

2011

## Rendering Borders Obsolete: Cross-Cultural and Cultural Psychology as an Interdisciplinary, Multi-Method Endeavor

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### ScholarWorks Citation

Author, F. M. (2011). Title of chapter. In F. Deutsch, M. Boehnke, U. Kühnen, & K. Boehnke (Eds.), *Rendering borders obsolete: Cross-cultural and cultural psychology as an interdisciplinary, multi-method endeavor: Proceedings from the 19th International Congress of the International Association for Cross-Cultural Psychology*. (URL)

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# Rendering Borders Obsolete: Cross-Cultural and Cultural Psychology as an Interdisciplinary, Multi-Method Endeavor



A peer-reviewed book based on presentations at the XIX Congress of the International Association for Cross-Cultural Psychology, 2008, Bremen, Germany.

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ISBN 978-0-9845627-2-5

Citation format:

Author, F. M. (2011). Title. In F. Deutsch, M. Boehnke, U. Kühnen, & K. Boehnke (Eds.), *Rendering borders obsolete: Cross-cultural and cultural psychology as an interdisciplinary, multi-method endeavor*. Bremen, Germany: International Association for Cross-Cultural Psychology. Accessed via [www.iaccp.org](http://www.iaccp.org)

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## **Can Happiness change? An Interdisciplinary, Multi-Method Investigation of the Dynamics of Happiness**

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### **Abstract**

None of the major basic questions social sciences are concerned with can satisfyingly be answered from the perspective of one discipline alone. Each of them proposes theories and perspectives that make unique and important contributions. At the same time theoretical perspectives in general inevitably do have their blind spots. This fundamental insight was the reason for us to choose as the motto for the 19<sup>th</sup> IACCP congress held in Bremen in 2008 “Crossing borders – (Cross-) Cultural Psychology as an Interdisciplinary, Multi-Method Endeavor”. In this chapter we first want to illustrate this motto and our reasons for choosing it by reviewing recent research on one exemplary basic question of the social sciences: Can happiness change? We will cover findings across the social science disciplines in order to illustrate the benefits of interdisciplinary, multi-method investigations. This review will also reveal that the recent evidence violates traditional mono-disciplinary views on the respective question. After that, we will briefly introduce the contributions of this volume.

Humans strive for happiness. Yet, the pursuit of happiness is often confronted with the most pessimistic outlook by psychologists, economists, biologists, sociologists, and political scientists. After decades of research on happiness, the majority of scholars from various scientific disciplines agree on this claim: at least in the long run happiness remains constant. While many factors have been identified that contribute to the general level of subjective well-being (for an overview see Kahneman, Diener & Schwarz, 1999), research on both societal and individual levels of analysis implies that as time passes people remain on their level of happiness in the “hedonic treadmill” (Brickman & Campbell, 1981; Diener, Suh, Lucas & Smith, 1999; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). On the societal level, sociologists and political scientists have shown for instance that although richer populations tend to be happier than poorer ones, a society’s average happiness is a constant that remains unchanged, even if per capita incomes increase for most of the population (Easterlin, 1974, Kenny, 2004). Studies on the individual level show that biological factors play an important role in one’s sense of well-being (Ebstein, Novick, Umansky, Priel, & Osher, 1996; Hamer, 1996), and the average level of happiness may in fact be partly heritable as twin studies suggest (Lykken & Tellegen, 1996; Lyubomirsky, Sheldon, & Schkade 2005). As a consequence, individual differences in happiness may resist change (Diener & Lucas, 1999). Many authors agree that happiness fluctuates around a more or less fixed set-point (Headey & Wearing, 1989; Larsen, 2000; Williams & Thompson, 1993) suggesting that no efforts can bring about substantial and lasting changes in happiness. Not only biological, but also cognitive factors contribute to the stability of happiness, such as for instance social comparisons (Festinger, 1954; Kahneman & Miller, 1986; Mussweiler, 2003). Merton and Kitt (1950) argued that individuals derive their life-satisfaction from comparing themselves to others belonging to their ‘reference group’. This concept can partially explain why the average level of subjective well-being across a society remains stable, even though its members become more affluent: The evaluative outcome of social comparisons does not change, if an individual gets richer and the members of the reference group become more affluent simultaneously. Individuals are even equipped with mechanisms that prevent (negative) changes in subjective well-being. The human capacity to cope with and adapt to both positive and negative events is striking. In fact, research has shown that people underestimate the adaptive potentials of their ‘psychological immune system’. As a result they tend to overestimate the duration of their affective reactions to events in the future (a phenomenon called ‘immune neglect’; Gilbert, Pinel, Wilson, Blumberg & Wheatley, 1998; Igou, 2008). To summarize, traditional research in various domains on both societal and individual levels of analysis converges on the straight forward conclusion: Despite the fact that people may strive for improvements in their subjective well-being, happiness does not change.

### **Happiness can change!**

However parsimonious and consistent this evidence might seem, recent research challenges this notion substantially. Recent data from Political Science (the World Value Survey, WVS) shows that there is an (almost) worldwide trend toward higher levels of subjective well-being. Inglehart, Foa, Peterson and Welzel (2008) analyzed data from 1981 to 2007 and found that happiness rose in 45 of the 52 countries. Furthermore their analyses suggest that the extent to which a society allows freedom of choice has a major impact on happiness. Since 1981, economic development, democratization, and rising social tolerance have increased the extent to which people perceive having free choice, which in turn has led to higher levels of happiness around the world.

Yet, this world-wide trend does not take place without exceptions. Over the 1990 - 2000 decade happiness in China plummeted despite massive improvement in material living standards. Brockmann, Delhey, Welzel and Yuan (2009) explained this so called “China puzzle” by drawing on a specific version of relative deprivation theory, the concept of “frustrated

achievers.” They found that income inequality in China became increasingly skewed towards the upper income strata, so that related to the average income the financial position of most Chinese worsened. Consequently, financial dissatisfaction rose and became an increasingly important factor in depressing happiness.

Inglehart et al. (2008) explain the (almost) worldwide increase of happiness with what they call “empowerment”: With increasing extent to which people endorse self-expression values, identified by the World Value Survey, agency related motives become subjectively more important. Personal freedom and control over one’s life are conducive to perceiving the self as a self-determined agent, which is conducive for a person’s sense of subjective well-being. Obviously, the work by Inglehart et al. (2008) challenges the traditional views held by many psychologists and sociologists that at least in the long run happiness remains stable.

Yet again, we believe that recent psychological research has also made significant steps forward in explaining cultural difference in the construal and experience of happiness that may stimulate further large scale survey research in the other social sciences as well. From a psychological perspective agency is only one of two fundamental dimensions of human motives and behavior with communion being the other. These basic dimensions have different names and slightly different meanings, and they were studied in different research contexts like person perception, self research, personality, group perception, or values. Bakan (1966) introduced the terms of agency versus communion and described them as “two fundamental modalities in the existence of living forms, agency for the existence of an organism as an individual and communion for the participation of the individual in some larger organism of which the individual is part” (pp. 14–15). Agency arises from strivings to individuate and expand the self and involves such qualities like instrumentality, ambition, dominance, competence, and efficiency in goal attainment. Agentic traits like being active, decisive, self-confident, and efficient are profitable and useful in the perspective of the self because they help to attain one’s goals. Communion, conversely, is the dimension primarily related to the interests of others. Communion arises from a striving to integrate the self in a larger social unit through caring for others and involves such qualities like a focus on others and their well-being, cooperativeness, and emotional expressivity.

The notion that agency and communion are truly fundamental dimensions of human behavior is substantiated by the fact they can be used to describe judgmental and behavioral patterns in various domains, such as person perception (Rosenberg & Sedlak, 1972; Wojciszke, 2005), self-construal (Markus & Kitayama, 1991), gender stereotypes (Eagly & Karau, 2002), autobiographical memory (McAdams, Hoffman, Mansfield, & Day, 1996), occupational development (Abele, 2003), attachment styles (Bartz & Lydon, 2004), reward distribution behavior (Watts, Messé, & Vallacher, 1982), or information processing (Woike, Lavezzary, & Barsky, 2001). Agency and communion are rooted in two basic motivations: The need to affiliate with others and the need for personal distinctiveness. According to optimal distinctiveness theory (Brewer, 1991), the need to assimilate (aiming at a sense of belonging and in-group inclusion) and the need to differentiate (aiming at distinctiveness) are the result of evolutionary adaptation and work in opposition to each other. Therefore, people frequently need to negotiate between the two motivations (Pickett, Silver, & Brewer, 2002). Hence, the consequences of experienced agency and communion can be considered to be quite dynamic.

As a matter of fact, agency and communion do have important consequences for a person’s subjective well-being. Helgeson (1994) argued that both agency and communion are required for optimal well-being. In numerous studies, she could show that when one exists in the absence of the other (unmitigated communion or unmitigated agency) negative health outcomes occur with detrimental consequences for subjective well-being (e.g. Helgeson, 2003; Helgeson, Snyder, & Seltman, 2004).

The two basic needs are also associated with the independent and interdependent construal of the self. It has been suggested that whereas people with independent self-views should be seeking to confirm their internal positive attributes of the self, interdependent individuals can be expected to seek the affirmation of their relationship with significant others. Accordingly, their general well-being should be crucially dependent on how well they manage to achieve these cultural tasks (see for instance Kitayama, Karasawa, Curhan, Ryff and Markus, 2010). In fact, this has been supported in many studies. For instance, Kwan, Bond and Singelis (1997) found that general well-being for collectivist culture members can be better predicted on the basis of their relationship harmony than self-esteem, while the reverse is true for individualists (see also Diener & Diener, 1995; Kitayama & Markus, 1999; Uchida, Norasakkunkit & Kitayama, 2004). Most recently, Kitayama et al. (2010) presented survey data from the US and Japan which showed the link between culture, well-being and health. They found that the strongest predictor of well-being and health was personal control in the US, but the absence of relational strain in Japan. One of the implications of this kind of research is that a complete picture of happiness across cultures requires simultaneously taking both agency and communion related motives into account. Yet again, these findings still await a test with representative samples from various cultures.

While the latter findings reflect relatively stable differences between cultures, other studies confirm that the degree of independence and interdependence of the self varies dynamically with the context (e.g. Gardner, Gabriel, & Lee, 1999; Trafimow, Triandis, & Goto, 1991). In a series of experiments Kühnen and colleagues (e.g. Kühnen, Hannover, & Schubert, 2001; Kühnen & Haberstroh, 2004; Kühnen & Oyserman, 2002) have argued that if the self is one of the crucial psychological factors that mediate the impact of culture on subjective experience, then inducing either independence or interdependence experimentally by means of cognitive priming should result in behavioral and judgmental patterns that mirror cross-cultural differences (for overviews see Hannover & Kühnen, 2004, 2009). Haberstroh, Oyserman, Schwarz, Kühnen and Li (2002) applied this logic of reasoning to judgments of subjective well-being. They showed that after being primed for interdependence, participants are more likely to rely on tacit assumption of cooperative conversational conduct when answering question about their general life satisfaction than after being primed for independence. Furthermore, these authors found parallel differences in subjective well-being ratings between the Germans (i.e. individualists) and Chinese (i.e. collectivists). Hence, independence-interdependence of the self has a causal impact on judgments of well-being and varies in part dynamically with the current context. In addition these findings suggest that culture affects judgments and behavior (including subjective well-being) via the configuration of independent and interdependent self-aspects. Yet again, psychological experiments are usually supposed to investigate short-term consequences of contextual influences (such as priming) only. Whether findings from long-term investigations are indeed due to the same causal mechanisms that are identified in experiments often remains an open question. Few long-term longitudinal studies have been reported. Recently, reporting data from a longitudinal study that commenced in 1985, Boehnke and Wong (2011) were, however, able to show that German adolescents who had seen a great threat of a Third World War in the mid 1980s and had become politically agentic in this situation, are 21 years later happier than those peers, who also had seen a great threat but had not participated in any political action. That study, lacks a cross-culturally comparative dimension and may thus only apply to cultures where independent self-construals are the norm.

In the opening of this chapter, we have stressed the importance of transcending traditional borders of scientific disciplines. The issue of whether or not happiness can change was introduced as one of the basic questions that all social sciences are concerned with. We are aware that the above reported review of the current literature is of course far from being exhaustive in the sense that all relevant findings on happiness around the world are covered. A look into Bok's recent monograph (2010) on *Exploring Happiness: From Aristotle to Brain Science*

is advisable if this is sought. Our intention was a different one: We intended to merely illustrate that each of the social sciences makes unique and important contributions in understanding the dynamics of happiness. Therefore, a comprehensive answer requires “crossing borders” or even “rendering borders obsolete,” as we now formulate it in the title of the present volume<sup>1</sup>. Current studies from political science see the increasing level of freedom and the subjectively experienced increase of personal agency as the driving force underlying the world-wide trend toward greater happiness. While this may be true, a psychological perspective suggests that agency is only one of two fundamental dimensions of human behavior, with communion being the other. Optimal happiness requires that both needs are satisfied in a balanced fashion. While many studies suggest that both motives are universally relevant, cross-cultural differences exist in the relative emphasis that is placed on either of them. Depending on whether individuals define their selves primarily in terms of independence or interdependence, respectively, either personal agency or relational harmony are more important predictors of subjective well-being. Furthermore, the dynamics of happiness are partially due to situational influences that affect a person’s current configuration of independent or interdependent self-cognitions, respectively. In sum, we believe that “interdisciplinary, multi-method endeavors” are needed and all social sciences can benefit from such approaches.

### Overview of this book

The thematic emphasis was implemented in the scientific program of the 2008 IACCP congress in several ways. For instance, several of our keynote speakers came from neighboring disciplines of psychology, such as political science, sociology and anthropology. The largest part of the scientific program consisted, of course, of individual oral presentations and symposia. A total of 557 oral presentations were given at IACCP 2008. In addition, we had 153 poster presentations, a round table discussion, and a workshop. Of course, we had to choose the motto for our IACCP conference long time before the call for abstracts was sent out to potential contributors. At that point in time, our motto merely expressed our hope that the submissions would fill it with life. We are very grateful that many of them did so. This volume collects contributions that reflect the great variety both in terms of topics and methodologies which characterizes current (cross-) cultural psychology.

The first three contributions address cultural issues in close relationships. Summarizing their keynote address, Hatfield and Rapson address cultural differences in a truly fundamental issue: romantic love. They summarize classic and most recent findings on the question of whether people from various cultures differ in the extent to which they are “romantics” (i.e., demanding love and marriage) or more pragmatics (i.e., being open to marriage without love). Argiropoulou, Pavlopoulos, and Quek assess the conflict strategies of Greek couples. What role do values, self-disclosure, and satisfaction play in predicting how couples try to resolve conflicting issues? Pitting cultural and evolutionary approaches against each other, Rivera-Aragon, Diaz-Loving, Velasco-Matus, and Montero-Santamaria present data on indigenous manifestations of infidelity and jealousy in Mexico. What are the patterns of infidelity and jealousy in Mexican males and females? What is the relation between individuals’ jealousy and infidelity? Which types of jealousy are related to sexual and emotional infidelity?

In a globalizing world, psychological aspects of migration and intergroup relations are becoming ever more important. The contributions of the second part of this volume address several central issues in this realm. Schmitz and Berry present data on the structure of

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<sup>1</sup> ....following the tradition that titles of the series of selected papers from international congresses of the International Association for Cross-Cultural Psychology (IACCP) have to always use the next letter in the alphabet, following the first title letter of the selected paper volume of the previous congress. The volume of selected papers from the 2006 international IACCP congress in Athens bore the title “Quod Erat Demonstrandum” (Gari & Mylonas, 2009), so this time the title had to start with the letter ‘r.’



acculturation attitudes of immigrants and a national sample in Germany. The authors examine the psychometric properties of these attitudes, and link them to some features of personality and to the psychological adaptation of immigrants. Host acculturation orientations of French students toward ethnic minority groups were assessed by Jyoti Verma. Do French students expect ethnic minorities to adopt French norms or do they find it more important that immigrants maintain their heritage culture? Also focusing on students, Le Nhat Tran presents data on acculturation experiences of Vietnamese international students. To what extent are these experiences specific for the Vietnamese culture? While ingroup-favoritism is one of the best established findings from the literature on intergroup relation, Leung and Ting show that Caucasians hold rather positive stereotypic beliefs about Asians. Finally, Kirch, Tuisk and Reinkort investigated social identities of Estonians and Russians living in Estonia and found remarkable traces of the perceived Soviet Union's role in the Second World War.

The relevance of value orientation in current cross-cultural research does not have to be stressed here. Chapter 3 of the current volume collects three articles on this topic. First, Shulamith Kreitler presents meaning correlates of value orientations of three cultural communities living in Israel. Second, Mylonas, Gari, Panagiotopoulou, Georgiadi, Valchev, Papazoglou, and Brkich address potential methodological biases in forming culture clusters based on value assessments and present solutions for how to reduce such biases. Finally, Spieß and Stroppa used qualitative and quantitative methods to examine the role of social support and networks for life satisfaction, job stress and company support of staff of international corporations varying in size.

Chapter 4 of this volume includes two articles with a developmental psychology focus. Nandita Babu investigated the theory of mind understanding as reflected in the narratives of children from families of low as well as high socioeconomic status in India. The article by Holding, Abubakar, Obiero, Van Baar and Van de Vijver describes the adaptations made to the Infant-Toddler version of the HOME (Home Observation Measure of the Environment) Inventory for use in a low income population in Kenya.

Finally, the last chapter of the current volume includes three articles on unique and innovative issues in cross-cultural psychology. Boer and Fischer examined the functions of music-listening across cultures. Does music serve equivalent functions across cultures? The second contribution of the final chapter by Setiawan describes a study designed to investigate the relationships between perceptions of counseling and the willingness to seek counseling in Indonesia. Finally, Osborne, Kriese and Davis provide suggestions for how to teach and facilitate critical thinking, intercultural sensitivity, and interpersonal skills in the classroom.

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## **Culture and Passionate Love**

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### **Abstract**

For more than 4,000 years, poets and storytellers have sung of the delights and sufferings of love and lust. This chapter reviews what scholars from various disciplines have discovered about the nature of passionate love and sexual desire. Anthropologists and evolutionary psychologists have assumed that passionate love is a cultural universal. Cultural researchers, historians, and social psychologists have emphasized the stunning diversity in the way passionate love and sexual desire have been viewed and experienced. Culture, ethnicity and the rules passed down by political and religious authorities have a profound impact on the way people think about and act out love and sex. Marriage for love and sex for pleasure have always been deeply threatening to political and religious leaders who have feared the individualistic implications of permissive approaches to romance and passion. Individualism and personal choice are seen as the enemies of order and authority; such freedom are deemed heretical, sinful, dangerous, and an invitation to chaos, selfishness, and anarchy. The fight over the rules governing love, marriage, divorce, and sex stands as one of history's central and most powerful themes. Today, however, in the era of widespread travel, global capitalism, and the World Wide Web, many of these traditional cross-cultural differences seem to be disappearing. Authority is giving way nearly everywhere to increased freedom, particularly in the personal realm, in the world of passion. Is the erosion of traditional authority and strict personal rules really happening—and if so what does that portend for personal and societal futures?

In all cultures, men and women feel the stirrings of passionate love and sexual desire. Yet despite its universality, culture has been found to have a profound impact on people's definitions of passionate love and on the way they think, feel, and behave when faced with appropriate partners in settings designed to spark such feelings. Cross-cultural studies provide a glimpse into the complex world of passionate love and increase our understanding of the extent to which people's emotional lives are written in their cultural and personal histories, as well as "writ in their genes."

### Defining Passionate Love

The Sufi poet Jelaluddin Rumi, who was born in Afghanistan in 1207 A.D., contended, "whoever has been taught the secrets of love is sworn to silence with lips sealed." Nonetheless, Rumi penned ecstatic missives celebrating the glories of love (*Mathnavi* and *Diwan-I-Shams*). In this snippet, he rhapsodizes:

With love, bitter turns into sweetness.

With love, dregs turn into honey. . .

With love, thorns become flowers.

With love, vinegar becomes wine. . . .

With love, misery turns into happiness.

In all cultures, people distinguish between two kinds of love: "passionate love" and "companionate love." *Passionate love* (sometimes called "obsessive love," "infatuation," "lovesickness," or "being-in-love") is the variety of love with which we will be concerned in this paper. We will not discuss companionate love, a deeper, more intimate, and longer lasting variety of love and friendship.

Passionate love is a powerful emotional state. It has been defined as:

A state of intense longing for union with another. Passionate love is a complex functional whole including appraisals or appreciations, subjective feelings, expressions, patterned physiological processes, action tendencies, and instrumental behaviors. Reciprocated love (union with the other) is associated with fulfillment and ecstasy. Unrequited love (separation) is associated with feelings of emptiness, anxiety, and despair (Hatfield & Rapson, 2005, p. 71).

The *Passionate Love Scale (PLS)* was designed to tap into the cognitive, emotional, and behavioral indicants of such longings (Hatfield & Sprecher, 1986). The *PLS* has been translated and utilized by researchers in Germany, India, Indonesia, Iran, Italy, Japan, Korea, Peru, Poland, Spain, Sweden, and Switzerland. The *PLS* has been found to be a useful measure of passionate love with men and women of all ages, in a variety of cultures, and has been found to correlate well with certain well-defined patterns of neural activation (see Bartels & Zeki, 2000; Fisher, 2004; Hatfield, Rapson, & Martel, 2007; Hatfield & Rapson, 2009; Landis & O'Shea, 2000).

### Theoretical Understandings of Passionate Love

#### Passionate Love: A Cultural Universal

Passionate love is as old as humankind. Love poems have been discovered on the outskirts of the Valley of Kings. Written during Egypt's New Kingdom (1539-1075 B.C.E.) but surely composed much earlier, these songs (recorded on cuneiform tablets) speak to lovers today. Consider this fragment:

#### The Flower Song

To hear your voice is pomegranate wine to me.

I draw life from hearing it.  
 Could I see you with every glance,  
 It would be better for me  
 Than to eat or drink.<sup>2</sup>

Today, most cultural theorists consider passionate love to be a universal emotion, transcending culture and time (Hatfield & Rapson, 2005; Jankowiak, 1995; Tooby & Cosmides, 1992). Jankowiak and Fischer (1992), for example, drew a sharp distinction between “romantic passion” and “simple lust.” They proposed that both passion and lust are universal feelings. Drawing on a sampling of tribal societies from the *Standard Cross-Cultural Sample*, they found that in almost all of these far-flung societies, young lovers talked about passionate love, recounted tales of love, sang love songs, and spoke of the longings and anguish of infatuation. When passionate affections clashed with parents’ or elders’ wishes, young couples often eloped. Cultural anthropologists have recorded folk conceptions of love in such diverse cultures as Indonesia, Morocco, Nigeria, the Fulbe of North Cameroun, the People’s Republic of China, Trinidad, Turkey, the Mangrove (an aboriginal Australian community), the Mangaia in the Cook Islands, Palau in Micronesia, and the Taita of Kenya (see Jankowiak, 1995, for a review of this research). A number of studies document that in both tribal and modern societies, people’s conceptions of passionate love are surprisingly similar (Neto et al., 2000).

### Passionate Love: Cultural Differences

Americans are preoccupied with love—or so cross-cultural observers once claimed. In a famous quip, Linton (1936) mocked Americans for their naïve idealization of romantic love and their assumption that romantic love is a prerequisite for marriage:

All societies recognize that there are occasional violent, emotional attachments between persons of opposite sex, but our present American culture is practically the only one which has attempted to capitalize these, and make them the basis for marriage. . . . The hero of the modern American movie is always a romantic lover, just as the hero of the old Arab epic is always an epileptic. A cynic may suspect that in any ordinary population the percentage of individuals with a capacity for romantic love of the Hollywood type was about as large as that of persons able to throw genuine epileptic fits. (p. 175)

Throughout the world, a spate of commentators once echoed Linton’s claim that the idealization of passionate love is a peculiarly Western institution.

*Background.* The world’s cultures differ profoundly in the extent to which they emphasize individualism or collectivism (although many cultural researchers focus on related concepts such as independence vs. interdependence, modernism vs. traditionalism, urbanism vs. ruralism, affluence vs. poverty, or a family focus vs. an individualistic focus). Individualistic cultures such as the United States, Britain, Australia, Canada, and the countries of Northern and Western Europe tend to focus on personal goals. Collectivist cultures such as China, many African and Latin American nations, Greece, southern Italy, and the Pacific Islands, on the other hand, press their members to subordinate their personal interests to those of the group (Markus & Kitayama, 1991; Triandis, McCusker, & Hui, 1990). Triandis and his colleagues point out that in individualistic cultures, young people are allowed to “do their own thing.” In collectivist cultures, the group comes first.

Hsu (1953, 1985) and Doi (1963, 1973) contended that passionate love is a Western phenomenon, virtually unknown in China and Japan, and so incompatible with Asian values and customs that it is unlikely ever to gain a foothold among young Asians. Hsu (1953) wrote: “An

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<sup>2</sup> Translated by M. V. Fox. [http://news.nationalgeographic.com/news/2004/04/0416\\_040416\\_pyramidsongs.html](http://news.nationalgeographic.com/news/2004/04/0416_040416_pyramidsongs.html)

American asks, ‘How does my heart feel?’ A Chinese asks, ‘What will other people say?’” (p. 50). Hsu pointed out that the Chinese generally use the term “love” to describe not a respectable, socially sanctioned relationship, but an *illicit* liaison between a man and a woman. Chu (1985; Chu & Ju, 1993) also argued that although romantic love and compatibility are of paramount importance in mate selection in America, in China such feelings matter little. Traditionally, parents and go-betweens arranged young peoples’ marriages. Parents’ primary concern was not love and compatibility but *men dang hu dui*. Do the families possess the same social status? Are *they* compatible? Will the marriage bring some social or financial advantage to the two families? (A note: Later in this chapter, we will discuss the fact that since the 1950s, in the wake of globalization, Chinese attitudes and values have begun to undergo revolutionary changes.)

On the basis of such testimony, cross-cultural researchers once contended that romantic love is common only in modern, industrialized countries. It should be less valued in traditional cultures with strong, extended family ties (Simmons, Vom Kolke, & Shimizu, 1986). It should also be more common in modern, industrialized countries than in developing countries (Goode, 1959; Rosenblatt, 1967). In recent years, cultural researchers have begun to test these provocative hypotheses.

### Recent Research on Culture and Passionate Love

Recently, cultural researchers have begun to investigate the impact of culture on people’s definitions of love, what people desire in romantic partners, their likelihood of falling in love, the intensity of their passion, and their willingness to acquiesce in arranged marriages *versus* insisting on marrying for love. From this preliminary research it appears that, although a few cultural differences do in fact exist, cultures frequently turn out to be more similar in their profoundest of feelings than one might expect. Let us now turn to this research.

### The Meaning of Passionate Love

Shaver, Wu, and Schwartz (1991) interviewed young people in America, Italy, and the People’s Republic of China about the way they viewed love. They found that Americans and Italians tended to equate love with happiness and to assume that both passionate and companionate love were intensely pleasurable experiences. Students in Beijing, China, possessed a darker view of love. In the Chinese language, there are few “happy-love” words; love is associated with sadness. Not surprisingly, then, the Chinese men and women interviewed by Shaver and his colleagues tended to associate passionate love with ideographic words such as infatuation, unrequited love, nostalgia, and sorrow love. Other cultural researchers agree that cultural values may, indeed, have a profound impact on the subtle shadings of meaning assigned to the construct of “love” (Cohen, 2001; Kim & Hatfield, 2004; Kitayama, 2002; Luciano, 2003; Nisbet, 2003; Oyserman, Kimmelmeier, & Coon, 2002; Weaver & Ganong, 2004). A few cultural researchers argue, for example, that romantic love is more important in modern, industrialized, individualistic cultures (Levine et al., 1995), in Latin cultures (Ferrer Pérez et al., 2008), and in European cultures than in Asian or Indian samples (Simmons et al., 1986, 1988; Medora et al., 2002), or in societies where men and women possess sexual equality (DeMunck & Korotayev, 1999).

There is, however, considerable debate as to how important such differences are. When social psychologists explored folk conceptions of love in a variety of cultures—including the People’s Republic of China, Indonesia, Micronesia, Palau, and Turkey, as well as a variety of other nations—they concluded that people in the various cultures possessed surprisingly similar views of love and other “feelings of the heart” (for a review of this research, see Contreas et al., 1996; Fischer, Wang, Kennedy, & Cheng, 1998; Jankowiak, 1995; Kim & Hatfield, 2004; Shaver, Murdaya, & Fraley, 2001; Xu et al., 2008). In a typical study, for example, Shaver and his



colleagues (2001) argued that love and sexual mating, reproduction, and parenting are fundamental issues for all humans (pp. 219-220). To test the notion that passionate and companionate love are cultural universals, they conducted a “prototype” study to determine (1) what Indonesian (compared to American) men and women considered to be “basic” emotions, and (2) the meaning they ascribed to these emotions. Starting with 404 Indonesian *perasaan hati* (emotion names or “feelings of the heart”) they asked people to sort the words into basic emotion categories. As predicted, the Indonesians came up with the same five emotions that Americans consider to be basic: joy, love, sadness, fear, and anger. Furthermore, when asked about the meanings of “love,” Indonesian men and women (like their American counterparts) were able to distinguish passionate love (*asmara*, or sexual/desire/arousal) from companionate love (*cinta*, or affection/liking/fondness). There were a few differences in the American and Indonesian lexicons, however:

The Indonesian conception of love may place more emphasis on yearning and desire than the American conception, perhaps because the barriers to consummation are more formidable in Indonesia, which is a more traditional and mostly Muslim country (p. 219).

Why are these diverse societies so similar in their views of love? Perhaps love is indeed a cultural universal. Or perhaps the times they are “a-changin’”. One impact of globalization (and the ubiquitous MTV, Hollywood and Bollywood movies, chat rooms, and foreign travel) may be to ensure that when people throughout the world speak of “passionate love,” they may well be talking about much the same thing. We would argue that culture and historical pressures produce visions of passionate love that are variations on a theme. Shading, melody, and tempo may vary with culture, but the underlying architecture of the mind may remain the same. Cultural traditions and values may affect romantic visions, how one describes one’s feelings when in love, how demonstrative people are in displaying their love, but the fact of passionate love may indeed be a cultural universal based on similarities in the architecture of the mind and a common neural substrate (Aron et al., 2008; Xu et al., 2008).

### **The Likelihood of Being in Love**

Sprecher and her colleagues (1994) interviewed 1,667 men and women in the United States, Russia, and Japan. Based on notions of individualism versus collectivism, the authors predicted that whereas American men and women would be most vulnerable to love, the Japanese would be the least likely to be “love besotted.” The authors found that they were wrong. In fact, 59% of American college students, 67% of Russians, and 53% of Japanese students said they were in love at the time of the interview. In all three cultures, men were slightly less likely than women to be in love. (In America, 53% of men and 63% of women; in Russia, 61% of men and 71% of women; and in Japan, 41% of men and 63% of women indicated they were currently in love.) There was no evidence, however, that individualistic cultures breed young men and women who are more love struck than do collectivist societies.

Surveys of Mexican-American, Chinese-American, and European-American students have revealed that in a variety of ethnic groups, young men and women show similarly high rates of “being in love” at the present time (Aron & Rodriguez, 1992; Doherty et al., 1994; Hatfield & Rapson, 2005).

### **The Intensity of Passionate Love**

Cultures also seem to share more similarities than differences in the *intensity* of passionate love that people experience. In one study, Hatfield and Rapson (2005) asked men and women of European, Filipino, and Japanese ancestry to complete the *PLS*. To their surprise, they found that men and women from the various ethnic groups seemed to love with equal passion. (In the

following table 1, none of the ethnic group differences nor any of the gender x ethnic group differences were significant.)

**Table 1**

*PLS Scores of Various Ethnic Groups*

	Men	Women
Caucasians (in Hawaii)	100.50	105.00
Caucasians (mainland USA)	97.50	110.25
Filipinos	106.05	102.90
Japanese	99.00	103.95

Hatfield and Rapson's (2005) results were confirmed in a study done by Doherty and his colleagues (1994) with European-Americans, Chinese-Americans, Filipino-Americans, Japanese-Americans, and Pacific Islanders.

After viewing the preceding results, some cultural researchers observed: "True, people might fall in love, but they don't expect to have these desires indulged. When it comes to marriage, in family focused societies people sacrifice their own desires, and accede to the wishes of parents, authorities, and friends."

To test this notion, Sprecher and her colleagues (1994), asked American, Russian, and Japanese students: "If a person had all the other qualities you desired, would you marry him or her if you were not in love?" (Students could answer only "yes" or "no.") The authors assumed that only Americans would demand love *and* marriage; they predicted that both the Russians and the Japanese would be more practical. They were wrong! Both the Americans and the Japanese were romantics. Few of them would consider marrying someone they did not love (only 11% of Americans and 18% of the Japanese said "yes"). The Russians were more practical; 37% said they would accept such a proposal. (These ethnic group differences were significant at the  $p < .001$  level.) Russian *men* were only slightly more practical than men in other countries. It was the Russian *women* who were most likely to "settle." (This gender difference was significant at  $p < .05$ ).

Despite the larger proportion of Russian women willing to enter a loveless marriage, a large majority of individuals in the three cultures would refuse to marry someone they did not love (see Table 2).

**Table 2**

*Would You Marry Someone You Did Not Love?*

	Yes	No
American men	13%	87%
American women	9%	91%
Russian men	30%	70%
Russian women	41%	59%
Japanese men	20%	80%
Japanese women	19%	81%

For additional information on culture, love and sex, see Boratav (2008); Gabreyna (2008); Gabreyna & Fehir, 2008; Levine et al., 1995; Ryder, Pfaus & Brotto (2008); Schmitz (2008)—several of whose work are represented in this volume.

### In Conclusion

The preceding studies, then, suggest that (in the area of passionate love and sexual desire) the large differences that once existed between Westernized, modern, urban, industrial societies and Eastern, modern, urban industrial societies may be fast disappearing. Those interested in cross-cultural differences may be forced to search for large differences in only the most underdeveloped, developing, and collectivist of societies—such as in Africa or Latin America, in China or the Arab countries (Egypt, Kuwait, Lebanon, Libya, Saudi-Arabia, Iraq, or the United Arab Emirates).

However, it may well be that even there, the winds of Westernization, individualism, and social change are blowing. In spite of the censure of their elders, in a variety of traditional cultures, young people are increasingly adopting “Western” patterns—placing a high value on falling in love, pressing for gender equality in love and sex, and insisting on marrying for love (as opposed to arranged marriages). Such changes have been documented in Finland, Estonia, and Russia (Haavio-Mannila, & Kontula, 2003) as well as among Australian aboriginal people of Mangrove and a Copper Inuit Alaskan Indian tribe (see Jankowiak, 1995, for an extensive review of this research).

Naturally, cultural differences still exert a profound influence on young people’s attitudes, emotions, and behavior, and such differences are not likely to disappear in our lifetime. In Morocco, for example, marriage was once an alliance between families (as historically it was in most of the world before the 18<sup>th</sup> century), in which children had little or no say. Today, although parents can no longer simply dictate whom their children will marry, parental approval remains critically important. It is important, however, that young men and women are at least allowed to have their say (see Davis & Davis, 1995).

Many have observed that, today, two powerful forces—globalization and cultural pride/identification with one’s country (what historians call “nationalism”)—are contending for men’s and women’s souls. To some extent, the world’s citizens may be becoming one but in truth the delightful and divisive cultural variations that have made our world such an interesting (and simultaneously dangerous) place, are likely to add spice to that heady brew of love and sexual practices for some time to come. The convergence of cultures around the world may be reducing the differences in the ways passionate love is experienced and expressed in the modern era, but tradition can be tenacious, and the global future of passionate love cannot be predicted with any certainty.

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## **Conflict Patterns among Greek Couples: The Role of Values, Self-Disclosure, and Relationship Satisfaction**

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### **Abstract**

This study tested the assumption that self- and spouse reports on values, self-disclosure and satisfaction could predict conflict patterns, as proposed by Rusbult, Zembrodt, & Gunn's (1982) Exit-Voice-Loyalty-Neglect typology. Participants were 133 married Greek couples. Results were generally consistent with expectations: Self- and spouse reports on satisfaction, self-disclosure and values were significant predictors of the use of the four conflict resolution strategies, to an extent that varied across conflict type, informant (self vs. spouse) and gender. Overall, husbands were more satisfied than wives. No differences were found at the mean level of self-disclosure, or in the frequency and type of the conflict strategies used by husbands and wives. Values that promoted positive social relationships (e.g., Benevolence, Tradition, Conformity) were positively related to constructive conflict strategies (Voice, Loyalty), and negatively related to destructive conflict strategies (Exit, Neglect). The opposite pattern of relationships was found for values that promoted self-interest at the expense of couple goals (Power). Values promoting gratification of personal needs without necessarily threatening social relations (e.g., Hedonism, Stimulation) differentially contributed to the prediction of conflict resolution strategies in husbands and wives. Finally, passive conflict strategies (Loyalty, Neglect) were negatively related to values, emphasizing the active pursuit of problem solving (Self-direction and Achievement). Findings are discussed in the light of literature on cultural and gender differences in conflict resolution strategies in intimate relationships.

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Marriage dissolution is becoming very common, especially in the western world (Epstein & Baucom, 2002). As Erich Fromm (1956, cf. Dwyer, 2000) pointed out, there is hardly any activity or enterprise that starts with such tremendous hopes and expectations and yet fails so frequently as love does. Peterson (1983, cf. Dwyer, 2000) defined an interpersonal conflict as a situation where the actions of one person interfere with the actions of another. The process by which partners deal with the conflict they experience is crucial for relationship outcomes, as ineffective conflict resolution can result in greater relationship distress and negative relationship outcomes (Dwyer, 2000). In what concerns Greece, statistics reveal an increase in divorce rates, even though it is only slight when compared with the standards of fellow countries in the European Union (Symeonidou & Mitsopoulos, 2003). Research on conflict patterns among Greek couples is scarce.

This study aims to extend previous findings by simultaneously assessing both cultural context (Values) and relational variables (Self-disclosure, Satisfaction) as possible predictors of the choice of different conflict strategies in intimate relationships. This is consistent with calls to incorporate cultural context along with relational variables in the study of conflict patterns (Trubisky, Ting-Toomey, & Lin, 1991). Although values have been successfully used to predict behavior in different fields such as voting, political activism and environment protection (Schwartz, 1992), to our knowledge they have not been studied with regard to the choice of conflict resolution strategies in intimate relationships. The adoption of Schwartz's pan-cultural hierarchy of values enables the researcher to formulate more precise predictions regarding the preference for each of the four conflict strategies based on the distinct underlying motives each value promotes, rather than the more general predictions based on the individualism-collectivism dimension previously used in the study of conflict resolution in intimate relationships.

This study also aims to examine whether partners' values, level of self-disclosure and satisfaction can have an impact on an individual's use of certain conflict strategies by including both self- and spouse reports. Results will be discussed in the light of literature examining cultural and gender influences on conflict resolution in intimate relationships as well as on the basis of the relative position of Greece in different value systems, e.g., individualism-collectivism (Georgas, 1989, 1991), Hofstede's values (Hofstede, 1980), social axioms (Bond et al., 2004), and personality factors (Schmitt, Allik, McCrae, & Benet-Martínez, 2007).

### **Conflict Patterns in Intimate Relationships**

The theory of couple patterns of problem solving has suggested four primary reactions to relationship problems, namely, Voice, Loyalty, Exit, and Neglect (Rusbult & Zembrodt, 1983; Rusbult, Zembrodt, & Gunn, 1982). Voice is defined as expressing one's dissatisfaction actively and constructively with the intention of improving the relationship, Loyalty as waiting passively but optimistically for conditions to improve, Exit as threatening to end or leaving the relationship, and Neglect as passively allowing one's relationship to deteriorate. Voice and Loyalty are considered constructive responses to relationship problems, while Exit and Neglect are characterized as destructive responses. These strategies could further be defined as active (i.e., Exit, Voice) or passive (i.e., Loyalty, Neglect). In comparison to models describing simple responses, this typology presents a range of possible reactions to relationship problems and could be applied to relationships at any stage of their evolution (Sinclair & Fehr, 2004).

Previous research suggests that women are more likely to use Voice than men (Rusbult et al., 1982). In general, studies examining gender differences in conflict resolution within heterosexual intimate relationships in western countries indicate a typical "demand-withdrawal" pattern, wherein a wife complains or makes demands to which her husband responds by withdrawing or other passive behavior (Cingöz-Ulu & Lalonde, 2007). However, recent findings, which are based on the advanced marital structure hypothesis, challenge the notion that demanding and withdrawing behaviors are inherently male or female by suggesting

that this pattern can be altered through contextual factors, such as gender power differences and acculturation, particularly in traditional marriages (Rehman & Holtzworth-Munroe, 2006).

