advertising, researchers have linked the concept to how consumers process advertising claims and then apply the information to product experience (Hoch & Ha, 1986), how positive publicity coupled with advertising can influence attitudes towards a brand (Kim, Yoon, & Lee, 2010), how advertising messages can influence order of information search (Obermiller & Sawyer, 2011). Decision-making research looks at the effect for both consumers and managers, including a call for incorporating the

bias into modeling of consumer and managerial behaviors (Narasimhan et al., 2005). Research links the bias to attitude-formation (Cohen & Reed II, 2006) and decisions in cases of conflict (Krishnamurthy & Nagpal, 2010). Studies find that confirmation bias is more present for indecisive managers (Brooks, 2011), and leads to overconfidence (Van den Steen, 2011). The bias also relates to judgements salespeople in a service environment (Naylor, 2007). Practitioner-focused strategy writing emphasizes the need for managers to consider the effects of the bias (Schoemaker & Day, 2009; Urbany, Reynolds, & Phillips, 2008). Thus, it seems clear that confirmation bias represents a fundamental aspect of how individuals process information, regardless of setting or context (e.g. Duong, Pescetto & Santamaria, 2014, Minas, Potter, Dennis, Bartelt & Bae, 2014).

Within the wide-ranging research of the concept of confirmation bias, it seems surprising that, to the best of our knowledge, this paper represents one of the few applications of the concept in the international business literature, and specifically one of the first to apply it to an investigation of psychic distance. We believe that the concept of confirmation bias may provide insights into understanding how managers form and revise their perceptions of the psychic distance between themselves and other business actors. This may be particularly true in the early stages of internationalization where managers may have lower levels of international experience and the process of information gathering is often more haphazard and opportunistic (e.g. Bilkey & Tesar, 1977; Cavusgil, 1980; Ellis, 2011). First, the frequency with which managers encounter new information, and thus have to process this information for the first time, will tend to be higher. This may provide greater opportunity for biases in the processing of that information. In contrast, in the later stages of internationalization, more comprehensive and repeated exposure to such information may weaken the biases as managers find it increasingly difficult to ignore any disconfirming information. Second, early information gathering of market selection data appears to rely heavily on low involvement sources (Reid, 1984), such as trade shows, government export promotion programmes, etc. With these types of low involvement information sources, the potential to discount or disregard information that contradicts existing perceptions may be high; whereas, with high

involvement sources, such as prior operating experience in the country, disregarding such information may be more difficult.

Given the huge number of potential foreign markets, in the early stages of internationalization managers may selectively investigate the markets for which they already have some familiarity. Thus, if managers do exhibit a tendency to focus heavily on information that confirms their existing perceptions of psychic distance while avoiding or doubting information contrary to that perception, then it may lead to faulty decision-making processes similar to those predicted by O'Grady & Lane (1996). Therefore, this study seeks to contribute to the international business literature by introducing the social cognition effect of confirmation bias to the study of psychic distance and to test the effects of confirmation bias on the perception of psychic distance with an experiment. By bridging two fields that often talk to disparate audiences, we add insight to past and future research on psychic distance.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

We propose that confirmation bias may affect how individuals process information about foreign countries, which in turn influences their perceptions of the psychic distance of those countries. In instances where information confirms pre-existing beliefs, confirmation bias predicts that the information will be attended to and seen as trusted, thus reinforcing those perceptions. In cases of disconfirming information, the information will be ignored or viewed as dubious. In this context, we propose three hypotheses.

The Belief Confirming Hypothesis

In some cases, individuals encounter information that confirms their existing belief. In the case of psychic distance, this situation might involve a manager being exposed to information that stresses similarities with a country that the manager already perceives to be close in terms of psychic distance, such as a Canadian manager's view of USA as proposed by O'Grady and Lane (1996). In this case, the manager tends to agree with, accept, and assimilate the information. As a result, the manager perceives the country to be even closer than prior to learning the new information. Similarly, a

manager may be exposed to information that stresses the differences for a country that the manager already perceives to exhibit greater psychic distance. Once again, the manager tends to agree with, accept, and assimilate the information (Klayman, 1995). This leads the manager to perceive the country to be even further away than prior to the exposure. Note that the direction of change in these two cases is opposing (one positive and one negative), but in both cases the information confirms and potentially strengthens a pre-existing belief. This bias in the processing of information, specifically a focus on information consistent with existing beliefs, reflects the third and fourth components of Klayman's (1995) model, and more broadly reflects confirmation bias as conceptualized by Jones and Sugden (2001), Nickerson (1998), and Jonas et al. (2001). Thus, the confirmation bias will lead individuals to shift perceptions to a stronger version of their initial beliefs. This leads to our first hypothesis:

Hypothesis 1: In cases of a belief-confirming information, the post-exposure perceptions of psychic distance of the host country will shift in the direction of the pre-exposure perceptions (i.e. distant countries will be perceived as being even more distant, and proximate countries will be perceived as being even more proximate).

The Belief Disconfirming Hypothesis

In some cases, managers encounter information contrary to their initial beliefs. In cases where the information stresses the similarities for a country perceived to be distant, managers tend to dismiss the information. As a result, their perceptions of the country do not change from pre- to post-exposure. Their biases result in the information being ignored. The managers assume the new data to be incorrect rather than consider that their initial beliefs might be incorrect. Similarly, information that stresses the differences for a country believed to be proximate in terms of psychic distance will result in managers tending to dismiss the information. Again, perceptions of the country do not change. In both of these instances, the presented information is contrary to the existing belief, and as a result, will be ignored or downplayed. Such a perspective continues the application of the writings of Klayman (1995) and others regarding the information processing implications of confirmation bias. Thus, we predict the following:

Hypothesis 2: In cases of belief disconfirming information, the post-exposure perceptions of psychic distance of the host country will not change relative to the pre-exposure perceptions.