### **Culture and Conflict Resolution Strategies**

Culture influences the way how people perceive conflicts, as well as the conflict process itself, since a person's cultural background dictates the goals that are considered incompatible, the reasons why they are seen as such, the choice of appropriate conflict management, as well as the evaluation of the conflict outcome (Kaushal & Kwantes, 2006). Other scholars also note that individuals in various societies value conflict very differently. Individuals in western cultures view conflict as a part (perhaps even a beneficial one) of life, while people from cultures such as Korea or Japan feel that conflict is, by definition, bad and should be avoided. Therefore, they are less apt to initiate conflict (Wall & Callister, 1995).

Previous research has mainly explored the influence of the individualism-collectivism dimension on different ways of handling interpersonal problems. In general, the most stable finding coming from these studies as well as a recent meta-analysis examining conflict resolution strategies is that individualistic cultures promote open, direct and assertive communication patterns and choose forcing as a conflict style more often than collectivistic cultures. At the same time, the latter promote more indirect and reserved communication patterns and prefer the styles of withdrawing, compromising, and problem solving more than individualistic cultures (Hocker & Wilmot, 1995, cf. Fitzpatrick et al., 2001; Leung & Chan, 1999; Holt & DeVore, 2005).

However, the above patterns stem from research in organizational settings and may not apply when conflict management is contextualized within specific types of close relationships. For example, in a study comparing the preferred strategies deployed by people from individualistic Canada and collectivistic Turkey in managing conflict in close relationships, it was discovered that Turks seemed to be acting more directly, assertively or persuasively while managing conflict within their friendships and romantic relationships when compared to the styles they adopted with non-intimate others. Canadians, on the contrary, adopted a more compromising and complying manner and utilized third-party help more often within these close relationships compared to their more generic confrontational styles of managing conflict (Cingoz-Ulu & Lalonde, 2007). In another study, active conflict strategies were also positively related to socially oriented values, while they were unrelated to individualism among both heterosexual and homosexual relationships (Gaines et al., 2005).

Some scholars have argued that constructs such as individualism-collectivism constitute multidimensional "meta-concepts" or cultural syndromes that are not sufficiently specific for differentiating specific cultural style differences during disagreements (Hammer, 2005). Schwartz (1990) suggested that the individualism-collectivism dichotomy can obscure meaningful group differences since this dichotomy overlooks values that inherently serve both individual and collective interests and ignores values that foster the goals of collectivities other than the in-group and promotes the mistaken assumption that individualistic and collective values each form coherent syndromes that are in polar opposition.

Schwartz (1992) described ten motivationally distinct values, postulated to be present in all cultures, namely, Self-direction, Stimulation, Hedonism, Achievement, Power, Security, Conformity, Tradition, Benevolence, and Universalism. Empirical research in 56 nations has shown that beyond the striking differences in the value priorities of groups, there is a widespread consensus regarding the hierarchical order of values (Schwartz & Bardi, 2001). Pan-cultural hierarchy is explained by its adaptive functions in meeting basic requirements of human existence, namely: (a) the development of commitment to positive relations, identification with the group, and loyalty to its members, (b) motivation to invest the time and the physical and intellectual effort needed to perform productive work, to solve problems that arise during task performance, and to generate new ideas and technical solutions, and finally (c) gratification of the self-oriented needs and desires of group members (Schwartz & Bardi, 2001). According to



Schwartz (2006), many studies have demonstrated the strong relationship of values with every day behavior. However, there is a dearth of research connecting values to behaviors that are critical to relationship outcomes, such as problem solving and conflict management.

Individual differences in the importance attributed to values reflect individuals' unique needs, temperaments, and social experiences, and that these differences can have behavioral and attitudinal consequences (Schwartz, 2006). Different basic social structural characteristics can also alter value priorities (Schwartz & Bardi, 2001). According to Schwartz & Rubel (2005), various theories of gender difference lead researchers to postulate that men emphasize agentic-instrumental values like Power and Achievement, while women emphasize expressive-communal values like Benevolence and Universalism. These researchers suggest that empirical findings support the above notion, as for eight values gender differences are consistent, statistically significant, and small. However, differences for Conformity and Tradition values are inconsistent.

### **Relational Variables and Conflict Resolution Strategies**

The broader context provided by culture interacts dynamically with the more specific context provided by the type of relationship to shape the conceptions and the preferred conflict management strategies (Cingöz-Ulu & Lalonde, 2006). Many studies examining interpersonal and organizational conflict have addressed the importance of relational variables and context pertaining to conflict styles (Trubisky et al., 1991). This study aims to examine the influence of two relational variables, namely self-disclosure and relationship satisfaction, in the adoption of each of the four conflict strategies.

### **Self-Disclosure and Conflict Resolution Strategies**

Previous findings suggest that females with a communication style that is characterized by low self-disclosure and low disclosure of positive and negative emotions in romantic relationships receive lower support and experience greater conflict, which in turn leads to relationship distress and an increased risk for depression (Cuming & Rapee, 2010). Findings also suggest that individuals are less willing to self-disclose when they wish to leave the relationship (Baxter, 1979), suggesting a possible negative relationship between self-disclosure and Exit conflict strategy. An interesting question would be to investigate to what extent self-disclosure predicts each of the four conflict strategies.

According to Hinde's (1997) brief review of the literature regarding gender differences in self-disclosure, results are mixed. According to this review, some studies have found that women self-disclose more than men and that wives self-disclose more than husbands. Other studies have found that both men and women tend to self-disclose more to females than to males, while others suggest that there are gender differences in the content but not in the frequency of self-disclosure. Some researchers, however, reported little or no differences in self-disclosure between men and women (Hinde, 1997).

### **Relationship Satisfaction and Conflict Resolution Strategies**

Findings suggest that couples tend to use more constructive and less destructive conflict strategies. The more satisfied a couple is with their relationship prior to the emergence of problems, the greater the magnitude of the individual's investment of resources in the relationship and the less attractive the available alternatives to the relationship (Rusbult et al., 1982). Moreover, when prior satisfaction was high, individuals were more probable to use Voice and Loyalty, and less probable to use Exit and Neglect (Rusbult et al., 1982). Those who experienced greater need fulfillment also enjoyed better post-disagreement relationship quality. This is primarily because of their tendency to have more intrinsic or autonomous reasons for being in their relationship (Heather, Knee, Canevello, & Lonsbary, 2007). In the few studies that

revealed gender differences in satisfaction, husbands tend to be more satisfied in comparison to wives (Hinde, 1997).

### **Partners' Attributes and Individual Choice of Conflict Resolution Strategies**

Previous studies have discovered that adopting the partner's perspective in occasions where a partner acts in a potentially destructive way resulted in more positive emotional reactions and more relationship-enhancing attributions. It also enhanced inclinations towards constructive responding. Moreover, less negative emotional reactions, less partner-blaming attributions, and reduced inclinations towards destructive responding were also observed under the same conditions (Arriaga & Rusbult, 1998). A reciprocity effect has also been detected, which showed that the more individuals perceived their partner's use of destructive vs. constructive conflict strategies, the greater the couple's distress was. Moreover, the couple's health decreased when individuals failed to respond constructively to a partner who was using destructive conflict strategies (Rusbult, Johnson, & Morrow, 1986). Findings also suggest that people project their own felt communal responsiveness onto partners, thus perceiving partners to be just as caring and supportive as they themselves are (Lemay & Clark, 2008).

Dindia (2000) suggested that studies should include both partners' perceptions of their own and of their partner's maintenance strategies. This is, because a potential moderator in the connection between maintenance strategies and relationship satisfaction could be whose perspective is measured. This study aims to extend previous research on maintenance strategies since not only self-reports but also spouse's reports are included. This way, it is possible to examine whether a partner's actual behavior can have an impact on an individual's use of certain maintenance behaviors.

### **Research Questions**

1. Are there differences between husbands and wives in their conflict strategies, personal values, degree of self-disclosure, and level of satisfaction? Based on previous findings, wives are expected to use more active strategies, and especially Voice, in comparison to husbands. On the other hand, no specific hypothesis can be formulated regarding the relative frequency of use of each of the conflict strategies by Greek husbands and wives due to the lack of previous empirical findings, thus leaving this research question an open one to explore. Small or even no differences are expected to be found between husbands and wives in the level of self-disclosure. Husbands are expected to score higher on agentic-instrumental values, while wives are expected to have higher scores on expressive-communal values. Husbands are also expected to be more satisfied than wives, although this difference is not expected to be pronounced.

2. To what extent can self-disclosure, personal values, and level of satisfaction predict the use of positive and negative conflict resolution strategies in Greek married couples after controlling for demographic variables? Are these predictors the same for husbands and for wives? Self-disclosure and satisfaction are expected to be positively related to the use of constructive conflict strategies, and negatively related to the use of destructive conflict strategies. On account of the basic requirements each value serves, the following predictions can be made regarding the relationship of different values and the four conflict strategies: Values that promote positive social relationships (e.g., Benevolence, Tradition, Conformity) are expected to be positively related to constructive conflict strategies, and negatively related to destructive conflict strategies. A relationship of opposite direction is expected for values that promote self-interest at the expense of optimal attainment of group goals, such as Power. However, no clear predictions can be made regarding values that promote gratification of personal needs without necessarily threatening social relations (e.g., Hedonism, Stimulation). Finally, passive conflict strategies are expected to be negatively related to values that emphasize active pursuit of problem solving (e.g., Self-direction, Achievement).

3. Can individual preference for a specific conflict strategy be predicted from the partner's reports on self-disclosure, personal values, and level of satisfaction after controlling for self-reports on the respective variables and demographic characteristics? Also, are there any differences between husbands and wives in the above pattern of relationships? It is expected that spouse reports on each of the above variables have an influence on the type of conflict resolution strategy that each individual chooses. The direction of the relationships is not expected to be different from that predicted in the case of self-reports. By way of explanation, the greater the extent of a partner's self-disclosure and the greater his/her satisfaction, the more it is expected that they use constructive conflict resolution strategies, not destructive ones. Moreover, a partner's values are expected to be related to the use of the same conflict resolution strategies that were predicted in the case of self-reports.

## Method

### Participants

One hundred and thirty-three couples living in Greece participated in our study. The mean length of marriage was 19.6 years ( $SD = 11.40$ ,  $min = 1$ ,  $max = 55$ ). Husbands' mean age was 48.8 years ( $SD = 10.48$ ), most of them had completed secondary or higher education and worked as clerks (e.g., public servants, employees in private settings). Wives' mean age was 44.3 years ( $SD = 9.78$ ), most of them had completed secondary or higher education and were working as clerks or household keepers.

### Measures

The Exit-Voice-Loyalty-Neglect Scale (Rusbult et al., 1982) assessing two constructive conflict strategies and two destructive conflict strategies. The constructive ones are Voice (e.g., "When my partner says or does things I do not like, I talk to him/her about what is upsetting me") and Loyalty (e.g., "When I am upset about something in our relationship, I wait awhile before saying anything to see if things will improve on their own"). The destructive ones are Exit (e.g., "When I am angry at my partner, I talk to him/her about breaking up") and Neglect (e.g., "When I am upset with my partner, I ignore him/her for a while"). A 7-point Likert scale ranging from 1 = "never" to 7 = "always" was used to assess the frequency of each behavior during marital disagreements. These measures proved to be quite stable (see alpha reliabilities in Table 1).

An abbreviated version of the Schwartz Value Survey (Schwartz, 1992) was used, measuring eight out of ten dimensions of values, i.e., Self-direction, Stimulation, Hedonism, Achievement, Power, Conformity, Tradition and Benevolence. Participants were asked to indicate the degree to which each of the above values was a guiding principle in their life in a 7-point Likert scale ranging from 1 = "not at all important" to 7 = "extremely important." The internal consistency of the subscales ranged from acceptable to high (see Table 1).

Participants also filled out an abbreviated version of the Self-Disclosure Questionnaire (Jourard & Lasakow, 1958), which consisted of 18 of the original 60 items. The original SDQ was composed of 60 items that measure disclosure on six main topics (attitudes, tastes, work, money, personality, body). This study utilized the shortened version adapted by Fitzpatrick et al. (2001), containing three items for each domain. Respondents indicated on a 7-point Likert scale the degree to which they had disclosed about each item to their spouses in a range from 1 = "nothing" to 7 = "full detail." Items were averaged to produce an overall self-disclosure score for each respondent. The internal consistency of this measure was quite high (see Table 1).

The Kansas Marital Satisfaction Scale (Schumm, Paff-Bergen, Hatch, & Obiorah, 1986) consists of three items. Participants responded on a 7-point Likert scale ranging from 1 = "extremely dissatisfied" to 7 = "extremely satisfied." The average score of marital satisfaction was calculated, which proved to be a very reliable measure (see Table 1).

The method of back translation (English-Greek-English) by two independent bilingual speakers was implemented for all tools used.

### **Procedure**

Participants were recruited via undergraduate psychology students, who were asked to introduce a couple they knew and to invite them to take part in a study on values and marital satisfaction. The research assistants then contacted these couples and, after they had received their consent, arranged an appointment in order to administer the questionnaires. Less than 10% of the contacted couples refused to participate. Data completion took place on a private basis, i.e., independently for each partner. Questionnaires were returned in separate sealed envelopes. Participants were informed about the anonymity of their answers. No payment or other benefits were offered.

### **Results**

All questionnaires were scored based on the authors' instructions. In the case of the Schwartz Values Survey, items were centered within individuals prior to producing averaged scores by following procedures suggested by Schwartz (1992, and personal communication) in order to correct for bias in response style. The resulting scores indicate the relative importance of a specific value within the value system of each respondent. According to Schwartz (1992), failure to make the necessary scale use correction typically leads to mistaken conclusions.

#### **Relative Preference of the Conflict Resolution Strategies**

In order to examine differences at the mean level of use of the four conflict strategies, we ran two repeated-measures MANOVAs, separately for the two partners. Results revealed significant differences for husbands, Wilks'  $\Lambda = 0.28$ ,  $F(3, 130) = 113.80$ ,  $p < .001$ ,  $\eta^2 = .72$ , and for wives, Wilks'  $\Lambda = 0.24$ ,  $F(3, 130) = 141.82$ ,  $p < .001$ ,  $\eta^2 = .77$ . In subsequent Bonferroni pair-wise comparisons of means, Exit was found to be the least preferred strategy for the two spouses, followed by Neglect. Voice and, to a lesser extent, Loyalty were the most preferred strategies, the difference between them being significant among wives but not among husbands. The mean scores of the four conflict strategies for each of the two partners can be found in Table 1.

#### **Differences between Husbands and Wives**

A series of paired-sample t-tests of scores on conflict strategies, personal values, self-disclosure, and marital satisfaction were performed in order to test for respective differences between husbands and wives at the mean level (see Table 1). Significant findings emerged in Satisfaction,  $t(132) = 3.13$ ,  $p = .002$ , with husbands scoring higher than wives. The two spouses also differed significantly in five out of eight dimensions of personal values, i.e., Stimulation,  $t(132) = 2.91$ ,  $p = .004$ ; Achievement,  $t(132) = 3.54$ ,  $p = .001$ ; Power,  $t(132) = 3.76$ ,  $p < .001$ ; Conformity,  $t(132) = -2.05$ ,  $p = .042$ ; Benevolence,  $t(132) = -2.11$ ,  $p = .037$ . A closer inspection of the mean differences revealed that husbands valued Stimulation, Achievement, and Power to a greater extent than wives did. Wives, on the other hand, valued Conformity and Benevolence more than husbands. The two spouses did not differ in the frequency with which they self-disclosed or in the frequency of use of each of the four conflict strategies.

**Table 1**

*Means, Standard Deviations, Alpha Reliabilities and T-Tests of Conflict Strategies, Values, Self-Disclosure, and Marital Satisfaction of Husbands and Wives*

	Husbands			Wives			t-value
	Mean	SD	alpha	Mean	SD	alpha	
<i>Conflict strategies</i>							
Exit	2.07	1.20	.85	2.16	1.22	.83	-0.62
Voice	4.68	1.05	.73	4.85	1.04	.67	-1.57
Loyalty	4.53	0.86	.46	4.44	0.96	.52	0.92
Neglect	3.34	1.27	.75	3.42	1.24	.68	-0.66
<i>Values (centered scores)</i>							
Self-direction	.24	.55	.56	.19	.57	.62	0.94
Stimulation	-.65	1.05	.77	-.96	1.10	.66	2.92**
Hedonism	.09	.96	.39 <sup>a</sup>	.14	1.02	.40 <sup>a</sup>	-0.42
Achievement	-.09	.66	.64	-.38	.62	.57	4.06***
Power	-1.01	.98	.64	-1.42	1.00	.67	3.81***
Conformity	.42	.58	.65	.64	.64	.72	-3.15***
Tradition	-.41	.87	.69	-.33	.95	.74	-0.92
Benevolence	.44	.60	.73	.64	.56	.73	-3.35***
Self-disclosure	5.27	1.07	.91	5.28	1.17	.91	-0.05
Satisfaction	6.00	.99	.92	5.72	1.15	.91	3.13**

*Note.* \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ . <sup>a</sup> Pearson correlation between 2 items.

### Prediction of Conflict Resolution Strategies from Self-Reports

To examine possible links of conflict strategies with values, self-disclosure, and satisfaction, Pearson product-moment coefficients were calculated. Only significant correlations at  $\alpha \leq .01$  are reported below. Self-disclosure correlated positively to the use of Voice for both spouses (husbands:  $r = .39$ ; wives:  $r = .38$ ), and the use of Loyalty only for husbands ( $r = .35$ ). Moreover, the more satisfied the two spouses were, the more they tended to use Voice (husbands:  $r = .41$ ; wives:  $r = .27$ ) and Loyalty (husbands:  $r = .35$ ; wives:  $r = .23$ ), and the less they used Exit (husbands:  $r = -.48$ ; wives:  $r = -.38$ ) and Neglect (husbands:  $r = -.28$ ; wives:  $r = -.20$ ,  $p < .05$ ). Concerning the relationship between conflict strategies and values, significant coefficients emerged for wives as follows: Loyalty was negatively related to Hedonism ( $r = -.24$ ) and Achievement ( $r = -.24$ ), while it was positively related to Conformity ( $r = .23$ ) and Tradition ( $r = .38$ ). Wives who valued Tradition also tended to use Exit less ( $r = -.26$ ), while Benevolence was negatively related to both Exit ( $r = -.33$ ) and Neglect ( $r = -.31$ ). On the contrary, Power was positively related to Exit ( $r = .25$ ). In the case of husbands, the use of Exit conflict tactic was positively related to Stimulation ( $r = .26$ ) and negatively related to Conformity ( $r = -.25$ ). Finally, the more husbands valued Self-direction as a guiding principle to their lives, the less they tended to use Loyalty as a conflict tactic ( $r = -.28$ ).

To test whether values, self-disclosure, and level of satisfaction were able to predict the use of conflict strategies after controlling for demographic characteristics, a series of hierarchical multiple regressions were conducted separately for husbands and wives. Prior to these analyses, we set out to examine which dimensions of values significantly predicted the use of the four conflict strategies in order to decide which values to include in the final model. For this purpose, separate regressions were run with entry order as follows: step 1 comprises self-reports on Self-direction, Stimulation, Hedonism, Achievement, Power, Conformity, Tradition, and Benevolence; step 2 comprises spouse reports on the respective variables. A stepwise method was used within each step. Results revealed that the use of Exit conflict tactic was

predicted from Stimulation for husbands ( $B = .30, p < .01$ ) and from Benevolence ( $B = -.62, p < .001$ ) and Tradition ( $B = -.24, p < .05$ ) for wives. Voice conflict tactic was predicted from self-reports on Self-direction ( $B = -.36, p < .05$ ) and Power ( $B = -.16, p < .10$ ) and from spouse reports on Hedonism ( $B = -.22, p < .05$ ) in the case of husbands, while in the case of wives Voice was predicted from self-reports on Stimulation ( $B = .22, p < .01$ ) and Power ( $B = -.15, p < .10$ ), and spouse reports on Tradition ( $B = .32, p < .01$ ). Self-reports of husbands on Self-direction predicted their use of Loyalty ( $B = -.44, p < .01$ ), this conflict tactic was predicted from self-reports of Tradition ( $B = .39, p < .01$ ) for wives. Finally, the use of Neglect was predicted from self-reports on Stimulation ( $B = .25, p < .05$ ) in the case of husbands, while self-reports on Benevolence ( $B = -.79, p < .01$ ) and Hedonism ( $B = -.30, p < .01$ ) predicted the use of Neglect in the case of wives.

A series of hierarchical regressions followed. In these analyses, step 1 included marriage length, age, and education level of each partner in order to partial out the effect of these demographic factors, and step 2 included self-reports on self-disclosure, level of satisfaction, and those dimensions of values which had predicted a significant amount of variance of conflict strategies in the preliminary analyses presented above. These findings are presented in Tables 2 and 3 for husbands and wives, respectively.

**Table 2**

*Hierarchical Regression Analyses for the Prediction of Conflict Tactics of Husbands from Demographics, Self-Reports, and Spouse Reports*

Predictors at step 3	Conflict tactics of husbands			
	Exit	Neglect	Voice	Loyalty
	B	B	B	B
Demographics (adjusted $\Delta R^2$ )	.09**	.00	.03	.06*
Length of marriage	-.00	.00	.00	.00
Age self	.02	.02	-.03	-.02
Age spouse	.03	-.01	.03	.00
Education self	-.01	-.06	-.12	-.14**
Education spouse	-.03	-.00	.07	.06
Self-reports (adjusted $\Delta R^2$ )	.12***	.09**	.20***	.17***
Self-disclosure	.01	-.05	.30***	.20**
Satisfaction	-.53***	-.14	.28*	.15
Self-direction <sup>SVS</sup>	--	--	-.23	-.38**
Stimulation <sup>SVS</sup>	.21*	.22*	--	--
Power <sup>SVS</sup>	--	--	-.02	--
Spouse reports (adjusted $\Delta R^2$ )	.01	.04*	.02	.00
Self-disclosure	-.06	.08	-.14	.07
Satisfaction	.19	-.35**	.04	-.08
Hedonism <sup>SVS</sup>	--	--	-.10	--
Adjusted Total $R^2$	.22***	.13**	.25***	.23***

Note. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ . SVS: Schwartz Values Survey.

**Table 3**

*Hierarchical Regression Analyses for the Prediction of Conflict Tactics of Wives from Demographics, Self-Reports, and Spouse Reports*

Predictors at step 3	Conflict tactics of wives			
	Exit	Neglect	Voice	Loyalty
	B	B	B	B
Demographics (adjusted $\Delta R^2$ )	.00	.09**	.00	.13***
Length of marriage	-.00	-.00	.00	.00
Age self	.04	-.02	-.03	-.01
Age spouse	-.00	.06*	.00	.02
Education self	.03	-.00	.01	-.13*
Education spouse	-.02	-.12	-.00	.12
Self-reports (adjusted $\Delta R^2$ )	.20***	.10***	.20***	.10***
Self-disclosure	.11	-.08	.28***	.05
Satisfaction	-.42***	-.11	.15	.24**
Stimulation <sup>SVS</sup>	--	--	.21**	--
Hedonism <sup>SVS</sup>	--	-.24*	--	--
Power <sup>SVS</sup>	--	--	-.16*	--
Tradition <sup>SVS</sup>	-.21	--	--	.32***
Benevolence <sup>SVS</sup>	-.54**	-.66***	--	--
Spouse reports (adjusted $\Delta R^2$ )	.00	.00	.08**	.04*
Self-disclosure	-.06	-.02	-.13	.08
Satisfaction	.18	.09	.11	-.29**
Tradition <sup>SVS</sup>	--	--	.37***	--
Adjusted Total $R^2$	.20***	.19***	.28***	.27***

Note. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ . SVS: Schwartz Values Survey.

In what concerns the effect of demographic variables, it was found that the more educated husbands and wives were, the less they tended to use Loyalty. Moreover, wives who were married to older husbands tended to use Neglect more frequently. Overall, demographics at step 1 explained 9%<sup>3</sup> of Exit for husbands, 9% of Neglect for wives, and 6% and 13% of Loyalty for husbands and wives, respectively. However, the relative importance of demographic factors decreased considerably when psychological variables were included in the model.

After demographics were controlled for, Self-disclosure was positively related to the use of Voice (for both husbands and wives) and Loyalty (only for husbands). Moreover, both husbands and wives tended to use Exit less often, the more satisfied they were in their relationships. Increased male satisfaction also positively predicted Voice, while increased female satisfaction positively predicted Loyalty. In what concerns values, higher scores of husbands in Stimulation were related to more frequent use of Exit and Neglect. On the contrary, the more wives valued Stimulation, the more they reported using Voice when facing relationship problems. Findings also reveal that wives used Neglect less, the more they valued Hedonism. Power, however, was negatively related to the use of Voice from the wives' part. The more wives valued Benevolence as a guiding principle, the less they used Exit and Neglect tactics. Finally, the more value wives assigned to Tradition, the more they used Loyalty as a conflict tactic.

Overall, the above predictors based on self-report data explained a significant amount of variance of the use of conflict strategies which ranged from 9% (for the prediction of Neglect) to 20% (for the prediction of Voice) for husbands, and from 10% (for the prediction of Loyalty) to 20% (for the prediction of Voice and Exit) for wives.

<sup>3</sup> All proportions of explained variance in hierarchical regression analyses are based on adjusted  $R^2$  values.

### Prediction of Individual Conflict Resolution Strategies from Spouse Reports

To examine the relation between spouse reports on self-disclosure, satisfaction, and values on the one hand, and self-reports on conflict strategies on the other, the Pearson correlation coefficients were computed. Only significant correlations at  $\alpha \leq .01$  are reported below. Results revealed that husbands tended to use Voice ( $r = .26$ ) more frequently and Neglect ( $r = -.38$ ) less frequently, the more satisfied their wives tended to be. Moreover, the more wives valued Hedonism, the less their husbands tended to use Voice as a problem solving tactic ( $r = -.23$ ). Wives tended to use Voice less, the more their husbands valued Achievement as a guiding principle to their lives ( $r = -.24$ ). On the contrary, wives tended to use Voice ( $r = .26$ ) and Loyalty ( $r = .26$ ) more frequently, the more their husbands valued Tradition.

To test whether spouse reports on self-disclosure, level of satisfaction, and values make a significant contribution to the use of different conflict strategies after controlling for self-reports and demographics, these variables were included in a separate (third) step in the hierarchical multiple regressions presented above. As in the case of self-reports, only those dimensions of spouse's values were used that had been found to significantly predict conflict strategies in preliminary analyses.

Results at step 3 showed that, after controlling for self-reports and demographics, spouse reports explained an additional 4% of variance of the use of Neglect by husbands, and an additional 8% and 4% of the use of Voice and Loyalty, respectively, by wives. Specifically, husbands reported less frequent use of Neglect, the more satisfied their wives were; wives tended to use Voice to a greater extent, the more their partner valued Tradition as a guiding principle to his life. Wives' Loyalty was negatively associated to their husbands' level of satisfaction. Spouse reports failed to further predict Exit, Voice, and Loyalty conflict strategies of husbands, or Exit and Neglect strategies of wives.

## Discussion

The purpose of this study was to explore conflict patterns among married couples in Greece and to investigate factors associated with the adoption of the Exit-Voice-Loyalty-Neglect typology responses to conflict (Rusbult et al., 1982). Results were generally consistent with expectations: self- and spouse reports on satisfaction, self-disclosure, and values were significant predictors of the use of conflict strategies to an extent that varied across conflict type, informant (self vs. spouse), and gender (husbands vs. wives).

### Preferred Conflict Resolution Strategies

Greek husbands and wives tended to use positive strategies significantly more frequently than negative strategies. Exit in particular was the strategy least frequently used by both husbands and wives. A possible explanation for these findings could be that cultures with a high value dimension of uncertainty avoidance, such as Greece (Hofstede, 1983), display a readiness to avoid ambiguous, uncertain situations (Ting-Toomey, 1991). In France, another country that is high in uncertainty avoidance, this was also associated with low levels of interpersonal conflict (Ting-Toomey, 1991). Moreover, in a study examining the geographical distribution of the Big Five personality traits, Greece was rather high in Neuroticism, a characteristic associated to uncertainty avoidance (Schmitt et al., 2007). Moreover, Greece scored rather high in a dimension of social axioms called societal cynicism (Bond et al., 2004), suggesting distrust in laws and the social system, possibly leading to a higher investment in close relationships as a counterbalance. The greater the desire to avoid uncertainty and maintain harmonious intimate relationships in a culture, the less frequent conflict resolution strategies, in general, and negative conflict resolution strategies, in particular, are expected. Finally, the finding that husbands and wives employ both active (Voice) and passive (Loyalty) strategies could in part be explained by the fact that although Greeks have made a transition from collectivistic to individualistic values, there is evidence that traditional values about relationships continue to affect family organization and relational health in this country (Georgas, 1989, 1991).



## Differences between Husbands and Wives

In comparison with their spouses, Greek husbands tended to be more satisfied, as expected. Moreover, in accordance to our predictions, husbands valued Stimulation, Achievement, and Power more, while wives valued Benevolence and Conformity to a greater extent. These findings are in line with two previous studies – both including Greece, namely, the European Social Survey, conducted in 19 countries, and a 67-countries study (Schwartz & Rubel, 2005) – suggesting that men attribute consistently more importance to Power, Stimulation, Hedonism, Achievement, and Self-direction than women, while the latter attribute more importance to Benevolence and Universalism. However, in previous studies no gender differences were found in Conformity, though results regarding gender differences in this value are generally inconsistent. These findings extend previous literature regarding differences between husbands and wives in values by testing whether the same gender differences could be detected using a different instrument, namely, the Schwartz Value Survey rather than the Portrait Values Questionnaire. Additionally, they could also be generalized to a different population, namely, individuals of a wider age range and occupation in comparison to student samples (with a restricted age range of 18-24 years). Findings regarding Conformity also add to previous inconclusive results. Moreover, the inclusion of couples in this study has enabled us to explore the possibility that differences in values between partners might be smaller than those seen in the general population, since selection of an intimate partner is often based on the accordance in values, and partners are also expected to influence each other's value system.

The finding that Greek husbands and wives did not differ at the mean self-disclosure level or in the frequency of use of the four conflict strategies is also in line with previous cross-cultural findings regarding gender differences. According to Hofstede (1980), countries that are relatively high in femininity emphasize fluid gender boundaries, fluid gender expectations, and androgynous ideals of behaviors, while masculine cultures emphasize clear gender segregation values, different gender expectations, and different gender behavior patterns with males in the assertive role and females in the nurturing role. An inspection of Hofstede's masculinity-femininity scores indicated that Greece is positioned 18<sup>th</sup> among 50 countries (Hofstede, 1983). The agreement between husbands and wives in self-disclosure and relative use of conflict strategies is also in line with previous studies of traditional family values, where Greeks seemed to reject the hierarchical roles of father and mother. According to those, the father is the head of the family, acts in an authoritarian manner, and has control over the family's financial issues, while the mother is usually a housewife and tends to be submissive, conciliatory, compromising, caring for the children, and accepting the father's decisions (Georgas, 1989, 1991; Mylonas, Gari, Giotsa, Pavlopoulos, & Panagiotopoulou, 2006). Leung and Chan (1999) also suggested that cultural differences in power distance are likely to influence conflict resolution. Greece is positioned around the mean of power distance compared to 50 countries (Hofstede, 1983), thus further explaining the absence of difference between Greek husbands and wives in the type of conflict strategies they use to resolve conflict.

## Prediction of Conflict Strategies from Self-Reports

As expected, partners tended to use more constructive conflict strategies the more satisfied they were, while dissatisfaction with the relationship was positively associated with the use of negative conflict strategies. The finding showed that increased male satisfaction was related to the use of Voice, while increased female satisfaction was related to the use of Loyalty. This is in line with previous findings, suggesting that men are thought to construct and maintain an independent self-construal (i.e., representations of others are separate from self), whereas women are thought to construct and maintain an interdependent self-construal (i.e., others are considered part of the self) (Cross & Madson, 1997; Markus & Kitayama, 1991). Findings suggest that individuals with a more independent self-construal use Voice when dealing with relationship dissatisfaction, while individuals with an interdependent self-construal use Loyalty under the same conditions (Sinclair & Fehr, 2004).

In a broader sense, Voice and Loyalty are considered maintenance behaviors when partners are faced with relationship dissatisfaction. The relationship between maintenance strategies and satisfaction has been established in many studies. According to Bell et al. (1987, cf. Dindia, 2000), when wives were satisfied with their marriages, they tended to believe that maintenance strategies were important to both themselves and their husbands; moreover, the more frequently they perceived that those behaviors were employed by both themselves and their partners, the greater their satisfaction tended to be.

The finding that self-disclosure was positively related not only to Voice, but to Loyalty as well, is also in line with previous findings suggesting that self-disclosure can be multidimensional (Derlega, Metts, Petronio, & Margulis, 1993), i.e., one may use it to express independence, self-assertion, and directness, as well as harmony, connectedness, and solidarity. Furthermore, Fitzpatrick et al. (2001) argued that marriage is considered a particularly intimate relationship to both individualistic and collectivistic cultures; therefore, partners' disclosure is tied to values in a way that is not apparent to other relationships. These researchers have found, for example, that self-disclosure was unrelated to individualism, while it was positively related to collectivism. The authors conclude that since marriage may be considered an in-group, marital disclosure could be a way to create unique interactions with spouses, thus further delineating in-group/out-group boundaries. Kito (2005) also found that self-disclosure was higher in romantic relationships than in friendships among both American and Japanese students.

A pattern of relationships between personal values and the four conflict resolution strategies was found in this study, and could be explained by the functions of each value in meeting one or more of the three basic requirements of human existence (Schwartz & Bardi, 2001).

Overall, wives who valued Power reported using Exit to a greater extent, while at the same time they tended to use Voice less frequently. This finding is not surprising given the fact that Power values emphasize dominance over people and resources. Moreover, their pursuit often entails harming or exploiting others, thereby disrupting and damaging social relations. Loyalty was negatively related to Achievement and Self-direction in wives and husbands, respectively. A possible explanation for this finding could be the strong motivation of people who greatly value Achievement and Self-direction to invest time and physical and intellectual effort in order to solve problems. This is in direct contrast with the essence of Loyalty, according to which one passively but optimistically hopes that problems will be solved as time goes by.

On the other hand, Tradition and Conformity were positively related to the use of Loyalty in wives. Conformity was also negatively related to the use of Exit in husbands. Wives who valued Tradition also tended to use Exit less, while Benevolence was negatively related to destructive conflict strategies in wives. These findings were also expected, since accepting and acting on Tradition, Conformity and Benevolence values promotes the requirement for cooperative social relationships.

The values of Hedonism and Stimulation, however, proved to differentially influence behavior in husbands and wives. More precisely, in the case of husbands, Stimulation was positively related to both Exit and Neglect. On the contrary, the greater wives valued Stimulation as a guiding principle in their lives, the more they tended to use Voice during conflict resolution. Moreover, in wives, Hedonism was negatively related to the use of Neglect. Both Stimulation and Hedonism are social transformations of the needs of the individual, as a biological organism, for physical gratification and optimal arousal. However, in contrast to Power values, these values do not necessarily threaten positive social relations. Thus, when gratification of these needs can be more easily accomplished in the context of the relationship – or when gratification of these needs outside of the context of the relationship is not even permissible – the pursuit of these values is more possibly to lead to relationship maintaining conflict strategies. On the contrary, if gratification of these needs is permissible or perhaps easier outside the relationship, destructive conflict resolution strategies are expected to be more frequent.

Findings of this study regarding the differential behavioral consequences of Hedonism and Stimulation in husbands and wives suggest possible gender differences in the way they gratify their needs, which could at least in part be explained by culturally defined gender roles. According to self-silencing theory (Jack, 1999, cf. Cuming & Rapee, 2010), women's and men's early experiences provide a basis for forming beliefs about how one "should" behave in order to build and maintain intimate relationships or images of relatedness. Women are more likely to adopt images of relatedness based on "selflessness." In other words, they may believe that in order to maintain relationships they must put others' needs first or remove critical aspects of themselves, such as thoughts and feelings, from dialogue (self-silencing). Thus, women are less likely to use destructive conflict resolution strategies, even when gratification of personal needs is greatly valued. Moreover, women are more likely to define themselves in terms of their relationships or adopt a relationally interdependent self-construal (Lydon, Menzies-Toman, Burton, & Bell, 2008). As a result, pursuit of self-interest goals coincides with pursuit of collective couple goals, rendering constructive conflict resolution strategies as the most appropriate means to satisfy both sets of goals.

### **Prediction of Individual Conflict Strategies from Spouse Reports**

Spouse reports had less impact on preference for each of the four conflict strategies as compared to self-reports. This is not surprising, as the effect of self-reports was partialled out before testing for the effect of spouse reports. Both partners tended to use less passive conflict strategies (i.e., Neglect, Loyalty), the more satisfied their partners were with their relationships. It seems possible that a high level of partner's satisfaction creates a positive emotional environment encouraging the expressing of an individual's feelings and thoughts. In addition, correlational analyses showed that the more satisfied wives tended to be, the more their husbands used Voice and the less they used Neglect as a conflict resolution strategy. Previous research has shown that an individual's perception of his/her partner's maintenance strategies is positively associated with the individual's own level of satisfaction (Dindia, 2000). Our findings suggest that, apart from self-perceptions of one's own and one's partner's maintenance strategies, significant links also exist between an individual's own and his/her partner's actual maintenance strategies and relationship satisfaction.

The hierarchical regression results suggested that wives' values do not have an influence on the choice of the conflict resolution strategy that husbands tend to use. However, correlational analyses revealed that husbands tended to use Voice less, the more their wives valued Hedonism as a guiding principle in their lives. When husbands perceive that gratification of personal needs is very important to their partners, it seems that they may feel less "safe" to voice their concerns and thoughts loudly. This is in line with the finding that the more their husbands valued tradition, the more wives tended to use Voice. Moreover, correlation analyses revealed that wives used Voice less, the more their husbands valued Achievement. A possible explanation for these findings might be that tradition is considered as a conservation value that emphasizes order, self-restriction, preservation of the past, and resistance to change. When a spouse possesses the above characteristics, the threat for relationship dissolution is decreased. Therefore, individuals might feel safer to voice their worries and thoughts. On the contrary, Achievement is considered a self-enhancement value that emphasizes the pursuit of one's own interests and relative success as well as dominance over others. Husbands who possess these attributes may seem selfish and dominant, which could have a negative effect on wives' willingness to behave in constructive ways when facing relationship problems.

### **Limitations and Suggestions for Future Research**

This study collected information from both spouses in order to examine conflict resolution strategies and their relationship to personal values, self-disclosure, and satisfaction. However, it relied exclusively on participants' perceptions, as reflected in self-reported questionnaire data. An interesting addition to the research design would be to ask participants to recall real conflict incidents and their actual reactions towards their partners. It would also be enlightening to directly observe couples during actual disagreements in experimental conditions. Another

limitation of this study was that a small number of couples were excluded from the final sample because one member, in most cases the husband, did not return the questionnaires. Since no further information is available for these couples, generalization of our findings should be made with caution. Furthermore, the present study included only married couples. The extension of the project to alternative forms of intimate relationships, such as cohabiting or homosexual couples, will broaden our knowledge. Finally, since values did have an influence on the choice of conflict strategies and since values are expected to vary cross-culturally, it would be potentially enlightening to compare couples from different cultures.

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## **Jealousy and Infidelity among Mexican Couples**

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### **Abstract**

Gender differences in jealousy have been traced back to both socio-cultural, as well as to evolutionary sources. The evolutionary approach predicts similar gender differences to be found in all cultures. Socio-cultural explanations, however, suggest that the patterns of gender differences may be culture-specific. The current study investigated gender differences in the relations between jealousy and infidelity in Mexico. 537 participants (248 men; 289 women) filled out an inventory of jealousy and infidelity, respectively. The results show first a positive relationship among infidelity, anger, fear, suspicion, frustration and distrust. Second, the data reveal a clear gender difference in that men desired sexual and emotional infidelity relationships more often than women. These findings are discussed regarding the importance of culture.

**Authors' Note:** The authors would like to thank the financial support for the development of this project of PAPIIT, Project No. IN305706-3, Correspondence concerning this article should be addressed to Sofia Rivera-Aragon, E-mail: [sofiar@servidor.unam.mx](mailto:sofiar@servidor.unam.mx)

When referring to infidelity, references, common knowledge and scientific inquiry are biased towards the sexual experience and disregard the fact that infidelity also has an emotional component. The widespread occurrence of sharing a mate or losing them to other people or other interests across cultures (Buss, 1989) indicates a universal phenomenon that seems to be the leading motivation behind feelings of infidelity and, very often, jealousy (Seidenberg, 1967). In fact, suspicion about the partner's possible infidelity elicits jealousy in men and women (Buss & Shackelford, 1997; Daly & Wilson, 1983; Garcia, Gomez, & Canto, 2001). Although gender difference may attest to both biological and cultural effects, specific studies directed at uncovering cultural idiosyncratic manifestations are absent.