The Neutral Scenario Hypothesis

In other cases, managers encounter complex discussions of other countries. They receive both kinds of information (belief confirming and belief disconfirming). A key question emerges regarding the ways in which confirmation bias influences managerial perceptions in this context. According to past research (Friedrich, 1993; Klayman, 1995; Mynatt et al., 1977), when faced with balanced information, at least in terms of its emphasis on similarities and differences between countries, confirmation bias skews managerial processing. This scenario allows for the clearest test of confirmation bias. According to the confirmation bias theory, the pre-existing beliefs held by managers should influence the processing of information. As a result, when respondents are asked to consider a distant country, they will tend to process information emphasizing differences, but they will also tend to ignore or dismiss similarities. As a result, their post-exposure perceptions of psychic distance will tend to be higher. Similarly, when respondents are asked to consider a psychically proximate country, they will tend to process information emphasizing similarities, but they will tend to ignore or dismiss the differences. As a result, their post-exposure perceptions of psychic distance will tend to be lower. As an application of the confirmation bias literature (e.g. Klayman, 1995), this leads to the final hypothesis:

Hypothesis 3: In cases of balanced information, the post-exposure perceptions of psychic distance of the host country will shift in the direction of the pre-exposure perceptions (i.e. distant countries will be perceived as being even more distant, and proximate countries will be perceived as being even more proximate).

METHODOLOGY

Sample

Participants for this experiment were a randomly selected sample of experienced, Australian-based managers drawn from a database of alumni for management education programs (both degree granting and executive short-courses) offered by a university in Australia. Respondents were solicited in two waves of 600 and 400 emails respectively in November 2010 and February 2011. To encourage participation, the participants for each wave of data collection were entered into raffles for an iPad. The first wave yielded 129 complete surveys for a net response rate of 21.5%, and the second wave yielded 71 complete responses for a net response rate of 17.8%. The instrument was piloted on a sample of 35 mature age business students - an average of 35.2 years old.

The two waves of data collection were compared on seven respondent characteristics (Appendix I) and no overall statistically significant difference was found (Manova: $df = 7$, $F = 0.998$, $p > .05$). In total, 73% of the respondents were male, which is broadly comparable to the population of Australian managers in general - 70.2% male as reported by ABS (2009). Overall, the respondents' average age was 41.2 years with 19.4 years of work experience. Thirty-three percent (33%) of respondents classified themselves as senior managers, 29% classified themselves as middle managers, and 34% classified themselves as professionals or consultants.

Experimental Design and the Main Independent Variables

To investigate the confirmation bias effects, the sample of practicing managers completed a 2 x 3 between-subject experimental designⁱⁱⁱ. Each manager (participant) was assigned a specific foreign country (either psychically distant or psychically proximate to the manager's home country), and then exposed to one of three video conditions (varying the nature of the information concerning the country). This design was administered using an on-line survey containing embedded videos. The use of video as an experimental manipulation is commonly found in the psychology and business literatures (e.g. Chen, Yao, & Kotha, 2009; Oaksford, Morris, Grainger, & Williams, 1996). Videos can be characterized as a low involvement, or low attention, source of information about another

country, particularly when compared to the experience of actually living and working in a foreign country. This form of a low involvement source of information is similar to sources of information that a manager may receive prior to actually committing an investment to a particular country, such as a government export promotion program (Reid, 1984), advertising by foreign governments encouraging FDI, training videos preparing employees for overseas postings, or what may be obtained in brief exploratory visits to a foreign country. Fine-grained research (e.g. Bilkey & Tesar, 1977; Calof & Beamish, 1995; Cavusgil, 1980) confirms that the early stages of internationalization, and the accompanying information searches, are often much more opportunistic and unplanned than the one characterized by formal models, and thus rely on such low involvement sources of information.

In order to select two near (proximate) and two far (distant) countries in terms of psychic distance, 119 nations were rank-ordered in terms of their distance from Australia using a formative index based on five dimensions selected from Dow and Karunaratna's (2006) psychic distance stimuli scales (differences in language, religion, industrial development, education and political systems). Using this criterion variable, Vietnam and China were selected as the distant countries from Australia (respectively ranked 90th and 92nd most distant from Australia out of 119 countries) while the United States of America and the Netherlands were selected as the near countries (4th and 8th most distant). Two countries were selected for each condition (near and far) to increase the generalizability of the results. Each respondent was asked to consider one of those four countries.

Three videos were prepared for each of the host countries in order to reflect each of the three hypotheses:

1. A video emphasizing similarities between the nominated country and the manager's home country,
2. A video emphasizing differences between the nominated country and the manager's home country, or
3. A video presenting a balanced view of the similarities and differences between the nominated country and the manager's home country.

The manipulation through this combination of videos and assigned countries results in six distinct treatments. Two are belief confirming, two are belief disconfirming, and two are neutral (see Table 1). This experimental design only tests the third and fourth elements of confirmation bias as espoused by Klayman (1995), i.e. the biases in the interpretation of information and the reluctance to revise beliefs in light of contradictory information. Participants were not given the opportunity to search for new evidence or to develop new hypotheses.

Given time restrictions and concerns about respondent fatigue and response rates, both conditions were tested using a between-subject design; each respondent was only asked to consider one host country and only shown one video condition for that country. The specific details concerning the content and creation of the videos are discussed in the Materials section.

Insert Table 1 Here

Dependent Variable – Perceived Psychic Distance

Ultimately the primary dependent variable of interest in this study is the change in perceived psychic distance in response to the video treatment. As such, perceived psychic distance was measured both before and after exposure to the video for each participant using best-worst scaling (BWS). Borrowed from the field of choice modeling, the BWS technique is an efficient method for determining the strength of an individual's preferences amongst multiple discreet alternatives (Marley & Louviere, 2005), and the technique has recently been validated with respect to the measurement of psychic distance (Dow, 2008). In the present study, respondents were asked to compare the psychic distance from Australia of nine different countries. This set of nine includes the four host countries under investigation, plus five benchmark countries (UK, Japan, Mexico, Brasil and Ecuador). The benchmark countries were selected to maximize the variance in terms of psychic distance from Australia. As is the case in traditional best-worse scaling, each respondent was presented with multiple subsets of countries. In this instance, each subset contained three of the nine countries. For each three-country set, the respondent was asked to select the country "nearest to you in terms of psychic distance" and the country "furthest from you in terms of psychic distance." This ranking of

the nearest and furthest within each group of three countries was repeated for different sets of countries for a total of 12 iterations. This approach enables each country pair to be presented an equal number of times. To score these responses, each time a country is ranked as the nearest in its group of three nations, it is given one point. Each time it is ranked as the furthest, one point is subtracted. Each respondent was cued with the traditional Uppsala definition of psychic distance: “the sum of factors preventing or disturbing the flow of information between firm and market. Examples of such factors are differences in language, culture, political systems, level of education, level of industrial development, etc.,” (Johanson & Wiedersheim-Paul, 1975). A minor additional instruction was appended indicating that we wanted their personal perceptions of this distance.

For analysis purposes, we adopted the approach of Nunnally (1982) and retained the post-treatment score as the dependent variable and used the pre-treatment score as a control variable, rather than explicitly calculating a difference score. Various researchers argue this method offers a superior approach to modeling errors compared to calculating difference scores and using them as the dependent variable (Cronbach & Furby, 1970; Shadish, Cook, & Campbell, 2002).

Supplementary Dependent Variables

We acknowledge perceived psychic distance to be the primary dependent variable for this paper and the focus of our hypotheses. However, two related dependent variables were also measured: (1) the perceived business risk of the host country and (2) the participant’s entry mode preference in a fictitious business scenario. These two additional variables are potential consequences or actions in response to a change in perceived psychic distance; and thus, act as validity checks on our measure of perceived psychic distance. For each of these supplementary variables, participants were given a fictitious business scenario in which they are the most senior manager of a medium-sized Australian manufacturing firm that is considering possible entry modes for a foreign investment in a specific host country. The firm is a high-technology company with difficult to protect tacit firm-specific assets (FSA). We chose this scenario because the impact of psychic distance on perceptions of risk and entry mode choices are thought to be greatest when the firm's FSAs are difficult to protect (Brouthers & Hennart, 2007).

Perceptions of Business Risk

Johanson and Vahlne (1977) popularized the psychic distance concept as one of the key antecedents in their internationalization process model. The Uppsala model predicts that psychic distance will influence managerial actions by increasing the perceived business risk of the host country. In extreme circumstances, the presence of large psychic distances might raise the perceived risk above the firm's tolerable limit. Thus, management would avoid or delay investing in that country. In effect, psychic distance can be viewed as an antecedent of perceptions of country-specific business risk. Thus, we use these perceptions of country-specific business risk as a criterion-related validity check (Kerlinger, 1986) on our measure of perceived psychic distance. For this reason, we measured each participant's perceptions of the riskiness of the host market, both pre- and post-video manipulation, using Forlani, Parthasarathy, and Keaveney's (2008) three item, 7-point Likert scale for measuring risk.

Preferences for a Joint Venture

The underlying logic of the Uppsala internationalization process model (Johanson & Vahlne, 1977) also suggests that another potential reaction of a firm to higher than acceptable levels of business risk (brought about by large psychic distances) would be to adjust the mode in which the firm enters the country. The Uppsala *market commitment postulate* – i.e. the prediction that a firm would enter a market in a low commitment mode until it is able to reduce the risk by accumulating additional experiential knowledge - provides an example of such an adjustment. In a parallel line of argument, Kogut and Singh (1988) suggested that the use of a joint venture with local equity partners may also ameliorate the impact of psychic distance and lower the business risk of the venture. The joint venture partner effectively provides an immediate source of otherwise difficult to acquire experiential knowledge about the local market. This latter prediction, complemented by the transaction cost economics (TCE) literature (e.g. Hennart, 1988), has subsequently influenced a substantial portion of international business research and become virtually synonymous with the term entry mode.

For these reasons, we also measured the participant's preference for a joint venture both pre- and post-video manipulation. In particular, the instrument used is similar to the one employed by

Gatignon and Anderson (1988) and Delios and Henisz (2000). Participants were asked to identify which of four alternative entry modes they preferred: a wholly-owned subsidiary (i.e. 100% equity control), a majority share in a joint venture (i.e. 51% to 99% equity share), a 50-50 joint venture, or a minority share in a joint venture (i.e. < 50% equity share). In a similar fashion to business risk, the preference for a joint venture (i.e. higher levels of local equity participation) was utilized as a supplementary dependent variable in order to provide a validity check on perceived psychic distance, which is our primary criterion variable. The variable was coded as a preference for joint ventures in order to yield the same sign as the perceived psychic distance and business risk variables. Cronbach and Furby's (1970) technique was employed for both the business risk and preference for joint ventures variables. We utilized the post-treatment measure as the dependent variable and the pre-test measure as a control variable.

Materials

The materials created for this experiment are the videos manipulating the information that respondents have available to process. Three videos were prepared for each host country. One video emphasizes differences between the two countries, the second emphasizes the similarities, and the third presents a balanced perspective (in time and number of facts) of similarities and differences (Appendix II provides a sample script for one of the 12 videos).

To create the videos, we first determined the appropriate categories of information to be included. A review of the leading papers on psychic distance was conducted to identify the key dimensions (Evans & Mavondo, 2002; Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975; Maznevski, DiStefano, Gomez, Noorderhaven, & Wu, 2002). Seven major topic areas emerged from this review: 1) language, 2) religion, 3) industrial development, 4) education, 5) political and legal systems, 6) business practices, and 7) culture. The second step was to create the scripts for the videos. A common introduction was used for each video along with appropriate facts, such as examples of similarities and differences along each of the seven dimensions. The facts were drawn from a variety of sources, including the World Factbook (CIA, 2010), the Global Edge database sponsored by Michigan State University, and searches of local country websites. All facts were

double-checked for accuracy. The seven dimensions were addressed in the same order in each video. After the scripts were written, three coders completed an independent count of the unique claims in each script. The number of unique claims were also balanced across topic areas (e.g. ensured an equal number of claims concerning language versus the number of claims concerning religion).

Coders also assessed the strength, believability and relevance of the claims. After finishing the counts, the coders met and resolved any disagreements. Unanimous agreement was found and then the range of the count of unique claims were compared across videos. Initial differences in number of claims were adjusted through the addition of more claims until the range across all 8 bias videos was between 35 to 39 claims. For the balanced videos, the similarity and difference claims were approximately 20 each, resulting in roughly 40 claims per video. Given that differences might exist between claims (e.g. speaking a different language is different from preferring more formal dress) the authors ensured an equal number of claims within each topic area (e.g. differences in language). As described below, this issue was also double-checked by a subsequent pre-test survey.

For the actual video creation, the same images were used for each version. While simple, these images kept the visual component constant across all conditions. The same voice-actor (one of the co-authors who is a native English speaker) narrated each video. Each video was monitored to ensure consistency in total length and time spent on each topic. Overall, each video was between five and six minutes long. For the pairs (i.e. the similarity versus difference videos for the same country), the largest difference in length was 29 seconds. We purposively kept the videos simple, using a voiceover coupled with images of a deck of Powerpoint slides.