Differences between men and women concerning types of infidelity, either sexual or emotional, have been analyzed by two leading theories: the socio-cultural theory (DeSteno & Salovey, 1996a; Harris & Christenfeld, 1996b; Hupka, 1981) and the evolutionary theory (Buss, 1989; Buss, Larsen, Western, & Semmelroth, 1992; Buunk, Angleitner, Oubaid, & Buss, 1996). Evolutionary theory emphasizes male's greater concern about paternal certainty and, thus, sexual infidelity, while it contends that females' need for protection leads to greater discomfort with the emotional aspects of infidelity, which could include abandonment. The socio-cultural perspective establishes the social function of jealousy: preserving property rights as defined by culture in a specific historical time frame.

According to the socio-cultural perspective, jealousy does not involve a triadic relationship, but rather a quartet consisting of the rival, the member of the couple who is the object of desire, the subject who is the victim of jealousy, and the community, whose function is to secure the fulfillment of rules, promote behaviors that are consistent therewith, and restrict behaviors that contradict them (Garcia et al., 2001). Given that a variety of experiences lead men and women to develop different attitudes concerning proper behaviors in relationships, relevant factors in trying to understand men's and women's responses to the couple's potential crisis are norms, attitudes, and beliefs (Díaz-Loving & Sánchez-Aragón, 2002). Thus, culture is in charge of determining when a situation is threatening, when this situation constitutes danger, and under what conditions the manifestation of jealousy is required (Hupka, 1981).

From the evolutionary position, significant gender differences regarding men's and women's feelings about their partner's infidelity have been explained based on survival needs. From this standpoint, the reason that men are predisposed to feeling distressed by sexual infidelity, while women are predisposed to feeling distressed by emotional infidelity, is linked to reproduction and protection needs (Symons, 1979; Daly, Wilson, & Weghorst, 1982; Buss, 2000). Therefore, differences originate from the various adaptive pressures men and women have gone through throughout evolution. In the case of men, adultery is supposed to have the greatest adaptive advantage and cost, when men are the victims and their partner's infidelity resulted in pregnancy. Then, the affected man would face the risk of investing resources in supporting offspring that do not carry his genes. In order to prevent this, according to this hypothesis, evolution endowed men with a sexual jealousy mechanism that is triggered by their partner's sexual betrayal. Almost as a reflex, this mechanism has been especially designed to respond only to specific input stimuli, and when the former is triggered, affective changes are produced (Barkow, Cosmides, & Tobby, 1992). It should be noted that there is some learning, and thus socio-cultural aspects regarding male jealousy, since the input stimuli might be cognitive, such as the idea that the partner is having sexual relations with someone else, which unleashes jealousy. Females, since they tend to be more selective of mates, have lower levels of adultery, and in consequence did not develop such an accurate sexual jealousy mechanism. Nevertheless, throughout history women have faced a different kind of risk: the loss of resources provided by her partner to her and her offspring. It is believed that this challenge conditioned a response mode in women that is activated by the idea that her partner is developing a sentimental bond with another woman, which would probably lead the man to provide someone else with the needed resources. In other words, women are not afraid of adultery, they are afraid of being abandoned (Sabini & Silver, 2005).



Although the general patterns of behavioral response to sexual or emotional infidelity seem to be universal, socio-cognitive theorists have argued that cognitive valuation plays a significant role in eliciting jealousy and have highlighted the importance of the interpretation of a variety of fears and not only emotional or sexual betrayal (Harris, 2003a; Hupka & Ryan, 1990; Mathes, 1991; Parrott, 1991; Salovey & Rothman, 1991; White, 1981; White & Mullen, 1989). Accordingly, two factors make the partner's involvement with someone else particularly threatening: (a) when it jeopardizes an aspect of the individual's self-concept, self-image, and other self-representations, and (b) when the quality of the primary relationship is deteriorated. For instance, the hypothesis of Salovey and his colleagues (Salovey et al., 1991; Salovey & Rodin, 1991) suggests that jealousy may occur in response to rivals who are superior to us in domains that are particularly important and relevant to self-definition. This is, when the individual perceives that their partner is interested in someone else, the latter may become a rival who is competing for the partner's attention and a prominent target of social comparisons. Particularly, individuals facing this kind of rival will try to assess whether the rival is better or worse based on certain aspects that are deemed important by the betrayed individual. Social comparison with the rival will take place in such dimensions as they are deemed important for the individual's self-esteem and self-concept (DeSteno & Salovey, 1996b), in dimension that the individual considers important for their partner (Schmitt, 1988; White, 1981), or in those that enhance the individual's general appeal as a partner (Mathes, 1991). A rival with superior qualities in these dimensions will provoke feelings of jealousy. It should be noted that all these self-construal dimensions are developed in social interaction (Mead, 1913) and are closely related to socio-cultural norms (Díaz-Guerrero, 1984).

The effects of diverse cognitive sets that were derived from the interaction of evolution with individual and ecosystems are evident when men and women differ in their jealousy responses according to physical appeal and characteristics associated with the rival's status (Dijkstra & Buunk, 2002). For example, Dijkstra and Buunk (1998), Buss, Shackelford, Choe, Dijkstra & Buunk (2000), and Hupka and Eshett (1998) found that women are more jealous in response to a more physically attractive rival, while men are more jealous when they face more socially dominant rivals. An explanation for this is offered by Dijkstra and Buunk (1998) and Buss et al. (2000) on the basis of evolutionary psychology. According to this view, and on account of men's and women's differences in terms of reproductive biology, they also differ in regard to the characteristics that contribute to increase the value they give to each other as partners and will determine the rival's jealousy-provoking characteristics. While women's value is based on their physical appeal, men's value as partners is determined by status-related characteristics such as social dominance.

Socio-cognitive theorists have not usually focused on distinguishing the difference between sexual jealousy and emotional jealousy. An exception to this is DeSteno's et al. (1996a) "double shot" hypothesis and Harris and Christenfeld's (1996a) "two for one" hypothesis, which suggest that both men and women find emotional and sexual infidelity more damaging when they are combined, than being confronted with only one. Moreover, both hypotheses state that men tend to think that a woman is surely in love with another man if she has sexual relations with him. Therefore, sexual infidelity is even worse for men than the emotional one as it implies that both types of infidelity are taking place. This is because men think that it would be impossible for women to have sexual relations with someone they are not in love with. Women, on the other hand, tend to think that men can have sex without being in love and, therefore, sexual infidelity does not necessarily imply emotional infidelity. However, these arguments shift when it comes to emotional infidelity: women believe that if a man is in love, he will also be willing to have sexual relations; hence, emotional infidelity is seen as an attack on the relationship.

An additional link in the emotional vs. sexual perspective is the role of individualism or collectivism on the representation of power and love. Díaz-Guerrero and Díaz-Loving (1988) indicate that in the Mexican culture, power and love are confounded, making it more important in this collectivistic culture to mix sex and emotions in both males and females. In this same

direction, Harris (2003b, 2002) reports data which do not correspond to the universal gender difference contained in the literature. In these studies, more mature male and female samples reported having focused more on emotional aspects of their partner's infidelity, when both men and women faced their unfaithful partner. However, women were significantly more prone to putting an end to the relationship. The fact that both men and women paid significantly more attention to emotional aspects leads us to a couple of interesting remarks: (a) distress caused by sexual infidelity may decrease with age, for both men and women, or (b) in a stable relationship, individuals concentrate more on the potential emotional loss. It would follow that collectivistic cultures which are more in tune with closeness would generally respond like more committed individuals from individualistic cultures. In fact, Díaz-Loving and Sánchez-Aragón (2002) report that Mexican subjects reacting to intimacy stimuli have no anxiety in regards to loss of individuality, while participants in the United States clearly manifest that intimacy is good as long as one does not lose autonomy. The state of affairs should impact the manifestations and reactions to both jealousy and infidelity in different cultures.

In reference to the effects of infidelity on other psychological variables, including jealousy, Sabini et al. (2005) looked at the end of an affair. For example, when a man finds out that the woman who he has an affair with is about to resume her relationship with her husband, the former is likely to experience different feelings, one of which would be the acknowledgment that he might be leaving his offspring to another man. This might be positive in terms of reduced personal costs for their maintenance. However, in view of the fact that women usually have certainty as to who the father of her children is, the aforementioned advantage for men does not apply to a woman when her married partner (her affair) is about to resume the relationship with his wife. One of the effects is that, in general, men are less upset and hurt when the affair comes to an end. Interestingly, Díaz-Loving (2004) reports that within ideal love, women tend to voice the pain they would endure (hurt factor of jealousy) if their current relationship came to an end, while men do not.

The role of jealousy could be one of detracting from infidelity. Harris (2003b) suggests that a good strategy to prevent infidelity is to be on the alert for any signal about it. Harris's (2003b) starting point is the idea that infidelity is seldom abrupt; on the contrary, individuals usually begin by flirting (increasing visual contact, smiles, and hugs), behavior that may be a signal of increasing sexual interest, emotional interest, or both. Therefore, contrary to evolutionary psychology hypothesis, specific markers on jealousy for each sex need not have been developed. Rather, both sexes could prevent any type of infidelity by being aware of the social norms and markers set by their own culture and being on the alert for such "flirtation". In fact, Buunk and Dijkstra (2004) remark that when individuals experience preventive jealousy, they might be trying to protect the couple's emotional and sexual exclusivity, which can be achieved by anticipating and watching over the partner's every action. In contrast, when jealousy is due to an infidelity *fait accompli*, this is, a proven fact, individuals are more prone to expressing their anger to their partner or rival, in order to stop extra-dyadic sex from happening again. This partly restores the self-esteem of the affected individual. Although with some limitations, these authors found that the emotional response depends on the type of infidelity: jealousy due to emotional infidelity gives rise to feelings of threat and pain, and those due to sexual infidelity give rise to feelings of betrayal and anger.

Becker, Sagarin, Guadagno, Millevoi, and Nicastle (2004) found that individuals who are affected by infidelity arrange their emotional responses by the following four types: jealousy, anger, pain, and annoyance. These authors discovered that both men and women report pain as the strongest emotional response to infidelity, the emotional aspect of infidelity being the one considered as the worst. They also revealed that both sexes agree that the sexual aspect of infidelity brings about greater anger and distress than the emotional aspect. Only in the case of jealousy, differences by sex were found: women regard the emotional aspect as worse, while for men the sexual one is worse. This is in accordance to existing literature on the subject. Yet, why does sexual infidelity bring greater anger? The authors mention that this may be due to the fact that sexual infidelity entails a decision, and that the latter makes the individual act in a way that

jeopardizes their relationship with their partner. Besides these findings, Lieberman (2004) states that annoyance plays an important role in this kind of situation, acting as a defense mechanism: it tells the unfaithful person that continuing the relationship with that other person might jeopardize the person's integrity.

Given the theoretical, empirical and applied implications of infidelity, jealousy, and their relationship from a universal or indigenous position, the authors set out to develop valid, reliable, and culturally sensitive measures. These were edified over inclusive evolutionary and socio-cognitive perspectives and span from idiographic to nomothetic methodologies, in order to answer the following questions and hypothesis by means of a multivariate correlational model:

Which are the indigenous manifestations of infidelity and jealousy in Mexico?

What are the patterns of infidelity and jealousy in Mexican males and females?

What is the relation between individuals' jealousy and infidelity?

Which types of jealousy are related to sexual and emotional infidelity?

Are there differences by sex in the relationship patterns?

Test hypotheses derived from two different theoretical models of romantic jealousy (evolutionary and social constructivist theories).

Can the results be interpreted from an emic or ethic perspective?

## Method

### Participants

537 volunteers participated in this study: 248 men and 289 women, with ages ranging from 18 to 72 years, and a mean age of 39.89. As to education level, 47.7% of the participants had college studies and 43.1% had high school or less education. At the time of research, all participants were in a stable relationship: most were married ( $n = 410$ ), the rest lived in cohabitation ( $n = 99$ ). The number of children ranged from 1 to 7, with an average of 2 children. All participants were not randomly selected volunteers contacted in parks, offices, shops, homes, and by using a snowball technique in Mexico City. The requirement was that they be over 18 years and currently in a stable couple relationship. They were asked to participate and if they accepted, they received the instruments indicating that answers were confidential and anonymous.

### Measures

Two scales were applied: the Jealousy Inventory (Díaz-Loving, Rivera, Ojeda, & Reyes, 2000) and the Infidelity Inventory (Romero, Rivera, & Díaz-Loving, 2007). In both cases, the conceptual definition of the construct was extracted from the literature and was used as stimuli with indigenous samples who were asked to indicate the feelings, thoughts and behaviors attached to each concept. Once the local manifestations were obtained, these were set on Likert-type scales and applied to larger samples. The psychometric characteristics of both inventories are offered.

The Jealousy inventory consists of two areas (emotions and feelings; cognitions and styles) with twelve factors. The scale is set on a five-point Likert-type continuum, spanning from total disagreement to total agreement with each item. Construct validity was derived from a principal components factor analysis with an orthogonal rotation that yields twelve factors with Eigenvalues over 1, which explain 69.8% of the total variance. Items with factor weights superior to .40 for each dimension were selected. According to their conceptual content, these factors were divided into components. The first six factors refer to emotions and feelings elicited by the jealousy stimuli, and the next six factors refer to cognitions and behavioral response

styles. Cronbach alpha for the whole inventory is .98. Table 1 shows each factor, its definition, sample items, and the reliability coefficient for each one.

**Table 1**

*Jealousy Factor Definitions and Indicators*

<b>Factor</b>	<b>Definition</b>	<b>Sample Items</b>	<b>Cronbach Alpha</b>
<b>Jealousy (Emotions and Feelings)</b>			
Emotional responses produced by Jealousy	In this scale, jealousy is the detonator. It measures the intensity of emotions, as a response to jealousy.	I would feel like dying if my mate left me.	.95
Anger	In this scale, the individual gets angry or upset because he/she is not the partner's center of attention. Annoyance is caused by any intrusions on exclusivity.	That my mate has other friends annoys me. It disgusts me that my mate goes out with other people.	.91
Negative Attitude	Expression of disagreement with the partner's relationships with other people, because the former should only establish them with him/her.	I do not like my mate looking at other people with desire. I do not like it when my mate greets someone with a kiss who is of the opposite sex and whom I do not know.	.82
Pain	The individual expresses a feeling of despair, which is accompanied by depressive aspects.	I would feel great pain if my mate cheated on me. If my mate betrayed me, it would be a long time before the pain went away.	.82
Control	Annoyance due to a lack of control over the partner.	It threatens me to see my mate talking to someone else. I do not like it when my mate has fun with his/her friends.	.76
Fear	Fear and anxiety emotions vis-à-vis the possible loss of the partner.	It frightens me to think that my mate could cheat on me. I fear my mate will leave me if he/she meets someone else.	.78
<b>Jealousy (Cognitions And Styles)</b>			
Obsession	Continuous and recurrent thoughts about the partner's possible deceit.	I want my mate to think only about me. I want to know who my mate is with at all times.	.98
Intrigue and Suspicion	The individual distrusts and is constantly suspicious of his/her partner, keeping an eye on him/her all the time.	I think I can lose my mate at any moment. Occasionally, I suspect my mate is with someone else.	.91
Trust-Distrust	Fluctuation between Insecurity and Security concerning the partner' transgression of the exclusivity rule.	I feel jealous of the air my mate breathes. I generally trust my mate.	.85
Trust	Feelings of self-confidence.	When one has self-confidence, jealousy is needless. I trust my mate eyes closed.	.77

Factor	Definition	Sample Items	Cronbach Alpha
Frustration	Disappointment because of the partner's transgression.	I hate imagining my mate has sex with another person. I see my relationship in jeopardy when my mate hangs out with his/her ex.	.75
Distrust	Insecurity due to the partner's disloyalty.	I think my mate wants to cheat on me. I think there is somebody else in my mates life	.70

For the Infidelity Inventory (Romero, Rivera, & Diaz-Loving, 2007), two conceptually clear subscales are present. One of which assesses behavior on a five-point frequency Likert-type scale, spanning from never to always, while the other one measures consequences, also on a five-point scale, which in this case spans from total disagreement to total agreement with each statement.

As with the precious inventory, principal components factor analysis with an orthogonal rotation was used to obtain construct validity. For the unfaithful behavior component, four factors with Eigenvalues over 1 explained 70.16% of the test variance and yield a Cronbach alpha for this section of .98. Items with factor weights over .40 for each dimension were selected and the factors with their definition, sample items, and reliability scores are presented in Table 2.

**Table 2**

*Definitions for Unfaithful Behavior Subscale Factors*

Factor	Definition	Sample Items	Cronbach Alpha
Sexual Infidelity	Behaviors that denote the existence of a sexual tie to someone besides the primary partner.	I have had sex with other people besides my mate.	.97
Emotional Infidelity Desire	It refers to a desire for a romantic tie to someone besides than the primary partner, which is not necessarily fulfilled.	I wish to kiss other people besides my mate. I have desired other people besides my mate.	.96
Sexual Infidelity Desire	Desire for a sexual tie to someone besides the primary partner, which is not necessarily fulfilled.	I have desired having sexual contact with others besides my mate. I have desired having sexual intercourse with others besides my mate.	.96
Emotional Infidelity	Conducts that denote the existence of a romantic emotional tie with someone besides the primary partner.	I have loved others besides my mate. I have related sentimentally with others besides my mate.	.87

The same statistical procedures were conducted for the section that measures consequences of the unfaithful behavior. Two factors with Eigenvalues over 1.5 that explain 56% of the total test variance were selected for their conceptual clarity. Their total Cronbach alpha was .73 and their definitions and sample items are presented in Table 3.

**Table 3***Definitions for Factors in the Infidelity Consequences Subscale*

Factor	Definition	Sample Items	Cronbach Alpha
Negative consequences of infidelity	It refers to the damage that infidelity might cause to the primary relationship, promoting even the dissolution of the same.	Having another relationship deteriorates the primary one. Infidelity destroys couple relationships.	.91
Positive consequences of infidelity	It refers to the benefit that the infidelity might bring to the primary relationship, promoting rapprochement and helping the partners to solve the problem in the relationship.	Infidelity can help save a relationship. Having an alternative mate helps endure marriage problems.	.86

## Results

In order to find the relation between jealousy and infidelity, *Pearson's product-moment correlation coefficient* was applied. Data obtained for both men and women show that jealousy and infidelity are related. It was observed that the greater the sexual and emotional infidelity, together with both the sexual and emotional desire involved in behavioral infidelity, the higher the level of emotional responses generated by jealousy, and the greater the anger, control, fear, obsession, suspicion, frustration, and distrust. Likewise, there was no correlation in men or in women between infidelity and trust. On the other hand, different correlations were found in men and women. The former recorded a positive correlation between infidelity and the negative attitude concerning jealousy, while the latter showed no significant association between these variables. Nevertheless, in the case of women, there is a negative correlation between infidelity and pain due to jealousy, which in the case of men does not present a significant correlation (Tables 4 and 5).

As to the consequences of infidelity in men, it was found that the higher the level of pain caused by jealousy and the greater the trust in the partner, the greater the negative consequences of infidelity. However, when there is greater suspicion-intrigue concerning the partner and greater distrust, less negative consequences are perceived (Table 4). For women, the greater the pain and the more negative their attitude, the greater the negative consequences of infidelity. Likewise, results indicated that the greater the suspicion, the less negative consequences appeared. As to the positive consequences of infidelity, the latter increases when jealousy increases, except when there is pain, which produces an inverse relation (Table 5).

**Table 4***Correlations between Infidelity and Jealousy in Men*

Jealousy Factors	Behavioral Infidelity			Consequences of Infidelity		
	Sexual Infidelity	Emotional Infidelity Desire	Sexual Infidelity Desire	Emotional Infidelity	Negative	Positive
Emotional responses produced by jealousy	.257**	.264**	.255**	.226**		.253**
Anger	.291**	.259**	.273**	.247**		.290**

Negative attitude	.167**	.251**	.227**	.167**		.196**
Pain					.275**	-.119*
Control	.280**	.266**	.266**	.200**		.178**
Fear	.214**	.209**	.193**	.177**		.287**
Obsession	.197**	.212**	.216**	.181**		.171**
Suspicion-Intrigue	.310**	.267**	.268**	.244**	-.146**	.355**
Trust-Distrust	.124*	.178**	.146**	.183**		.164**
Trust					.291**	
Frustration	.187**	.267**	.244**	.185**		.196**
Distrust	.343**	.318**	.342**	.299**	-.179**	.280**

\*\*p ≤ 0.01

\* p ≤ 0.05

**Table 5***Correlations between Infidelity and Jealousy in Women*

Jealousy Factors	Behavioral Infidelity				Consequences of Infidelity	
	Sexual Infidelity	Emotional Infidelity Desire	Sexual Infidelity Desire	Emotional Infidelity	Negative	Positive
Emotional responses produced by jealousy	.144**	.243**	.201**	.158**		.202**
Anger	.131*	.203**	.161**	.126*		.176**
Negative attitude					.127*	
Pain	-.170**	-.114*	-.186**	-.174**	.271**	
Control	.103*	.174**	.152**			.128*
Fear	.135**	.210**	.168**	.123*		.161**
Obsession		.156**	.129*			.119*
Suspicion-Intrigue	.260**	.346**	.353**	.245**	-.124*	.306**
Trust-Distrust	.135**	.125*	.110*	.111*		
Frustration	.142**	.239**	.209**	.147**		.116*
Distrust		.144**	.168**	.113*		

\*\*p ≤ 0.01

\* p ≤ 0.05

In order to test the sex-differences hypothesis, *t-student test* were conducted with the purpose of comparing each factor by sex. Data obtained for the jealousy scale show significant differences in three factors: negative attitude, frustration, and distrust, with women being the ones with the highest means in the three factors (Table 6).

**Table 6***Differences in Jealousy Factors by Sex*

Factors	Means by sex		Theoretical Mean	t	p
	Men	Women			
Emotional responses produced by jealousy	2.1902	2.2832	3	-1.047	.296
Anger	2.0524	2.0980	3	-.575	.565
Negative attitude	2.5806	<b>2.8478</b>	3	-2.878	.004**
Pain	3.6637	3.7640	3	-1.078	.282
Control	2.1573	2.2886	3	-1.565	.118
Fear	2.2782	2.4104	3	-1.445	.149
Obsession	2.5573	2.6734	3	-1.507	.132
Suspicion-Intrigue	1.8161	1.8997	3	-1.041	.298
Trust-Distrust	2.8000	2.8166	3	-.273	.785
Trust	3.5944	3.4927	3	1.164	.245
Frustration	2.3333	<b>2.5920</b>	3	-2.799	.005**
Distrust	1.8508	<b>2.0720</b>	3	-1.882	.050*

\*\*  $p \leq 0.01$       \*  $p \leq 0.05$

Finally, a *t-student test* was applied in order to establish comparisons between men and women in the infidelity scale. Data show a significant difference among mean values, with men recording a higher mean in all infidelity factors, involving desire and behavior. As to consequences, no significant differences were found by sex (Table 7).

**Table 7***Differences in Infidelity Factors by Sex*

Factors	Means by sex		Theoretical Mean	t	p
	Men	Women			
Sexual Infidelity	1.5226	1.3322	3	2.453	.014**
Emotional Infidelity Desire	2.0242	1.7772	3	3.072	.002**
Sexual Infidelity Desire	1.8484	1.5017	3	4.139	.000**
Emotional Infidelity	1.5774	1.4187	3	2.132	.033*
Negative consequences of infidelity	4.0000	4.0166	3	-.154	.877
Positive consequences of infidelity	2.0138	1.9709	3	.501	.617

\*\*  $p \leq 0.01$       \*  $p \leq 0.05$

## Discussion

One of the solutions to the etic-emic dilemma present in cross-cultural psychology has been indigenous research that has incorporated the methods and themes of mainstream psychology together with ideographic autochthonous measures (Díaz-Loving, 1998). The present research is a good example of this process, considering universal hypothesis derived from evolutionary theory with methods that incorporate the idiosyncratic manifestations of the phenomenon in a specific ecosystem. According to the results, concerning the partner, there is a strong relation between any type of infidelity and the appearance of jealousy and trust. Thus, the universal hypothesis that general suspicion about the partner's possible infidelity in sexual or emotional form elicits jealousy in men and women is confirmed (Buss, Shackelford, Kirkpatrick, Choe, Hasegawa, Hasegawa, & Bennett, 1999; Daly et al., 1983). However, a cultural difference is identified when in contrast to Drenick's (2003) findings that infidelity is more related to



jealousy in the case of women (as compared to men) in an individualistic culture, the present data show a similar correlation pattern between jealousy and infidelity in men and women.

On the other hand, the positive relation found between infidelity (of any type) and pain, in the case of women, reinforces the findings of Oikle (2003), who suggested that men and women differ as to the nature of their infidelity, women being more prone than men to add an emotional component to the sexual component of infidelity. Thus, when women have an affective bond to a new relationship, they feel less pain concerning their fixed partner's possible infidelity.

In connection with differences found in reference to three of the jealousy factors (negative attitude, frustration, and distrust), it can be said that, in general terms, women become more emotional and sensitive in response to a situation of jealousy, and yet they are also ambivalent, since they show a negative attitude concerning jealousy. That is, they disagree with their partners' engaging in relationships with other people, and feel frustrated and distrustful concerning the relationship. According to Harris and Christenfeld (1996a), gender differences in terms of jealousy are based on men's and women's knowledge about the relation between love and sex. Thus, men think that women have sex only when they are in love, and women think that men have loveless sex.

As to differences in unfaithful behavior, men desire sexual and emotional infidelity relationships more often; this predisposes them to engage in such kind of relationship. These results are consistent with Regan and Atkins (2006), who state that men tend to focus more on enjoying and even remember having experienced sexual desire to a greater degree than women. These authors say that this behavior is due to the different reinforcement and punishment patterns which men and women are exposed to in connection with their sexual conduct, as combined with existing normative beliefs regarding masculinity and femininity. According to Wiederman and Kendall (1999), men see sexual infidelity as a threat, while, for most women, emotional infidelity is more disturbing. However, in the present study, men get involved in both types of infidelity. Another way to account for these differences has to do with the evolutionary perspective that states that women's procreation capacity is limited; hence, they are less motivated to engage in infidelity relations (Fisher, 1999; Yela, 2000). However, no differences were found as to the consequences of infidelity by sex, which contradicts other researchers' (Lamanna & Riedmann, 2003) presumptions.

Based on the above, it can be said that once you make concepts equivalent in terms of their indigenous manifestations, jealousy and infidelity are similar in that they involve a will to hurt others and the individuals themselves, and may lead to several kinds of individual, communitarian, and social problems. As Hatfield (2006) states, passion seems to span across cultures, what can differ is the way people interpret or manifest their emotion. In this same line of thought, thus, socialization and enculturation have a differential effect on biological parameters creating long-term damaging results that may affect others and themselves by preventing them from doing well at work or impairing their social relations, leaving a significant imprint on individuals which is difficult to erase. A final set of questions arise as to the intervening variables that might explain the evolutionary and gender differences across cultures. In fact, Marlow (2006) shows similar patterns among North Americans and Koreans that are congruent with evolutionary theory, but then alludes to Hofstede's (1998) research on masculine and feminine cultures to explain the importance of gender on tendencies within cultures.

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## **Structure of Acculturation Attitudes and their Relationships with Personality and Psychological Adaptation: A Study with Immigrant and National Samples in Germany**

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### **Abstract**

This contribution deals with the structure of acculturation attitudes and their relationship with personality dimensions and psychological adaptation. Based on two German samples—an immigrant and a national one—evidence suggests that four independent factors are underlying acculturation styles as assessed with the Acculturation Attitudes Styles (AAS). Integration, Assimilation, Separation, and Marginalization are independent, lowly correlated constructs and represent distinct modes of coping with acculturation demands. Analyses also demonstrate that each acculturation factor shows a specific pattern of personality characteristics, including basic temperament dimensions, cognitive styles, coping, and components of emotional intelligence. Finally, the four acculturation styles can predict psychological adaptation such as wellbeing, happiness, etc. Integration is the most adaptive acculturation strategy, whereas Separation and Marginalization most strongly predict negative outcomes.

**Authors' Note:** We would like to thank Florian Schmitz (University of Freiburg) for support with the confirmatory factor analyses.

The field of acculturation research has developed rapidly in the past decade (Sam & Berry, 2006). This field seeks to comprehend how immigrants acculturate following migration, and how well they adapt to their new society. Of particular importance is the question: if there are variations in how immigrants acculturate, and in how well they adapt, is it possible to discover relationships between these two variables, in order to identify which ways of acculturating are associated with more positive outcomes?

One way to assess how immigrants seek to acculturate (i.e., their acculturation attitudes) is to employ a measure with a fourfold structure, assessing preferences for Integration, Assimilation, Separation, and Marginalization. These four ways of acculturating are based on the intersection of two underlying issues facing acculturating individuals and groups: to what extent do they wish to maintain their heritage cultures and identities; and to what extent do they wish to have interactions with others in the larger society outside their own group.

An international study of immigrant youth (Berry, Phinney, Sam, & Vedder, 2006) used an instrument that assessed these four acculturation attitudes. This study was able to show that these four attitudes could be combined with other acculturation variables (such as cultural identities, friends, and language use) to form a broader variable, which was termed acculturation strategies. These four strategies were related to the psychological and sociocultural adaptation of immigrants: those who engaged the Integration way (i.e., were able to involve themselves in both their heritage cultures and in the national society) adapted better than those who engaged the other ways of acculturating, especially Marginalization. Although there is empirical evidence to demonstrate the independence of the two issues underlying these acculturation strategies (e.g., Ryder, Alden, & Paulus, 2000; Sabatier & Berry, 2008), the existence of four independent acculturation attitudes has been queried by some other researchers (e.g., Chirkov, 2009). To our knowledge, there is little empirical evidence that the four postulated acculturation strategy dimensions can be considered as independent factors. The first purpose of our study is to seek evidence for the existence of four independent factors underlying the four acculturation attitudes. We postulated in accordance with the model that four factors should emerge. Second, we assess the role of some personality variables that may provide insight into the psychological meaning of these attitudes. And third, using these four attitudes and their links to personality, we seek to extend our understanding of the relationships between how individuals acculturate and how well they adapt.

This study addresses these three central issues using two samples in Germany: an immigrant sample and a national one. We first examine the psychometric properties of the four Acculturation Attitudes Scales (including Exploratory Factor Analyses and reliabilities of the scales); then we investigate the latent structure of data matrix (applying Confirmatory Analyses), with several models postulating different numbers of latent factors being tested; and then we seek to link the identified factors to some features of personality and to the psychological adaptation of immigrants. We postulated that each acculturation factor should show a different pattern of personality characteristics. The Acculturation Attitudes Scale was originally construed to measure acculturation attitude with migrants; in our studies we also assessed data with members of the mainstream society, German, which had contact with migrants living in Germany. We were interested to get knowledge about their beliefs regarding acculturation, referred to as acculturation expectations (Berry, 1997). We expected a similar factor structure as we would discover with the migrant samples.

### **Assessment of Acculturation Attitudes**

How to assess acculturation attitudes has been a question of some importance. As noted above, these attitudes are rooted in individuals' preferences on two underlying issues: the extent to which they wish to maintain their heritage cultures and identities, and the extent to which they wish to have contact with those outside their own group and to participate in the daily life of the larger society. When these two issues intersect, four acculturation attitudes are produced: *Integration, Assimilation, Separation, and Marginalization*. Initially, (e.g., Berry, 1970; Berry et al,

1986) each of the four attitudes was assessed independently. Later assessment (e.g., Dona & Berry, 1994; Sabatier & Berry, 2008) examined preferences on the two underlying dimensions. Recently, discussions of these two approaches (e.g., Arends-Toth & van de Vijver, 2006) have appeared, in which some questions about the psychometric properties of both approaches have been raised. For the four statement approach, the issue has been whether factor analysis would reveal four independent factors (one each for the four attitudes) or two independent factors (one each for the two underlying dimensions).

## **Links between Acculturation Attitudes and Personality**

Previous research has shown that there are important relationships between acculturation attitudes and various aspects of personality (Schmitz, 1992, 2001, 2003, 2004; Ward & Kennedy, 1994; Ward, Leong, & Low, 2004). The main findings have been as follows.

### **Integration**

Persons preferring Integration, compared with those scoring low on Integration, are emotionally more stable; they are more sociable and agreeable, less impulsive, and show a higher degree of Sensation Seeking, more Open-Mindedness and Activity. Obviously, they feel safer and they are more interested in exploring new situations. They are flexible enough to modify their strategies if it becomes obvious that the strategies are not going to lead to success.

### **Assimilation**

Those seeking Assimilation show a higher degree of Neuroticism and Anxiety, but they are agreeable (sociable), friendly, and less aggressive. The high degree of Activity helps them make an effort to assimilate to the new culture they are confronted with. Their sociable and friendly attitudes facilitate coming into contact with members of the larger national society, communicating with them, and joining in their activities.

### **Separation**

Among migrants choosing Separation as an acculturation strategy, there is also a higher degree of Neuroticism, including its defining components such as Emotionality, Anxiety, and lack of self-assurance and feelings of self-esteem. As they are less active and frequently less sociable and agreeable, they often find it difficult to deal effectively with people of the larger national society as well as with other sociocultural groups. The high degree of Closed Mindedness (the polar contrast of the Openness dimension) makes it more difficult for them to modify their beliefs and behavior systems.

### **Marginalization**

Persons preferring Marginalization show a high degree of Unsocialized Impulsive Sensation Seeking; further there is a higher degree of Neuroticism, Aggressiveness, and a lack of interpersonal trust and Open-Mindedness.

## **Relation between Acculturation and Coping**

Schmitz (2003, p. 37) has argued that "acculturation strategies are closely related to coping strategies which are constitutive elements of the stress-and coping-paradigm and which are influenced by personality and situational variables." Empirical data with immigrants confirmed this assumption: each acculturation attitude was related to a different pattern of general coping styles (Schmitz, 2001). Immigrants are confronted with a variety of problems, such as maintenance or change of their own cultural identity, challenged by partly different systems of values, beliefs, customs, and issues in daily life; in some cases these are experienced as stressful. They have to develop coping strategies to deal with these stressful daily life hassles. It can be assumed that acculturation strategies are closely related to general coping styles, that they can be considered as specific patterns of coping behavior that are applied in situations of acculturative stress. In the literature relating to coping theories and research (Zeidner & Endler,

1996), three types of coping are distinguished: task orientation, emotion orientation, and avoidance orientation. It may be assumed that task orientation should be found with immigrants preferring Integration and Assimilation, as these persons attempt to deal actively with demands of their social environment. The emotion orientation serves more to regulate their own emotions rather than to actively and constructively resolve problems they are confronted with. The emotion orientation should be negatively correlated with Integration, but positively with Separation/Segregation and Marginalization; this is because acculturation strategies frequently show close relationships with the expression of negative feelings towards the larger national society and other ethnic groups (cf. Schmitz, 2004). The avoidance orientation should be observed with persons preferring Separation and Marginalization, since persons of both groups are less interested in contact with the larger society. Persons preferring Separation avoid contact with the national society, but look for social support within their own ethnic group. Persons favoring Marginalization as well as not being interested in close contact with the larger society and with their own ethnic group, frequently choose a coping strategy called distraction, which is a subtype of avoidance behavior that includes distracting activities, such as gambling, alcohol and drugs, etc. Schmitz (1992) presented data that confirm these assumptions regarding the relationship between acculturation strategies and coping styles.

### **Links between Acculturation Attitudes and Adaptation**

A common finding (reviewed by Berry, 1997; and Berry & Sam, 1997) is that those pursuing an Integration strategy (that is, having positive attitudes towards both maintaining their heritage cultures and participating with others in the larger society) generally have better psychological adaptation. Those having a preference for Marginalization have the poorest adaptation, with those preferring Assimilation or Separation generally falling in between. This pattern was largely confirmed in an extensive international study of immigrant youth (Berry et al, 2006). Such poor psychological adaptation has been referred to as *acculturative stress* (Berry, 1970; 2006; Berry & Annis, 1974).

In Germany, Schmitz (2001) reported that the degree of acculturative stress experienced by immigrants and their acculturation attitudes determine the individual's well-being and health-related behavior. Immigrants may experience acculturative stress over a long time period which can lead to major psychological disturbances (Schmitz, 2003). Schmitz (2003) investigated a sample of immigrants who had experienced a high degree of acculturative stress. He found relationships between acculturation attitudes and measures of psychopathology [assessed by the DAPP-BQ Dimensional Assessment of Personality Pathology – Basic Questionnaire; Livesley, Jackson, & Schroeder (1989)]: Integration was mostly negatively correlated with psychopathology, while Separation and Marginalization were positively correlated; Assimilation showed some positive and some negative correlations.

### **Aims of This Study and Hypotheses**

The aim of the present study was twofold. First, the factorial structure of acculturation attitudes as assessed with the AAS was investigated. Second, the pattern of relationships of AAS acculturation styles with personality dimensions and psychological adaptation was examined. Our predictions can be summarized as follows.

#### **Hypotheses 1**

The Acculturation Attitudes Scales assess four different preferences for how to acculturate, namely *Integration*, *Separation/Segregation*, *Assimilation*, and *Marginalization*. As the four ways can be considered qualitatively different (Berry, 1970; Berry et al, 1986), the instrument was predicted to possess a four-factorial structure. This should be the case for both, acculturation attitudes of immigrant groups as well as acculturation expectations of members of the host society. Therefore, comparable four-factorial structures of acculturation styles should be found in both groups.



## Hypothesis 2

Acculturation attitudes were predicted to correlate with personality dimensions. The latter can be considered as broad classes of behavior in general and of social behavior and attitudes in particular. Therefore, correlations with acculturation attitudes are straightforward and were predicted in line with previous research findings (e.g., Schmitz 1992, 2001, 2003, 2004). Particularly, it was expected that each acculturation style can be characterized by a differential pattern of relationships.

## Hypothesis 3

Psychological adaptation (wellbeing) can be predicted by the four acculturation attitudes in the immigrant samples. Specifically, it was predicted that those engaged in Integration would adapt better than those engaged in Marginalization, with the other two ways of acculturating falling in between.

## Methods

### Procedure

The data analyzed in the present paper were originally collected as part of three different studies conducted between 1998 and 2005. Each study consisted of a battery of standardized questionnaires, focusing on acculturation attitudes and related issues. Approximately half of the total dataset comprises of immigrants with different cultural origins. In most cases, immigrant participants were contacted and interviewed by persons of their own ethnic group. Additionally, data were collected with a comparable number of German participants to serve as a comparison sample.

In all three studies, acculturation attitudes were assessed with the Acculturation Attitude Scales (AAS, see below). Additionally, a number of other instruments were employed in line with the purpose of investigation. In the next section, first, all instruments analyzed in the present paper will be described. Then more detailed information will be supplied regarding characteristics of the samples and which instruments were employed in each study.

### Materials

Acculturation attitudes were assessed with the Acculturation Attitude Scales (AAS), which were originally developed as a measurement instrument in the *International Comparative Study of Ethnocultural Youth* (Berry, Phinney, Sam, & Vedder, 2006). The AAS comprises of four scales: Integration, Separation/Segregation, Assimilation, and Marginalization. Each scale is made up of six items that refer to six domains of cultural experience and identity in everyday life, including use of language, marriage, traditional customs, social activities, choice of friends, and music preference. For immigrants, the AAS assesses how they *prefer* to acculturate. For German members of the national society, the scale assesses how they think or expect that immigrants *should* acculturate.

*Personality measures.* Basic dimensions of personality were assessed with the German version of the *Zuckerman- Kuhlman Personality Questionnaire (ZKPQ; Schmitz, 2004; Zuckerman, 2008)*. The questionnaire consists of five scales, Impulsive Sensation Seeking (ImpSS) with its two subscales Impulsivity (IMP) and Sensation Seeking (SS), Sociability (SY), Neuroticism-Anxiety (NANX), Aggression-Hostility (AGHO), and Activity (ACT). Additionally, there is an Infrequency Scale that may help to identify and measure response sets. From a psychometric perspective, Zuckerman's scales (sometimes referred to as "Alternative Five") have the advantage of being strictly orthogonal (Schmitz, 2004; Zuckerman, 2008), being clearly related to Eysenck's "Giant Three," and they can be also related to Costa and McCrae's "Big Five." But with its clear focus on genetically and biologically routed temperament dimension, the ZKPQ does not assess more cognitive aspects of personality, like the "Openness to Experience" factor in Costa and McCrae's model, which may be relevant in the context of cultural experience. So we included Rokeach's concept of Open-Mindedness which was assessed with an 18-items short

version of the Dogmatism Scale (Rokeach, 1960). Open-Mindedness vs. Closed-Mindedness was defined by “the need for a cognitive framework to know and to understand” (Rokeach, 1960, p. 67), as well as the capacity to break up one’s own belief system and to integrate new information from the outside.

*Emotional intelligence.* As a comparatively novel construct in this area of research, we included a measure of trait-emotional intelligence. Emotional intelligence was shown to be important in social interactions (e.g., Mavroveli, Petrides, Rieffe, & Bakker, 2007) as well as in the perception and regulation of emotions (e.g., Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Both aspects seem to be important for successful acculturation. We employed the German adaptation of the Trait Meta-Mood Scale 24 (TMMS-24; Salovey et al, 1995; Extremera & Fernández Berrocal, 2005). This scale contains three subscales: emotional attention (towards one’s own emotions and the emotions of other persons); clarity (in the perception of one’s own emotions and the emotions of others); and repair (capacity to interrupt negative emotions, to promote positive emotions).