One of the final concerns with the development of the videos was the possibility of unintentional biases in the strength and relevance of the claims made in each video. To assess this potential problem, each video was tested on an independent sample of 246 respondents, ranging from 19 to 23 respondents for each of the 12 videos. This pre-test sample is younger than the main sample (35.3 years old versus 41.2 years old), less educated (69% university educated versus 95%), and smaller in the percentage of respondents holding managerial positions (27.6% versus 62%). These demographic factors were controlled for in the pre-test sample analyses. Each person in the pre-test

sample was asked to view one video and then assess the degree to which the video stresses similarities as opposed to differences among the countries in question. In addition, we asked the respondents to assess the degree of relevance of the claims in the video regarding conducting business in a foreign country. We assessed both of these dimensions using a 5-point semantic difference scale. We also asked respondents to complete the same demographic questions as in the main sample.

Concerning the degree to which the videos are similarity-stressing, balanced, or difference-stressing, they were confirmed to be significantly distinct ($F[2,243] = 14.15, p < .001$) as intended. In addition to that, the magnitude of the gaps between them (i.e. between the similarity-stressing and balanced videos and between the balanced and difference-stressing videos) are not significantly different from each other ($t = 0.66, p = .51$). However, the critical issue is not just whether the three conditions are distinct and roughly equal intervals, but rather that these characteristics do not vary between the confirmatory, neutral, and disconfirmatory conditions and thus might potentially bias the results. To test this possibility with maximum statistical power, the degree of similarity was regressed on both the variable coding the videos as similarity-stressing, balanced or difference-stressing, and the variable coding the videos as confirmatory, neutral or disconfirmatory. The regression was significant ($F [2,242] = 14.23, p < .001$), but the relationship was entirely driven by the variable coding similarity-stressing versus difference stressing videos (i.e. the intended distinction). The variable indicating whether the video was confirmatory, neutral or disconfirmatory was non-significant ($t = 0.65, p = 0.514$), indicating that there appears to be no significant bias across the treatments.

A similar set of analyses was conducted to test the relevance of the claims made in the video. Once again the key attribute, the relevance of the information, was regressed on the variable indicating whether the video was a confirmatory, neutral, or disconfirmatory. The confirmatory nature of the videos was non-significant with respect to the perceived relevance of the information even when controlling for differences in the demographics ($F[1, 244] = 1.09, p = .297$). In summary, the pre-test analyses indicate that the videos are not unduly biased in terms of the strength and relevance of the claims. These results were also repeated controlling for the age, experience and occupation of the respondent with effectively the same results.

Structure of the Survey

At the start of the survey, participants were asked to assess their perceptions of the psychic distance of nine countries using the BWS scaling technique. The participants were then provided with a one-page business scenario where they assumed the position of a senior manager of a medium-sized Australian manufacturing firm considering a possible foreign investment in a specific country. Respondents were then asked to assess the business risk of the proposed investment and indicate their preferred entry mode.

In the next step, participant demographic information was collected to help clear each respondent's short-term memory before the video manipulation. The participants were then randomly assigned to one of three video conditions (a similarity-stressing, a difference-stressing, or a balanced presentation) pertaining to the host country to which they had been assigned. In total, there are 12 video conditions (4 countries x 3 biases); however, each respondent was exposed to only one of the 12 videos. After watching the video, the respondent was asked to note as many of the seven dimensions discussed in the video as possible, and to also note the most surprising fact from the video. This step, along with a timer that recorded the actual viewing time, enabled us to confirm whether the respondents actually watched the videos.

After the video treatment, participants were asked to respond to the best-worst scaling psychic distance questions a second time, and to read and assess the same business scenario as in the first half of the survey. This process enabled us to estimate both the pre- and post-video perceived psychic distance, perceptions of business risk, and entry mode preferences.

RESULTS

Prior to formally testing the hypotheses, a number of preparatory steps were completed. First, a confirmatory factor analysis was conducted for the three-item measure of perceptions of business risk. The analyses indicated that for both the pre-test and post-test measurement of perceptions of business risk the factor loadings were all high and statistically significant, and that the overall reliabilities of

0.927 and 0.946 respectively were well within acceptable limits (Nunnally, 1978). In each case, a composite score was created as the average of the measures of that variable.

The average pre-test scores of perceived psychic distance of each country were inspected to confirm our selection of countries (see Appendix III for a full listing). As expected, the two proximate countries: USA and Netherlands, fall below the median distance from Australia in terms of perceived psychic distance, while the two distant countries: China and Vietnam, are both above the median. More importantly the perceived psychic distances of the proximate countries are significantly lower ($t= 12.74, p < 0.001$) than the perceived distances of the distant countries; thus confirming that they are correctly classified. Experience and managerial status were also examined as possible controls, but had no impact, so results are reported without them.

The final preliminary check was taken to determine whether some participants did not understand the task. To test this possibility, the post-test perceived psychic distance was regressed on to the equivalent pre-test scores. Respondents with absolute standardized residuals greater than 3.0 would be expected less than 0.3% of the time, but in our sample of 200, we observed three such cases (1.5% of the sample). These cases concerned an belief similarity stressing video about Vietnam, a balanced video concerning Vietnam, and a difference stressing video concerning China were regarded as outliers and eliminated from subsequent analyses (Aguinis, Gottfredson, & Joo, 2013; Hair, Anderson, Tatham, & Black, 1998). This process reduced the sample population to 197 respondents. Descriptive statistics and intercorrelations for all measures from these respondents are shown in Table 2.

Insert Table 2 Here

To test the hypotheses, the post-test perceived psychic distance was regressed on the pre-test perceptions of distance, plus three variables indicating the relevant video treatments (i.e. confirming, neutral and disconfirming videos). If a confirming video was shown, the confirming video variable was coded with a non-zero value; however, there are actually two types of confirming scenarios as

illustrated in Table 1. A participant may be shown a difference-stressing video concerning a country he or she believes to be distant. In this case, the confirming video variable was coded +1 to reflect a predicted increase in perceived distance. Alternatively, the participant may be shown a similarity-stressing video concerning a country that he or she believes to be proximate. This constitutes another confirming video; however, the variable was coded -1 to reflect a predicted decrease in perceived distance. In all other instances the confirming video variable was coded zero. We repeated this pattern for the neutral video and disconfirming video variables. In this manner, all three hypotheses were tested simultaneously.

Model 1 in Table 3 indicates that the overall regression model predicting post-test perceived psychic distance is highly significant ($F = 506.4$, $df = 4$, $p < .001$) and explains 91% of the variance; however, the high level of fit is primarily driven by the pre-test measure of distance. Within this model, all of the three video treatment variables confirm their relevant hypothesis.

In a test of H1, the coefficient for the confirming video is positive and significant ($b = .716$, $t = 6.59$, $p < .001$). Confirmatory information significantly increases the perceived distance for far countries and decreases the perceived distance of near countries.

In a more elaborate test of confirmation bias, the coefficient for the neutral video was also positive and significant ($b = .463$, $t = 4.10$, $p < .001$), confirming H3. This result illustrates that even when balanced information is provided, the perceived distance for far countries increases and the perceived distance for near countries is reduced. Essentially, the effect reverses direction depending on the prior beliefs.

Finally, in a test of H2, the coefficient for the disconfirming video is non-significant as predicted ($b = -.171$, $t = 1.55$, $p > .10$). The disconfirmatory information appears to have no significant effect on perceptions of psychic distance, supporting H2.

Nevertheless, one concern is that since H2 is a null hypothesis, the result may possibly be driven by a lack of statistical power. However in this case, the non-significant coefficient is negative rather than positive, which is not in the direction that one would expect if a confirmation bias were completely absent. As a further test, we compared the difference in the magnitude of the confirming

video coefficient with the coefficient for the neutral video (Δb_{cn}), and the difference in the magnitude of the neutral video coefficient with the coefficient for the disconfirming video (Δb_{nd}). Both differences are highly significant ($\Delta b_{cn} = 0.634, F = 13.19, p < .001$; and $\Delta b_{nd} = 0.253, F = 3.502, p = .037$, respectively). These findings demonstrate that in each step, as the degree to which the video confirms prior beliefs increases (i.e. moves from disconfirming to neutral and then to confirming), the magnitude of the impact on post-test perceptions increases significantly, supporting all three hypotheses.

Insert Table 3 Here

Models 2 and 3 in Table 3 repeat these same analyses using the two supplementary criterion variables: perceptions of business risk and preferences for joint ventures. While the explained variance gradually decreases across the three models (from 91.2% to 71.5%), the models are still statistically significant and support all three hypotheses. The confirming videos significantly increased perceived psychic distance, perceptions of business risk, and preferences for joint ventures. The disconfirming videos had no significant effect, while the neutral videos had generated significant effects, and the confirming video impact was significantly greater than the neutral video impact for both Models 2 and 3 ($F[1,192] = 15.63, p < .001, F[1,192] = 9.58, p = .002$, respectively).

Given the cascading relationship between the three criterion variables in Models 1, 2 and 3, subsidiary analyses were also conducted to confirm to what extent perceived psychic distance mediates the impact of confirmation bias on perceptions of risk and entry mode choice. In each case the evidence indicates a partially mediated relationship. These results are not reported here but are available on request from the authors.

For ease of interpretation, Table 4 demonstrates the same relationships by providing the mean changes in perceptions and preferences (pre-test to post-test) for each of the six possible treatment combinations. For each criterion variable, the change in score is the residual of regressing the post-test perception (or preference) on the pre-test perception (or preference), without any additional variables

in the model. A clear pattern becomes apparent when comparing the mean changes down each column (e.g. the left hand column compares the changes in response to a similarity-stressing video). For the more heavily shaded belief confirming treatment cells, the shifts in all three of the perceptions and preferences are quite pronounced in the direction of the pre-existing beliefs, while the changes in the more lightly shaded belief disconfirming treatment cells are close to zero. This indicates that the respondents seem to systematically process the messages that reinforce their pre-existing beliefs (H1), while ignoring (or not processing) the messages that contradict their pre-existing beliefs (H2).

Insert Table 4 Here

The middle column of Table 4 provides a demonstration of how the same bias may become manifest even within a balanced video (H3). For the distant countries, the participants with an initial perception of high distance appear to only process the portions of the message that reinforce the differences between the countries and in the process, increase perceptions of distance and risk. Conversely, for the psychologically proximate countries, the respondents with an initial perception of low distance appear to process the portions of the message that reinforce the similarities, resulting in lower perceptions of distance and risk.

DISCUSSION AND IMPLICATIONS

This research draws upon the social cognition literature in order to explore the processes that shape an individual's perceptions of psychic distance and specifically demonstrate that confirmation bias appears to have a significant impact on managerial perceptions of psychic distance. Through the use of an experimental design, we demonstrate that even with a relatively modest intervention (i.e. a 5 to 6 minute video), the impact of confirmation bias on perceptions of distance and risk, as well as managerial choices can be detected. This research fits into the emerging research topic of behavioral strategy and indicates that this growing field offers the potential to make significant contributions to our understanding of strategic decision-making (Powell, Lovullo, & Fox, 2011).

From a social cognition perspective, this research represents, to our knowledge, one of the first applications and testing of confirmation bias in an international business setting. While the social cognition literature broadly acknowledges the concept of confirmation bias, its presence and implications in an international business setting have yet to be tested. Our findings indicate that managers seem to be more likely to process information and revise their perceptions of distance and risk, and their preferences for particular entry modes, when that information confirms their original beliefs. When the information contradicts their beliefs, they do not seem to process the information and/or are resistant to revising their perceptions and preferences. As a result, when managers are faced with a proximate (or distant) country, they may tend to underestimate (or overestimate) how different that country is from their own in terms of psychic distance, due to biases rooted in past experiences and existing beliefs regarding that country. Consequently we argue that these findings have broadened the application of the confirmation bias construct and illustrated its potential impact on significant international business decisions. As managers consistently face not only new information, but are then expected to make decisions based on the processing of that information, the role of confirmation bias is potentially broad. As a fundamental part of decision making across many different settings including daily life for individuals, our results begin to illuminate the process by which managers' perceptions of psychic distance change over time. Therefore, these results constitute the first step in what could potentially become a large research agenda that examines the process by which managers form perceptions of psychic distance.