*Coping styles.* Coping styles were assessed by the German version of the Coping Inventory for Stressful Situations (CISS) developed by Endler & Parker (1990, 1992). The CISS consists of three subscales: (1) task orientation; (2) emotion orientation; and (3) avoidance orientation. The Avoidance Scale includes two further subscales: social diversion and distraction. According to Endler and Parker (1990), task orientation describes purposeful task-oriented efforts aimed at solving the problem, cognitively restructuring the problem, or attempts to alter the situation. Emotion orientation refers to emotional reactions that are self-oriented aiming to reduce stress that is not always successful, and avoidance orientation describes activities and cognitive changes aimed at avoiding the stressful situation what can occur via distracting oneself with other situations or tasks or via social diversion (looking for social support) as means of alleviating stress.

*Psychological adaptation.* Three instruments were used to capture aspects of psychological adaptation, including the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985; German version made available by E. Diener), the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999 [German adaptation by Schmitz & Schmitz, 2004]), and – as an inverse marker of wellbeing – the Beck Depression Inventory (BDI; Beck, Steer, & Garbin, 1988; German adaptation by Hautzinger, Bailer, Worall, & Keller, 1995).

## Samples

Approximately half of the total dataset ( $N = 1799$ ) analyzed in the present paper comprises of immigrants ( $N = 905$ ) with different cultural origins, who live in Germany at the time of data collection, and a comparable number of German participants ( $N = 894$ ). Most immigrant participants were young adults recruited at professional schools, high schools, or universities. On average they had lived in Germany for 10 years and were familiar with the German language. Data were collected in three studies; their sample characteristics will be described below.

*Study 1.* A total of  $N = 534$  immigrants participated in this study (250 males, 284 females; age 15-31, age average 21; 4). Their countries of origin were the Balkans (25), Turkey/Kurdistan (117), Western Countries of the European Union (81), Eastern Europe (128), North-Africa (31), Sub Saharan-Africa (28), Middle Asia (41), East Asia (16), and Latin America (32). There were also 36 Anglo-Saxons from outside the European Union. The German sample comprised of  $N = 774$  research volunteers (320 males, 454 females; age 14-33, age average 22; 2).

All participants completed a version of the Acculturation Attitudes Scales (AAS). Form (a) assessed acculturation attitudes from the viewpoint of the immigrants, whereas form (b) measured acculturation expectations from the viewpoint of the German participants.

*Study 2.* The immigrant sample comprised of  $N = 105$  participants (51 males, 54 females, age 17-29, age average 22; 3). They came from Turkey ( $N = 50$ ) and Eastern Europe ( $N = 55$ ).

The German comparison sample was  $N = 120$  (55 males, 65 females, age 18-27, age average 22; 7).

Also in this study, participants completed a version of the AAS (see above). Additionally they were administered the Zuckerman-Kuhlman-Personality-Questionnaire (ZKPQ), the Dogmatism Scale (assessing Open-Mindedness), the Trait Meta-Mood Scale (TMMS 24), and the Coping Inventory for Stressful Situations (CISS).

*Study 3.* All participants in this study were immigrants either from Turkey or Kurdistan ( $N = 266$ ; 133 males, 131 females, for 2 subjects gender was missing; age 14-48, age average 23; 11).

Instruments used were the AAS (see above), the Satisfaction With Life Scale (SWLS), the Subjective Happiness Scale (SHS), and the Beck Depression Inventory (BDI).

## **Results and Discussion**

### **Overview of Analyses**

The first part of the analyses addressed the Acculturation Attitudes Scales' underlying structure and item-scale validity using exploratory factor analyses (EFA) in immigrant and German samples. The factorial structure and relationships between acculturation styles were additionally examined using confirmatory factor analyses (CFA).

In the second part of this paper, correlates of the four acculturation styles will be described. Particularly we will report on relationships with personality dimensions, cognitive styles, coping, emotional intelligence, and forms of psychological adaptation.

### **Exploratory Factor Analyses and Psychometric Characteristics**

Data of studies 1 and 2 were aggregated for the present analyses: however separate exploratory factor analyses (EFA) were conducted for the Germans and the immigrants to investigate potential differences in how acculturation styles are represented that would be possibly reflected in the underlying structure of the instrument and the pattern of loadings.

So for each group, all 24 AAS items were entered in a principal components analysis. According to the scree criterion, four factors were extracted, accounting for 59% and 48% of the total variance, respectively. An orthogonal Varimax rotation led to the most consistent pattern of loadings across both groups (see Table 1).

**Table 1**

*Exploratory Factor Analyses of the Acculturation Attitudes Scales (AAS) for Germans and Immigrants living in Germany*

Item	No	CFA	Germans				Immigrants			
			INT	SEP	ASS	MRG	INT	SEP	ASS	MRG
Integration_5	21	+	.840				.806			
Integration_6	24	+	.825				.756			
Integration_4	18	+	.742				.483			
Integration_3	8	+	.731				.461			
Integration_2	3		.731				.433			
Integration_1	1		.672				.731			
Segregation_1	6		.400	.515				.544		
Segregation_2	7	+		.808				.753		
Segregation_4	13	+		.707				.798		
Segregation_6	20	+		.703				.515		
Segregation_5	15	+		.653				.733		
Segregation_3	10			.632				.445		
Assimilation_1	4	+			.548				.670	
Assimilation_3	11	+			.547				.504	
Assimilation_2	9	+			.743				.629	
Assimilation_6	23	+			.771				.507	.456
Assimilation_5	22				.609				.468	.444
Assimilation_4	17				.708					.630
Marginalization_4	14				.419	.568				.558
Marginalization_3	12	+				.745				.647
Marginalization_5	16	+				.724				.688
Marginalization_6	19	+				.687				.562
Marginalization_1	2	+				.601			.450	
Marginalization_2	5					.484			.545	

*Note.* No = number of item in questionnaire; CFA (+) = item selected for confirmatory factor analyses; INT = Integration, SEP = Separation, ASS = Assimilation, MRG = Marginalization; only salient loadings (> .40) are displayed; joined data from studies 1 and 2.

In both samples, a clear factorial structure was evident in the pattern of loadings. In the German sample, all items had their dominant loading on their theoretically assigned factor, resulting in perfect hit rates. In the immigrant sample, 21 out of 24 items loaded on their theoretically expected factors. So generally speaking, hypothesis 1 stating four distinguishable acculturation styles seemed to be largely supported across both Germans and immigrants.

Let us briefly reflect on the few cases of item cross loadings. It is to note that the strongest overlap was observed with items belonging to the Assimilation or Marginalization factors, possibly indicating the proximity of these two acculturation styles as represented by the immigrants, since they both reflect loss of their heritage cultures. This finding could have the theoretical implication that both factors are not sufficiently distinctively represented (and possibly practiced) by immigrants, which would question the existence of four separable factors of acculturation. However, part of the effect could equally result from inadequate items that were not meaningful (not correctly understood) or applicable for a few participants in the heterogeneous immigrant sample. The latter would imply a measurement problem rather than a conceptual one. We will return to this question later using confirmatory factor analyses.

**Table 2***Means, Standard Deviations and Reliabilities of the Acculturation Attitudes Scales (AAS)*

Acculturation Style	<i>M (SD)</i>		<i>t(ΔM)</i>	Cronbach's Alpha <sup>a</sup>	
	Immigrants	Germans		Immigrants	Germans
Integration	3.61 (.85)	3.81 (.89)	4.42***	.70	.88
Assimilation	1.96 (.82)	2.05 (.68)	2.34*	.78	.83
Separation/Segregation	2.68 (.89)	2,35 (.77)	7.75***	.72	.83
Marginalization	1.83 (.68)	1.66 (.60)	5.17***	.62	.81

Note.  $t(\Delta M)$  = *t* value of test of difference between group means ( $df=1531$ ); \*  $p < .05$ , \*\*\*  $p < .001$ ;

<sup>a</sup> 6 items per scale; joined data from studies 1 and 2.

Psychometric characteristics of the Acculturation Attitudes Scales (AAS) are displayed in Table 2 for immigrants as well as for Germans. Taking into consideration their brevity, all of the 6-item scales possessed sufficiently high internal consistencies. However, all Cronbach's Alphas obtained for Germans exceeded those obtained for the immigrants by about 10 points. This finding could also indicate problems associated with some of the items in the immigrant sample.

Empirical means of the four scales indicate the preference for the respective acculturation style in each group. It is important to note that the immigrants' preferred acculturation attitude and the Germans' preferred acculturation expectation show the same order across the four styles. Integration clearly is the most preferred option followed by Separation/Segregation and Assimilation. The least preferred one in both groups is Marginalization. But there were also differences between groups for the four acculturation styles. Compared with what immigrants indicated themselves, members of the national society had higher expectations towards immigrants to practice Integration and Assimilation, whereas they valued less Separation and Marginalization.

### Confirmatory Factor Analyses

Some of the previously raised questions were then addressed using confirmatory factor analyses (CFA). In the following section, some preparatory steps will be briefly reported; next, two mayor confirmatory analyses will be described. The first CFA tested the factorial structure of acculturation attitudes as assessed with the AAS. The second CFA tested the comparability of the factorial structure across immigrants and Germans. The latter could be also regarded a test of structural equivalence between acculturation attitudes of immigrants and expectations of German nationals.

Prior to these analyses, adequate indicators for the CFA were selected from the AAS items. Based on the German and immigrant datasets, as well as on additional datasets not included in this paper, we selected four items as indicators for each of the acculturation styles. Selection criteria were clear item-scale characteristics, pattern of loadings in the EFAs, sufficient variability, and shape of the distribution (approximating normal distribution). The final selection of indicators can be inferred from Table 1.

The combined dataset obtained from studies 1 and 2 was also used for the CFAs. As outliers and missing values can bias the estimation of parameters, we excluded all participants with more than two missing items per factor or more than 25% missing responses in total (37 immigrants, 12 Germans). Additionally, bivariate outliers according to a joint criterion based on student's residuals, cook distances and leverage were removed (24 immigrants, 29 Germans) prior to computing covariance matrices. All analyses were conducted with LISREL 8 (Jöreskog & Sörbom, 1996).

The fit of the theoretical model to data was assessed with the Root-Mean-Square-Error-of-Approximation (RMSEA; Steiger, 1990) as well as with the Goodness-of-Fit Index (GFI; Jöreskog & Sörbom, 1996). Parsimony of the models was estimated with the Adjusted Goodness-of-Fit Index (AGFI; Jöreskog & Sörbom, 1996). Conventionally, the following criteria should be met to accept a model: RMSEA below 0.08, GFI above 0.90, and AGFI above 0.85. If more than one model fitted the data, chi-square difference tests were computed when applicable. Model

selection was based on the Akaike Information Criterion (AIC; Akaike, 1974), which takes into account fit and parsimony of the model. The model with the smallest AIC is conventionally selected.

In the first step using CFA, immigrant and German samples were analyzed separately, but identical models were specified (see Table 3; models No 1-6; fit indices for immigrant sample upper half, fit indices for German sample lower half).

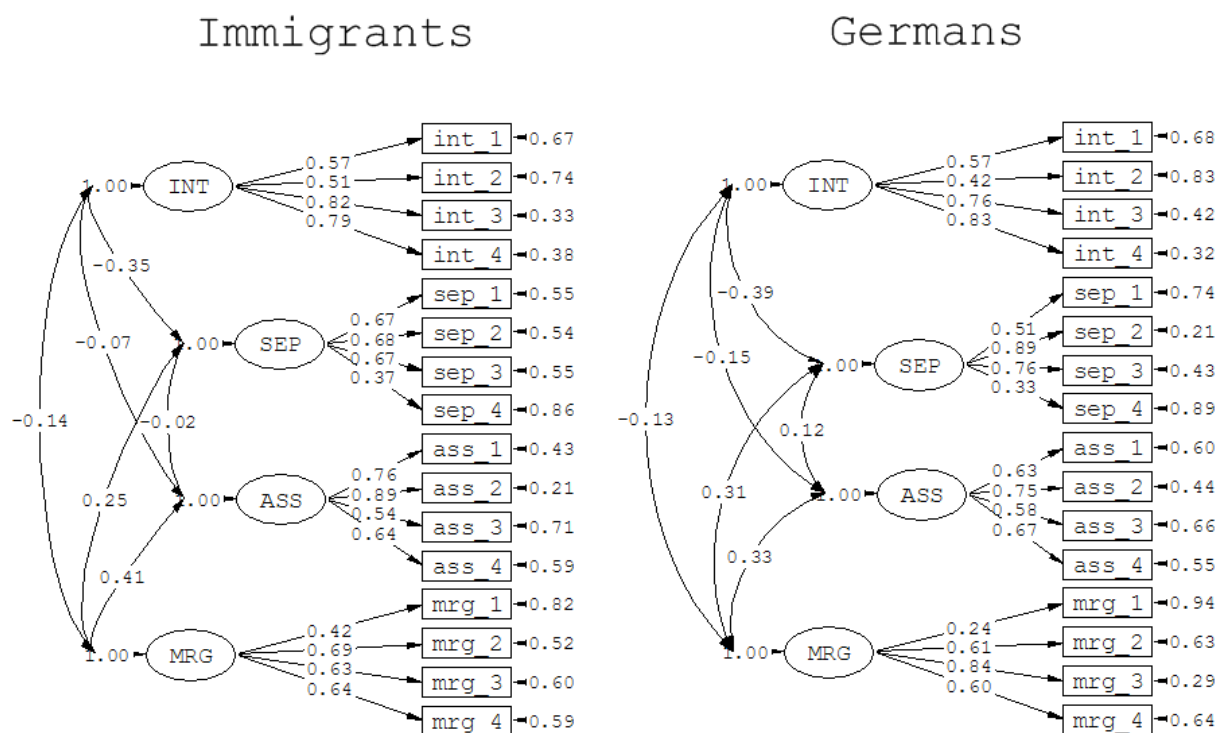
**Table 3**

*Fit Indices for the Confirmatory Factor Analyses of the Acculturation Attitudes Scales (AAS)*

No	Model	$\chi^2$ (df)	RMSEA	GFI	AGFI	AIC
<i>Immigrants</i>						
1	4 Correlated Factors (INT, SEP, ASS, MRG)	315.18 (98)	0.06	0.94	0.91	381.56
2	3 Correlated Factors (INT, SEP, ASS-MRG)	617.01 (101)	0.10	0.87	0.82	762.54
3	3 Correlated Factors (INT-SEP, ASS, MRG)	640.56 (101)	0.10	0.87	0.82	778.72
4	2 Correlated Factors (INT-SEP, ASS-MRG)	926.97 (103)	0.13	0.81	0.75	1159.88
5	2 Correlated Factors (INT-SEP, ASS-MRG-SEP)	911.75 (99)	0.13	0.81	0.74	1163.25
6	1 Factor (INT-SEP- ASS-MRG)	1790.55 (104)	0.19	0.67	0.57	2347.87
<i>Germans</i>						
1	4 Correlated Factors (INT, SEP, ASS, MRG)	249.81 (98)	0.04	0.96	0.95	326.83
2	3 Correlated Factors (INT, SEP, ASS-MRG)	773.08 (101)	0.10	0.88	0.84	957.35
3	3 Correlated Factors (INT-SEP, ASS, MRG)	887.70 (101)	0.10	0.87	0.82	1101.91
4	2 Correlated Factors (INT-SEP, ASS-MRG)	1406.15 (103)	0.13	0.80	0.74	1747.44
5	2 Correlated Factors (INT-SEP, ASS-MRG-SEP)	1376.61 (99)	0.13	0.81	0.73	1707.61
6	1 Factor (INT-SEP- ASS-MRG)	2132.98 (104)	0.17	0.71	0.63	2785.95

*Note.*  $\chi^2$  (df) = Model Chi-Square, RMSEA = Root Mean Square Error of Approximation, GFI = Goodness of Fit Index, AGFI = Adjusted Goodness of Fit Index, AIC = Akaike Information Criterion. Models 1-6 are identically specified for the Migrant and German Subsamples. Model 1 tests the predicted four-factor solution, Models 2-6 test alternative structures (see text for details); joined data from studies 1 and 2.

The first model tested was the theoretically expected one: Integration, Separation/Segregation, Assimilation, and Marginalization were specified as correlated latent factors uniquely accounting for variance in their assigned indicators. According to the fit indices, model 1 could be accepted for the immigrant and the German sample. Path diagrams of model 1 are displayed in Figure 1 for both groups.



**Figure 1.** Path diagrams of confirmatory factor analyses of the acculturation attitudes scales for the immigrant and German subsamples

INT = Integration, SEP = Separation, ASS = Assimilation, MRG = Marginalization. All parameter estimates are completely standardized.

It should be noted that the latent variables were allowed to correlate in the model, but only moderate to low correlations occurred, which supports the notion of four separable factors. Nevertheless, some relationships turned out to be higher, such as (not surprisingly) for Assimilation and Marginalization in the immigrant sample.

So in a next step we formally tested whether these two acculturation styles are actually only one factor. Model 2 therefore specifies a joint Assimilation-Marginalization factor that accounts for variance in the eight items formerly used as Assimilation and Marginalization indicators. Measurement models for Integration and Separation were not modified. As can be seen in Table 3, this resulted in a significant deterioration of model fit. Model 2 was not acceptable according to any of the model fit indices in terms of absolute fit, neither for the immigrant nor for the German sample. Also in terms of a model comparison, model 2 fitted worse than model 1.

In a similar vein, we tested whether any other of the acculturation style factors that were found to be at least moderately correlated could be merged. Model 3 tested for a joint Integration-Separation Factor (see Figure 1, latent relation in German sample). Model 4 tested a somewhat more parsimonious 2-factorial structure with one Integration-Separation factor and another Assimilation-Marginalization factor. Model 5 is a derivative of model 4 with the modification that Separation items which seemed to be associated with Integration and Marginalization (see Figure 1) were allowed to load on both latent factors. Finally, model 6 only specifies one common factor, which would only be expected if all items are determined by one strong dimension (e.g., social desirability). None of the alternative models (models 2-6) could be accepted for any group.

To summarize the results of the first step of the CFA: the factorial structure of acculturation styles as assessed by the AAS could be best described by four underlying factors that uniquely determined variance in their theoretically assigned items. The correlations

between factors were generally low. Even moderately correlated acculturation styles were separable and could not be equated.

In the second step of the CFA, we tested to what extent the structure of acculturation styles was comparable between immigrants and Germans. This was motivated by apparently similar structural properties across both groups (see Figure 1). Comparing both samples is, formally speaking, the test of equivalence between acculturation attitudes of a heterogeneous immigrant sample and acculturation expectations of a German national sample.

Model 7 (see Table 4) made identical structural assumptions as model 1, but this time, both samples were analyzed simultaneously. This tested whether the four acculturation styles determine the same observable indicators across groups (structural equivalence). Model 7 could be accepted.

Model 8 was derived from model 7 with the additional constraint that the correlations between the latent factors (acculturation styles) were equal across both groups. As can be seen in Table 4, the common latent relations estimated in model 8 fitted both datasets. A slight increase in global  $\chi^2$  was not significant. Additionally, the model comparison index AIC favored the more parsimonious model 8 over model 7. So far, this means that acculturation attitudes are conceptually equivalent across both groups.

**Table 4**

*Fit Indices for Group Comparisons between Immigrant and German Samples of the Acculturation Attitudes Scales (AAS)*

No	Model	IMG	GER	Global Fit				
		GFI	GFI	$\chi^2$ (df)	$\Delta\chi^2$ (df)	$p(\Delta\chi^2)$	RMSEA	AIC
7	Equal Structure (i.e., Model 1)	0.94	0.96	564.99 (196)	–	–	0.051	708.39
8	Equal Relations between Factors	0.94	0.96	573.55 (202)	8.56 (6)	.19	0.050	704.20
9	Equal Relations and Loadings	0.93	0.96	658.01 (218)	93.02 (22)	< .001	0.053	761.43
10	Equal Relations, Loadings, and Residuals	0.92	0.94	940.03 (234)	375.04 (38)	< .001	0.064	1032.77

*Note.* GFI = Goodness of Fit Index, separately for IMG = immigrant sample and GER = German sample,  $\chi^2$  (df) = Model Chi-Square,  $\Delta\chi^2$  (df) = Chi-Square Difference Test (to Model 7), RMSEA = Root Mean Square Error of Approximation, AIC = Akaike Information Criterion; joined data from studies 1 and 2.

Models 9 and 10 were concerned with measurement issues. In model 9 it was tested whether (additionally to constraints of model 8) all 16 loadings of the indicator variables could be set equal across both samples. Despite acceptable (absolute) fit indices, the chi-square difference test clearly indicated a substantial decrease in model fit as compared with model 7 (see Table 4) and model 8 ( $\Delta\chi^2$  [16] = 84.46;  $p < .001$ ), so model 9 was rejected. Model 10, which additionally specified equal residual variances, could not be accepted either. As neither of the model's testing quantitative equality of the measurement models (relations between constructs and indicators) adequately fitted data, it was concluded that the manifestation of acculturation attitudes in self-reported behavioral preferences was at least gradually different between the heterogeneous immigrant sample and the German national sample. However, it could have likely been that only a few items with larger between groups differences had primarily contributed to this difference (cf. Figure 1). Additionally, given the relatively large datasets, there was surely more than enough power to detect even minor (practically less important) differences.

To conclude, the four acculturation styles were shown to be largely structurally equivalent across different samples. They were shown to possess the same underlying structure and relations irrespective of whether they were assessed as acculturation attitudes or expectations. Acculturation styles were shown to possess the same manifestations in observable indicators



across groups (pattern of loadings), only quantitative differences occurred between groups (magnitude of loadings).

### Correlations with Personality

The next section will address Hypothesis 2, which stated that the four acculturation attitudes are characterized by a different pattern of relationships with personality variables. We chose to present relationships with personality variables in the form of correlations (see Table 4) to highlight correspondence without making causal assumptions at this point. Quite plausibly, some of the personality variables may causally determine the choice of acculturation strategy. This may especially be the case for some of the biologically/genetically routed temperament dimensions of the ZKPQ. Other variables like cognitive style or coping variables may overlap or be structurally related as facets of a common factor in a hierarchical personality model.

The presented analyses were based on the data of study 2, in which a number of important domains of personality were addressed, including temperament, cognitive styles, coping strategies, and emotional intelligence. At this point the reader shall be alerted to the fact that any selection of variables will be incomplete, so that some factors of importance in the acculturation process will be missing.

Nevertheless, as predicted, each acculturation style was characterized by a specific pattern of correlations in the investigated variables. The most important relationships will be highlighted and discussed in the following; more detailed information can be obtained from Table 5.

**Table 5a**

#### *Correlations between Acculturation Attitudes and Personality*

	Integration			Separation		
	IMG	GER	$z(\Delta r)$	IMG	GER	$z(\Delta r)$
<b>Alternative Five (Zuckerman)</b>						
Impulsive SS (IMPSS)	-.01	-.02	0.07	-.04	-.01	-0.22
Impulsiveness (IMP)	-.26 **	-.31 ***	0.40	.17	.25 **	-0.62
Sensation Seeking (SS)	.24 *	.29 **	-0.40	-.23 *	-.26 **	0.24
Sociability (SY)	.35 ***	.29 **	0.49	-.31 **	-.18 *	-1.02
Neuroticism-Anxiety (NANX)	-.17	-.25 **	0.62	.25 **	.27 **	-0.16
Aggression Hostility (AGHO)	-.29 **	-.36 ***	0.58	.25 **	.25 **	0.00
Activity (ACT)	.28 **	.21 **	0.55	-.10	-.01	-0.67
<b>Open Mind (Rokeach)</b>						
Open-Mindedness	.33 ***	.42 ***	-0.77	-.25 **	-.32 ***	0.56
<b>Coping with Stressful Situations (Endler)</b>						
Task Orientation	.30 **	.34 ***	-0.33	-.07	-.14	0.52
Emotion Orientation	-.21 *	-.26 **	0.39	.27 **	.29 **	-0.16
Avoidance Orientation	-.18	-.23 **	0.39	.23	.23 **	0.00
- Social Diversion	-.17	-.19 *	0.15	.36 ***	.26 **	0.82
- Distraction	-.19 *	-.26 **	0.54	.11	.21 *	-0.76
<b>Emotional Intelligence (Mayer, Caruso, Salovey)</b>						
Attention	.10	.13	-0.22	.33 ***	.26 **	0.57
Clarity	.36 ***	.42 ***	-0.52	-.28 **	-.31 ***	0.24
Repair	.35 ***	.37 ***	-0.17	-.27 **	-.33 ***	0.49
<b>Social Desirability</b>						
Infrequency (INF) / SD	.18	.19 *	-0.08	.14	.09	0.37

*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ ; IMG = Immigrants ( $N = 105$ ), GER = Germans ( $N = 120$ );  $z(\Delta r)$  =  $z$  value of the test for correlation differences between both groups; data from study 2.

**Table 5b***Correlations between Acculturation Attitudes and Personality*

	Assimilation			Marginalization		
	IMG	GER	<i>z</i> ( $\Delta r$ )	IMG	GER	<i>z</i> ( $\Delta r$ )
<b>Alternative Five (Zuckerman)</b>						
Impulsive SS (IMPSS)	.02	-.05	0.52	.39 ***	.29 **	0.84
Impulsiveness (IMP)	-.06	-.11	0.37	.41 ***	.29 **	1.01
Sensation Seeking (SS)	.09	.01	0.59	.38 ***	.28 **	0.83
Sociability (SY)	.14	.21 *	-0.53	-.19 *	-.22 *	0.23
Neuroticism-Anxiety (NANX)	.30 **	.33 ***	-0.25	.29 **	.31 ***	-0.16
Aggression Hostility (AGHO)	-.20 **	-.10	-0.76	.39 ***	.38 ***	0.09
Activity (ACT)	.28 **	.07	1.61	-.23 *	-.17	-0.46
Open Mind (Rokeach)						
Open-Mindedness	.20 *	.18 *	0.15	-.31 **	-.34 **	0.25
<b>Coping with Stressful Situations (Endler)</b>						
Task Orientation	.16	.14	0.15	.00	.02	-0.15
Emotion Orientation	.12	.17	-0.38	.20 *	.25 **	-0.39
Avoidance Orientation	.06	.05	0.07	.28 **	.30 ***	-0.16
- Social Diversion	.22 *	.19 *	0.23	.26 **	.25 **	-0.08
- Distraction	-.10	-.09	-0.07	.30 **	.35 ***	-0.41
<b>Emotional Intelligence (Mayer, Caruso, Salovey)</b>						
Attention	.20 *	.23 **	-0.23	-.31 **	-.29 **	-0.16
Clarity	.18	.15	0.23	-.34 ***	-.29 **	-0.41
Repair	.20 *	.16	0.31	-.31 **	-.32 ***	0.08
<b>Social Desirability</b>						
Infrequency (INF) / SD	-.09	-.01	-0.74	-.06	-.15	0.67

Note. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ ; IMG = Immigrants ( $N = 105$ ), GER = Germans ( $N = 120$ );  $z(\Delta r)$  =  $z$  value of the test for correlation differences between both groups; data from study 2.

**Integration**

This acculturation style had clear relationships with Zuckerman's (2008) ZKPQ dimensions. Integration was characterized by a high degree of Sociability and Activity and a low degree of Aggression/Hostility and Anxiety. The zero correlation with Impulsive-Sensation-Seeking resulted from an inverse pattern of correlations with both of its subscales: Impulsiveness was negatively correlated with Integration, whereas Sensation Seeking was positively correlated. Naturally, such personality characteristics facilitate taking attempts to come in contact with persons from both cultures. Similarly, Integration was positively related with Open-Mindedness (Rokeach, 1960), a necessary prerequisite to deal with the complexity of handling two culturally transmitted value and belief systems and associated behaviors at the same time.

With regard to coping strategies, Integration correlated positively with task orientation but negatively with emotion and avoidance orientation. In the coping literature (e.g., Endler & Parker, 1990, 1992), the latter two are considered as short-term oriented, whereas task orientation is considered the only strategy that resolves problems from a long-term perspective. Thus, people preferring Integration are equally characterized by their efficient and rational coping strategies.

A similar pattern occurred for subcomponents of Trait Emotional Intelligence (Salovey et al, 1995). Whereas high degrees of Attention are maladaptive and can lead to rumination and negative emotional states, clarity and repair are those components that are characterized by the mastery of one's emotions (e.g., Extremera & Fernández Berrocal, 2005). Integration was positively related with clarity and repair, speaking for the high level of meta-cognitive ability associated with this acculturation strategy.

### **Separation/Segregation**

This acculturation strategy had an almost inverse pattern of relations with basic dimensions of temperament (as compared with Integration). People preferring Separation were low in Sociability and Sensation Seeking, but high in Neuroticism-Anxiety and Aggression. These personality characteristics should make it difficult for them to come in contact with people outside their own cultural group. Additionally, with their low degree of Open-Mindedness, they may not even be interested in doing so.

Separation was positively correlated with the rather maladaptive coping strategies emotion and avoidance orientation. Moreover, this style was positively correlated with the Attention component, but negatively with the clarity and repair components of emotional intelligence. Therefore, people preferring Separation can be characterized as reacting highly emotional in stressful situations, being aware of their perceived stress, but not being capable to adequately handle their negative effect.

### **Assimilation**

Assimilation was the acculturation style that turned out to be least related with personality variables. However, the highest (positive) correlations were obtained with Neuroticism-Anxiety. Moreover, immigrants scoring high on Assimilation reported to be more active and less aggressive. This pattern of correlations makes Assimilation appear like an anxious form of acculturation (high Neuroticism-Anxiety), where immigrants strive hard (high Activity) to adjust themselves to the mainstream culture for not getting into conflict situations (low Aggression-Hostility).

Assimilation was positively correlated with social diversion, an avoidance-oriented coping strategy, which seems to fit into the scheme described above. Additionally, there was a moderate relationship with the rather maladaptive Attention component of the emotional intelligence framework.

### **Marginalization**

This acculturation strategy was positively correlated with Impulsiveness, Neuroticism-Anxiety, and Aggression-Hostility, but was negatively related with Sociability. Such personality characteristics should make it difficult to maintain any positive relations with people from one's own or the mainstream culture.

It is noteworthy that Marginalization was the acculturation style most clearly related with basic dimensions of personality. Taking into consideration the generally low preference of Marginalization, the obtained pattern of correlations could also have resulted from participants who were even more likely than others to reject items of this socially undesirable acculturation style as well as items of undesirable personality dimensions. However, despite being negatively related with the infrequency scale (that served as a measure of social desirability), Marginalization was not more strongly related with this scale than the other acculturation styles.

Marginalization was positively correlated with emotion and avoidance oriented coping. Negative correlations with the emotional intelligence components clarity and repair also fitted in. However, Marginalization was also negatively correlated with Attention, which could be interpreted as a "don't care" mentality.

**Table 6***Regression of Psychological Adaptation on Immigrants' Acculturation Attitudes*

Psychological Adaptation	Standardized Regression Coefficients ( $\beta$ )			
	Integration	Separation	Assimilation	Marginalization
Wellbeing	.31 ***	-.38 ***	.14 *	-.14 *
Happiness	.30 ***	-.52 ***	.05	-.25 ***
Depression	-.24 ***	.49 ***	-.11	.04

Note. \*  $p < .05$ , \*\*\*  $p < .001$ ; data from study 3.

### Psychological Adjustment

This section will address Hypothesis 3, which stated that acculturation styles would be differently related with psychological adaptation. Evidence in this direction has been previously reported (see Berry, 1997). Usually, Integration is found to lead to the best psychological adjustment, whereas Marginalization to the worst, with the other two styles in between.

In the present study we were interested if self-reported acculturation styles as assessed with the AAS were equally predictive of a number of psychological adjustment variables. We tested these effects with data from study 3, in which we collected wellbeing (Diener et al., 1985), happiness (Lyubomirsky & Lepper, 1999), and as an inverse marker depression (Beck et al., 1988).

As expected, Integration was the acculturation style most clearly related with adaptive forms of psychological adjustment (see Table 6). Assimilation was not substantially related with any of the psychological adaptation variables. However, Separation/Segregation as well as Marginalization predicted negative psychological adjustment. In the present study, the negative relationships between adjustment and Separation turned out to be even stronger than those obtained for Marginalization.

## General Discussion

The aim of the current study was to investigate the structure and correlates of acculturation styles (attitudes and expectations) as assessed with the Acculturation Attitudes Scales (AAS). First, the structure was addressed using exploratory and confirmatory factor analyses. Second, relationships of acculturation styles with personality variables and psychological adaptation were investigated. The analyses were based on data obtained from three studies conducted between 1998 and 2005, comprising a total of  $N = 1799$  mostly young adults. About half of all participants were immigrants with diverse cultural origins living in Germany, the other half were German nationals. All of them completed the AAS, which assessed acculturation attitudes with the immigrants and acculturation expectations with the German participants.

### Structure of the Acculturation Attitudes Scales (AAS)

Acculturation strategies can be considered a core topic in the area of acculturation research, and different modes of acculturation have been described (e.g., Berry, 1970; Berry et al., 1986). Despite successful application of these constructs in research, there is still debate to what extent Integration, Separation/Segregation, Assimilation, and Marginalization are inter-related or comparatively independent constructs. Specifically, the dimensionality of the underlying factors was discussed (e.g., Arends-Toth & van de Vijver, 2006; Chirkov, 2009). One aim of the present paper was to explicitly test the factorial structure of acculturation styles. Using EFA and CFA methods, it turned out that the AAS has a clear four-factorial structure. The four acculturation styles were shown to be independent factors. Their correlations were generally low, and even those styles that showed moderate relationships were best described as related but independent constructs. The structure of acculturation styles assessed as acculturation attitudes of immigrants and acculturation expectations of members of a national

sample were highly comparable, which underscores that the four strategies are generally represented as distinct modes to cope with acculturation demands.

### **Preference for Acculturation Styles among Immigrants and Nationals**

The order of preference for the four acculturation styles was identical for immigrants and Germans. Integration was the most preferred style by both groups, followed by Separation/Segregation, Assimilation, and finally Marginalization. This order has not always been the same in Germany. As discussed elsewhere (e.g., Schmitz, 1987, 1989, 1994), acculturation preferences have changed over the last three decades. Integration has always been at the first place and Marginalization at the last. However, Assimilation and Separation changed places: previously Assimilation was the second most preferred style, today it is Separation. These changes seem to have taken place before the year 2000. Most data of the current study were collected in the stable period between 2002 and 2005.

### **Correlates with Personality**

Personality variables were included in the present study as they have previously shown to be related with the choice of acculturation strategy (e.g., Schmitz 1992, 2003; Ward, Leong, & Low, 2004). The specific pattern of loadings obtained for the four acculturation styles further underscores their construct validity as independent styles with specific patterns of relations. We refrained from presenting analyses that would imply a causal direction between personality and the choice of acculturation style. But it is plausible that biologically routed personality dimensions (which are there at first place) may have direct or indirect effects on the choice of acculturation style, while cognitive styles and coping may be considered as structurally related in a broader personality hierarchy. Basic dimensions of personality were also shown to be consistently related with the experience of emotions (Costa & McCrae, 2002) and emotion-related variables. Therefore, personality may have direct effects on psychological adaptation as well as indirect effects mediated by, for instance, acculturation strategy.

### **Psychological Adaptation**

Forms of psychological adaptation, including wellbeing, happiness, and as an inverse marker depression, were shown to be clearly predicted by the four acculturation styles. In line with previous findings (Berry, 1997; Berry & Sam, 1997), Integration was shown to be the most adaptive acculturation strategy, predicting happiness, wellbeing, and low scores of depression. Assimilation seemed to be ambivalent, whereas Separation was most strongly predicted negative outcomes – even more than Marginalization in our present sample.

### **Validity of the Acculturation Attitudes Scales**

With its 24 items the AAS can be considered a short and reliable instrument that can be easily included in larger research batteries. With its clear factorial validity, scales of the AAS allow the specific assessment of the four acculturation styles. The concurrent validity of the scales with some personality variables and psychological adjustment underscores their quality. The instrument was demonstrated to be comparable across cultural groups and across acculturation attitudes and expectations. This may encourage future research with the AAS also among other ethnic groups settled in different societies.

### **Limitations of this Study and Future Analyses**

Some of the analyses required large datasets, so we decided to combine immigrants of different origins into one large sample. As previously discussed, this may have led to substantial noise in the heterogeneous immigrant sample. It would be desirable to replicate the core findings with more homogeneous immigrant samples. However, we are confident that results would be comparable to the ones obtained in the current study, as structural properties of acculturation styles and correlates were highly comparable for the combined immigrant and the German samples.

The primary aim of this paper was to address the structure of acculturation styles. Personality correlates were primarily included to demonstrate specific relationships with the four acculturation styles as a form of construct validation. The complex relations of acculturation, personality, cognitive styles, coping, and psychological adaptation should be analyzed in more detail in future research (including mediation and moderation analyses).

Future analyses should also address other relevant variables that could not be included in this short report, including gender, age, ethnic origin, time of living in new country, social activities, social adaptation problems, school and academic achievement. Investigations of these factors will help achieve a better understanding of the acculturation process as a whole. Such analyses were beyond scope of the present paper. But they should be carried out prior to making any proposals for application to policies and programs for use with specific adult immigrant groups who are settled in Germany.

## Conclusion

Acculturation styles as assessed with the Acculturation Attitudes Scales (AAS) are best described assuming a four-factorial structure. Integration, Separation/Segregation, Assimilation, and Marginalization were shown to be independent factors that were only lowly correlated. The structure and relations were highly comparable for acculturation attitudes and acculturation expectations.

Further, the relative independence of acculturation styles was corroborated by their specific patterns of correlations with personality variables, including basic temperament dimensions, cognitive styles, coping, and components of emotional intelligence.

Acculturation attitudes also predicted psychological adaptation. Integration turned out as the most adaptive style, Assimilation as somewhat ambivalent. The most maladaptive were Separation and Marginalization.

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## Host Acculturation Orientation: Some Preliminary Impressions of the French Students on Ethnic Minority Groups in Montpellier, S. France

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### Abstract

The **objective** was to study the host acculturation orientation of a sample of 100 French students of a S. France University. For this purpose a nine-items Host Acculturation Scale was used. **Observations** gave the impression that the students considered it significantly 'more important' that the immigrants *maintained* their heritage culture in their homes rather than doing so in general or at the workplace. Furthermore, it was considered only 'partially important' that the immigrants *adopted* the French norms, values and customs in general and at the workplace, and 'not important at all' that they did so in their homes. Ethnic groups were perceived as *threatening* to the extent of 'quite a bit' and, comparatively speaking, they were more *acceptable* than *liked*. The correlational observations suggested that those who *liked* the immigrant groups were also open to *accepting* them in their country and did not mind that these groups *maintained* their heritage culture. A modest degree of negative relationship was observed between the overall acceptance for *maintaining* the heritage culture by the immigrant groups and the perception that these groups were a *threat* to the mainstream French population. Regarding prediction of the host acculturation orientation, it appeared that *liking* the immigrants seemed to significantly facilitate the French hosts' *acceptance* for maintenance of the heritage culture at the workplace. Moreover, those who perceived the immigrants as a *threat* to the French people were also likely to expect that the immigrant groups adopted the French ways and customs.

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After completing two studies in the years 2000 and 2005, which mainly addressed the acculturation orientation and experiences of Indians living in Paris, the author felt that it was time to look at the host acculturation orientation, particularly in view of the popular acceptance of the bi-directional model of acculturation. By reason of logistical constraints, the present study had a very limited and focused concern. The purpose was to obtain a general impression of the French students' attitude towards the ethnic minority groups residing in their city, namely, Montpellier in S. France, with the help of a 'Host Acculturation Scale.'

## Acculturation

Taken as a 'culture level' phenomenon, acculturation refers to culture change resulting from the contact between two autonomous cultural groups (Redfield et al. 1936), while at the 'individual level' acculturation requires individual members of both the larger society and the various acculturating groups to engage in new behaviours and work out new forms of relationships in their daily lives (Graves, 1967). Apparently, acculturation occurs within the societal network of inter-group relations, and the nature and evolution of these inter-group relations are an essential part of the acculturation process.

According to Hutnik (1991), immigrant's ethnic identity is determined by the degree to which a person identifies with his/her own ethnic group and with that of the majority group. Consequently, four adaptation styles may be distinguished, namely, **acculturative**, where an individual identifies with his/her own minority group and with the majority group ("I am an Indian American or American Indian"), **assimilative**, where an individual identifies with the majority group but not or only weakly with the own minority group ("I am an American and not an Indian"), **dissociative**, where an individual identifies predominantly with the own minority group ("I am an Indian and not American"), and **marginal**, where an individual is indifferent to ethnic group identifications ("I am not an Indian but I am also not an American"). Hutnik (1991) contends that these ethnic identity patterns cannot be used as indices of acculturation orientations. Acculturation process includes not only these patterns of self-categorization but also patterns of change with respect to beliefs, attitudes, values, and behaviour.