From an international business perspective, this work represents one of the few efforts to understand the underlying processes that shape perceptions of distance. A consensus appears to have emerged, suggesting that the more abstract forms of distance, such as psychic distance, should be considered in terms of individual-level perceptions of distance rather than with national-level indices based on secondary sources. If such is the case, then we should seek to understand the factors that shape these individual-level perceptions and thereby better understand when, how, and why they might deviate from the traditionally employed national-level indices. These issues have not been discussed or explored to any significant extent in the current international business literature. Some

work has begun in this area (i.e. Håkanson & Ambos, 2010; Sousa & Bradley, 2006), but this paper extends those efforts by drawing on the field of social cognition and bridging the psychology and international business fields. Our paper is by no means exhaustive in explaining the drivers of perceptions of distance, but it does represent an important step in a new area of international business research.

Within the international business context, this work provides a theoretical basis for a well-known but relatively underexplored observation found in the O'Grady and Lane (1996) article regarding the psychic distance paradox. The outward manifestation of the paradox, that a positive link between psychic distance and performance might exist, has been explored (e.g. Evans & Mavondo, 2002); however, no research to our knowledge has explored the underlying mechanisms of the phenomena. We believe confirmation bias may indeed be one of the underlying mechanisms. As such, we hope that this paper advances our theoretical understanding of the paradox predictions as it provides partial empirical evidence to support those claims.

From a methodological perspective, this research may make a contribution by responding to both Leung et al.'s (2005) call for the greater use of the experimental approach and to Tung and Verbeke's (2010) call for more micro-level studies involving individual managers. If those involved in the field of international business wish to understand the mechanisms underlying managerial choices, such as entry mode choices, additional micro-level research is needed.

A major implication of this paper for researchers concerns how to measure psychic distance. Some commentators (e.g. Dow & Karunaratna, 2006, Zaheer et al., 2012) argue that measuring the decision maker's *a priori* perceptions of distance is a more appropriate approach than using exogenous national averages or *post hoc* perceptions of distance, but such an approach may not be practicable. As a result, when forced to adopt alternative approaches to measuring distance, such as secondary indicators, one needs to be cognizant that information processing biases, such as the confirmation bias, may distort subsequent results.

In terms of managerial implications, this study offers a timely reminder that the backgrounds of employees and the resulting information biases may influence their decision-making processes.

This may systematically cause managers to overlook opportunities in more distant markets and to overemphasize the potential opportunities in proximate markets. Conversely, the judicious selection of employees with broader international experiences and backgrounds may help to overcome such biases.

This research also offers implications for the short-term training courses used to prepare employees for international postings that may benefit international human resource managers. The effectiveness of such training of programs constitutes a complex topic; however, our results indicate that at least with respect to shifting short-term perceptions of a foreign country, low involvement training programs may have limited impact.

As is the case with all experimental research in the social sciences, we need to be cautious about whether the behaviors in an experimental setting accurately reflect how people are likely to behave in general. In this specific instance, while we have taken extensive measures to ensure an appropriate sample of respondents experiencing a realistic scenario, we cannot replicate the actual financial risk that such a decision entails. As a result, the possibility exists that the participants may have been more risk-seeking than in a real-life situation, as nothing is truly at risk. Thus, our results may understate the degree to which people respond to and attempt to mitigate those risks. We call on future researchers, as best as possible, to investigate actual decisions made by actual decision makers. Even though this data would be difficult to collect, it may be worthwhile to do so.

Another potential limitation of this research rests in the use of a simple intervention: a 5 to 6 minute video designed to measure short-term shifts in perceptions and preferences. However, we argue that particularly in the early stages of internationalization, the search process can be idiosyncratic and opportunistic. In that sense, a short video might simulate the forms of information a manager receives from government export facilitation programs, host country campaigns encouraging inward foreign direct investment, brief overseas visits, and company training programs. The critical issue here is not the duration of the intervention and/or the effect, but whether the effect becomes evident under some circumstances (i.e. when it is belief confirming) and not evident in others (i.e. when it is belief disconfirming). Our results indicate that a systematic confirmation bias in short-term

processing of information and in the resulting perceptions does occur. Still one corollary remains. Does this bias also occur with respect to longer term information processing and a more substantial exposure to information about a market? In one sense, more sustained exposure to information may merely entrench existing beliefs even further; however, it may also be the case that more extensive exposure, such as living in a foreign environment for a sustained period, may make it more difficult to deny disconfirming information. Thus, the confirmation bias effects may be profound in the early stages of a manager's international career, but once he or she has a sustained exposure to a country, the effect may dissipate. Future research may need to utilize more traditional research methods in order to look for confirmation bias regarding these issues. It would not be practical to test them using an experimental approach. Future research is needed that links the large body of research regarding cultural intelligence, international human resources, and cultural training to the relatively isolated study of psychic distance. The move to an individual-level analysis allows for a better link between these two important bodies of research.

A third limitation to these findings emerges from the realization that many business decisions are made by a top management team rather than by one individual. Thus, while a shift from national averages to the perceptions of one individual represents a significant improvement, additional work needs to be undertaken regarding the ways in which individual preferences translate into a decision by a team. This may lead to an examination of group behaviors, and group decision-making, including investigations of constructs such as group polarization and group-serving bias. Understanding the role of group dynamics in decision-making remains a key relatively unexplored issue for psychic distance research.

A fourth concern results from the complication that an individual's perceptions of distance may be contingent on context. For example, perceptions of distance may be high when one considers a long-term investment in manufacturing facilities, but the perceptions may be lower when the person considers a once-off export of product. The context of our experiments controls this aspect; however, generalization of the results to other contexts should be undertaken with caution. These contexts represent a potentially fruitful area for future research. All perceptions, and all countries, are not

created nor processed equally. By acknowledging this false assumption of equivalence, we open the door allowing in many interesting questions to be investigated.

In terms of other avenues of future research, a great deal of potential emerges from the social cognition literature. To date, little research has focused on the perceptions of distance and to our knowledge only one paper (Sousa & Bradley, 2006) has concentrated on detecting biases in those perceptions. In contrast, extensive research has been conducted on actual managerial choices (e.g. market selection and entry mode choices). Thus, substantial evidence may be found concerning the decisions managers typically make, but a great deal less about the reasons why they make them. An obvious first step is replication and confirmation of our findings with respect to confirmation bias; however, moving beyond that, we also need to understand what factors might moderate the magnitude of any confirmation bias. For example, does the strength of the bias change with the strength of the belief, with the depth of knowledge in the relevant area, or possibly with the degree of cognitive complexity (e.g. Bieri, 1955) or cultural intelligence (Thomas, 2006)? Moreover, the core question of how managerial choices change over time is grossly under-researched.

More research is also needed on the basic linkage between the national-level indices and perceptions of distance. Which dimensions, such as differences in language, religion and culture, are more critical in the formation of perceptions of distance, and what factors moderate their relative importance? For example, Håkanson and Ambos (2010) find that geographic distance is the single strongest predictor of perceptions of distance. This is somewhat surprising given that Beckerman (1956) coined the term to account for trade patterns not explained by geographic distance. This represents an interesting paradox that has not yet been explained.

Moving into the broader social psychology literature, social identity theory (Tajfel, 1974) may be able to shed new light on what shapes our perceptions of distance. This may be particularly powerful within the context of language differences and knowledge flow (Rieche, Harzing, and Pudelko, 2015). Similarly, attribution theory (Heider, 1958) may provide insights into the role that perceptions of distance may play in cross-national joint ventures. To this extent we have only just

begun to scratch the surface in terms of how existing social cognition theories may play a role in explaining international business decisions.

Another interesting avenue for investigation is whether the international behaviors commonly linked to psychic distance are normative, or are they merely descriptive. For example, is the gradual internationalization associated with the Uppsala model (Johanson & Vahlne, 1977) truly in the best interests of the firm? For example, is it a rational response to risks brought about by barriers to communication, and as such can be linked to firm survival or superior performance in the long run; or is it to some extent a misguided behavior resulting from biases in the information processing and decision making? The results presented here imply that there may be an element of truth to the latter interpretation.

In conclusion, our argument is that the use of more abstract forms of distance in international business research may have reached an inflection point. When trying to predict firm behavior, broad national-level indices have played an appropriate role in the research to date, but now a shift in the unit of analysis closer to the actual decision makers (individual-level perceptions of distance) should take place. Such a shift in focus opens up new research agendas. In particular, we need to explore and understand processes that shape those individual-level perceptions of distance. What are the key factors shaping those perceptions, and what biases may be involved in the process of assimilating new information about foreign markets? This effort offers both an approach to thinking about those issues as it draws from the field of social cognition to provide some preliminary evidence on how confirmation bias may play a role in distorting people's perceptions of distance.

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Table 1 Information Conditions and Predicted Impact on Perceived Psychic Distance

		Information Conditions		
		Similarity-Stressing Video Presentation	Balanced Video Presentation	Difference-Stressing Video Presentation
Pre-existing Perceived Psychic Distance of Host Country	High	Disconfirming – no change in perceptions of distance	Neutral – will increase perceptions of distance	Confirming – will increase perceptions of distance
	Low	Confirming – will lower perceptions of distance	Neutral – will lower perceptions of distance	Disconfirming – no change in perceptions of distance

Table 2 Means, Standard Deviations, and Correlations Among Measured Variables ^t

Variable	<i>M</i>	<i>SD</i>	Pre-test perceived psychic distance	Pre-test perceptions of business risk	Pre-test preference for joint ventures	Post-test perceived psychic distance	Post-test perceptions of business risk	Post-test preference for joint ventures
Pre-test perceived psychic distance	-0.42	2.49	1.00					
Pre-test perceptions of business risk	4.10	1.43	0.32 **	1.00				
Pre-test preference for joint ventures	1.94	0.84	0.31 **	0.01	1.00			
Post-test perceived psychic distance	-0.57	2.64	0.94 **	0.34 **	0.36 **	1.00		
Post-test perceptions of business risk	4.12	1.64	0.44 **	0.89 **	0.12	0.51 **	1.00	
Post-test preference for joint ventures	2.06	1.00	0.44 **	0.12	0.79 **	0.52 **	0.32 **	1.00

^t $n = 197$, * if $p < .05$, ** if $p < .01$.

Table 3 Factors predicting post-test perceptions and preferences ^t

Dependent variable:	Model 1 <i>post-test perceived psychic distance</i>	Model 2 <i>post-test perceptions of business risk</i>	Model 3 <i>post-test preference for joint ventures</i>
Pre-test perceived psychic distance	.873 *** (.031)		
Pre-test perceptions of business risk		.877 *** (.036)	
Pre-test preference for joint ventures			.858 *** (.047)
Confirming video	.716 *** (.109)	.763 *** (.081)	.505 *** (.065)
Neutral video	.463 *** (.113)	.339 *** (.079)	.220 ** (.067)
Disconfirming video	-.171 (.110)	-.046 (.083)	-.094 (.069)
F (df)	506.4 (4,192)	296.2 (4,192)	123.9 (4,192)
P	< 0.001	< 0.001	< 0.001
Adjusted R sq.	0.912	0.858	0.715

^t Unstandardized coefficients and standard errors (in parentheses) are reported for each independent variable; two tailed probabilities are indicated as follows: * if $p < 0.05$, **if $p < 0.01$ and *** if $p < 0.001$.

Table 4 Mean Change in Scores by Treatments ^t

		Similarity-stressing video	Balanced video	Difference-stressing video
		<i>Belief disconfirming treatment</i>	<i>Neutral treatment</i>	<i>Belief confirming treatment</i>
Psychically Distant Countries	Change in perceived psychic distance	-.02 (.53)	.08 (1.07)	.70 (.89)
<i>(China & Vietnam)</i>	Change in perception of business risk	-.09 (.67)	.27 (.66)	.76 (.92)
	Change in preference for joint ventures	-.02 (.43)	.35 (.63)	.52 (.66)
		<i>Belief confirming treatment</i>	<i>Neutral treatment</i>	<i>Belief disconfirming treatment</i>
Psychically Proximate Countries	Change in perceived psychic distance	-.33 (.84)	-.32 (.83)	.03 (.61)
<i>(USA & Netherlands)</i>	Change in perception of business risk	-.54 (.54)	-.25 (.63)	.03 (.35)
	Change in preference for joint ventures	-.47 (.53)	-.08 (.51)	-.16 (.39)

^t Changes in scores are based on the residuals of the post-test variable regressed on the corresponding pre-test variable.