## The Concept of Bi-Directional Models of Acculturation

In earlier researches, acculturation as a cultural change process was envisaged as occurring along a single dimension. The contention being that only the immigrants have to change and must choose to assimilate in the host culture or move along a continuum ranging from *maintenance* of their original culture to *adoption* of host society's culture (Gordon, 1964). It appeared that unidimensional models consider *assimilation* and *acculturation* as equivalent because assimilation (or giving up one's original cultural identity and obtaining a new identity in the host society) was considered the ultimate goal for the acculturating individual and a one-directional process that expected only the immigrants to change.

However, for many plural societies, the majority culture group also has to undergo a certain amount of changes when the distinctive ethnic minority groups become accepted as members of the host society, and the expectation that they would eventually assimilate with the mainstream culture does not hold true. Therefore, now the more comprehensive and useful bi-directional models of acculturation (Berry, 1980; Snauwaert, 2002) include two independent dimensions: (a) *maintenance* of the values, norms/customs and identity aspects coming from the heritage culture, and (b) *participation* in the host society, for studying acculturation orientation. Having said this, it may be added that host communities differ in how *accepting* they are on the *maintenance* dimension of acculturation; and how *demanding* they are that the ethnic minority groups take over elements from the dominant society and adapt to its culture.

## Bi-Directional Models of Acculturation

### The Contact Model of Acculturation (Berry, 1980)

Berry's (1980) bi-directional model distinguishes between attitudes towards *maintenance* of the minority culture, and attitudes towards *contact* with the dominant culture in the host society. The latter dimension may be referred to as *adaptation* rather than *contact* as it addresses to the cultural adaptation of immigrants to the values, norms, and customs of the dominant society. Furthermore, across cultures, most immigrants combine positive attitudes towards *maintenance* and *adaptation* in so-called 'integration' orientation and, compared to the alternatives 'assimilation' (i.e., *adaptation* without *maintenance*), 'separation' (i.e., *maintenance* without *separation*) and 'marginalisation' (i.e., neither *maintenance* nor *adaptation*), the 'integration' orientation is the most adaptive orientation for psychological adjustment and competence (Berry & Sam, 1996; Ward, Bochner, & Furnham, 2001).

Hence, in parallel with the immigrant acculturation orientations, host orientations can fall into Berry's well-known categories of integration, assimilation, separation, and marginality. In the terminology of Bourhis et al. (1997), these are named integrationism, assimilationism, segregation, and exclusionism. Therefore, it follows that the immigrants who adopt the elements from the dominant society do not necessarily have to give up their original culture. It may be added that researches in various host societies suggest that the (perceived) acceptance by the host community of the immigrant cultures enhances immigrant integration (Horenczyck, 1996; Lalonde & Cameron, 1993; Piontkowski, Florack, Hoelker, & Obdrzalek, 2000).

### Culture Adoption Model of Acculturation (Bourhis, Moise, Perreault, & Senecal, 1997)

Bourhis et al. (1997) contend that the issue of *culture maintenance* relates to an attitude towards the culture of origin, whereas the issue of 'relations with the other group' measures a behavioural preference which could be replaced by the issue of *culture adoption*. The question now is, 'whether the immigrants do or do not want to adopt some part of the host culture' and, using the combination of the two issues, one could determine the four kinds of acculturation orientations as Berry's (1980). Vanbeselaere et al. (forthcoming) point out that adoption of norms and values from the majority culture is a more demanding task than just developing relations with the autochthons and that good and regular contact with the host group does not necessarily imply a profound change of the value pattern from the heritage culture.

## Relational Outcomes

One concern of the present study is the *relational outcomes* that refer to the friendly or hostile and inclusive or exclusive nature of intercultural attitudes and practices. It is argued that as a consequence of pervasive ethnocentric bias there is inbuilt ethnic tension between the immigrants' and the host's acculturation orientations in intercultural relations. In line with the social identity theory, both sides will be inclined to favour the in-group culture over the culture of an out-group (Tajfel & Turner, 1986). In addition, intercultural relations between the immigrants and the host group are often unequal. In view of their dominant group position, the host group will demand some degree of *assimilation* from the immigrants while their acceptance of culture *maintenance* will vary depending on whether they perceive the minority culture as a 'threat' to their group dominance (Bobo & Hutching, 1987; Montreuil & Bourhis, 2001).

Conversely, the minority status of the immigrants is associated with a sense of heightened ethnic self-identification and could reinforce culture *maintenance*. At the same time, immigrants' attitude towards cross-cultural *adaptation* will vary depending upon whether they perceive the dominant culture as a 'threat' to their group survival (Berry et al., 1977). Some have indicated that on both sides of the ethnic divide, ethnocentrism and perceived threat will decline with increasing levels of education (Scheepers, Verbeck, & Coenders, 2001). The last three questions of the Host Acculturation Scale were aimed at assessing the state of these *relational outcome* variables with items such as these: Do you *like* the immigrant groups in general? Do you see the

immigrant groups as a *threat* to the group dominance of the French population? Do you find the immigrant communities *acceptable* in your country?

### **The Venue: Paul-Valery Montpellier Iii, University, South France**

The beautiful city of Montpellier is the Capital of the Languedoc Roussillon region of S. France. This region is famous for its wine-university city. The city is located between Provence, the Camargue, the Cevennes mountains, and the Pyrenees. Known to be a 1,000-year-old city, Montpellier is the home to modern universities and has the oldest medical school. Louisville and Montpellier are sister cities, and Université Paul-Valéry de Montpellier 3 (<http://www.univ-mont3.fr>) was the venue for the small study done by the present researcher during her short visit in the third week of June 2006. The university offers courses along with research opportunities in the different academic and applied areas such as languages, fine arts, cinema and theatre, science, humanities, management and information technology, etc.

### **The Ethnic Groups in Montpellier**

It is well documented that France has received immigrants from many parts of the world, mostly from other European countries and a significant proportion from French colonies of North Africa. It appears that a significantly large ethnic minority group in Montpellier is that of people from North Africa (popularly called *Maghrebins*). It may be noted in this context that Montpellier's population increased dramatically during the 1960s, due in part to an influx of refugees from Algeria. The other ethnic minority groups in the city were Spanish or Espanola and some Chinese. On the other hand, people of Indian origin were conspicuous by their absence.

The Arabic word *Maghreb* (Arabic, Berber, Tamazgha), also rendered *Maghrib*, refers to the five countries constituting North Africa, and literally means "the place of sunset" or "the west" (from an Arabian perspective). It is the term now generally used, mainly by the Arabs, to refer collectively to the African countries of Morocco, Algeria, Tunisia, Libya, and Mauritania. *Beur* is a colloquial term to designate French-born folks whose parents are immigrants from North Africa and have their origin in the countries of the *Maghreb*. The colloquial term is, however, slightly derogatory and not advised in formal speech with respect to etiquette, and actually sends the message that descendants of North Africa immigrants are not recognized as mainstream French people. *Beur* are still suffering discrimination in access to employment or to lease a dwelling. It may be noted that partially isolated from the rest of the continent by the Atlas Mountains and the Sahara desert, inhabitants of the northern parts of the *Maghreb* have long been tied in to the inhabitants of the Mediterranean countries, Southern Europe and Western Asia ([http://en.wikipedia.org/wiki/Arab\\_culture\\_in\\_France](http://en.wikipedia.org/wiki/Arab_culture_in_France)).

### **Jewish Population in Montpellier**

The city of Montpellier came into prominence in the 10th century as a trading centre, with trading links across the Mediterranean world, a rich Jewish cultural life, and traditions of tolerance of its Muslims, Jews, and later of its Protestant believers. Montpellier's Jewish population arrived from the former French colonies of Morocco, Algeria and Tunisia, situated just a few hundred miles further to the south but on the opposite side of the Mediterranean.

The Jews of Montpellier first gained prominence in the 13<sup>th</sup> century when the city began to win a reputation as one of the great *studia* of Europe, the University coming under Jewish influence through the emphasis of the secular studies of law and medicine. Due to persecution and wars, many Spanish Jews arrived in continuous waves of immigration. They tended to specialize in the translation of Islamic philosophical and medical texts, in addition to the works of Jewish scientists, poets, and thinkers written in Arabic. In Montpellier, the Jews lived peacefully during the 13<sup>th</sup> century, during the period of royal tolerance, and it was during this period that the Jewish life flourished, and the community felt confident enough to settle in the heart of the city with a synagogue and its outbuildings. However, the annexation of the entire Languedoc region to the French crown resulted in an increasingly harsh attitude towards their status, and the community was finally banished from the entire province in 1394.

Although in Montpellier the Jewish place of residence and worship has long since been demolished, one fascinating relic of Jewish medieval life, namely, Mikvah (*Mikvé* in French) or ritual baths, has survived throughout the centuries (main web site of the freelance writer [www.jeremyjosephs.com](http://www.jeremyjosephs.com)).

### Chinese Diaspora

Chinese immigration in France has a long history. However, talking of contemporary times, the expulsions of ethnic Chinese from Vietnam in the 1970s led to a wave of immigration of Chinese all around the world and also to France in Europe. Nevertheless, the number of Chinese immigrants in Montpellier is difficult to find. Chinese Diaspora in France consists of people of Chinese ancestry who were born in or immigrated to France. The population estimates for the Chinese vary, ranging from 200,000 to 300,000 as of 2006 (Smith, 2006).

### Migrants from the South of Europe

More often than not, most migration flows into France during the 19th century involved migrants from neighbouring countries like Italy, Spain, Portugal, Belgium, Poland, etc., who were attracted by the opportunities in manufacturing, construction work, and agriculture. There was, however, considerable regional variation in the South; Italian and Spanish immigrants were attracted by the agricultural work available. It may be argued that mass immigration into France does not really begin until the 1850s when the Second Empire's (1852-1870) economic expansion and industrial growth created a demand for labour that could not be met nationally.

### Conspicuous Absence of Indian Ethnic Minority Groups in Montpellier

The researcher was under the impression that it would be possible to find a significant number of Indian immigrants in Montpellier, although not as many as in Paris. However, surprisingly the presence of Indian ethnic minority group was between insignificant to almost negligible in the city. According to an Indian origin immigrant in the Restaurant business (who said he arrived in 1960s), only a handful of Indians were living in Montpellier, and if he was right, their number would be hardly 50. There were a few Indian Restaurants run by the people of Indian origin and the researcher saw some of those restaurants in the heart of the city. The researcher's own experience tells that if there is a significant presence of a minority community in a country/city, one would easily find them walking on the streets, on markets, at entertainment spots, and enrolled as students. This was not to be the case in Montpellier. It was decided that the students would respond to the questions, keeping in mind the significantly present immigrants in the city of Montpellier which, by and large, included people from North Africa who were popularly known as *Maghrebins*, Spanish people or *Espanola*, Jews, and some Chinese. It appeared reasonable to ask for the students' view 'in general' about the ethnic groups they are used to seeing and that they recognized. This seemed better by far compared to asking them about a group that was not in their frame of reference.

### Purpose

The purpose was to have a preliminary impression of the acculturation orientation of the French students towards the notably present ethnic minority groups in the city of Montpellier and to take note of whether they *liked* and *accepted* these groups, or found them as a *threat* to their group dominance?

### Method

#### Sample

The data were collected on 100 college students, 50 male and 50 female, of the Paul-Valéry University of Montpellier III in S. France. The average age of the students was 22.5 years (S.D. = 3.30). The students were enrolled in the courses for learning languages (Spanish, German, English, Italian, Chinese, etc), performing arts, painting, cinema and media, humanities

(psychology, sociology, economics, history, geography, etc), management, and information technology.

## Instrument

### The Host Acculturation Orientation Scale

In the present study, a nine-itemed three-point Host Acculturation Rating scale was used with modification in the formulation of the questions put to the host group. The Scale was inspired by the Immigrant Acculturation Scale used by Phalet and Swyngedouw (2004). In their work, Phalet and Swyngedouw tried to assess acculturation attitudes among Turkish and Moroccan minorities by asking symmetrical *maintenance* and *adaptation* questions.

Accordingly, while addressing to the culture *maintenance* and *adaptation* domains, the questions were put in the following way:

‘Is it considered of value to maintain the Turkish or Moroccan culture?’

‘Is it considered of value to adapt to the Dutch host culture?’

The participants indicated their attitudes on three-point scale from 3 = Maintain completely, over 2 = In part, to 1 = Not at all.

Phalet and Swyngedouw (2004) asked their respondents to rate both questions first in private context (‘home’ and ‘family life’) and next in the public context (‘school’ and ‘work’). They also used a parallel measure of acculturation attitudes in the Belgian comparison group, which referred to the host expectations from immigrants in private and public contexts in the following form:

‘Are they expected to maintain the Turkish and Moroccan minority culture?’ from 3 = Maintain completely, over 2 = In part, to 1 = Not at all.

‘Are they expected to adapt to the Belgian host culture?’ from 3 = Adapt completely, over 2 = In part, to 1 = Not at all.

In the present study, the questions were also rated for general as well as both the private and the public contexts, but with slightly different wordings. For example, the questions were formulated in the following manner for the *maintenance* and *adaptation* domains, respectively:

How acceptable it is for you that the immigrants maintain their own culture? Response options from Totally Acceptable (3), to Partially Acceptable (2), and Not Acceptable at All (1)

How important it is for you that the immigrants adapt to your cultural norms, values and customs? Response options from Very Important (3), to Partially Important (2), and Not Important at All (1).

The items of the Host Acculturation Scale were translated into the French language from English by one of the senior French colleagues of the researcher. The first three items of the scale were meant to measure the degree of ‘acceptance’ that the French students considered giving to the immigrants for *maintaining* their heritage culture in general, at home, and at the workplace. Similarly, the next three items examined the ‘importance’ that the students gave to *adopting* the French cultural norm, values, and customs in general, in family life, and at the workplace, while the last three items of the scale tried to measure the ‘relational outcome variables’. Accordingly, the respondents were asked whether the immigrant groups were *liked* and *accepted* by them or considered as a *threat* to the mainstream French population (see Appendix 1).

As already mentioned, a total number of only nine questions comprised the Host Acculturation Scale and there were never more than three questions for measuring a particular acculturation dimension and one question each for the general, public, and private domains

within them. Similarly, the *relational outcome* variables were measured with the help of a total number of three questions only or one question each for one *relational outcome*.

The researcher realized that analysis based on a very limited number of questions or just one per variable, as in the case of *relational outcome* variables, lessens the result's reliability. It may be reiterated that the researcher stayed with putting simple straight questions, since the study had a very limited focus and had the purpose of giving only a preliminary impression of the acculturation orientation of the French students towards the ethnic minority groups in the city of Montpellier. The reliability of the scale items used by Phalet and Swyngedouw (2004) was not reported from where the researcher drew the idea to formulate her measure.

## Procedure

During the day, the researcher stood on the university campus near the library, close to the students' cafeteria, or in outdoor places like a patch of green grass or under the trees, where students prefer to spend their free time. She carefully looked for a lone student or a small group of them and approached them with the request to fill in the questionnaire. After a lone student or the small group of students agreed to help the researcher, the first question put to them was whether they were French nationals in order to assure that they belonged to the majority group. Most of them were; the ones who were not French nationals were not included. Since it was a short questionnaire and the researcher was a foreigner, she could get the students' cooperation without any noticeable difficulty. The questionnaire needed only a few minutes to be completed, but data collection would have been very difficult had it not been in the French language. Although the majority of the students had basic knowledge of the English language (and some had a fairly good knowledge of the language), French was their language in use for all practical purposes.

## Analysis

1. Mean and Standard Deviations were computed for:

(a) The *maintenance* and *adaptation* dimensions of the French students' acculturation attitude towards the immigrants, and (b) the *relational outcomes*, that is, the students' positive or negative perception about the ethnic groups.

2. An intercorrelation matrix was computed for all the above mentioned variables.

3. A paired comparison *t-test* was used for observing the significant differences between the Means for *maintenance* and *adaptation* dimensions of the host acculturation orientation and the *relational outcome* variables.

4. Host acculturation orientation dimensions were predicted by using the *relational outcome* variables.

5. One way ANOVA was applied to see the role of gender on the variables of the study.

## Results

**Table 1**

*Mean, S.D. and Intercorrelations between the Maintenance and Adaptation Dimensions of the French Students' Host Acculturation Orientation*

Maintenance of the heritage culture	Mean	S.D.	Maintenance of the heritage culture by the immigrants			Adopting the norms, values, and customs of the host group by the immigrants		
			In general	At home	At work-place	In general	At home	At work-place
(a) In general	2.67	.47			.22* (.03)	-.20* (.05)		
(b) At home and family	2.92	.27						
(c) At work	1.96	.54						-.28** (.00)
Adopting the French culture								
(d) In general	2.19	.61					.35** (.00)	.49** (.00)
(e) At home and family	1.28	.49						.20* (.05)
(f) At workplace	2.30	.58						

Note: N = 100 French college students (50 male, 50 female), \*\*  $p < .01$ , \*  $p < .05$  Only significant coefficients are reported.

*Maintenance* dimension of the host cultural orientation referred to the acceptance given by the French students towards: (a) The *maintenance* of the heritage culture *in general*, (b) *maintenance* of the heritage culture at *home*, and (c) *maintenance* of the heritage culture at the *workplace* by the ethnic minority groups. *Adaptation* dimension of the host cultural orientation referred to the importance given by the French students to the proposition that:

(d) The immigrants *adopted* the French cultural norms, values, and customs *in general*.

(e) The immigrants *adopted* the French cultural norms, values, and customs in their *home*.

(f) The immigrants *adopted* the French cultural norms, values, and customs at the *workplace*.

Table 1 has the details for the host acculturation orientation measured in terms of *maintenance* and *adaptation* dimensions. It may be recalled that the data were collected on a 3-point rating scale for both the dimensions. For the *maintenance* dimension the scores are: 3 = Totally Acceptable, 2 = Partially Acceptable, and 1 = Not Acceptable at All. Similarly, in the case of the *adaptation* dimension, the scores are: 3 = Very Important, 2 = Partially Important, and 1 = Not Important at All.

Accordingly, it appeared that the French students almost completely accepted that the immigrants *maintained* their own culture *in general* (Mean = 2.67, S.D. = .47). Similarly it was highly accepted among them that the immigrants *maintained* their heritage culture in their *homes* and family life (Mean = 2.92, S.D. = .27). However, there seemed to be only partial acceptance to the proposition that the immigrants *maintained* their heritage culture at the *workplace* (Mean = 1.96, S.D. = .54).

Furthermore, regarding how important it was that the immigrant groups *adopted* the French norms, values and customs, the students had to say that it was partially important *in general* (Mean = 2.19, S.D. = .61), but a little more than partially important for the *workplace* (Mean = 2.30, S.D. = .58). However, it did not matter to them much whether the immigrant groups *adopted* the French norms, values, and customs into their *homes* or family life (Mean = 1.28, S.D. = .49).



Coming to the intercorrelations in Table 1, it may be noted that a pattern emerged in the host acculturation orientation around the *workplace*. For example, the students who thought that it was 'important' for the ethnic minority groups to *adopt* the French cultural norms and customs etc. *in general*, also considered that it was important for them to *adopt* the French ways in their *homes* and at the *workplace* ( $r = .35$  and  $.49$  respectively,  $p < .01$  in both cases). Further, although the relation was of modest degree, it appeared that the students who thought that it was 'important' for the immigrants to *adopt* the French norms, values, and customs in their *homes* believed that it ought to be the same way at the *workplace* ( $r = .20$ ,  $p < .05$ ).

At the instance of the correlational findings for the *maintenance* dimension of the host acculturation orientation, a negative association was observed between the host group's acceptance for *maintaining* the heritage culture at the *workplace* and the importance they gave to *adopting* the French norms, values, and customs at the *workplace*. This seemed to be a consistent finding. There was one more significant finding that referred to the *workplace*. Accordingly, acceptance for *maintaining* the heritage culture *in general* was positively associated with acceptance for *maintaining* the heritage culture at the *workplace* ( $r = .22$ ,  $p < .03$ ). In other words, the French students who accepted that the ethnic minority groups *maintained* their heritage culture *in general*, also agreed that they could do so at the *workplace*.

A moderately significant but negative association was observed between acceptance given to *maintaining* the heritage culture *in general* and the importance given to *adopting* the French cultural norms, values, and customs *in general* ( $r = -.20$ ,  $p < .05$ ). Looking at this finding in a totality, however, it appeared that the French students who considered that it was important to *adopt* the French norms, values, and customs *in general*, did not think that *maintaining* the heritage culture *in general* was acceptable to them in the same way.

**Table 2**

*Paired Samples t-test between the Maintenance Dimensions of the Host Acculturation Orientation*

Acceptance for <i>Maintaining the Heritage Culture by the Immigrants</i>	Mean	S.D	Paired Differences (Mean)	S.D.	t	df	Sig. Level
<b>Pair 1</b>							
In General	2.67	.47					
At Home	2.92	.27	-.25	.52	-4.01**	99	.00
<b>Pair 2</b>							
In General	2.67	.47					
At Workplace	1.96	.54	.71	.64	11.09**	99	.00
<b>Pair 3</b>							
At Home	2.92	.27	.96	.62	15.53**	99	.00
At Workplace	1.96	.54					

Note: N = 100 French college students (50 male, 50 female), \*\*  $p < .01$

Tables 2 and 3 contain the findings of the paired comparison *t-test* between the different questions from the *maintenance* and *adaptation* domains of the host acculturation orientation. The analysis aimed at examining whether the students made a significant difference in their attitude as regards to acceptance for *maintenance* of the heritage culture by the ethnic groups in different domains (i.e., *in general*, *in their home*, and at the *workplace*). The observations indicated that it was significantly more acceptable for the students that the ethnic groups *maintained* their heritage culture at *home* in comparison to doing so *in general* (Means = 2.92 and 2.67 respectively,  $t = -4.01$ ,  $df = 99$ ,  $p < .01$ ).

Also, it was much more acceptable for the students that the immigrants *maintained* their heritage culture *in general* rather than that at the *workplace* (Means = 2.67 and 1.96 respectively,  $t = 11.09$ ,  $df = 99$ ,  $p < .00$ ). The findings indicated that the French students were ready to accept almost completely that the immigrants *maintained* their heritage culture *in general*. However,

their acceptance for *maintaining* the heritage culture at the *workplace* was only partial at best. Similarly, a highly significant difference was observed between the Means indicating the French students' acceptance for *maintaining* the heritage culture at *home* in comparison to that at the *workplace* (Means = 2.92 and 1.96 respectively,  $t = 15.53$ ,  $df = 99$ ,  $p < .00$ ). In other words, it was almost completely acceptable to the French students that the immigrants *maintained* their heritage culture at *home* but only partially acceptable that they did so at the *workplace*.

**Table 3**

*Paired Samples t-test between the Adaptation Dimensions of the Host Acculturation*

Importance of <b>Adopting</b> French cultural norms, values, and customs by the ethnic groups	M	S.D	Paired Difference s (Mean)	S.D.	t	df	Sig. Level
<b>Pair 1</b>					14.28**	99	.000
In General	2.19	.61	.91	.64			
At Home	1.28	.49					
<b>Pair 2</b>							
In General	2.19	.61	-.11	.60	-1.83 n.s.	99	.070
At Workplace	2.30	.58					
<b>Pair 3</b>							
At Home	1.28	.49	-1.02	.68	-14.97**	99	.000
At Workplace	2.30	.58					

Note: N = 100 French college students (50 male and 50 female), \*\*  $p < .01$

**Pair 1:** Do you *like* the immigrant groups in general?

Do you see the immigrant groups as a *threat* to the dominance of the French population?

**Pair 2:** Do you *like* the immigrant groups in general?

Do you regard the immigrant groups as *acceptable* in your country?

**Pair 3:** Do you see the immigrant groups as a *threat* to the dominance of the French population?

Do you regard the immigrant groups as *acceptable* in your country?

Concerning the significant differences between the French students' point of view on the *adaptation* dimension of the host acculturation orientation in the three domains, the results (in Table 3) suggested the following: First, the French students gave significantly more importance to the position that the immigrants *adopted* the French norms, customs, and values *in general* in comparison to doing so in their personal or *home life* (Means = 2.19 and 1.28 respectively,  $t = 14.28$ ,  $df = 99$ ,  $p < .00$ ). Second, it was significantly more important for them that the immigrants *adopted* the French norms and ways at the *workplace* rather than in their *homes* and family life (Means = 2.30 and 1.28 respectively,  $t = -14.97$ ,  $df = 99$ ,  $p < .00$ ). Finally, for the French students it was not significantly important that the ethnic groups *adopted* the French norms, values and customs *in general* in comparison to doing so at the *workplace*. It may be said that the French students' had the expectation that the ethnic minority groups *generally adopted* their norms and ways, and it was important to do so at the *workplace*.

Table 4 contains the Means and standard deviations for the *relational outcome* variables (i.e., the host group's positive or negative attitude and perception towards the ethnic minority groups in their city), along with the coefficients of correlation among the same. Additionally, the table also contains paired samples t-test observations for the *relational outcome* variables.

It may be recalled that the *relational outcome* variable was measured with the help of three questions also mentioned in Table 4. It appeared that the French students *liked* the ethnic minority groups 'Quite a bit' (Mean = 4.00, S.D. = .83), found them *acceptable* somewhere

between 'Very much' and 'Quite a bit' (Mean = 4.48, S.D. = 2.01), but also perceived them as a *threat* to the extent of 'Very much' and 'Quite a bit' (Mean = 1.51, S.D. = .67).

The findings further indicated that *liking* and *acceptance* for the immigrant groups lessened the possibility of perceiving the ethnic minority groups as a *threat* to the mainstream French population ( $r = -.25, p < .01$  in both instances).

**Table 4**

*Mean, S.D., Intercorrelations between the Relational Outcome Variables and the Composite Score for the Maintenance Domain of the Host Acculturation Orientation along with the Paired Samples t-test observations for the Items of the Relational Outcome Variables*

	Mean	S.D.	Like	Threat	Acceptable	Maintaining	t	df	p
<b>Like</b>	4.00	.83							
				-.25** (.01)		.33** (.00)	20.86**	99	.00
<b>Threat</b>	1.51	.67							
					-.25** (.01)	-.19* (.05)	-2.25**	99	.02
<b>Acceptable</b>	4.48	2.01							
							-13.05**	99	.00

Note: N = 100 French college students (50 male and 50 female), \*\* $p < .01$

**Like:** Do you *like* the immigrant communities in general

**Threat:** Do you regard the immigrant communities as a *threat* to the French?

**Acceptable:** Do you regard the immigrant communities as *acceptable* in your country?

**Maintaining:** Overall *Acceptance* for *maintaining* the heritage culture

Moreover, a composite score for the maintenance dimension representing the host group's overall acceptance for *maintaining* the heritage culture by the ethnic groups (derived by combining the scores of the three *maintenance* domain questions), showed a highly significant positive association with *liking* for the immigrants ( $r = .33, p < .01$ ). This observation indicated that a *liking* for the immigrant groups was likely to enhance the students' *acceptance* for *maintenance* of heritage culture by the ethnic groups.

Further, a modest degree of negative relation was observed between an *overall acceptance* for the *maintenance* dimension and the perception that the immigrant groups were a *threat* to the French mainstream population ( $r = -.19, p < .05$ ). Nevertheless, the observation suggested that those who *accepted* that the immigrant groups could *maintain* their heritage culture in their country or city also felt that such groups could be a *threat* to the mainstream French population.

Considering the observations of paired samples t-test between the *relational outcome* variables, it appeared that *liking* for the immigrant groups was expressed relatively strongly as indicated by a significantly larger Mean, suggesting a positive attitude of the French students towards the ethnic minority groups (the groups were *liked* 'Quite a bit'). On the other hand, a Mean of 1.51 for the question whether the ethnic groups were perceived as a *threat* indicated that this was true to the extent of 'very much' to 'quite a bit'. It may be said that the students held a significantly different attitude about the question of *liking* for the ethnic groups and finding them as a *threat*. It appeared that the students seemed to report *liking* for the ethnic groups but that did not rule out perceiving them as a *threat* to the French mainstream population (Means = 4.00 and 1.51 respectively,  $t = 20.86, df = 99, p < .00$ ).

While comparing the Means for the French students' *acceptance* for the ethnic minority groups on the one hand, and their *liking* for the same on the other, a significantly larger Mean was observed for the former case (Means = 4.48 and 4.00 respectively,  $t = -2.25, df = 99, p < .02$ ).

The finding suggested that a higher *acceptance* for immigrants could be found in the country among the French students. However, on the question of *liking* them, the students responded with certain reservations. Lastly, a significant difference was observed between the Means for the *relational outcome* variable *acceptance* for the ethnic minority groups and that for considering them as a *threat* (Means = 4.48 and 1.51 respectively,  $t = -13.05, p < .00$ ). This finding indicated that for the present sample of students of the Paul Valéry Montpellier III University, although the ethnic groups were close to 'very much' accepted, they were still perceived as 'quite a bit' of *threat* to the members of the mainstream host community.

### Predicting the Host Acculturation Orientation

Simple multiple regression analysis was used to predict the acculturation orientation of the French students (i.e., *maintenance* and *adaptation* dimensions of the host acculturation orientation) by using the *relational outcome variables* and the demographic variables of age and gender. The findings had little to say in this regard, and the only significant finding was observed for the criterion *maintenance* of heritage culture at the *workplace*. Accordingly, *liking* for the immigrants seemed to significantly facilitate the French students' *acceptance* for *maintaining* the heritage culture by the ethnic groups at the *workplace* (Standardized Beta = .28,  $t = 2.79, p < .01, F = 2.88, df = 99, p < .02, R^2 = .13$ ).

In another case, perceiving the immigrant groups as a *threat* to the mainstream French population appeared as a significant predictor for the importance that the host group gave to *adoption* of French norms, values, and customs *in general*. It may be mentioned here that *threat* (a *relational outcome* variable) was used as the lone predictor variable after finding out that it was the only one with a significant  $t$  ( $t = 2.31, p < .02, F = 5.32, df = 99, p < .01$ ) out of the rest of the predictor variables for the *adaptation* dimension of the host acculturation orientation. The findings, when interpreted, seem to suggest that if the immigrants were perceived as a *threat* to the host group then the French students were likely to put more emphasis (i.e., give more importance) on the *adoption* of the French ways and culture by the ethnic groups.

### Main Observations

1. The observations indicated that it was significantly more acceptable (close to completely acceptable) for the French students that the ethnic groups *maintained* their heritage culture in their *home*, as well as family life, relative to doing so *in general*. It was, however, partially acceptable that the ethnic groups *maintained* their culture at the *workplace*.

2. It appeared that the host had some expectation that the ethnic minority groups *adopted* their norms and ways. More specifically, it was either partially important or a little more than partially important for them that the ethnic minority groups *adopted* the French cultural ways *in general* and in the *workplace*. However, the French students did not consider it important at all that the ethnic minority groups adopted the French norms, values, and customs in their *homes*.

3. Regarding the *relational outcomes*, the findings indicated that a *liking* for the immigrant groups was expressed in a significantly stronger way along with the perception that these groups were a *threat* to the mainstream French population. On the other hand, *acceptance* for the immigrants in their country was, comparatively speaking, expressed more strongly than the *liking* for them. Looking at the findings in totality, it appeared that the ethnic groups were perceived as a *threat* to the extent of 'quite a bit' by the French students of the Paul Valéry Montpellier III University despite the indication that the ethnic groups were generally *liked* and said to be *acceptable*.

4. The correlational observations in this regard indicated that those who *liked* the immigrant groups *in general* were open to *accepting* them in their country, but at the same time perceived them as a *threat* to the mainstream French population.

5. *Liking* for the immigrants was significantly and positively associated with the overall acceptance given to them for *maintaining* their heritage culture. However, a modest degree of a

negative relation was observed between the overall acceptance given for *maintaining* the heritage culture and the perception that the ethnic groups were a *threat* to the mainstream French population.

6. Coming to the observations regarding prediction of the host acculturation orientation, it appeared that *liking* for the immigrants seemed to significantly facilitate the French hosts' acceptance for *maintaining* the heritage culture by the ethnic groups at the *workplace*.

Finally, the French students who perceived the immigrants as a *threat* to the mainstream French population were likely to give more importance to the contention that the immigrants *adopted* the French ways and culture.

### Shortcomings of the Study

Having stated the major observations from this small study and reiterating that the study had an extremely limited focus, the author humbly admits that the analysis based on only a few questions or just one per variable lessens the result's reliability. In addition to using the Host Acculturation Scale, an interview with the students on the questions asked, especially as to 'why' they feel towards the ethnic minority groups the way they do, would have been a better strategy for data collection. However, the results of a study, as well as the choice of a data collection method, are likely to have limitations regardless of the researcher's enthusiasm when external circumstances such as time, money, and language barrier imposes constraints on that study.

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## Appendix 1

### The English version of the Host Acculturation Scale

**Instructions:** Please read each of the following questions one by one and respond by choosing (checking out) one of the numbers which represents your view most closely. The meaning presented by respective numbers is provided.

**How acceptable it is for you that the immigrants maintain their own culture?**

3-----2-----1  
 Totally Acceptable                      Partially Acceptable                      Not Acceptable at all

**How acceptable it is for you that the immigrants maintain their own culture at home and in family life?**

3-----2-----1  
 Totally Acceptable                      Partially Acceptable                      Not Acceptable at all

**How acceptable it is for you that the immigrants maintain their own culture at their workplace or job?**

3-----2-----1  
 Totally Acceptable                      Partially Acceptable                      Not Acceptable at all

**How important it is for you that the immigrants adapt to your cultural norm, values, and customs?**

3-----2-----1  
 Very important                      Partially important                      Not important at all

**How important it is for you that the immigrants adapt to your cultural norms, values and customs at home/in family life?**

3-----2-----1  
 Very important                      Partially important                      Not important at all

**How important it is for you that the immigrants adapt to your cultural norms, values and customs at their workplace/job?**

3-----2-----1  
 Very important                      Partially important                      Not important at all

#### Items for Measuring the Relational Outcome Variables

**Do you like the immigrant groups in general?**

Very much      Quite a bit      Somewhat      No                      Not at all  
 5                      4                      3                      2                      1

**Do you see the immigrant groups as a threat to the group dominance of the French population?**

Very much      Quite a bit      Somewhat                      No                      Not at all  
 1                      2                      3                      4                      5

**Do you regard the immigrant community as an acceptable ethnic minority group for your country?**

Very much      Quite a bit      Somewhat                      No                      Not at all  
 5                      4                      3                      2                      1

## **Vietnamese Students Abroad: A Research Framework**

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### **Abstract**

The purpose of this paper is threefold. First, a critique of the current literature on the acculturation experience of Vietnamese international students is provided. Second, a review of the distinctive cultural-historical traits of Vietnamese international students is presented, demonstrating their differences relative to other Asian sojourning groups as well as other Vietnamese migrant groups. A third purpose of this paper is to present a Vietnamese-specific psychological acculturation framework that might pave the theoretical foundation for investigations on the acculturation experience of Vietnamese international students. This framework is based upon Berry's (1997) acculturation framework, and De Jong and Fawcett's (1981) value-expectancy model.



## The Misunderstood Sojourners

A large body of research has addressed the movement of individuals across cultures and adjustment to life in a new cultural context (e.g., Horenczyk & Mudnayer, 2007; Leung, Pe-Pua, & Karnilowicz, 2006). A significant part of this literature has involved the acculturation experience of international students, a rapidly growing community worldwide (Paige, 1990). This literature, however, has not been sharply focused or comprehensive in regard to the experience of international students from Vietnam (Do, 2005). Knowledge regarding the acculturation of these sojourners remains limited, both conceptually and empirically. A number of reasons exist for this limited understanding.

First, Vietnamese international students (VISs) have rarely been examined in the literature. When they have, it has been as a subordinate group in combination with students of other ethnicities (Mooney, 1995; Shore, 1986). Most often, VISs have been grouped with students of other Asian origins under the catch-all term, 'Asian', as though these Asian internationals were a monolithic group (Leung et al., 2006). Further, given the cultural similarities between Vietnam and other countries in Asia, it has been assumed that findings involving Asian students in general can also apply to Vietnamese students (Shore, 1986). This approach has been criticized by Mooney (1995):

Vietnamese have usually been combined in studies with Laotians and Cambodians into a group which is labeled Indochinese, assuming, apparently, that the natives of these three countries are very much alike... [Thus], data gathered from students from more than one ethnic background might obscure distinctions between groups which may actually be unique. (pp. 1-2).

A second reason for this limited understanding is that, although Vietnamese immigrants and refugees have been among the most frequently researched immigrant/refugee groups, investigations involving VISs have seldom been reported (Allen, Vaage, & Hauff, 2006). Again, assumptions have been made that VISs and Vietnamese immigrants/refugees can be lumped into one group, and as such, the acculturation experience of VISs can be inferred from that of Vietnamese immigrants/refugees. It is important to emphasize that several differences exist between these two Vietnamese groups, including their motivation to go abroad, their social status, source(s) of social support, how they are received by their hosts, and how they acculturate in the host society (Paige, 1990; van Oudenhoven, 2006). For example, while Vietnamese immigrants/refugees are often reported to be more receptive to the changes demanded by the new culture, and more ready to assimilate into the mainstream culture, VISs are reported to be more protective of their cultural traditions (Saito, 1999; van Oudenhoven, 2006). In addition, Vietnamese refugees often undergo acculturation while simultaneously coping with mental health problems (e.g., posttraumatic stress disorders) that are often associated with human rights violations in their home country or that resulted from their difficulties during their journey fleeing from Vietnam (e.g., see Hinton, Safrena, Pollack, & Tran, 2005; Silove, Steel, Bauman, Chey, & McFarlane, 2007).

Finally, research frameworks suitable for the study of international students' experience abroad have been lacking. Although much has been written to guide those conducting research on the experience of immigrant populations, few efforts have been dedicated to research on international students. Without careful modification, the application of theoretical perspectives and research instruments that were developed for immigration research to research involving international students is problematic, given the potential differences between these two groups of acculturating people.

These limitations in the current literature have impaired our ability to understand the acculturation experience of VISs. In the next section, certain characteristics of Vietnamese culture and history are discussed, which suggest a potentially different acculturation experience for VISs, and which support the view that these sojourners should be studied as a separate cohort from other groups of Asian internationals or Vietnamese migrant groups.

## The Cultural-Historical Legacy of Vietnamese International Students

Analyses of several accounts of Vietnamese culture and history suggest that the cultural-historical legacy of Vietnam has shaped a unique Vietnamese character. Such a character is comprised of both 'vulnerable' and 'protective' factors for VISs in their sojourn abroad.

Given the geopolitical position of Vietnam at the heart of Southeast Asia, the Việt culture is akin to that of various ethnic groups, which inhabited ancient Southeast Asia (e.g., Laos, Cambodia, and continental Malaysia). The entire region had a common face characterized by a number of features, such as the cultivation of rice and the predominance of agriculture. Against this common backdrop, the peoples of Southeast Asia all modeled their cultures according to their distinct geopolitical conditions. Vietnamese culture was shaped through constant efforts to cope with natural calamities associated with the tropical climate (especially the devastating flooding of the Red River), and continuing struggles against foreign aggression (e.g., Chinese, French, American, Japanese, and Korean) (Huu-Ngoc, 2008). The Vietnamese nation was occupied by Chinese empires for more than 1,000 years (from the 2<sup>nd</sup> century BC to the 10<sup>th</sup> century AD), and fractured by 83 years of French colonization (1862-1945). These ordeals have made Vietnam unlike any other country, and formed certain distinctive characteristics of the Vietnamese national character (Huu-Ngoc, 2008). Among these are a strong adherence to community, a great ability to adapt, and most prominently, a vigorous sense of ethnic identity, cultural preservation, and national independence (Guffin, 1997). As pointed out by Pham (1994):

The long domination by and later continued contacts with China, as well as recent involvements with the West have left many imprints on the Vietnamese culture, helped sharpened a strong sense of identity and independence among the Vietnamese and attested to their adaptive abilities (p.70-71).

Throughout the course of history, the Vietnamese have demonstrated that although they might take on customs of an occupying culture, they are not easily absorbed by it (Harris et al., 1962). When foreign elements are taken on, it is only after having imposed a local stamp on them. Palazoli (1981, cited in Huu-Ngoc, 2008, p. 1066) argues:

The uniqueness of the Vietnamese lies in the ability to incorporate foreign influences through an alchemy that modifies and adapts them; and the flexibility with which they are accumulated is accompanied by an irreducible tenacity to certain basic national traits, which has allowed the country to preserve its own identity through times of servitude or dismembering.

Furthermore, due to the frequency of war, Vietnam's social development was often disrupted. Socio-economic structures have gone through repeated interruptions. Continuing economic crises, the unstable conditions of Vietnamese society, and the scarcity of national resources after wartime have resulted in a sense of resilience for the Vietnamese people (Lee, 2005).

Vietnam's long history of striving for independence and freedom has also influenced the way its people engage with others. On the surface, Vietnamese people may appear compliant, but this attitude of compliance may be a ruse useful in protecting the country from attack and assimilation. Phan (2001) suggests:

If one knows about Vietnamese history of constantly struggling for independence and its geographical position in the Asian region, one may realize that being 'flexible' or 'compliant' is just a mask to protect the country and its people from being invaded, or assimilated by bigger nations...The history of thousands of years has formed distinctive cultural characteristics among the Vietnamese people with conditioned compliance/flexibility on the outside, but rebellion near the surface (p. 298).