Appendix I Descriptive Statistics Concerning Respondents (n = 200)

	Mean	Std Dev	Minimum	Maximum
Age (5 point scale - 10 year intervals)	2.67 (41.2 yrs)	1.02 (15.8 yrs)	1 (20 – 29 yrs)	6 (70+ yrs)
Years of work experience	19.4	9.6	2	50
Size of employer (# of employees)	17,878	52,975	1	400,000
Gender (male)	73%			
University education	95%			
In full-time employment	82%			
Role within Most Recent Employer:				
Senior Managers	33%			
Middle Managers	29%			
Professionals/Consultants	34%			
Other (including Sales)	4%			

Appendix II: Script for Australia – China Neutral Video

Introduction

This brief segment focuses on China. The goal of this presentation is to inform you on various aspects of that country, in preparation for your upcoming investment decision.

Language

There are many aspects of a country that may be relevant to a potential investment decision; and the various languages of a country is the first of such issues. Similarities and/or differences in languages can have a substantial impact on a firm's ability to communicate with local customers, suppliers and even employees.

While Australia and China have distinctly different dominant languages, many Australians might not be aware that even within China, there are huge linguistic variations. What we nominally refer to as 'Chinese', actually includes six very different languages. Fortunately, it is also true that the use of the English language in China is widespread and growing rapidly. The Economist reported in 2006 that up to one fifth of the population is learning English.

Religion

A second issue which can influence a firm's ability to conduct business in a foreign country is the dominant religion. Religion has a potentially powerful impact on people's value systems, and can influence how they behave and interact with one another.

In terms of religious affiliation and attitudes, Australia and China are quite distinct. While a very large proportion of the Chinese population has no religious affiliation, the remaining portion of the population is heavily skewed to a mixture of Chinese-folk religions, Taoism and Buddhism (approximately 17%). Nevertheless, many Australians may not realize that Christianity has gone through several cycles of popularity in China since first being introduced in 635 AD, and it is once again on the increase. Independent estimates of the number of practicing Christians in China range from 40 million to 54 million people.

Industrial Development

A third factor which may influence a company's ability to conduct business in a foreign country is the level of development. This not only influences the cost of labour in a country and consumption patterns, but it also arguably shapes the attitudes, beliefs, values and behaviours of the population in general.

Despite its miraculous industrial growth over the past decade, the differences between Australia and China in terms of economic and industrial development are still substantial. In particular, China is still a heavily rural agrarian society with almost 40% of its workforce in agricultural production compared to 5% for Australia. However, in the major coastal cities of China, the overall standard of living, the consumption of consumer goods, and prominence of the service economy are rapidly approaching Australian standards.

Education

A fourth important issue is the similarities and/or differences in the educational systems of countries.

China has recently implemented major reforms in education intended to produce more able people and in turn develop an education system more like Australia where education is available to all

people. However, China's education system is a substantially more varied, and is still in need of much modernization.

Political & Legal Systems

A fifth critical issue with respect to doing business in another country is similarities and/or differences in the legal and political systems.

In contrast to Australia, China is only nominally a democratic government. While, the President and Vice-President is elected by the National People's Congress (NPC) for a 5 year term, machinations behind the scenes truly determine who serves in these positions. In China, the NPC is deemed to be the highest organ of state power as per the Chinese constitution and is partially composed of a permanent body called Standing Committee of the NPC. Nevertheless, in recent years, Chinese political system has become more open and democratic, and the country has started legal reforms to shift their system to one more similar to Australia.

Business Practices

A sixth but potentially more subtle issue is similarities and/or differences in actual business practices. This can involve simple, but potentially embarrassing issues such as how to properly greet people, and attitudes towards time.

While Chinese culture obviously is different from Australia's it is important to be just as aware of the similarities as of the differences. For example, being extremely late for an appointment is considered an insult in both cultures. Dress is also similar, and jeans are acceptable casual wear for both men and women. Business meetings over food are also common. During a meal, expressing enthusiasm about the food you are eating is a welcome, and usually expected, topic of conversation.

However, there are also some striking differences in business practices between the countries. As an initial example, most Chinese workers take a break between 12:00 p.m.- 2:00 p.m. Practically everything "shuts down" during this period, including elevator and phone services. A common problem in communication revolves around the word 'no.' Negative replies are considered impolite. Instead of saying 'no', answer 'maybe', 'I'll think about it', or 'We'll see' and get into specifics later. You'll find that the Chinese will do the same. The Chinese also tend to be driven more by emotions than figures during negotiations and for business decisions.

Culture

The seventh and final issue is the broader set of cultural values which are commonly shared by a large portion of a country's population. Countries can vary in terms of the emphasis placed on individuality (versus conformity), attitudes towards uncertainty and ambiguity, attitudes towards authority and social inequities, and not the least, attitudes concerning how gender roles are allocated in society.

Not surprisingly, the Chinese are different from Australians in terms of many cultural values. The largest difference is in terms of the role of the individual vs. the importance of the group. China is strongly collectivist and individuals are expected to subsume their own wants for the benefit of the group. Interestingly, these differences do not include masculinity or relationships between genders. Women in China enjoy opportunities and status similar to women in Australia.

This concludes our brief presentation on China.

Appendix III Perceived Psychic Distance by Country ^t

Country	Pre-test perceived psychic distance	Post-test perceived psychic distance
UK	-3.25 (1.37)	-3.29 (1.27)
USA	-3.01 (0.96)	-3.07 (0.93)
Netherlands	-0.93 (1.61)	-1.14 (1.50)
Japan	0.00 (1.89)	0.07 (1.75)
Mexico	0.73 (1.83)	0.72 (1.70)
Brazil	1.10 (1.40)	1.18 (1.45)
China	1.06 (2.22)	1.34 (2.25)
Vietnam	1.61 (2.08)	1.62 (1.92)
Ecuador	2.69 (1.47)	2.58 (1.46)

^t Mean values across all respondents ($n = 200$) with standard deviations reported in parentheses.

ⁱ We note that in the field of International Business (IB) the terms perception, belief and attitude are used more interchangeably than in the field of psychology. In order to better reflect the usage in work on confirmation bias, in this paper we use the term belief whenever possible.

ⁱⁱ For the purposes of our literature review, we group together the concepts of psychic distance, cultural distance and institution distance because numerous authors tend to use them interchangeably, and in particular because the same metrics are often used to measure all three constructs.

ⁱⁱⁱ It should be noted that this paper is only reporting on part of a larger research project, which includes an additional dimension (i.e. the overall design is 2 x 3 x 2). The additional dimension - the nature of the fictitious firm's competitive advantage - was a within-subject variable. Appropriate controls were put in place and tests conducted to confirm that the additional dimension did not confound the results presented in this paper. Additional information concerning this aspect of the study is available on request.