Instilled with these national characteristics, VISs may be resilient sojourners with a strong sense of ethnic identity and cultural preservation. They may demonstrate a pattern of

pretending to be unquestioning, i.e., they may appear compliant and conformist, yet not completely accept the new culture. Such characteristics might distinguish them from other groups of Asian students, and might act as protective factors that could help them participate and thrive in a new culture without the expense of losing their cultural identity.

Apart from these potentially 'protective' factors, certain aspects of Vietnamese history and culture may make VISs vulnerable in their sojourn. As Huu-Ngoc (2008) argues, the other side of the Vietnamese strong sense of community is the exaggerated concern for face saving, localism, and regionalism, and difficulties achieving a sense of self-affirmation. Also, national pride and fidelity to traditions may lead to conservatism, close-mindedness, reticence, and even withdrawal when exposed to new socio-cultural norms (Huu-Ngoc, 2008).

Another aspect of Vietnamese history that has shaped a unique Vietnamese character is related to Vietnam's prolonged colonization by China. During this period, Vietnam was heavily influenced by Confucianism (McHale, 2004). For centuries, Confucianism permeated Vietnamese society, influencing the Vietnamese psyche, and characterizing a number of Vietnamese behavioral patterns, to the extent that they may cause misunderstanding for people of other cultures (Pham, 1994). For example, given its emphasis on the need to maintain a hierarchical society, Confucianism has stratified Vietnamese society with vertical relationships, and resulted in the tendency of Vietnamese people to stress formality in social relationships (Pham, 1994). Being influenced by this, VISs may show reverence to elders by keeping a distance from them, or not confronting them in front of others. While these manners are desirable in Vietnamese culture, they may make VISs appear 'unfriendly', and 'passive' in the eyes of westerners. Although Vietnam fits within the East Asian Confucian world, it has been argued that the impact of Confucianism on Vietnamese mentality is far less extensive than in China, Korea, or Japan. This is because the appropriation of Confucianism in Vietnam did not follow the same trajectory as in other East Asian countries. The Vietnamese appropriated Confucian teachings not as a sharply bounded and internally consistent doctrine, but as related fragments in a mix of Confucian, Buddhist, and Daoist teachings combined with local customs and even western ideas (McHale, 2004). It may be a mistake to assume a convergence in the Confucianism-driven behaviors of Vietnamese people and that of peoples of other East Asian countries based on their surface similarities.

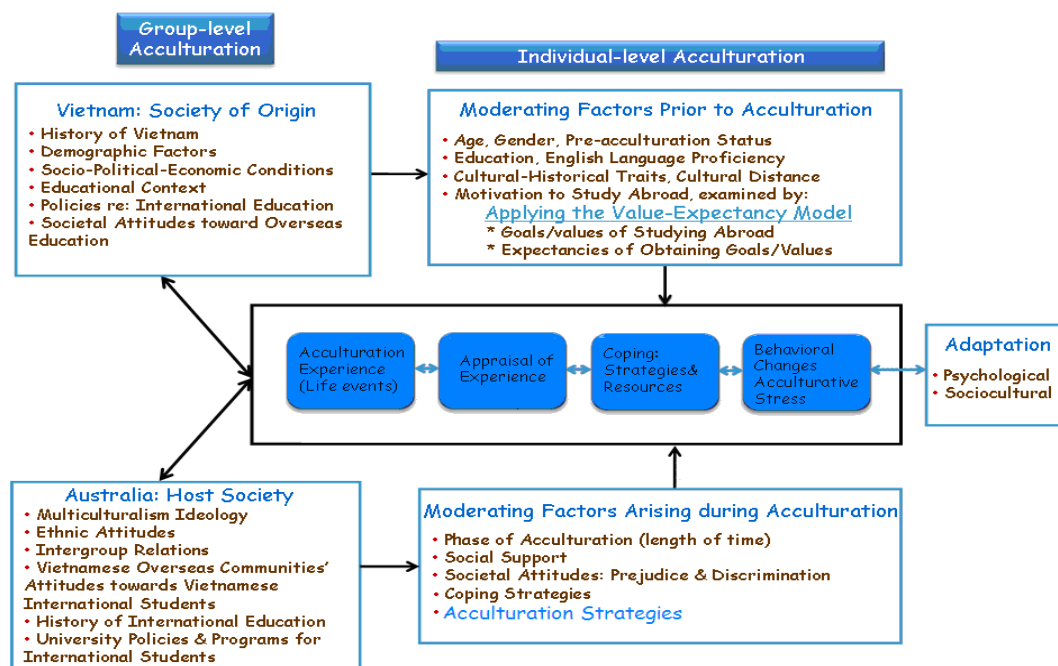
With regard to VISs in Australia or the U.S.A., common destinations of the Vietnamese people who fled Vietnam after the fall of the Saigon regime in 1975, another factor may lead to greater vulnerability while studying abroad. With anti-communist sentiments still fervent among many Vietnamese overseas communities in these countries, VISs in these locales are often reported to face hatred and discrimination by first wave Vietnamese immigrants. In extreme cases, they even have to conceal their identity to avoid harassment (Pham, 2002). Being in a situation like this may add to the stress experienced by these sojourners as they adjust to a new culture (Ip, Wu, & Inglis, 1998). This may place VISs in an unusual situation. Do (2005) argues:

Being in such unparallel political and historical context naturally puts them in a different category of international students from those of other ethnic groups, such as the Koreans, the Philippines [*sic*], or the Japanese. The VISs do not receive any support from their community nor participate in its activities. In many instances, they even refrain from revealing their identity lest any indications, however small, of an association with the current Vietnamese government would not be accepted or tolerated by the anti-communist members of the Vietnamese immigrant community (p.57).

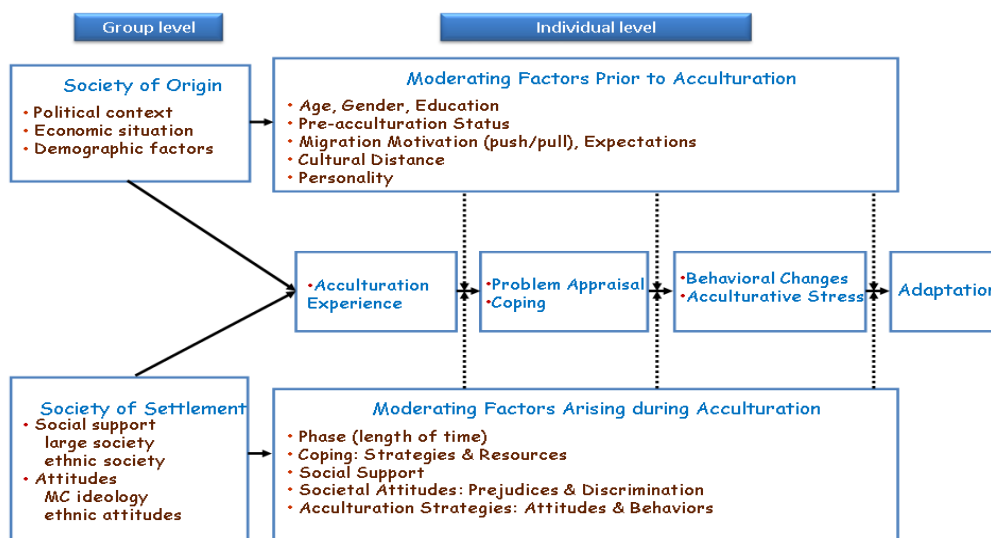
In summary, whether VISs have inherited their national character in its full manifestation, or only retained a semblance of it, one might argue that they are instilled with distinctive cultural-historical attributes. This suggests that their acculturation experience may differ from that of other Asian students, and justifies the need for research efforts that might improve our understanding of the challenges that these students face in a new culture.

## Constructing a Vietnamese-specific Psychological Acculturation Framework

To investigate VISs as an independent group with distinctive characteristics, a Vietnamese-specific psychological acculturation framework has been designed (Fig. 1). This framework has been constructed by Vietnamizing Berry's (1997) acculturation framework (Fig. 2), and marrying it with De Jong and Fawcett's (1981) Value-Expectancy model. As Berry (1997) noted, his framework is not a specific stepwise guide for acculturation research, but a 'skeleton' onto which numerous 'bits of flesh' could be added. As such, the added materials in the Vietnamese-specific framework are the 'bits of flesh' that help Vietnamize Berry's framework, and expand its application to an area of research that has been neglected.



**Figure 1.** A Vietnamese-specific psychological acculturation framework



**Figure 2.** Berry's (1997) acculturation framework

As can be seen from figures 1 and 2, the Vietnamese-specific framework is comprised of a number of key elements that are adopted from Berry's framework. These elements include Vietnam as the society of origin, Australia as the host society (for the purposes of this paper), the moderating factors prior to acculturation, the moderating factors arising during acculturation, the psychological acculturation process (as presented in the central part of Fig. 1), and adaptation. The following sections describe how these elements have been Vietnamized to make the framework best accommodate investigations on the acculturation experience of VISs.

### Societal Contexts

According to Berry (1997), a complete study of acculturation needs to begin with an examination of the two societal contexts in order to understand where the individuals come from and where they will be acculturating to. This also helps estimate the cultural distance between the two societies involved, and the degree to which the sojourners have voluntarily moved to the new culture.

With regard to the society of origin, Berry (1997) suggests investigating the political context, economic situation, and demographic factors. In the Vietnamese-specific framework, Vietnam's history is added as one more factor that needs to be studied. As discussed earlier, Vietnam has an eventful history that has shaped certain distinctive characteristics of the Vietnamese people, which potentially influenced the way its people acculturate. In addition, since the acculturating individuals are VISs, it is essential that the educational context of Vietnam be explored. This enables one to comprehend the milieu through which VISs have been nurtured and educated. Vietnam's policy regarding international education and societal attitudes toward overseas education are also in need of investigation. Knowledge of these factors will help capture not just the extent to which overseas study is appreciated and promoted in Vietnam, but also the 'push' factors (Martin, 1993) that have motivated VISs to study overseas.

Regarding the host society, Berry (1997) suggests examination of the general orientation of this society toward multiculturalism, and its attitudes toward different ethnocultural groups residing in it. While acknowledging that even in societies where multiculturalism is advocated, with variations in the relative acceptance toward different minority groups (i.e., there are groups that are less accepted, and those that are more favored (Berry & Kalin, 1995), Berry and his colleagues have not acknowledged the variations in the relative acceptance among the minority groups toward each other. I argue that this is also worthwhile to examine. This is

because in multicultural societies (like Australia), intercultural interactions between the host society and the ethnocultural groups, as well as intercultural interactions among members of the ethnocultural groups, are relatively equal in terms of the frequency, intensity, and influence on the well-being of the acculturating individuals. This raises the need to also explore the nature of the interrelationship between the Vietnamese groups with other ethnocultural groups currently residing in Australia. Also, as discussed earlier, given the anti-communist sentiments still prevalent among many Vietnamese overseas communities, VISs often face hostility from the first-wave Vietnamese immigrants (Do, 2005). As such, the attitude of these Vietnamese immigrants toward VISs also needs examination. In short, I suggest that there should be three main 'groups' whose orientations/attitudes toward VISs need to be examined. These include Australia and its people (the host society), the Vietnamese overseas communities, and the other major ethnocultural groups in Australia. It is also acknowledged that among these groups, the host society's attitudes are considered to be the most significant with regard to their potential to influence the acculturation experience of VISs.

Australia's history of international education is another aspect of the host context that needs to be studied when sojourners are international students. In Berry's (1997) framework, this has not been addressed. As the history of immigration/multiculturalism of the host society is important (i.e., to understand the degree of societal inclusion and relative acceptance toward immigrants/refugees), I suggest that, just like in immigrant research, knowledge of the host society's history of international education is equally important in this case. Understanding how international education has evolved over time in Australia will clarify the extent of support available to nurture international students. Also in need of investigation are Australian universities' policies and programs for international students. This will provide information regarding the welcoming nature of Australian universities toward international students and give a better picture of the acculturating context faced by VISs.

### **Moderating Factors Prior to Acculturation**

As noted by Berry (1997), to understand how people experience acculturation, one needs to understand their personal attributes prior to acculturation. In Berry's framework, such factors include age, gender, education, pre-acculturation status, migration motivation/expectations, cultural distance, and personality. In the present framework, a number of other factors are added. One of these is the English language proficiency of VISs, as research has shown that VISs appear less competent in English than their Asian counterparts (Hamilton, 2005). Given the interrelatedness of language to other areas of life (Morrison & McIntyre, 1971), host language proficiency could greatly facilitate individuals in their acculturation process. As discussed earlier, VISs are also instilled with certain distinctive cultural-historical attributes that might support or hinder their acculturation. These factors also need to be examined. Further, this may help predict the extent of culture shedding and culture learning (and possibly, cultural conflict) that these sojourners experience given the cultural distance between Vietnam and a Western country like Australia.

Since motivation to move abroad has been found predictive of group identification and subjective well-being of acculturating individuals (Tartakovsky & Schwartz, 2001), motivation to migrate and motivation to study abroad in the case of international students are other important factors that need to be studied. Berry (1997) suggests using the concepts of push/pull motivations and expectations to examine migration motivation/expectation. However, the traditional push/pull framework has been criticized for its limited utility in micro-level research. This framework might be replaced with a cost-benefit approach, stressing both the economic and non-economic forces in an individual's decision to move (Bogue, 1977). De Jong and Fawcett's (1981) Value-Expectancy (V-E) model is thus proposed in the present framework.

De Jong and Fawcett's V-E model is an Expectancy-Value theory, a type of theory that has been proven reliable and useful when applied as a theoretical foundation for studies into human motivation (Feather, 1982). To date, the V-E model has been applied to understanding migration decision-making and motivation (De Jong, 2000; De Jong & Fawcett, 1981). It has not previously

been reported as a means to explore motivation to study abroad among international students. Yet, applying the V-E model in this case may prove beneficial in expanding our knowledge base in this area.

De Jong and Fawcett (1981) assert that migration motivation is often based on people's desires to attain certain outcomes and the expectation of achieving them by migrating. The V-E model is described algebraically as follows:

$$MI = \sum_i V_i E_i$$

V is the value of the outcome and E is the expectation that migration will lead to the desired outcome. MI, the strength of the motivation to move, is a function of the sum of the value-expectancy products.

Applied in the case of VISs, it might be hypothesized that these students' motivation to study abroad is related to certain outcomes, and the expectation of achieving them by studying in Australia. The V-E model might be operationalized through the following steps:

- Give the students a set of relevant outcomes
- Obtain their rating of the importance of each of these outcomes
- Obtain their rating of the expectancy of achieving each of these outcomes
- Apply formula  $MI = \sum_i V_i E_i$  to obtain the total score for the strength of the motivation to study abroad

The use of the V-E model in this case might be questioned because all of the VISs are already in Australia by the time they are recruited as research participants. In theory, it is best to use a prospective design to run the V-E model. However, if such a design is not feasible, the V-E model can still be used in a retrospective study to generate descriptive data on people's motivation (De Jong & Fawcett, 1981). It is noted that the purpose of this framework is not to test how well the strength of the VISs' motivation to study abroad predicts their actual pursuit. Rather, it is to examine the factors forming their motivation, and the correlation of their met/unmet expectations to their acculturation experience.

### **Moderating Factors Arising during Acculturation**

Similar to the moderating factors prior to acculturation, the moderating factors arising during acculturation are also in need of investigation (Berry, 1997). In Berry's framework, as well as in the Vietnamese-specific framework presented here, such factors include phase of acculturation, coping strategies, social support, societal attitudes, and acculturation strategies. In the Vietnamese-specific framework, acculturation strategies are treated as a more important "during-acculturation" factor, and are given more research attention. This is because theoretically, acculturation strategies comprise a central concept in that they are so closely aligned with other crucial conceptualizations of acculturation (Berry, 1997). Empirically, acculturation strategies have been found to significantly correlate to how people appraise their experience, employ coping strategies, utilize social support, and undergo behavioral changes and acculturative stress (Berry, Poortinga, Segall, & Dasen, 2002).

For conceptual purposes, Berry suggests four acculturation strategies used during the acculturation process, namely, integration, assimilation, separation, and marginalization. Chirkov, Vansteenkiste, Tao, and Lynch (2007) noted that Berry's fourfold model of acculturation, though viewed as helpful in the study of all types of acculturating groups, may be most applicable in the study of immigrants. It may not be a mold that international students readily fit into. This suggests the need for careful application of Berry's fourfold model of acculturation to studies on the acculturation of international students.

## Acculturation: A Dynamic Process

Berry (1997) asserts that acculturation is a dynamic process which encompasses an array of intertwined phenomena. This, however, is not reflected in the figure he provides to describe his framework (see Fig. 2). Using one-way arrows to demonstrate the relationships among the framework's key elements, Berry depicts a causal relationship among them, rather than a reciprocal one. Berry's framework thus appears static, and can only depict acculturation as a linear, one-directional phenomenon. Two-way arrows are used in the Vietnamese-specific framework described earlier (Fig. 1), in order to better describe the mutual relationships among the framework's elements, and thus, better depict how acculturation, as an intricate and reciprocal process, may actually occur. The utility of the suggested framework in understanding the acculturation experience of Vietnamese students studying abroad may be ascertained when data, which are collected by the author based upon this framework, are analyzed as part of an investigation presently underway.

## Conclusion

In this paper, I have provided a critique of the current literature on acculturation as it pertains to the experience of VISs. I have argued that the apparent distinctiveness of VISs supports the view that they should be investigated as an independent cohort. The Vietnamese-specific psychological acculturation framework presented corresponds to this need. This framework is intended to facilitate investigation of the acculturation experience of VISs, and also to help provide a stronger theoretical and methodological foundation for acculturation research on international students in general.

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## **Those Wonderful People across the Sea: Positive Out-Group Bias by Caucasians toward Asians**

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### **Abstract**

While individuals often favor their in-group, they sometimes favor an out-group, such as when Caucasians positively stereotype Asians' quantitative abilities. It is unclear, however, whether positive stereotypes of Asians extend into other domains and create a generalized halo effect that influences judgments on other attributes. To examine this, three studies were performed. In Study 1, Asians and Caucasians were equally biased toward an Asian's response to a calculus problem. In Study 2, Asians, but not Caucasians, gave lower grades to essay writers they guessed were Asian. In Study 3, Caucasians rated their ethnic group with fewer positive terms and more negative terms than they rated Asians on general personality characteristics. Results suggest that Caucasians' views of Asians are more positive than self-judgments of each group, and that Caucasians' judgments about Asians may be influenced by a generalized halo effect.

**Authors' Note:** We thank Crissy Terawaki Kawamoto for her insightful comments regarding this manuscript, and we thank Drs. Edward W. Kinghorn, Ronald M. Miller, and Sean Ransom for their assistance with this study.

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Unlike other minority groups, who are often the targets of negative stereotyping, Asians and Asian-Americans are often stereotyped positively in the United States, particularly with regard to cognitive ability and academic achievement. These positive stereotypes may hold some degree of accuracy (Sue & Okazaki, 1990). Individuals of Asian descent, particularly those from East Asia, are overrepresented at elite U.S. universities and at highly competitive U.S. medical schools, and males of Asian Indian heritage have more than triple rate of college education than do U.S. white men (Choe, 2009). Such success has caused Asian-Americans to be generally excluded from affirmative action programs in the U.S., designed to increase minority representation in university admissions and in company hiring decisions.

Such achievements have also helped perpetuate the stereotype of Asian-Americans as a *model minority* whose members overcome disadvantaged circumstances via hard work and perseverance (Kao, 1995). Researchers, however, have identified substantial disadvantages of the model minority stereotype, including lower academic performance as a result of impaired concentration when ethnicity is made salient (Cheryan & Bodenhausen, 2000), perhaps as a result of *stereotype threat*, which results when individuals are concerned about confirming others' expectations of one's performance (Steele & Aronson, 1995). Indeed, some Asians in the U.S. have remarked that the expectations for academic success can become burdensome, particularly for those who struggle in their academic endeavors (Wing, 2007). More seriously, overly positive stereotypes of Asians may lead others to see Asians as a competitive threat and to justify discriminatory actions (Glick & Fiske, 2001), and may also lead to a general disregard for the physical, emotional, and social concerns of Asians in the U.S. (Islam, Trinh-Shevrin, & Rey, 2009).

Despite the growing interest in the effects of positive stereotypes toward Asians, no study has examined whether the positive stereotypes this group receives extend more generally to other domains. A well-established principle in psychology is that of the *halo effect*, or the tendency of an evaluatee who scores highly on one trait to receive higher scores on unrelated traits (Thorndike, 1920). In Thorndike's classic view, evaluators are "unable to treat an individual as a compound of separate qualities and to assign a magnitude to each of these in independence of the others" (p. 28). Instead, raters are likely to rate all traits using a global impression of the individual. Such impressions are often based on irrelevant attributes, such as when ratings of intellectual ability are related to the ratee's physical attractiveness (Eagly, Ashmore, Makhijani, & Longo, 1991). Such halo effects are considered to operate without implicit awareness (Greenwald & Banaji, 1995) and have been found in a variety of domains, including the assessment of an individual's height based on status (Wilson, 1968), evaluations of a university's academic quality based on its teams' athletic success (Goidel & Hamilton, 2006), and evaluations of a product's quality based on gift-wrapping (Howard, 1992). It is, therefore, possible that Asians in the U.S. are seen more positively on a number of variables both inside and outside the academic domain. Indeed, the U.S. stereotype of Asians also includes positive views of Asians' work ethic and family connectedness (Yu, 2006), as well as the familiar stereotypes regarding academic aptitude.

Halo effects, as with other implicit cognitive processes, are presumed to work based on prior exposure. In the present studies, judges are assumed that they already have experience with one attribute (in this case, a stereotype regarding Asian's presumed superiority in math and science achievement) and this is thought to influence ratings on other, more novel attributes (Greenwald & Banaji, 1995). On the other hand, ample evidence also exists that individuals favor their ethnic in-groups more highly than they favor ethnic out-groups. For example, Boulton and Smith (1992) found that both Caucasian and Asian children in Britain rated their in-group most favorably on both positive and negative traits, and that Caucasian children were least likely to prefer sharing activities with Asians. It is unclear, therefore, whether in-group bias would serve to depress Caucasians' evaluations of Asians in domains outside academic skills or whether a possible halo effect would serve to inflate them. Because stereotypes of Asians' intellectual capabilities typically focus on the mathematical and scientific domains, it is likewise unclear whether Caucasians' evaluations of Asians on language-based activities would be favorably

biased. Due to the pervasiveness of the halo effect and the persistence of the model minority myth regarding Asians in the U.S., we believed that Caucasians would rate Asians favorably across traits and domains.

To test these ideas, a series of three studies was developed. In Study 1, we sought to determine the degree to which Caucasians and Asians shared a bias in favor of Asians' mathematical abilities. In Study 2, we sought to determine whether this bias would extend to language writing abilities. In Study 3, we sought to determine whether Caucasians and Asians would show a bias in the assignment of favorable and unfavorable character traits to each group. We aimed to determine whether positive Asian stereotypes in mathematic abilities would create a halo effect around the ratings Caucasians made of Asians' abilities outside that domain, or whether in-group biases would serve to depress ratings that Caucasians made of Asians. In addition, we sought to determine whether Asians showed biases in these domains.

## **Study 1 - Ratings of Mathematical Ability**

In order to confirm the existence of positive stereotypes regarding Asians' quantitative ability in the present sample, we conducted a study to determine whether Asian and Caucasian participants would errantly rate an Asian student's incorrect response on a calculus problem as being correct. Our hypothesis was that both Asians and Caucasians would show a bias toward endorsing the Asian's response as being accurate.

### **Method**

#### **Participants and Procedure**

A total of 81 university undergraduate students (40 Caucasian; 41 Asian) at a small university in Hawaii were recruited for participation over the fall of 2007. Individuals were recruited by approaching participants in common areas on the university campus. Participants completed measures while a researcher waited to collect the questionnaire packet. More than 85% of the Asian participants were born outside the U.S.

#### **Measures**

Participants were presented with a calculus problem and two possible solutions written in different handwriting. The problem was complex and involved the use of integrals. (See Appendix B for calculus problem used.) Solution A was signed with the name "Emily Johnson," and the solution B was signed with the name "Guang-yao Wang." Both names are female. Participants were asked to indicate which of the solutions was correct. (In actuality, both solutions contained errors.)

### **Results**

Of the 81 participants, 67.9% ( $n = 55$ ) indicated that the Asian's response was correct and 32.1% ( $n = 26$ ) indicated that the Caucasian's response was correct. None indicated that both were incorrect. Chi-square analysis was then used to determine whether the two ethnic groups differed in their bias toward the Asian participant's response. They did not, chi-square (1) = 1.06,  $p = .30$ . In all, 63.5% of Caucasians and 73.2% of Asians chose the Asian's response over the Caucasian's.

### **Discussion**

As found in previous research, Caucasians exhibited a stereotype in the present study in favor of Asians' mathematical ability. Asians shared this bias toward their own group. The magnitude of this stereotype did not statistically differ between Asians and Caucasians.

Although it is expected that many participants understood the names to have been female, no manipulation check was undertaken to determine that all participants recognized the gender of both names to be female, particularly since the gender of the names may have been obscure to individuals unfamiliar with naming practices outside their culture. Although the lack of manipulation check makes it unclear whether issues related to gender may have influenced the findings, the findings do correspond with the previously established idea that Caucasians consider Asians to have superior mathematical abilities (e.g., Aronson et al., 1999). The present study suggests that Asians also share this view.

## Study 2 - Bias in Ratings of Writing Achievement

Study 1 supported previous research that implies that Caucasians show a bias toward Asians in their judgment of mathematical achievement. In Study 2, we sought to evaluate whether this bias would extend to the scores provided on a written essay. We anticipated that this would serve as a test of in-group bias if members of each ethnic group were to assign higher grades to essays identified as being written by a member of their own group.

### Method

#### Participants and Procedure

A total of 98 university undergraduate students (45 Caucasian; 53 Asian) at a small university in Hawaii were recruited for participation. The method and time-frame were identical to that used in Study 1. As in Study 1, a large majority of the Asian students were born outside the U.S.

#### Measures

Participants were presented with an essay entitled "Is playing games important for adults?" and a 6-point scoring guide, with 6 as the highest possible score. Participants were asked to indicate whether they believed the essay was written by a Caucasian or an Asian, and to provide a score from 1 through 6 based on the scoring guidelines.

### Results

A majority of the Caucasian participants (55.6%) guessed that the essay was written by a Caucasian, and a majority of the Asian participants (62.3%) guessed that it was written by an Asian. Chi square analysis showed that the tendency for raters to judge the writer to be a member of their own race was marginally significant, chi square (1) = 3.11,  $p = .08$ .

Racial groups were then analyzed separately to determine how their judgment of the writer's race was related to the grade they assigned to the essay. To do this, the sample was divided based on rater race and correlational analyses undertaken to determine the relationship between the scores given to the essay and their judgments of the rater's race. Assignment of race was considered a dichotomous variable with Caucasian assigned the value of 0 and Asian assigned the value of 1. The indicated findings showed that Asians gave significantly higher scores to essays they judged to be written by a Caucasian ( $M = 4.9$ ) than to those they judged to have been written by an Asian ( $M = 4.2$ ),  $r = -.38$ ,  $p = .006$ . There was no significant difference in the ratings given by Caucasians (Caucasian  $M = 4.9$ , Asian  $M = 4.8$ ),  $r = -.11$ ,  $p = .47$ .

### Discussion

Unlike the ratings of mathematical skills, Asian participants gave higher scores to essays they identified as being written by a Caucasian student. Although no causal inference may be

drawn from this correlational study, findings suggest that Asians see Caucasians as superior performers in English writing ability, whereas Caucasians in this sample did not.

### **Study 3 - General Trait Ratings**

Study 1 showed that Caucasians were biased toward Asians when judging the correctness of a difficult mathematical problem, and Study 2 showed that Caucasians gave Asians and Caucasians equivalent scores to a written essay, whereas Asians gave higher scores to writers they believed were Caucasian. Study 3 was designed to determine whether Caucasians and Asians would show biases in making generalized personality attributes.

## **Method**

### **Participants and Procedure**

A total of 68 university undergraduate students (29 Caucasian; 39 Asian) at a small university in Hawaii were recruited for participation. As in Studies 1 and 2, participants were recruited from common areas of the university campus over the fall of 2007. A substantial majority of the Asian students were born outside the U.S.

### **Measures**

Participants completed a 20-item questionnaire in which they were asked to determine which national group (Chinese, Japanese, U.S., Canadian) was the best fit for each of ten positive (e.g., "Imaginative") and ten negative (e.g., "Superstitious") personality traits. (See Appendix A for complete trait list.) Responses were grouped into categories labeled "Caucasian" and "Asian."

## **Results**

### **Ratings of Positive Personality Traits**

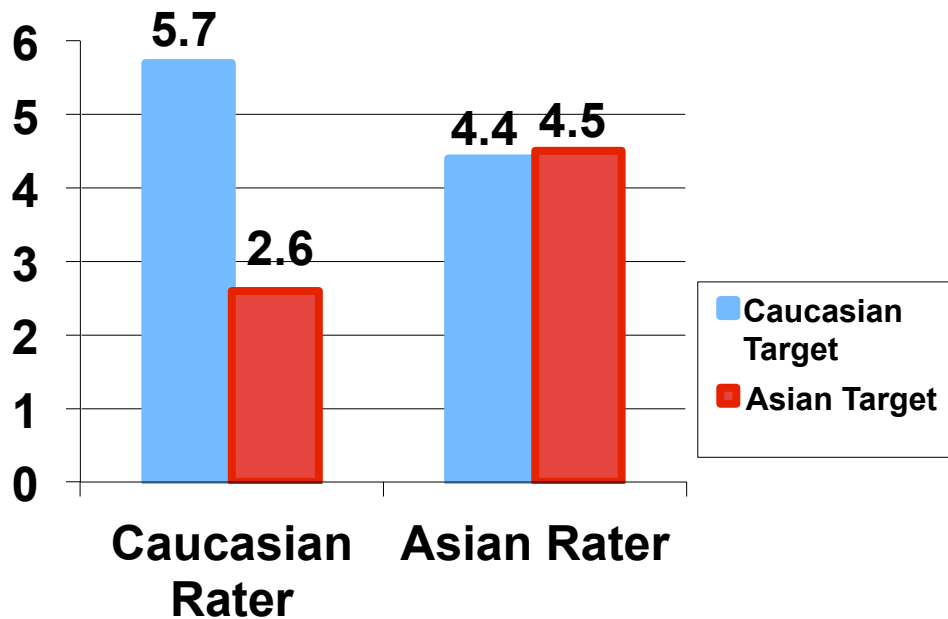
We first sought to determine whether each ethnic group would show biases in the way they assigned positive personality traits. To do so, we elected to perform two separate t-tests, one to compare the judgments of Caucasians in their ratings of each ethnicity and one to compare the judgments of Asians in their rating of each.

T-test analysis found that Caucasians were more likely to assign positive traits to Asians ( $M = 5.4$ ) than to Caucasians ( $M = 3.6$ ),  $t(56) = -5.14$ ,  $p < .001$ . Asians were also more likely to assign more positive traits to Asians ( $M = 5.4$ ) than to Caucasians ( $M = 3.7$ ),  $t(76) = -6.22$ ,  $p < .001$ .

### **Ratings of Negative Personality Traits**

We next sought to determine whether there were biases in the way each group assigned negative personality traits. We did this in the same manner as above.

Findings indicated that Caucasians were significantly more likely to assign negative traits to themselves ( $M = 5.7$ ) than to Asians ( $M = 2.6$ ),  $t(56) = 8.78$ ,  $p < .001$ . Asians assigned an equal number of negative traits to Caucasians ( $M = 4.4$ ) and themselves ( $M = 4.5$ ),  $t(76) = -.29$ ,  $p = .90$  (see Figure 1.)



**Figure 1.** Number of negative personality traits assigned to each ethnic group by Asian and Caucasian participants.

## Discussion

Findings of this study indicated that both Caucasians and Asians rated Asians highly on positive personality attributes. On negative personality attributes, Caucasians were more likely to assign negative characteristics to their own ethnic group, whereas Asians assigned negative attributes equitably. These findings run contrary to previous literature that suggests that Caucasians show an in-group bias and are more likely to give higher ratings on personal attributes to their own group (Aronson, 2004; Boulton & Smith, 1992) and seem to suggest that Caucasian participants in this sample see Asians in a particularly positive light, even compared to members of their own ethnic group. Asians in this sample do not appear to share this out-group bias. In regards to positive attributes, Asians did show an in-group bias. On negative characteristics, it is possible that the equal assignment of negative traits reflects a previously identified cultural reluctance for Asians to criticize. Such disparities in criticism may result in another's loss of face (Bond & Lee, 1981) and is frowned upon on in East Asian cultures. Face-saving acts, such as an equitable assignment of criticism, are considered important in these cultures.

## General Discussion

Over the course of three studies, Caucasian university students showed markedly favorable attitudes toward Asians in a variety of domains, including those irrelevant to the predominant stereotype in the U.S. regarding Asians' supposed aptitude in math and science. Caucasians strongly favored an Asian person's response to a difficult mathematics problem over a Caucasian's response in Study 1. They gave equivalent grades to essay writers regardless of whether they judged the writer as being Asian or Caucasian. Caucasians also assigned more favorable personality attributes and fewer negative personality attributes to Asians in Study 3.

Asians also showed a bias toward the Asian's (incorrect) response to the mathematics problem, which suggests that Asians themselves share the stereotype that Asians have higher aptitude in this area than Caucasians. When they judged the essay writer as being Asian, they assigned the essay lower grades. Finally, Asians assigned more favorable personality attributes to their own group than to Caucasians, a finding consistent with the existence of an in-group bias functioning among Asian participants.

These findings contrast with what would be expected from in-group bias functioning among Caucasians in this sample, and suggest that a diffuse and generalized halo effect has developed around Asians in the U.S. Such a halo would be a recently developed phenomenon. Historically, Asians have been discriminated against in the U.S., with Asians segregated into "Chinatown" areas of large cities and with anti-Asian sentiment codified into 19th and early-20th century laws (Wing, 2007). These attitudes culminated in the 1940s, with the forced internment of Japanese-Americans into isolated camps as a result of World War II hysteria. Only two decades later, however, American attitudes toward Asians began to change, with Japanese- and Chinese-Americans termed "model minorities" due to their educational and occupational successes (Kitano, 1969; Kitano & Stanley, 1973; Peterson, 1966). Findings of the present study suggest that, at least in a highly multicultural environment such as Hawaii, prior negative stereotypes have diminished and more positive stereotypes have developed that contribute to generalized positive attitudes toward Asians in a variety of domains.

The idea that a halo effect may provide an explanation for some forms of racial stereotyping appears to be a novel approach. Despite the fact that hundreds of articles have been published on the halo effect, we have found none that have examined the halo effect when applied to members of stereotyped minority groups, although the connection has been made in the popular press (National Public Radio, 2007). It is well established, however, that when an individual holds an opinion about a target in one domain, that opinion tends to be generalized toward other domains, including domains relevant to the national origin of the target such as the appeal of accented speech (Nisbett & Wilson, 1977). It is, therefore, possible that Caucasians who participated in the present studies experienced a generalized favorable bias toward Asians as a result of a halo that surrounds Asians' supposed positive abilities.

Such an effect would be expected when considering the supposed origins of the halo effect, which has been proposed to function outside conscious awareness (Greenwald & Banaji, 1995). The halo is caused when previous experience with one trait diffuses into a general positive attitude toward the target. In this case, the previous experience itself would be based on a stereotype, another implicit cognition.

The effects of the model minority stereotype are currently being debated. Asians who themselves endorse the model minority stereotype of their own group have been shown to have greater resilience (Mahalingam, Balan, & Haritatos, 2008) and may use pride in their ethnic group's achievements to feel like they occupy a higher social position in the U.S. (Mahalingam, 2006). In educational settings, educators have been found to have strongly positive stereotypes of Asian students (Chang & Demyan, 2007), which may lead to a *self-fulfilling prophecy* in which such expectations help result in students' greater achievement (Merton, 1948; Rosenthal & Jacobson, 1968). These prophecies, however, are now thought to have more modest effects in real-world classrooms than first described (Jussim & Karber, 2005), and recent research has suggested that the model minority stereotype may be harmful to some Asians in a variety of contexts. For example, despite Asians' success in the U.S. academically, they perform more poorly than other ethnic groups in the U.S. on indices of psychological adjustment, including measures of depression, suicide rates, and feelings of family alienation (Qin, Way, & Mukherjee, 2008). In addition, the model minority stereotype may lead to discrimination due to feelings of envy or resentment on the part of non-Asians (Rosenbloom & Way, 2004), or may lead to a benign neglect of Asians' actual concerns (Islam, Trinh-Shevrin, & Rey, 2009). At the greater extreme, some have claimed that the model minority stereotype is a political tool used to deny the existence of racism and to perpetuate inequitable social structures (Yu, 2006).

To be sure, the stereotype of Asians as high achievers who succeed as a result of aptitude and diligence is a far cry from the racist concept of the "Yellow Peril" immigrant horde that was thought to be threatening the U.S. a century ago (Wu, 2002). Nevertheless, a further understanding of both the positive and negative effects of the positive stereotypes toward Asians, and how such stereotypes could diffuse into a generalized positive halo, could enable social scientists to understand the complex social cognition that influences intercultural contact in today's rapidly globalizing society.



Data from the present studies are unable to determine how fragile the halo effect found here may be. Sociopolitical events, such as the rise of a globally despised leader or aggressive acts of one nation against another may swing public opinion dramatically and reverse the halo in only a brief time. The halo might also vanish if the stereotype leading to the halo effect is removed or replaced by a more negative stereotype. Additionally, stereotypes regarding gender or other characteristics (e.g., Communist Party membership) might be found to counteract the positive halo and result in a more negative evaluation.

The present studies are highly limited, and such limitations include the unusually multicultural environment of the participants. The study was conducted at a university in Hawaii that has a high percentage of non-U.S. students. Hawaii has a majority Asian-American population, with substantial Caucasian and Pacific Islander minorities, and the Asian influence has profoundly affected Hawaii's culture and economy. Participants in this study likely had familiarity with a variety of ethnic groups and may be more favorably disposed to Asians in general. In addition, ethnic diversity may result in a higher number of ethnic minority friends (Rosenfield, Sheehan, Marcus, & Stephan, 1981), as well as a milder prejudice level and fewer negative stereotypes toward an individual's ethnic out-group (Foley, 1976). It is possible, therefore, that participants in the present study had atypically low amounts of prejudicial attitudes compared with participant samples from elsewhere in the U.S.

Hawaii also differs from the U.S. culturally and politically, with politically liberal attitudes prevailing in the larger political culture. A recent university fact sheet, however, indicated that, among students attending the university where this study took place, only 17% were from Hawaii with an additional 36% attending from the U.S. Mainland and the balance from international locations, primarily Asia (Brigham Young University-Hawaii, 2007). Since many of the Hawaii residents may have been ethnic minorities, it is likely that the majority of Caucasian students in the present research came to the university from the U.S. Mainland. These students may have possessed characteristics, such as novelty seeking or openness to experience, that distinguish them from Caucasian students at other U.S. universities. Although such assumptions are speculative, it is possible that the present sample may not generalize to the broader population of Caucasian university students in the U.S. It should also be noted that the university is sectarian, which also may have influenced participants' responses in unmeasured directions.

Nevertheless, the present study is among the first to detect the presence of diffuse positive bias around Asians when rated by Caucasian participants in both academic endeavors and general personality, and suggests that in-group bias may at times be overcome by a positive halo effect. The pro-Asian attitudes found here may be similar to positive attitudes that have been found to exist elsewhere across cultural and ethnic lines. For example, one well-executed survey (Kohut, Allen, Doherty, & Funk, 2005) showed high, generalized positive attitudes toward the U.S. among people from India, with Indian respondents showing high endorsement of positive character traits such as "hard working" and "inventive" to describe U.S. citizens and low endorsement of negative character traits. Positive stereotypes of this sort from one ethnic group toward another may help explain phenomena as consequential as the 1990 election of an ethnically Japanese president in Peru or as mundane as the proliferation of French-influenced restaurants in Tokyo. Positive stereotypes, therefore, and the halos that may exist around them, may play an important role in how individuals interact in cross-cultural settings and how cultures and nations may interact with and influence one another.

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**Appendix A**

Intelligent  
Brilliant  
Scientifically-Minded  
Alert  
Shy  
Imaginative  
Ignorant  
Lazy  
Unreliable  
Honest  
Rude  
Stubborn  
Talented  
Efficient  
Humorless  
Kind  
Quarrelsome  
Revengeful  
Respectful  
Superstitious

**Appendix B**

Given the formulas for the sums of powers of integers, answer the following questions.

$$\sum_{k=1}^n k = \frac{n(n+1)}{2} \quad \text{and} \quad \sum_{k=1}^n k^2 = \frac{n(n+1)(2n+1)}{6}$$

Given the function  $f(x) = x^2$ , find a formula for the lower sum obtained by dividing the interval  $[0, b]$  into  $n$  equal subintervals.

## **Estonians and Russians in Contemporary Estonia: Is the Soviet Past still dominating the Present?**

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### **Abstract**

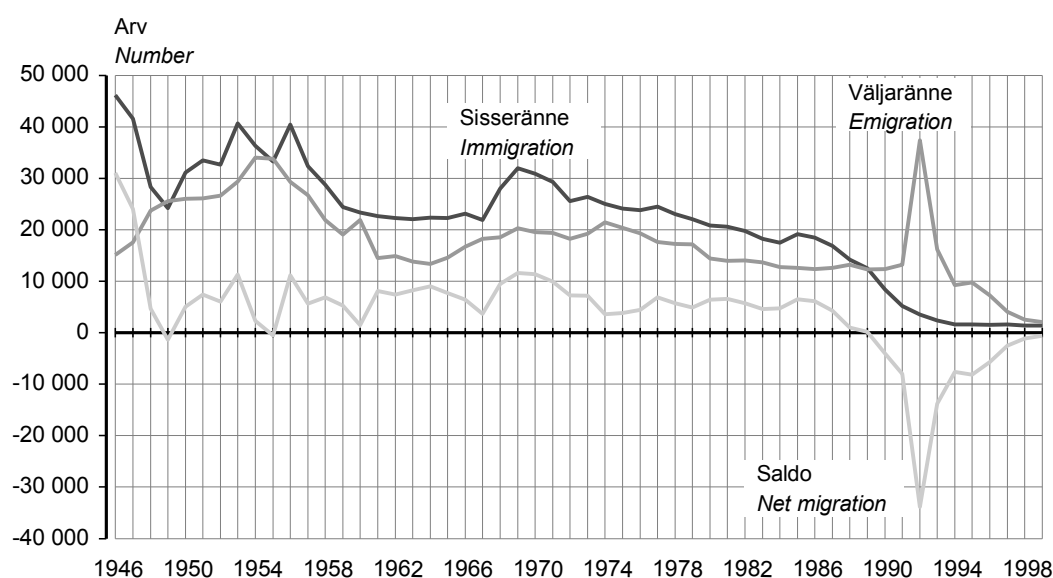
The current article focuses on a study about Estonians and Russians living in Estonia. As a method we used Identity Structure Analysis (ISA) to investigate their patterns of identification with 'Estonians', 'Russians in Estonia', 'Russians in Russia', and 'Estonian Government'. The themes embraced constructions of the past, including the context of the Soviet Union's role in WWII. Findings suggest that alarming events on the streets of Tallinn (April 2007) appear to be related to the role of the Soviet Union in WWII inter alia, where its construction as 'occupier' of Eastern Europe (as opposed to 'liberator') forms a 'core evaluative dimension of identity' for the Estonians, together with the Bronze Soldier having no symbolic salience or relation to the Estonian identity. Findings, such as Estonian Russians expressing much stronger idealistic identification with 'Estonians' than with the "own parents" group, also demonstrate ISA etic concepts that incorporate emic values and beliefs in contemporary Estonia. All Estonian people have experienced life in the EU for six years and this has deepened both Estonians' and Russians' emotional credit towards the EU. The most notable factor in this process has been rapid economic growth, although personal well-being has mostly been experienced by younger generations.

**Authors' Note:** Special thanks to Prof. Dr. Peter Weinreich and Dr. Wendy Saunderson for encouraging the authors to prepare this article.

## About the History of Relations between Estonians and Estonian Russians.

Estonia became independent from Russia after WWI on the 24<sup>th</sup> of February 1918. On the 23<sup>rd</sup> of August 1939 the Soviet Union and Germany signed a bilateral treaty in violation of principles of self determination (called the Molotov-Ribbentrop Pact) that divided Central and Eastern Europe between the USSR and Germany. Estonia remained under the Soviet sphere of influence (Misiunas & Taagepera, 2006, p. 15).

After the annexation of Estonia by the Soviet Union (1944), Estonian migration was no longer a naturally developing process, it was partly forced. Russians and others had arrived in different “migration waves” from the Russian Federation and other parts of the USSR. As you see from Diagram 1, the most intensive immigration took place during the years right after the Second World War. From the mid-sixties, the hinterland of migration enlarged and another reason for immigration became obvious: immigrants looked for material welfare. Continuous industrialization caused the increased demand for extra labour force and it caused the second larger immigration wave in the 1960s. Most of the Russian-speaking population remained in Estonia (Tammur, 2008).



**Figure 1.** Migration in Estonia, 1946–1999 (Tammur, 2008<sup>a</sup>)

<sup>a</sup> The data for 1946–1955 are only on urban population.

People who had settled in Estonia since 1945 came from a different geographical zone and a different national culture. At this point, an important aspect should be noted. The Russian colonists arriving in Estonia, who were different from Estonians in the ways mentioned above, settled in Estonia, thus forming a rather close community. Russians settled in places with definite spatial concentration rather willingly (i.e., medium-sized and large industrial towns), but not in rural settlements, in order to not assimilate among Estonians, whose culture was more Western and, therefore, significantly different from the colonists’ culture, whose language and alphabet also were alien to them (Geistlinger & Kirch, 1995, p. 15). Owing to the weakness in Moscow’s political power and the fall of the *iron curtain* at the end of the 1980s, Estonia restored its status as an independent state in 1991.

Triin Vihalemm and Marju Lauristin, social scientists at Tartu University who described Estonia’s economic and political efforts to match the criteria of the West and to overcome the legacy of the communist past, have concluded that the criterion for the success of the efforts was Estonia’s compatibility with the new emerging Europe. And in this societal process, the “Russian

issue” has been – and still is – the most complicated part of Soviet legacy (Vihalemm & Lauristin, 1997, p. 296).

In the post-communist countries, the construction of democracy inevitably means the use of political instruments for integrating ethnic elements into new systems, making special provisions for ethnic minorities. Since 1988-89, the civic-political-economic dimension – Estonian common political system, the national economy, a common system of social security, etc. – was subordinated to the ethnic cultural dimension. In this process of socio-cultural transformation, one central dilemma facing Estonia’s Russians was that their perceived identification with the Soviet state was significantly stronger than their self-definition in term of Russian ethnic culture (Kirch & Kirch, 1995, p. 440).

In Estonia, there has been no violence in the relationships between Estonians and Russians since 1991 as many surveys, like *Freedom House Ratings 1991-2006*, show (Tilly, 2008, p. 47).

Given that Estonia gained EU membership in 2004, joined the European single labour market, and its being in the Schengen treaty space, the assumption of our research was that historical context would hold reduced salience for the two main ethnic groups of Estonia, giving way to perceptions, expressions, and nuances of some more modern, common European identity. Such assumptions are foregrounded by a number of social, economic, and demographic shifts since having joined the EU. Broader context of European Union has created a good base for a new generation of young Russian people compared with former generations (their immigrant parents). Further socialization and integration will depend also on satisfaction with life and solidarity within society, which is going to be determined by developments in economic status of younger generations.

Estonian people are still generally positive concerning the EU’s economic future, and believe that the advantageous economic change will be quicker through joining the euro zone. In fact, Estonia’s economic crisis has been very real. An excessively high social price has now been paid for the country’s stabilisation achievements. The rate of registered unemployment has been growing rapidly, with unemployment reaching 15%.

In contrast to some of the newer EU member states, especially in Central Europe, support in Estonia’s population for the EU membership is still significantly high. The last *Eurobarometer* survey (in November 2009) shows that about 62% of Estonians believe the EU membership is “a good thing” (EB 72). Despite positive trends in life satisfaction, a new question arises: Will the young Russian-speaking population living in Estonia turn into a multi-cultural ethnic group with a significant Estonian linguistic and cultural background and/or will the state-determined identity become a significant value for them?

It is evident that Estonia’s accession to the EU has brought not only reconciliation with the Western economic system and legal culture, but also the adoption of European values, European political culture, etc. An interesting question is *What is or who is European?* Here, we try to limit our discussion and think about Russians’ ‘Europeanness’. Throughout the long period of its history, Russia has been commuting between two alternatives: trying to follow the European way of reforms on the one side, and looking for an original and different way of development, on the other (Asian) side. Indeed, a lot of Russian people are probably more European than those who live in states aspiring to become new EU member states. Nevertheless, instead of taking decisions based on people’s knowledge of the internet, or traditions of Russian classical music or paintings, one has to look at the traditions of the Russian statehood, rule, and power. Traditions of Russian centralised power, hierarchy, and subordination are vital, and the inappropriateness of European traditions in this society is quite obvious.

European tradition is also to acknowledge the factual history. This is the best basis for respectable relations between partners. Especially for the three Baltic States, the Second World War recalls resentfulness. Russia cannot be a trustful neighbour for Baltic people before it admits the fact of occupation of the Baltic countries in 1940.



The attempt to understand very recent developments, which have had a strong influence on identity developments for both Estonians and Estonian Russians, also gave the authors a good reason to postulate a hypothesis based on the events that took place in Tallinn in April 2007. Just some weeks before Victory Day of the Second World War, the Government of Republic of Estonia moved the historical victory monument (named Bronze Soldier) to the war cemetery. Alongside moving the monument, a polarization occurred in the minds of Estonian and Russian people, which expanded to unexpected hooliganism in the centre of Tallinn. Despite the fact that the main “actors” in the streets were only around 2,000 Russian-speakers aged 15 to 25, rioting for two nights only, these events were enough to warrant the study of stereotypes and attitudes reflecting the historical past and the present, in order find some explanation of the question whether or not the past still dominates the present.

### **Method of Identity Structure Analysis and the Study Instrument**

A comprehensive research method called Identity Structure Analysis (ISA) was considered applicable for the current study. The method of the ISA covers the authors’ need for cross-cultural comparison and in-depth analysis providing the use of cross-cultural universals (e.g., standardised parameters like *contra-identification with others*) called *etics*, together with *emic* qualities which reflect indigenous psychologies of local cultures. It is evident that ISA *etic* parameters of identity (i.e., indices) require no translation across languages and cultures. As Weinreich underlines, “...investigators have to be keenly aware of the *emic* qualities of the discourses that are incorporated within the etic parameters.” (Weinreich, 2003, p. 79).

We also give definitions of the method and of ‘identity’ as follows: Identity Structure Analysis (Weinreich, 1980/1986) is an open-ended conceptual framework, which can be used to explore individual or group identities within particular socio-cultural and historical contexts. It is, thus, primarily concerned with the ‘individual and societal phenomena’ within which issues of identity are implicated. Definition of identity: A person’s identity is defined as the totality of one’s self-construal, in which how one construes oneself in the present expresses the continuity between how one construes oneself as one was in the past and how one construes oneself as one aspires to be in the future (Weinreich, 2003, p. 26).

Our hypothesis in the current study is testing the symbols of World War II as expected core symbols of the identity of both ethnic groups – Estonians and Estonian Russians (using student respondents at International University Audentes). We expect that opposite poles, used for creation of the bipolar construct, probably show the split of the society, i.e., Estonians probably claim the Bronze Soldier monument as symbol of WWII is not a part of their identity, while Russians are likely to admit that this monument forms one of the core symbols of their identity.

In order to investigate the background of the identity-related processes, the authors have used Identity Structure Analysis for several times since 1993 (Tuisk, 1994; Kirch et al., 2001; Kirch, Tuisk, & Talts, 2004; Kirch & Tuisk, 2007). The experience of all earlier studies was taken into account in the planning phase of the study and for the preparation of the study instrument. The fieldwork was carried out at International University Audentes (Tallinn, Estonia). The sample comprised 100 respondents (students of social sciences and business administration), with numbers almost equally distributed between the two criterion groups – Estonians (n = 54) and Estonian Russians (n = 46). 45% of Estonians were female and 55% male, while among Russians the gender distribution was equal. Age distribution varied from 18 to 37, most falling within the age bracket of 18 to 22 years.

The questionnaires were given to each person in their mother tongue. Instructions about how to complete them were also given by a respective native speaker. Students were chosen as a target group in order to access the active part of population, and also in order to access respondents who had grown up during Estonia’s period of re-independence. The assumption of the authors was that Estonians and Estonian Russians have had different experiences in this situation. That is, despite a number of shared characteristics (age range, occupation, and rather

similar general fields of study), it was expected that the two sets of respondents would experience their social worlds (and thus construe their identity) from differing perspectives.

This assertion about the influences on Estonian Russians' stereotypes was also confirmed by a representative public opinion survey that was carried out in June 2007 where 1,000 Estonians and 500 Russians were questioned. The object of this study was to investigate interethnic relations and determine the challenges to integration policies after the Bronze Soldier crisis in Estonia. The main finding is shown in the survey results: while 66% of Estonians shared the opinion that moving the monument from the Tallinn centre was the government's only choice and 5% named it totally unfortunate, it was reverse among Russians, where only 5% supported the moving and 56% considered this action as totally unfortunate (University of Tartu, Saar Poll, & Office of Population Minister, 2007, p. 28). The instrument used was specially designed for our ISA-study and consisted of eleven rating sheets, each headed by a bipolar construct (i.e., a pair of opposing values/beliefs). Respondents were asked to construe specific entities against these constructs, on a zero-centred rating scale.

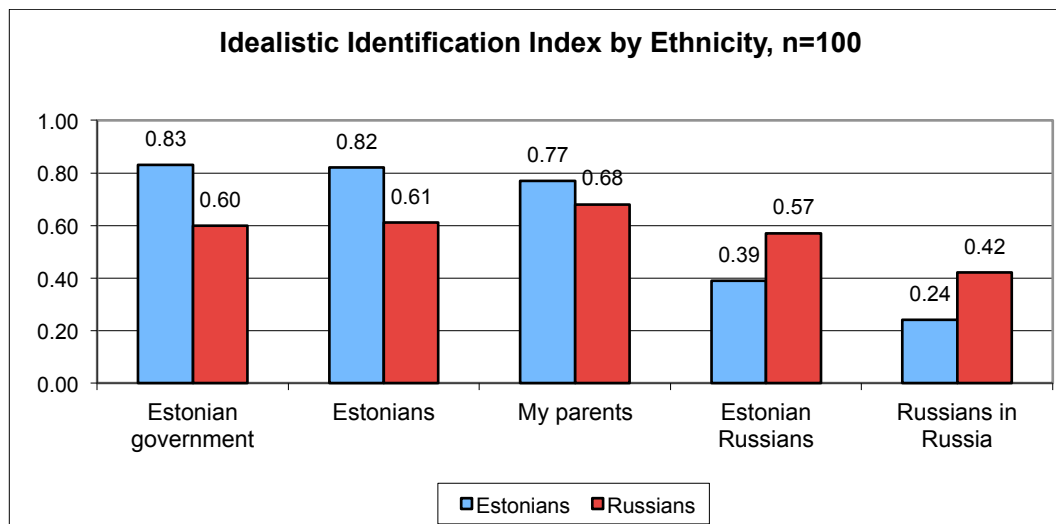
Within the ISA framework, certain entities are mandatory (i.e., current, past and aspirational selves, an admired person, and a disliked person). These form the basis of the individual value-system and form a relation between individual and group identity. At the same time, our instrument included entities reflecting respondent's socio-biographical context (e.g., my parents) and from the wider socio-cultural domain (e.g., the Estonian government, and respective ethnic groups like Estonians, Estonian Russians, and Russians in Russia). The authors expected that Estonian and Russian respondents' evaluation of these entities would help to test the research hypothesis.

The constructs themselves were chosen to reflect essential issues and life in contemporary Estonia. Because of the nature of the study, attention was focused primarily on issues of Estonian language and culture within a globalising world and on the influence of Russia on Estonia. We also "tested" the symbols of World War II in the case of both ethnic groups. Also broader issues such as the threat of globalisation giving the possibility to facilitate one's emigration and 'feels European' were also included for each ethnic group in the study instrument. See the full instrument in the Appendix.

## Results

### Patterns of Identification

**Positive role models: idealistic identification with others.** Positive role models are those entities who are perceived as possessing qualities to which individuals aspire, i.e., with whom they idealistically identify. In Figure 2, these entities have been ordered according the value of an index that can vary from 0 to 1. The index value has been considered high when above 0.70 and low when below 0.50.

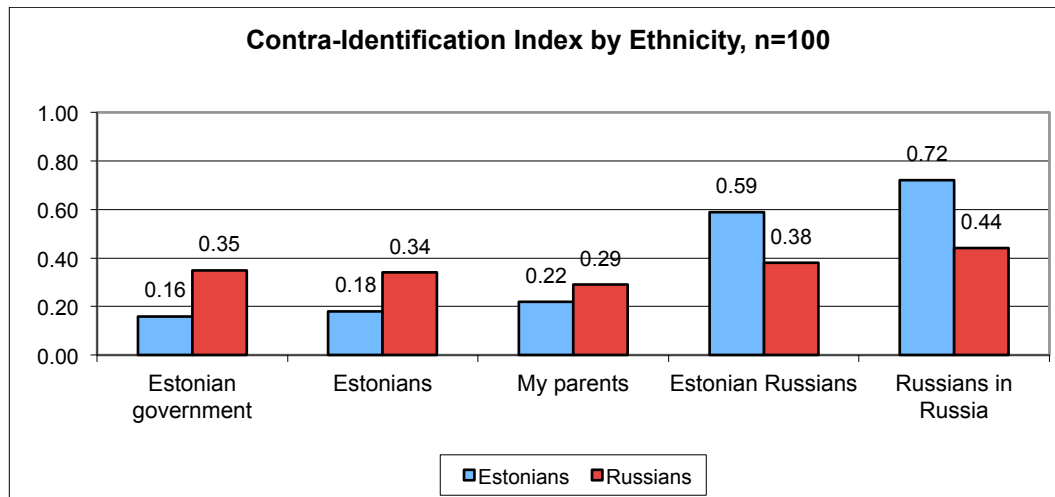


**Figure 2.** *Idealistic Identification Index by Ethnicity, n=100.*

As expected, Estonians' very high idealistic identification with the government (0.83) and their own ethnic group (0.82) can be easily explained by recent events described in part 3 of this paper. Unexpectedly Estonian Russians also show higher idealistic identification with Estonians (0.61) than with their own "titular" group, called here 'Estonian Russians' (0.57). Despite a slight difference (0.04), these index values still remain moderate. We also have to mention that the highest positive role model for Estonian Russians is 'parents', which can also be explained further as an entity found in the search for the origin of stability in the disorder caused by the events in April 2007. We can conclude here shortly that 'Estonian Russians' as a unit do not form a group to identify with, but Estonians as such or the parents of Russian speakers rather form a more positive role model. This is an example that demonstrates heterogeneity of Estonian Russians. This entity as such seems to be a fuzzy role model for idealistic identification. It seems that we can suppose that even if any kind of common category to "label" Russians in Estonia exists, it is not directly related to their ethnicity. There should be other dominants that bind these people on different bases (e.g., local identity or religion etc.). In the case of Estonians, those very high index levels ('Estonians' and 'Estonian government') express loyalty to the government that managed to handle the situation in April 2007 and to Estonian statehood as such, more than "simple support".

### **Negative Role Models: Contra-Identification with Others**

Contra-identification pertains to negative role-models, i.e., entities from whose (perceived) attributes the respondent wishes to dissociate (Weinreich, 1980/1986). The contra-identification index values are considered high when above 0.45 and low when below 0.25. Figure 3 shows that 'Russians in Russia' form the group both Estonians and Estonian Russians contra-identify the most, and we notice that here the Estonians' index value is very high, while the Russians' value (0.44) almost reaches a high level. The second position with which to contra-identify is for both groups 'Estonian Russians' (the values are 0.59 and 0.38 respectively).

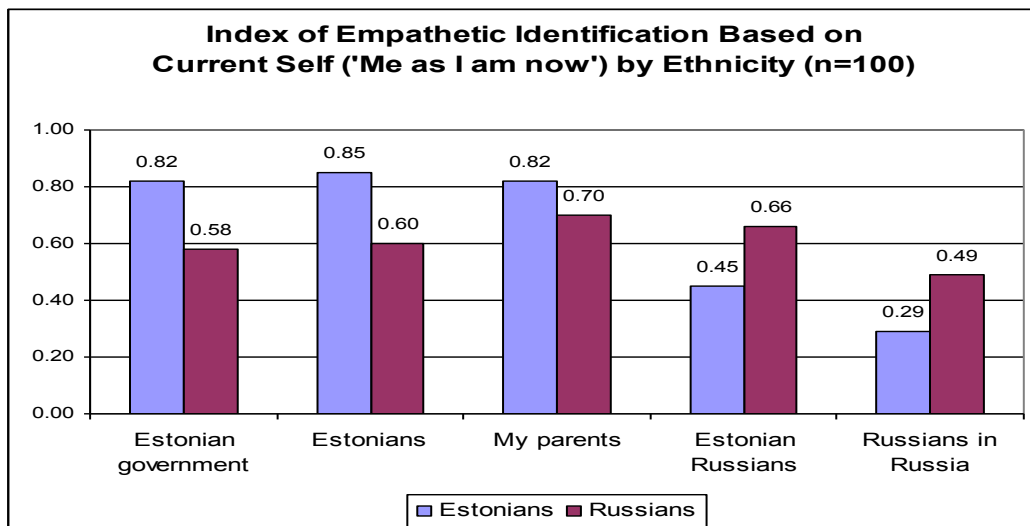


**Figure 3.** *Contra-Identification Index by Ethnicity, n=100.*

### Empathetic Identification

In order to investigate current perceptions of the surrounding environment more precisely, the authors also used “the empathetic mode of identification, which refers to self’s sense of an identity existing between self and the other in actuality – of having characteristics in common irrespective of whether these might be for emulation or dissociation”. The extent of one’s current empathetic identification with another is defined as the degree of similarity between the qualities one attributes to the other, whether ‘good’ or ‘bad’, and those of one’s current self-image (Weinreich, 2003, p. 60). The ISA considers the index value high when above 0.70 and low when below 0.50. From Figure 4 we can see that Estonians have very high empathetic identification with the government, ‘Estonians’ and parents, while Russians reach the higher level only in their identification with their parents.

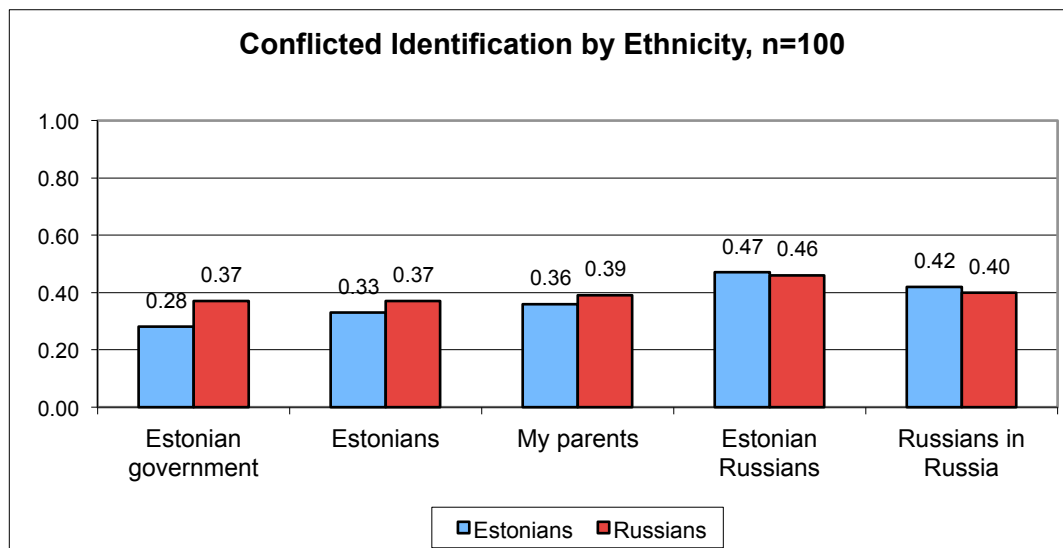
But also ‘Estonian Russians’ plays a rather significant role for them, attaining a value of 0.66.



**Figure 4.** Index of Empathetic Identification Based on Current Self (“Me as I am Now”) bu Ethnicity (n=100).

### Conflicted Identification

If one empathetically identifies with another person, while simultaneously contra-identifying with them, one’s identification with the person in question is conflicted. From Figure 5 we notice that the highest identification conflict among both groups is with ‘Estonian Russians’. As the index value here is considered to be high when between 0.35 and 0.50, we see that 0.47 and 0.46 match this level. Overall, conflicted identification with ‘Estonian Russians’ becomes rather clear as expected ‘carriers’ of this identity (i.e., Russian respondents) obviously share and accept “their own group’s” values while at the same time contra-identifying with these same values as well.



**Figure 5.** Conflicted Identification by Ethnicity, n=100.

What we can conclude at this point is that ‘Estonian Russians’ is a category which has conflicted identification values common for both Estonian- and Russian-speaking respondents, and both groups want to dissociate strongly from this entity as well.

## Identity Variants

In order to understand the matters behind the conflicted identity levels, the ISA uses identity diffusion as a characteristic. Identity diffusion is considered to be the dispersion of conflicted identifications with others, where the greater the magnitude of identification conflicts and the more extensive their dispersion across others, the more severe is the diffusion (Weinreich, 2003, p. 64). When we combine self-evaluation with identity diffusion, nine identity variants result. The combinations are presented in Table 1.

**Table 1**

*The Identity Variant Classification*

Self-evaluation	Identity diffusion		
	High (diffused variants)	Moderate	Low (foreclosed variants)
High	Diffuse high self-regard	Confident	Defensive high self-regard
Moderate	Diffusion	Indeterminate	Defensive
Low	Crisis	Negative	Defensive negative

In Table 2, the results of a study of the distribution of these identity variants are shown. We first focus on 'defensive high self-regard' that is common for about 1/5 of Estonian respondents.

**Table 2**

*Distribution of Identity Variants (Estonians n = 54, Russians n = 46)*

Identity variant	Estonians	Russians
Diffuse high self-regard	2	5
Diffusion	8	17
Crisis	3	4
Confident	13	5
Indeterminate	14	8
Negative	1	-
Defensive high self-regard	11	2
Defensive	2	5
Defensive negative	-	-

This group has high self-evaluation and low identity diffusion. This type of identity variant has been considered as a foreclosed variant, which means that instead of moderate conflicts which are considered optimal, the low level of identity-conflicts together with high self-esteem shows strong defensiveness against possible "attacks". Some Estonian researchers also warn about the presence of such a trend among Estonians and envision this phenomenon as a possible threat to the integration of the society. Based on our research, we notice that although a category involving such a contingent exists, it is decently low. Besides 'defensive high self-regard' discussed here, we see that in fact variants such as 'confident' and 'indeterminate' dominate among Estonian respondents.

In the case of Russians, it is noticeable that more than one third of the respondents belong to a variant called 'diffusion'. When we sum up all of those Russian respondents who have high identity diffusion, we notice this number (26) exceeds even 56% of respondents, while for Estonians it reaches just 24% (13 respondents out of 54). The high identity diffusion (weighted index value = 0.39) of all Russians indicates an overall strong identity conflict that is even more explanatory regarding the identity processes than separate conflicted identification values presented by Figure 4.

## Structural Pressure

Structural pressure refers to the consistency with which a particular construct is used in the appraisal of self and others. This consistency derives from the compatibility of the construct's evaluative connotations with one's overall evaluation of the identities to which it is attributed.

Table 3 shows the construct marking the Bronze Soldier monument's role in one's evaluation as having the strongest structural pressure among Estonian respondents (84.97\*\*\*) and is ranked as the second in the case of Russians (55.62\*). As expected, opposite poles of the construct apply here – Estonians claim the Bronze Soldier monument as a symbol of WWII is not a part of their identity, while Russians agree that it forms one of the core symbols of their identity.

The second and third strongest structural pressures measured for Estonians underline the Soviet Union's occupier role in WWII (82.19\*\*\*) followed by Russia's aggressive policies towards its neighbours (71.01\*\*\*). The latter reflects, in a way, a still existing fear of WWII's historical outcomes concerning Estonia and their reoccurrence.

**Table 3**

*Core constructs of Estonian and Russian Respondents*

Estonians			Russians		
No	Construct	SP	No	Construct	SP
11	Bronze Soldier is not related to my identity	84.97***	7	Media and internet of Russia influence Russians in Estonia	57.06*
9	Soviet Union was the occupier of Eastern Europe in WWII	82.19***	11	Bronze Soldier is one of the symbols of my identity	55.62*
4	Russia's policies towards its neighbours are aggressive	71.01***	5	It is easy to melt into Estonian society by knowing the language	49.45
5	It is easy to melt into Estonian society by knowing the language	67.50**	6	Estonian government is responsible for hard economic situation of the population	48.70
7	Media and internet of Russia influence Russians in Estonia	67.00**	3	Estonian Russians have more in common with Estonia, their country of residence	48.62
8	Estonian language and culture have history, traditions and future	65.62**	8	Estonian language and culture have history, traditions and future	48.08
10	Intends to bind future definitely with Estonia	57.79*			
2	Estonia has expectancy for fast economic development as its economy is flexible and innovative	54.32*			

*Note:* Structural pressure (SP) is scaled from –100 to 100. 'Core' evaluative dimensions are \*\*\*70-79; \*\*60-69; \*50-59. In the table above SP > 48.00 has also been shown to illustrate the trend and facilitate better description of structural pressure among both groups although all levels below 50 are considered as moderate and do not form the 'core'.

We have to notice that for Russians, the strongest structural pressure is given by their acknowledgement of the role that Russia's media plays on themselves (57.06\*). Unexpectedly, Russian respondents have also positively ranked the construct about the key role of the Estonian language in integrating into society (49.45), and this construct is even ranked third. We think that here we can see some positive outcome of the government's continuous efforts in emphasising the importance of the language as a prerequisite and tool for successful integration

of all different ethnic groups into Estonian society. This third ranking also helps disprove an attitude that is expressed rather often (by some sceptics) that the command of the Estonian language has no use and does not grant smooth acceptance of a foreigner by Estonians. The fourth position among Russian respondents is held by a construct that claims that the government is responsible for the hard economic situation (48.70). In the light of the events of April 2007, on the one hand, we can see that the government has been made responsible for “everything”, but on the other hand, we have to take into account that this can express respondents’ nostalgia about Soviet-time governments that indeed had to grant jobs and accommodation together with healthcare to every single working person.

Both Estonians and Russians show their trust that the Estonian language and culture have traditions and a future by positioning this construct at the same level (as the sixth). When we compare the values, we see that the Estonians’ index (65.62\*\*) has a higher value than the Russians’ (48.08). This occurred as expected.

Despite interesting findings expressed by the index values of idealistic and contra-identification and of structural pressure, we can see from Table 3 that Russians’ ‘core’ evaluative constructs have not been as strongly formed as those of Estonian respondents. This leads us to a new search for the factors really having influence.

On the basis of the researches of Korostelina in the Crimea (South Ukraine) (see Korostelina, 2007, p. 52), we can argue that Soviet identity (in form of Soviet-centred identification with historical symbols) of Estonian Russians still occupies a leading place as a core identity not only among middle-aged and elderly people but among students, too. According to Korostelina “core identities can remain, however, even in the situation of the destruction and disappearance of their respective social groups: identity-related processes continue to be organized in the same way that they had been within the whole system in the past. Consider, for example, the Soviet identity in the population of the newly independent states of the former Soviet Union. In spite of the disappearance of the common “Soviet people”, Soviet identity still occupies a leading place as a core identity among middle-aged and elderly people” (Korostelina, 2007, p. 52).

## Discussion

There are many varieties of what people may think as being European. Can we say today that due to Estonia’s EU membership, the European dimension is now forming a part of Estonians’ self-perception more than six or seven years ago? According to a survey conducted by Estonian media researchers (Lauristin & Vihalemm, 2009), we can conclude that the Estonian society has reached the stage where increasing international communication as well as economic and cultural ties have initiated a small but relevant shift towards the creation of a new “borderless” identity. European enlargement has influenced the self-definition of Estonian people and has provided the opportunity to redefine “*Europeanness*” from the viewpoint of new European identity components incorporated into Estonian identity.

As Piret Ehin from Tartu University said, in Estonia, there is a clearly evident ethnic gap in public attitudes towards the state and its institutions. Despite the progress that has been achieved in naturalization, almost half of the Russian-speaking population in Estonia (many of whom are Estonian citizens) do not consider themselves to be part of the Estonian nation in the constitutional meaning of the term. The results of a survey study, which was carried out in spring 2008, show that the crisis of trust accompanying the “bronze events” turned out to be deeper and longer lasting than expected (Ehin, 2009, p. 94).

Findings of the analysis suggest that the April 2007 events on the streets of Tallinn appear to be strongly related to the role of the Soviet Union in WWII. Its construction as ‘occupier’ of Eastern Europe (as opposed to ‘liberator’) forms a ‘core evaluative dimension of identity’ for the Estonians, although the Bronze Soldier has no symbolic salience or relation to the Estonian identity. For Russians, the monument is continuously one of the core symbols of their identity.



Also, we have to admit that the April 2007 events in Tallinn have created a still existing strong base for conflicted identifications among Estonian Russian youth. Without strong belief in the unity of their “titular” group as such, their identification first turns towards their parents and is followed by ‘Estonians’. The values of structural pressure show that besides Estonians even Russians have optimism about the continuity of the Estonian language and culture within a globalising world. Estonians and Russians both share a strong understanding of the key role of Estonian language for integrating into society.

It is evident that Estonians have mobilised themselves, and the 2007 events have even facilitated this new unity together with optimistic beliefs about the future because they are now a member of the EU and the NATO. However, Russian media, Russia’s perceived hostility towards its neighbours, and the history of World War II still remain in their minds, preventing them from forgetting the past. In general, for Russians it is clear that their integration mechanism is going to occur via the Estonian language and culture; our research indicates that convergence in values with Estonians take place. At the same time, however, significant symbols such as the Bronze Soldier still have their role in Russians’ memories and attitudes, causing conflicted identification leading to high identity diffusion that restricts smooth integration into Estonian society.

The role of Russia’s media and internet cannot be underestimated in the case of Estonian Russians (as this forms their strongest ‘core’ evaluative dimension). We see that the adaptation of Estonian Russians to Estonian society is influenced by an ideology pushed from Russia’s information channels. Unfortunately, interpretation of the Soviet Union’s history (including Estonia’s) in certain aspects remains unchanged. This is also why there are young Russians who still have a one-sided cliché in their minds, for instance about World War II.

Today, integration is a continuous process for the first and second generations of Russians in Estonia, in which they gradually become closer to Estonian society, while simultaneously losing their original cultural heritage (Russia as homeland – heritage). The results of our study show that two approaches exist simultaneously among Russian respondents: Estonia-centred and post-Soviet-centred approaches. This study reinforced our view that the integration process has become more complicated than it had been expected in Estonia about 20 years ago.

Estonian researchers (P. Ehin, M. Lauristin) are right in the perspective view that the somewhat greater support for political institutions and greater identification with the Estonian people among young Russian-speakers offer some hope that ethnic differences in political attitudes may decrease over time. However, the current gap between the political assessments of the ethnic majority and the minorities is so large that we cannot rely on the slow process of a generational change to reduce it (Ehin, 2009, p. 94).

All Estonians have experienced life in the European Union for six years by now and this has deepened both Estonians’ and Russians’ emotional credit towards the EU. Estonian people are still generally positive concerning the EU’s economic future, and believe that the advantageous economic change will be quicker through joining the euro zone.

However, the answers that were gathered with this ISA-study showed that most of the respondents’ life experience has created a positive attitude concerning integration issues, as they have got preconditions (e.g., belief in the role of the Estonian language as an integrator) for moving towards Estonia-centred dominants within their identity structure.

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## Appendix

Feels European	<1>	Does not/do not feel European at all
Me as I am now	---- 0 ----	
Estonians	---- 0 ----	
Government of Estonian Republic	---- 0 ----	
Me as I was 4 years ago	---- 0 ----	
Russians in Estonia	---- 0 ----	
Person whom I admire highly	---- 0 ----	
Person whom I don't like at all	---- 0 ----	
My parents, e.g., someone of the generation of my father and my mother	---- 0 ----	
Russians in Russia	---- 0 ----	
Me as I would like to be	---- 0 ----	
Estonia has the likelihood of fast economic development as its economy is flexible and innovative	<2>	Estonia hasn't any likelihood of fast development as the country is small and resources are low
Russians living in Estonia have more in common with Estonia as of their country of residence	<3>	Estonian Russians feel more in common with Russia as with the country of their origin
Russia's policies towards its neighbouring countries are aggressive	<4>	Russia's policies towards its neighbouring countries are amicable
It is easy to melt into Estonian society by knowing the Estonian language	<5>	It is hard to melt into Estonian society even when one has full command of the Estonian language
The Estonian government is responsible for the difficult economic situation of the population	<6>	First of all everyone has to manage himself/herself
Russian media and internet influence attitudes of the Russian-speaking population in Estonia in a great degree	<7>	Russian media and internet do not influence the attitudes of the Russian-speaking population in Estonia
Estonian language and culture have history, traditions and a future	<8>	Estonian culture and language are destined to vanish in a globalising world
The Soviet Union was the	<9>	The Soviet Union was the occupier

liberator of Eastern Europe in  
WWII

of Eastern Europe in WWII

Intends/intend to bind his/her  
future definitely with Estonia – to  
live and work here

<10> Want/wants to live and work in  
some other country of the  
European Union or in the USA

The Bronze Soldier is one of the  
symbols of (my) identity

<11> The Bronze Soldier has no relation  
to my identity

## Meaning Correlates of Value Orientations

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### Abstract

The purpose was to explore the relations between value orientations and meaning assignment tendencies. The hypotheses were that values would be related to a certain number of meaning variables that would be similar in three cultural groups. The participants were 150 individuals of both genders living in Israel. They are from three cultural communities (50 participants each): Israeli, French, and Russian. They were administered the values inventory PQ IV by Schwartz (1992) and the Meaning Test by Kreitler and Kreitler (1990a). The relations between the values of hedonism, power, and benevolence and the meaning variables were analyzed by correlations. The results showed that there are patterns of meaning variables corresponding to value orientations and that these patterns are unique to each of the value orientation. There were similarities in the major meaning variables across the groups but also differences, mainly in the salience of the constituents in the meaning patterns.

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Values have been shown to play a major role in diverse domains of human behavior in all cultures (Hitlin & Piliavin, 2004; Rohan, 2000). In order to understand these effects, it has often proved helpful to identify sociological and psychological correlates of value orientations, such as gender, education, personality traits, and cognitive tendencies (e.g., Ahn, Kim, & Yong, 2008; De Raad & van Oudenhoven, 2008; Singh, 1994; Struch, Schwartz, & Van der Kloot, 2002; Thumin et al., 1995). Cognitive correlates of values have been considered to be of particular importance because they have long been conceptualized as an integral component of values (Cole & Scribner, 1974; Greenfield, 2005; Hofstede, 1980; Kluckhohn & Strodtbeck, 1961; Nisbett, 2003). In addition, cognitive correlates of values have been considered as playing a role in regard to the impact of culture on behavior. A recent review of the field (Oyserman & Lee, 2008) has reached the conclusion that culture impacts behavior by means of value orientations which are in fact reservoirs of meaning and meaning-making strategies (ibid, p. 313). Oyserman et al. argue that behavior occurs in a context that specifies the meaning of the situation. The paper concludes with the following statement: "Our current review supports the perspective that one of the ways in which meaning is organized in context is through the meaning provided by salient and accessible culture ... and that once a particular cultural focus is cued, it is likely to carry with it relevant goals, motives, actions, ways of interpreting information, and processing strategies" (ibid, p. 331). This statement highlights the role of meaning as a major component in the bridge between culture – considered in terms of value orientations, manifested for example by individualism and collectivism – and behavior. Most important is the emphasis on the double role of meaning as the carrier of contents, such as goals, motives, and actions, as well as a factor determining ways of interpreting information and processing strategies. This emphasis on the double role of meaning is shared also by the system of meaning applied in this study.

A large body of data shows that meanings of stimuli, ranging from simple objects to abstract concepts, from body to art works, may vary among individuals and in different contexts (e.g., Cohen & Leung, 2009; Jakesch & Leder, 2009). In daily life these differences may be often annoying, but could under given circumstances be overlooked. In science, however, they may cause methodological difficulties and if overlooked may lead to erroneous conclusions. Thus, in personality inventories, differences in the meanings assigned to items or to the whole situation of testing may be one of the reasons for variations in responses that are responsible for measurement errors, differences in correlations between variables in different settings, and instability in reliability indices (e.g., Bollen & Lennox, 1991; Ziegler, Toomela, & Bühner, 2009). The issue of differences in meaning in different cultures becomes particularly poignant in regard to test translations (Solano-Flores, Backhoff, & Contreras-Niño, 2009). In studies on evaluation of sensory qualities (Bartoshuk, Fast, & Snyder, 2005) or preferences for objects in a consumer setting (Horsky, Nelson, & Posavac, 2004) unaccountable differences in meaning were observed to produce unstable results. Differences in meaning also seem to intervene in regard to the often observed gap between attitudes and behavior (Lawton, Conner, & McEachan, 2009) or between knowledge and practice (Büssing, Herbig, & Latzel, 2006). The meanings assigned to the abstract concepts or to questions presented in action-free context seem to differ from those that become relevant in the context of actual behavior (Onwujekwe, Hanson, & Fox-Rushby, 2005).

Values may be expected to be amenable to differences in meaning to no lesser degree than other concepts or consumer objects. In this context it may suffice to mention the example of happiness: though in all 27 countries that were examined, happiness was related to life satisfaction, the meanings of happiness differed between seeking pleasure, engagement, and meaningfulness (Park, Peterson, & Ruch, 2009).

The present study focuses on identifying meaning correlates of value orientations, and on their potentiality for variation in the context of different cultures. It was expected that demonstrating differences in meaning across values and identifying meaning correlates of specific values in participants with different cultural backgrounds would highlight the importance of considering meaning in future studies and would provide a means for controlling some of the variations in responses due to differences in meaning in cross-cultural studies.

The study is anchored in a comprehensive theory of meaning that has been applied extensively in studies of cognition and personality (e.g., Kreitler & Kreitler, 1990a, 1994). The next section presents a brief description of the meaning theory as background for the hypotheses and results.

### **The System of Meaning – its Nature and Functions**

Meaning is a set of particular semantic structures representing both cognitive contents and cognitive processes, used for defining, expressing, and communicating conceptions, attitudes, or experiences for a variety of purposes, e.g., identifying inputs, problem solving, comprehension, or communication. Meaning consists of meaning units, which include two components: 'the referent' which is the input, the stimulus, or the subject to which meaning is assigned, and 'the meaning value' which is the cognitive contents designed to express or communicate the meaning of the referent. The following are three examples of meaning units: "table – serves for eating", "bread – is on the table", "bottle – is made of glass". In these meaning units, 'table', 'bread', and 'bottle' are the referents and 'serves for eating', 'is on the table', and 'is made of glass' are the meaning values. Each meaning unit may be characterized in terms of meaning variables of the five following classes: meaning dimensions, which characterize the contents of the meaning values (e.g., location, material), types of relation, which characterize the immediacy of the relation between the referent and the meaning value (e.g., attributive, exemplifying-illustrative, metaphoric-symbolic), forms of relation, which characterize the logical-formal properties of the relation between the referent and the meaning value (e.g., positive, conjunctive, partial), shifts of referent, which characterize the relations of the present referent to the initial input and previous referents (e.g., identical, partial, opposite), and forms of expression, which characterize the media of expression of the referent and/or the meaning value (e.g., verbal, graphic, motional). The meaning system consists of the whole set of the meaning variables. The meaning variables have been defined on the basis of studies with over 30,000 participants in different countries and in regard to a variety of inputs (e.g., Kreitler & Kreitler, 1990a). Appendix 1 presents all the meaning variables with brief descriptions and examples, and Appendix 2 presents an example of meaning responses coded in terms of the meaning system.

Each of the five sets of meaning variables is complete in itself and independent of the other sets. Thus, characterizing a meaning unit involves using one variable from each set. Hence, when we have a group of meaning units characterized in terms of meaning variables and we count the frequencies of meaning variables used in characterizing these meaning units, we get in fact five independent groups of frequencies, namely, one for meaning dimensions, one for types of relation, one for forms of relation, one for shifts of referent, and one for forms of expression. Each of these five groups of frequencies amounts to the same total but consists of different meaning variables.

The description of the components of meaning indicates that it is a complex system, and that its elements are defined in terms of other elements of the system (namely, the system is self-embedded and regressive). These three characteristics reflect the static or structural aspects of the system. They are complemented by three further properties that describe the dynamic aspects of meaning: it is a developing system in the ontogenetic sense; it is a selective system dependent in its structure and functioning on properties of the individual and the input; and it is a dynamic system, whose special characteristics become manifest when it is activated for meaning assignment. The static and dynamic aspects of meaning are complementary and are made possible by the special characteristic of the meaning variables that may function as static contents or as active processes. For example, the meaning dimension "causes and antecedents" may describe a response to a question of the kind "why did X happen?" and may also appear as a process of causal reasoning.

Each individual disposes over a certain selected part of the meaning system, which represents the specific tendencies of that individual to apply the meaning system in information processing. Thus, each individual tends to use specific meaning variables with high frequency and other meaning variables with medium or low frequency. The frequencies with which the

individual tends to use each meaning variable are assessed by means of The Meaning Test and constitute the individual's meaning profile [see Method].

The major and most essential function of meaning is input identification (Kreitler & Kreitler, 1984). It ranges from limited identification in terms of a stimulus for a particular action to highly complex meaning elaborations necessary for acts involving cognitive, emotional, physiological, and behavioral components (Kreitler & Kreitler, 1985). This function is implemented by providing the contents and processes enabling meaning assignment to inputs.

A further function of the meaning system is to provide the cognitive contents and processes necessary for carrying out different cognitive acts. Studies showed that each meaning variable represents a specific set of contents and processes. For example, the meaning dimension Locational Qualities represents the set of contents denoting location (e.g., special, geographic) and the processes involved in dealing cognitively with locations (e.g., identifying, specifying, recalling, transforming). Further studies showed that each type of cognitive act corresponds to a specific pattern of meaning variables that provide a description of the contents and processes involved in its enactment. For example, meaning variables involved in planning include structure, temporal qualities, and causes and antecedents (Kreitler & Kreitler, 1987a). If the individual's meaning profile includes a sufficient proportion of the meaning variables included in the pattern corresponding to the particular cognitive act, that individual will be able to perform well in the particular cognitive act (Kreitler & Kreitler, 1989, 1990a, 1990b, 1994).

A third function of the meaning system is manifested in the domain of personality. A body of research showed that each of over 200 personality traits corresponds to a specific pattern of meaning variables. Again, as in the case of cognitive acts, the pattern of meaning variables may be considered as providing a description of the contents and processes involved in the enactment of the specific trait. For example, the meaning variables in the pattern corresponding to extraversion include high salience of the meaning dimensions of action, sensory qualities, temporal qualities, and belongingness of objects, as well as low salience of the meaning dimensions of internal sensations and cognitive qualities (Kreitler & Kreitler, 1990a). If the individual's meaning profile contains a sufficient proportion of the meaning variables included in the pattern corresponding to the particular personality trait, it is highly likely that the individual scores high on that personality trait.

The same holds in regard to further tendencies in the domain of personality, such as personality dispositions, defense mechanisms, the self, and emotions (Kreitler, 2003; Kreitler & Kreitler, 1987b, 1993).

In sum, the described functions of the meaning system indicate that the meaning system provides the understructure, i.e., the raw materials in terms of contents and processes, for input identification, cognitive functioning, personality tendencies, and emotions. All four functions depend on meaning assignment and reflect the central role of meaning for and within cognition. This has given rise to the psychosemantic conceptualization of cognition as a meaning-processing and meaning-processed system.

## **Value Orientations and Meanings**

The purpose of this study was to explore whether there are patterns of meaning variables corresponding to the value orientations, and to what extent these patterns are distinct or different across three cultures. The system of value orientations selected for the study was the Schwartz system of values because it is comprehensible, has a reliable and validated instrument of assessment, and is applicable in different cultures (Schwartz, 1992, 2005a, 2005b; Schwartz & Bardi, 2001). According to the Schwartz theory, values are cognitive representations grounded in biological needs, interactional requirements for interpersonal coordination, and social demands for group welfare and survival. Values are expected to support social structures and guide behavior. The following ten universal values have been identified: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security.



The expectation that value orientations would have meaning correlates was based on previous studies, which showed that various conceptions, ranging from planning to life, and time may be characterized in terms of meaning variables of the system of meaning (Kreitler, 1999; Kreitler & Kreitler, 1985b, 1986, 1987a, 1987b). In this study, the focus was on the cognitive processes indexed by the meaning variables correlated with value orientations rather than on contents that may characterize the meanings per se attributed to the values. The expectations were that meaning correlates that are specific to each of the studied value orientations would be found, and that there would be similarities between the meaning correlates of the value orientations across cultures because of the findings about the universality of the value orientations and their structure.

The study was designed to explore the domain of the relations between value orientations and meanings as a first phase of a larger cross-cultural project. The major question of interest at this stage was to what extent the meaning correlates of values in participants with different cultural backgrounds would be different or similar.

## Method

### Participants

The participants were 150 undergraduates of both genders from three cultural backgrounds: Israeli, French, and Russian. Each group comprised 50 individuals. The criterion for defining cultural background was that both the participant and his/her parents were born in the named country. Thus, the participants of the Israeli group and their parents were native Israelis, whereas the participants of the French and Russian groups were Israeli citizens but have immigrated into Israel from France or Russia, respectively. The number of men and women was equal in each group ( $n = 25$ ). The means of age were 23.5, 25.2 and 21.1 in the three groups, respectively. The mean number of years in Israel was 5.3 for the French participants and 6.4 for the Russian participants.

### Tools

The participants were administered two tests: the Schwartz inventory of values PQ IV and the Meaning test. The PQ IV includes 40 items, referring to ten values (three to six items per value), with six response alternatives assigned to each item. In each item, the respondent is asked to state to which extent he or she resembles someone with particular goals and aspirations (values). Following the instructions for scoring, first the MRAT was computed (the individual's total score on all values divided by the number of items); then, the scores of all items for an individual were centered around that individual's MRAT; finally, scores for the ten values were computed by taking the means of the centered items.

For the purpose of the present study the following three value orientations were chosen: hedonism, power, and benevolence. Hedonism is defined as relating to organismic needs and the pleasure associated with satisfying them. Power is defined as relating to social status and prestige, control or dominance over people and resources. Benevolence is defined as relating to the need for affiliation, concern for others, and preserving relations within the family and other primary groups. These three values were chosen because they are dissimilar as assessed in terms of two criteria: they are not adjacent in the value circumplex, which presents the theoretical model of relations among the ten motivational types of value; they represent three distinct dimensional poles of the values, i.e., openness to change, self enhancement, and self transcendence, respectively (Schwartz, 2006). Hence, the three values may be expected to provide an approximation of an overall image of the Schwartz system of values.

The Meaning Test (Kreitler & Kreitler, 1990a) consists of eleven standard stimulus words (street, bicycle, art, etc.). The respondents are requested to communicate to someone of their choice (who understands language etc. but not the meaning of the specific stimuli) the interpersonally-shared and personal-subjective meanings of the eleven stimuli, using any means of communication they consider adequate (write, draw, describe drawings or objects, etc.). The

Meaning Test was coded by experimenters who did not know the hypothesis. First, the narrative was turned into response units, each of which was characterized in terms of one of the five sets of meaning variables; then, the frequencies of the use of each meaning variable were computed across all units; finally, the frequencies were turned into proportions out of the total number of unit responses for the individual. These proportions yielded the meaning profiles of each individual participant. The reliability of coding across two different coders was satisfactory (correlation coefficients for two coders for the different meaning variables ranged from  $r = .76$  to  $r = .92$ ). These reliability indices compare well with those obtained in other studies, and demonstrate that the coding is based on clear objective criteria which have recently enabled the standardization of the coding in terms of a computer program<sup>1</sup>.

### **Procedure**

The tests were administered in Hebrew, Russian or French, in line with the cultural background of the participants. The order of administration was random. The administration was done in small groups on the university grounds. The study was approved by the local Helsinki committee.

### **Results**

Since there were no significant differences between the genders in any of the three groups in the variables of the PQ IV and the Meaning Test, all the data were analyzed together. The scores of the PQ IV and of the Meaning test were analyzed by correlations.

The data were first analyzed in each cultural group separately, in order to identify the meaning variables correlated with the scores of each value. The significant correlations constitute the pattern of meaning variables corresponding to the value orientation. In the second phase, the results were compared across groups for each value orientation separately.

**Table 1**

*Significant Correlations Between The Three Value Orientations And The Meaning Variables In The Three Cultural Groups*

Value	Meaning Variables	Significant Correlations		
		Israeli sample	French sample	Russian sample
<i>Hedonism</i>	Dim. Feelings & emotions	.42**	.83***	.56***
	Dim. Locational qualities	.36**	.42**	
	Dim. Sensory qualities	.34*	.78***	.63***
	Dim. Judgments & evaluations	-.35*		-.40**
	TR. Exemplifying-illustrative	.52***	.74***	.37**
	Ref. Shifts to close referents	.45***	.51***	.43**
<i>Power</i>	Dim. Actions & potentialities for action	.75***	.56***	.38**
	Dim. Function, purpose & role	.61***	.82***	.56***
	Dim. Results & consequences		.41**	.36**
	Dim. State & possible changes in it	.44**	.75***	.67***
	Dim. Possessions & belongingness	.58***	.52***	.66***
	Dim. Judgments & evaluations	.37**	.76***	.42**
	TR. Comparative	.39**		.48***
<i>Benevolence</i>	Dim. Function, purpose & role		-.35*	-.38**
	Dim. Causes & antecedents	.36**	.42**	
	Dim. Domain of application	.69***	.34*	.37**
	Dim. Feelings & emotions	.47***	.38**	.43**
	Dim. Cognitive qualities	.72***	.70***	.65***
	Dim. Judgments & evaluations	.62***	.64***	.43**
	TR. Attributive	.39**	.42**	.40**
	FR. Normative	.47***	.45***	
FR. Conjunctive	.39**	.38**	.43**	

*Note.* \*  $p < .05$  \*\*  $p < .01$  ; \*\*\*  $p < .001$  Dim. = Meaning dimension, TR = Types of relation, FR = Forms of relation, Ref. = referent

Table 1 presents the significant correlations of the value scores with the scores of the meaning variables. The findings show that each of the three value orientations is correlated with several meaning variables. The number ranges from six (for hedonism) to nine (for benevolence). The meaning variables are largely unique for each value orientation. The meaning variables correlated with hedonism indicate that those who score high on hedonism tend to assign meanings in terms of feelings and emotions as well as the various sensory qualities, minimize the use of judgments and evaluations, characteristically focus on the present inputs without deviating too much from them, and favor dwelling on concrete exemplifying instances and situations.

The meaning variables that are correlated with power indicate that those who score high on power are those who characteristically focus on judgments and evaluations, tend to assign meanings in terms of actions and functions, and are likely to note possessions in particular, as well as to note the state of things and their belongingness.

The meaning variables correlated with benevolence indicate that those who score high on benevolence tend to assign meanings in terms of feelings and emotions, cognitive qualities, judgments and evaluations, and characteristically focus on who or what is involved in the situation. In addition, they tend to consider the normative aspect (i.e., what should or should not be or be done) and to combine contents, thoughts, and information.

Notably, the described cognitive tendencies are based on findings of correlations of values with meaning variables that appear in all three cultural groups. In addition, in the case of each value orientation, there are some tendencies that appear to be related to the value only in two of

the cultural groups. The latter are, however, fewer in number than the tendencies that are related to the value score in all three groups.

The fact that the majority of the meaning variables were related to the value score in all three cultural groups indicates that basically the patterns of meaning variables corresponding to the value score are similar for the Israeli, French, and Russian participants in this study. Yet, in addition to this observation, one may analyze the differences between the cultural groups in terms of the correlation coefficients themselves. Thus, in regard to hedonism the meaning variables most salient in the Israeli group were the exemplifying-illustrative type of relation and referent shifts close to the input, whereas in the French group the most salient meaning variables were sensory qualities and feelings and emotions, and in the Russian group these same meaning dimensions in reversed order. Accordingly, the focus in the Israeli group is on the concrete approach which is rather a matter of cognitive style, whereas the focus in the French and Russian groups is on two specific categories of contents that emphasize sensory and emotional experiences.

Concerning the value of power, there are differences between all three groups in the salient meaning variables which, in all cases, refer to content categories. In the Israeli group, the emphasis is on actions and functions, in the French group on functionality and evaluations, and in the Russian group on possessions and state. Thus, the value of power is attained in the Israeli group in terms of activities, in the French group in terms of judgments and evaluations and in the Russian group in terms of differences in possessions and status.

Concerning benevolence, there are fewer differences between the groups, which share all the emphasis on cognitive qualities. In addition to this tendency to focus on cognitive aspects (e.g., memories, thoughts), there is evidence for concern in the Israeli group of who or what is involved in the situation; in the French group there is the tendency to emphasize judgments and evaluations; and in the Russian group there is the tendency to emphasize feelings and emotions.

## Discussion

The findings provided answers to several questions that have motivated the study. One question was whether there are patterns of meaning variables corresponding to the value orientations. When we consider the significant correlations between the value orientations and the meaning variables as constituting the pattern of meaning variables corresponding to the value orientation, the answer is positive. The results show that for each value orientation there is a pattern of meaning variables corresponding to it. Further, the patterns of meaning variables corresponding to the three value orientations are distinct so that each value orientation corresponds to a unique pattern of meaning variables.

A similar methodology has been applied in exploring the patterns of meaning variables corresponding to personality traits (Kreitler & Kreitler, 1990a). The formal features characterizing the patterns corresponding to traits were based on analyzing over 350 patterns of traits. These features include the number of meaning variables in the pattern, the proportion of meaning dimensions, and types of relation in the pattern, or the number of negatively correlated variables. Comparing the patterns corresponding to values with those corresponding to personality traits indicates unambiguously that the patterns corresponding to values do not resemble those corresponding to personality traits.

The patterns of meaning variables corresponding to value orientations highlight cognitive and emotional tendencies of high scorers of the different values. Further, the importance of the meaning variables corresponding to the value orientations is that they indicate processes whereby the value orientations function, for example, by means of focusing on emotions, by emphasizing status differences, by concern for who or what is involved in a situation, by adopting a concrete approach focused on the here-and-now, etc.

Another question was whether the patterns of meaning variables corresponding to the value orientations in the three cultural contexts differ. It may be noted that the differences may

be reflected in the nature of the meaning variables corresponding to the same value orientation in the three cultural contexts and in the correlation coefficients themselves.

The findings showed that there were similarities in the major meaning variables across the groups, but also differences. The similarities consisted in the fact that the major constituents of the meaning patterns corresponding to the value orientations in the three cultural contexts are identical. This finding supports Schwartz's thesis that the value orientations of the value survey are universal. However, the differences between the meaning patterns of the value orientations consist in the salience of the constituents of the value orientations. Thus, the findings suggest the benefit of going beyond similarities on the surface. Even when value scores are similar in different cultural groups, it may be advisable to explore the underlying structure of meanings, which may differ.

Some limitations of the study need to be noted. The major limitation is that the three studied samples may not represent absolutely distinct cultural groups with three different meaning systems. The French and Russian immigrants to Israel share a common Jewish cultural background and in addition may be assumed to have made some kind of adaptation to the Israeli culture after immigration. Another obvious limitation is the small number of participants in the study. These limitations restrict the possibility of drawing conclusions about the meaning correlates of the values in the cultural backgrounds of the participants. Nevertheless, it seems justified to conclude that this preliminary study demonstrates the usefulness and adequacy of meaning analysis for exploring in future studies the matrices of meaning variables characteristic of value orientations in different cultures.

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## Appendix 1

The meaning variables of the meaning system (Kreitler & Kreitler, 1990).

### **Meaning Dimensions (Dim)**

Meaning dimensions characterize the contents used for expressing the referent's meaning

1. **Contextual allocation:** Relating the referent to a superordinate, more inclusive concept; embedding it in a category, structure, a system of relations, or a more general context; God – belongs to religion; to go – it is a verb; Chair – a piece of furniture.
2. **Range of inclusion:** Specifying what the referent includes.
  - 2a. **Subgroups:** specifies different types or kinds or groups of the referent; e.g., Art – painting, sculpture; Feeling – love, anger; Child – John, Peter.
  - 2b. **Parts:** specifies components, parts or elements of the referent that comprise it wholly or partly; e.g. Friendship – includes love, trust, and mutual help; Body – hands and feet.
3. **Function, purpose or role:** specifies what the referent serves for, or for what it can be used, things that it does which are commonly considered as functions; e.g. Telephone – serves for transmitting messages; Person X – is a pilot; Table – is used for writing.
4. **Actions and potentialities for action:** describes actions that the referent does or can do, which are, however, not considered as functions of the referent.
  - 4a. **Actions that the referent does or can do,** e.g., Animal – walks and sleeps;
  - 4b. **Actions that are done to the referent or can be done with or to the referent,** e.g., Sea – people swim in it.
5. **Manner of occurrence or operation:** describes fully or partly how the referent acts, functions or occurs, including stages, phases, means, tools, organs, etc. involved in the action or occurrence of the referent or enabling them; e.g., Waking – you lift one leg etc; Democracy – the names of candidates are publicized and so on.
6. **Antecedents and causes:** describes antecedent circumstances or conditions, causes – direct or indirect, necessary or sufficient, for the existence or occurrence or activity of the referent; e.g., Anger – when you think about the success of your enemy.
7. **Consequences and results:** describes the outcomes that result directly or indirectly, intentionally or unintentionally from the referent's existence or occurrence or activity, or take place after the referent but do not reflect its function, including implications; e.g., Rain – everything gets wet; Love – parting and sadness.
8. **Domain of application:** to what or to whom the referent refers, for what or whom it is relevant.
  - 8a. **Subjects to which the referent refers or for whom it is relevant:** Specifies items or domains that are affected by the referent, are in interaction with it, or use it in some form; Beautiful – refers to the weather or to a woman; Car – driven by people.
  - 8b. **Direct or indirect object of the referent:** specifies items or domains in regard to which or with which the referent acts or occurs or on which it acts; e.g., Revolution – in society, in the arts; To eat – fruit, fish; To create – a piece of art, a friendship.
9. **Material:** the material or materials, the stuff of which the referent is made or of which it consists; e.g., Sea – is made of water; Love – is made of desire and worries.
10. **Structure:** The referent's structure, the interrelations among the components that make up the referent, its organization or complexity; e.g., Cupboard – there is some cover on the top, doors in front, etc; School – a headmaster on the top who is in charge and under him or her teachers responsible for teaching different subject matters etc.
11. **State and possible changes in it:** specifies the actual, potential or possible state of the referent, including state of the material (solid, liquid, gaseous, etc.), health (sick, healthy, etc.), clarity (fuzzy, sharp), strength, weakness, existence, freedom or slavery, dependence, sanity, drunkenness, limitations, etc; e.g., Glass – can be broken; Water – may evaporate; A person – tired or alert.
12. **Weight and mass:** specifies the weight of the referent or its mass in specific units or in terms of an estimate; e.g., Car – its weight is XX; Laptop – is not too heavy.



13. **Size and dimensionality:** specifies the referent's size (in terms of actual units or estimate), its number of dimensions (for example, 2-dimensional or 3-dimensional) and their size; e.g., Hole – deep; Dwarf – smaller in height than most people.

14. **Quantity and number:** specifies the number of the referent, its quantity, its quantifiable frequency (“how many times”...), how much of it exists; e.g., Human being – a billion only in China.

15. **Locational qualities:** specifies locational and spatial qualities of the referent, where it is to be found under usual or special conditions, its location, its address, in relative or absolute terms; e.g., Sun – in the tail of the Milky Way; Tel-Aviv – on the sea shore, south of... in the center of... ; Abraham – lives close to...

16. **Temporal qualities:** specifies the time when the referent existed or exists in relative or absolute terms, date, duration of occurrence or existence, age, period in which referent functioned or functions or will function or occur, whether the referent is young or old, new or old, short-lived or eternal; e.g., Love – forever.

17. **Possessions and belongingness:** specifies to whom or to what the referent belongs, what belongs to the referent in material or other terms, excluding parts or components of the referent.

17a. **What belongs to the referent, what the referent owns or possesses;** e.g., Mr. X – he is rich, he owns the estate.

17b. **To whom the referent belongs or could belong;** e.g., Ring – it belonged to my mother.

18. **Development:** specifies the ontogenetic or phylogenetic development of the referent or any part of it, the personal history of the referent, its evolution, how it turned into what it did, what will become of it in the future; e.g., Mail – in the past it was done by means of pigeons, in the future only by computers.

19. **Sensory qualities:** specifies sensations and sensory experiences or data that characterize the referent or describe it as well as those it experiences and perceives.

19a. **Sensory qualities characterizing the referent;** e.g., Tomato – is round and red.

19b. **Sensory qualities that the referent experiences or can experience;** e.g., Cat – is able to perceive colors.

Variables 19a or 19b may be further specified in terms of the following categories: General visual, Light & brightness, Color, Form & shape, Gustatory or taste qualities, Auditory or sound qualities, Olfactory or smell qualities, Tactual-kinesthetic, Temperature, Humidity, Skin sensations, Internal sensations, Pain.

20. **Feelings and emotions:** specifies feelings and emotions felt, experienced, evoked or perceived in oneself or others.

20a. **Feelings and emotions evoked by referent:** Feelings and emotions that may be felt in regard to the referent, with the referent, or evoked by it; e.g., Monster – scares people; Brightness – I like brightness; Sea – makes people happy.

20b. **Feelings and emotions experienced by referent:** Feelings and emotions that the referent experiences or can experience; e.g., Mother – loves her children.

Variables 20a or 20b may be further specified as Positive emotions and Negative emotions.

21. **Judgments and evaluations:** specifies judgments, evaluations, attitudes, and beliefs in regard to the referent and those held by the referent.

21a. **Judgments and evaluations about the referent:** specifies judgments, evaluations, attitudes, opinions and beliefs in regard to the referent, or held by others about the referent; e.g., The law – important; Sins – despicable.

21b. **Judgments and evaluations by the referent:** specifies judgments, evaluations, attitudes, opinions and beliefs held or expressed by the referent in regard to any object or state or event; e.g., Jo – believes in God, assumes he/she is inferior to others.

22. **Cognitive acts and qualities:** specifies cognitive actions or qualities evoked by the referent or characterizing it or done by it.

22a. **Cognitive acts and qualities evoked by the referent:** specifies cognitive acts and qualities evoked by the referent or in regard to it; e.g., Sea – provides inspiration; Bicycle – reminds me of my childhood; Bible – it is difficult to understand.

22b. **Cognitive acts and qualities by the referent:** specifies cognitive acts and qualities characterizing the referent or done by it; e.g., Jo – has poor memory; Tina – her reasoning is stronger than her intuition.

### **Types of Relation (TR)**

Characterize the directness of the relationship between the referent and the meaning value in the meaning unit, i.e., the degree to which elements other than the original referent are involved in the expression of meaning, e.g., other referents.

1. **Attributive**: the assigned contents (meaning value) relate to the referent directly, as a quality or action, without implying to what degree the contents are characteristic of the referent.

1a. **Qualities to substance**: the meaning value relates to the referent as a property or quality; e.g., House – tall, Bicycle – inexpensive.

1b. **Actions to agent**: the meaning value relates to the referent as an action, or as something that the referent does or what is done with it/toward it, so that the referent is in the role of “agent”, “performer of action”, the “subject of an action” or the “object of an action”; e.g., Telephone – rings; Bicycle – you ride on them.

2. **Comparative**: the assigned contents (meaning value) relate to the referent indirectly, by means of the intervention or intermediation of another meaning value or referent, regardless of whether words such as “like” or “different from” are used, and whether the characteristic is stated explicitly that serves as the basis of the comparison. The compared referents or meaning values are on the same level of abstraction or concreteness, i.e., both are abstract, or both are concrete.

2a. **Similarity**: the comparative intermediation is based on similarity, including relations of identity, equality, synonymy, likeness, or sameness of different degrees; e.g., Sea – like ocean; Bad – like evil; Wisdom – resembles justice because both are rare.

2b. **Difference**: the comparative intermediation is based on difference, including relations of polarity, contrast, lack of similarity, dissimilarity, opposition, bipolarity, unlikeness, or antonyms of different degrees; e.g., Sea – unlike a puddle; Friendship – the opposite of hostility.

2c. **Complementariness**: the comparative intermediation is based on a complementary relation, made possible by interaction, a transaction or matching in structure of different degrees, so that the complementing referents or meaning values may potentially form together some kind of a unit; e.g., Father – is the parent of a son and the son is the child of a father.

2d. **Relationality**: the comparative intermediation is based on relationality to other referents or meaning values that are more or less than the referent in some characteristic. Relationality may refer explicitly or implicitly to some scale or continuum; e.g., Genius – cleverer than others; To create – to produce something that is most original.

3. **Exemplifying-illustrative**: the contents relate to the referent as an example or illustration. It may be concrete or abstract, regardless of the abstraction level of the referent. The exemplifying component may or may not be presented explicitly or with prepositions or other phrases emphasizing the exemplifying relation.

3a. **Exemplifying instance**: the meaning value relates to a specific item, such as a person, an object, an event or situation that exemplify the referent or some aspect of it, mostly without further elaboration; e.g., Wisdom – Einstein; Evil – war; Emotions – anger.

3b. **Exemplifying situation**: the meaning value presents a specific static situation or image that exemplifies or illustrates the referent or some aspect of it. The presented examples mostly include some elaboration, but do not include any dynamic or actional elements; e.g., Motherhood – a child sitting on his mother’s lap looking at her.

3c. **Exemplifying scene**: the meaning value presents a specific scene with actional, dynamic, or dramatic elements that serve to exemplify the referent or some aspect of it. The presented examples are sometimes small narratives or stories; e.g., Longing – a man runs and runs and runs to the home of his beloved.

4. **Metaphoric-symbolic**: the assigned contents relate to the referent indirectly, through the intermediation of another meaning value from a content domain that is not assigned to the referent conventionally, and is mostly on a different abstraction level.

4a. **Interpretation**: the meaning value relates to the referent as an interpretation, addresses non-conventional aspects of the referent, and mostly uncovers a deeper unexpected significance of the referent; e.g., Happiness – what does not exist in what we have.

4b. **Conventional metaphor**: the meaning value relates to the referent in terms of a metaphor that is a conventional phrase in language; e.g., To scream – blow off some steam.

4c. **Original metaphor**: the meaning value relates to the referent in terms of an original metaphor, namely, the meaning value derives from a content domain that is not related conventionally to the referent and is on a different level of abstraction than the referent; e.g., Loneliness – a single shell on the enormous beach.

4d. **Symbol**: the meaning value relates to the referent in terms of a complex metaphor which includes contrasting features and their resolution or combination on the level of the image; e.g., Love – fire that produces and destroys.

Types of Relation may be further grouped into two Modes of Meaning: (a) **Interpersonally-shared, lexical (TR1+TR2)** which is used mainly for expressing lexical and conventional meanings and fulfills a major role in daily interpersonal communication; and (b) **Personal-subjective (TR3+TR4)** which is used mainly for expressing personal-subjective meanings, emotions and experiences, and fulfills a major role in subjective expressions of one's inner world, and in art.

### **Forms of Relation (FR)**

Forms of relation characterize the relation of the meaning value and the referent from the point of view of formal and logical characteristics.

1. **Propositional relation**: specifies explicitly or implicitly that the meaning value is related to the referent. The relation may be expressed directly or by means of prepositions and other connectives, such as "is a". In **1a. Propositional positive**, the relation is positive (e.g., Book – interesting), in **1b. Propositional negative**, the relation is negative (e.g., Book – not in the library).

2. **Partial relation**: The relation of the meaning value to the referent is characterized by limited generality; it is subject to restrictions or reservations to some extent. In **2a. Partial positive**, the relation is partial and positive (e.g., Apple – sometimes red), in **2b. Partial negative**, it is partial and negative (e.g., Sea – not always calm).

3. **Universal relation**: The relation of the meaning value to the referent is described explicitly as general, comprehensive, absolute, and unconditional. In **3a. Universal positive**, the relation is universal and positive (e.g., Life – always wonderful), in **3b. Universal negative**, it is universal and negative (e.g., To take – never without giving).

4. **Conjunctive relation**: Two or more meaning values are related to the referent and both are presented as essential for expressing the meaning of the referent. In **4a. Conjunctive positive**, the meaning values are related to the referent conjunctively and positively (e.g., Life – both wonderful and difficult), in **4b. Conjunctive negative**, they are related conjunctively and negatively (e.g., Life – neither enjoyable nor worthwhile).

5. **Disjunctive relation**: Two or more meaning values are presented in regard to the referent but only one of them is presented as adequate or essential, including exclusive disjunction and inclusive disjunction. In **5a. Disjunctive positive**, only one of the positively presented meaning values is adequate (e.g., Life – either it is full of fun or it is boring), in **5b. Disjunctive negative**, of the positive and negative meaning values presented, only the positive is adequate (e.g., Yoga – it is not a religion but a philosophy).

6. **Normative relation**: The meaning value is related to the referent in terms of the required, the necessary, the prescribed, morally or otherwise, as contrasted with the factual, descriptive or the way things actually are. In **6a. Normative positive**, the relation is normative and positive (e.g., Crime – needs to be punished), in **6b. Normative negative**, the relation is normative and negative (e.g., Theft – should never be allowed).

7. **Questioning relation**: The meaning value is related to the referent in terms of a question, addressed to others, or to oneself or in general, as a kind of wondering. In **7a. Questioning positive**, the relation is questioning and positive (e.g., Friendship – is it more like love or affection?), in **7b. Questioning negative**, the relation is questioning and negative (e.g., To create – is it not playing God?)

8. **Desired relation**: The meaning value is related to the referent in terms of a desired, wished for relation rather than in terms of a descriptive or factual relation. In **8a. Desired positive**, the relation is desired and positive (e.g. Money – desired object by many people), in **8b. Desired negative**, the relation is desired and negative (e.g. Disease – hopefully I will never get it).

### **Shifts in Referent (SR)**

Reference shifts represent changes in the referent that may occur in the course of the meaning assignment process. The changes are evaluated in reference to the original input and/or the preceding referents in the chain of responses.

1. **Identical:** The referent is identical to the original or preceding input.
2. **Opposite:** The referent is the opposite or reversal of the input; e.g., the input was "Life" and the referent is "Death".
3. **Partial:** The referent is a part or a sub-category of the input; e.g., the input was "Car" and the referent is "Toyota" or "a tire".
4. **Modified by addition:** The referent is the input modified by addition of some meaning value to it; e.g., the input was "Friendship" and the referent is "True friendship".
5. **Previous meaning value:** The referent is a previous meaning value; e.g., the input was "Highway" and the response to the input was "It is for cars of all kinds": "Cars" was the meaning value for "Highways" but is also the referent for "of all kinds".
6. **Association:** The referent is a different referent from the previous one or from the input but is related to them by association and is on the same level; e.g., The input was "Telephone" and the referent is "Fax", or the input "Table" is replaced by "Chair".
7. **Unrelated:** The present referent is not related in any obvious way to the input or to the previous referent; e.g., the input was "Telephone" and the referent is "Cow".
8. **Verbal label:** The referent is the previous referent or the input considered as a label, namely, relating to linguistic or vocal aspects of the input in terms of phonetic, morphological, or syntactic features; e.g., The input was "Apple" and the referent is "The noun apple" or "Rattle".
9. **Grammatical variation:** The referent is the input or the previous referent with some grammatical modification, such as a change in the verb conjugation, in the syntactic class (e.g., from verb to adverb), tense, modality, etc.; e.g., the input "To take" was replaced by "Taking" or "Took".
10. **Previous meaning values combined:** The referent is a combination of two or more meaning values that have occurred earlier in the chain of responses; e.g., the input was "Art" and meaning values produced earlier were "Spanish art", "Italian art", and "Greek art", which may be integrated at some point into the new referent "Art of the Mediterranean countries".
11. **Superordinate:** The referent is a superordinate concept or a superordinate, more inclusive system that includes the input; e.g., the input was "Piano" and the referent is "Musical instruments".
12. **Synonym:** The referent is a synonym or another word or phrase with similar or identical meaning to the input.
  - 12a. **In the original language:** The referent is a synonym of the input in the original language; e.g., the input was "Closed" and the referent is "Shut".
  - 12b. **Translated into another language:** The referent is a word in another language that could be considered as a translation of the input with a highly similar meaning; e.g., the input was "Woman" and the referent is "Frau" (= woman, in German).
  - 12c. **Label in another medium:** The referent is a label in a medium other than that of the original input; e.g., the input was a picture or image, and the referent is some label assigned to the image descriptive of it.
  - 12d. **A different formulation of the same referent on the same level:** The referent is a rephrasing of the original input in the form of a phrase or words that are not synonyms but are on the same level as the input; e.g., the input was "Botany" and the referent is "Plant science".
13. **Replacement by implicit meaning value:** The referent is a replacement of the original input through its meaning value that has, however, not been explicitly produced earlier; e.g., the input was "Piano" and the response was "Music produces calm". Thus, the referent "Music" replaced "Piano", as a meaning value assigned implicitly to "piano".

The Referent Shifts may be grouped in terms of the following categories, reflecting their relative distance from the input: Close shifts (Nos. 1, 3, 9, 12), Medium shifts (Nos. 2, 4, 5, 6, 10, 11), and Distant shifts (Nos. 7, 8, 13).

### **Forms of Expression (FE)**

This set of variables characterizes the mode of expression, especially the major modes used in expressing and communicating meanings.

1. **Verbal**: The meaning is expressed verbally: **1a. Actual direct enactment; 1b. Verbal description of verbal response** (e.g., “I would explain to him/her...”); **1c. Using available verbal materials** (e.g., for “Love” Elizabeth Browning’s poem on love).
2. **Visual, graphic**: The meaning is expressed visually, in the form of images presented by figural, graphic, photographic, and other visual means: **2a. Actual visual material** (e.g., expressing meaning by drawing); **2b. Verbal description of visual response** (e.g., I could show a picture of...”); **2c. Using available visual materials** (e.g., using a photograph).
3. **Motoric-motional**: The meaning is expressed by using movements, acts, gestures, hand movements, and facial expressions: **3a. Actual enactment of movements, acts etc.**; **3b. Verbal description of motoric-motional response** (e.g., “It is possible to enact...”); **3c. Using available materials of motoric expressions** (e.g., using available materials of motoric expressions, such as photographs of movements).
4. **Auditory (vocal, tonal)**: The meaning is expressed by using tones (musical or other), voice (of humans, animals etc.), noises and any other auditory means: **4a. Actual production of auditory materials (voice, tones, etc.)**; **4b. Verbal description of auditory response**; **4c. Using available auditory materials** (e.g., using available vocal and auditory materials, like music and voice recordings).
5. **Denotative**: The meaning is expressed by pointing to actual objects, situations, etc.: **5a. Actual presentation of object, situation, etc.**; **5b. Verbal description of denotative response** (e.g., for “bicycle” – I would show a real bicycle), **5c. Using available materials referring to objects or situations etc.**

## Appendix 2

An example of the coding of responses in the Meaning Test

**Stimulus:** Street; **Subject's response:** In a city, it is noisy and dirty, always interesting. Streets are sometimes dangerous for people.

Input	Referent	Meaning value	Referent shift	Meaning dimension	Type of relation	Form of relation	Form of expression
Street	Street	In a city	Identical to input	Locational qualities	Attributive: Qualities to substance	Propositional positive	Verbal: Actual direct enactment
	Street	It is noisy	Identical to input	Sensory qualities characterizing the referent	Attributive: Qualities to substance	Propositional positive	Verbal: Actual direct enactment
	Street	and dirty	Identical to input	State	Attributive: Qualities to substance	Conjunctive positive	Verbal: Actual direct enactment
	Street	Always interesting	Identical to input	Cognitive qualities evoked by referent	Attributive: Qualities to substance	Universal positive	Verbal: Actual direct enactment
	Streets	Are sometimes dangerous	Grammatical variation	Judgments & evaluations about the referent	Attributive: Qualities to substance	Partial positive	Verbal: Actual direct enactment
	Are dangerous	For people	Previous meaning value	Domain of application: direct or indirect object	Attributive: Qualities to substance	Propositional positive	Verbal: Actual direct enactment

## **Bias in Terms of Culture: Work Values Country-Clustering for 33 European Countries and Person-Job Fit Factor Equivalence Testing for Four European Countries**

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### **Abstract**

Bias in terms of culture has been posing threat to cross-cultural research since the very beginning of cross-cultural endeavor. Metric and statistical methods have been discussed in literature in order to deal with this type of bias; however, some of these methods show side-effects on the level of scale validity and some others with so stringent effects on the available information and allow for very limited variance to be interpreted.

The present twofold study describes yet another method, this time based on country clusters, following the idea introduced by Georgas & Berry (1995) of employing country sets based on their eco-cultural or psychological variables rather than single countries. In our study, the country clusters were derived from a different construct than the target one; the clusters of countries were formed using information from the European Value Survey Work Values, but the target construct in respect to bias reduction was the Person-Job Fit. Starting with 33 European countries and through trigonometrically transformed Multidimensional Scaling solutions, we arrived at a system of homogeneous clusters of countries in respect to their factor structure similarity. This similarity is not based on actual distribution resemblance levels, but on factor structure similarity as computed and utilized through the “hit” matrix. Testing for factor structure equivalence in the Person-Job Fit construct(s) for four European countries through covariance structure analysis, we contrasted two research methods, namely, the traditional across-countries approach and the method of aggregating some of the countries involved into clusters with a homogeneous factor structure. The findings showed that the aggregation technique reached acceptable levels of statistical support for the emerging factor structures, whereas the traditional approach did not statistically support the structures reached. Possible statistical artifacts were also tested through a third research condition, under a “homogeneity” rationale.

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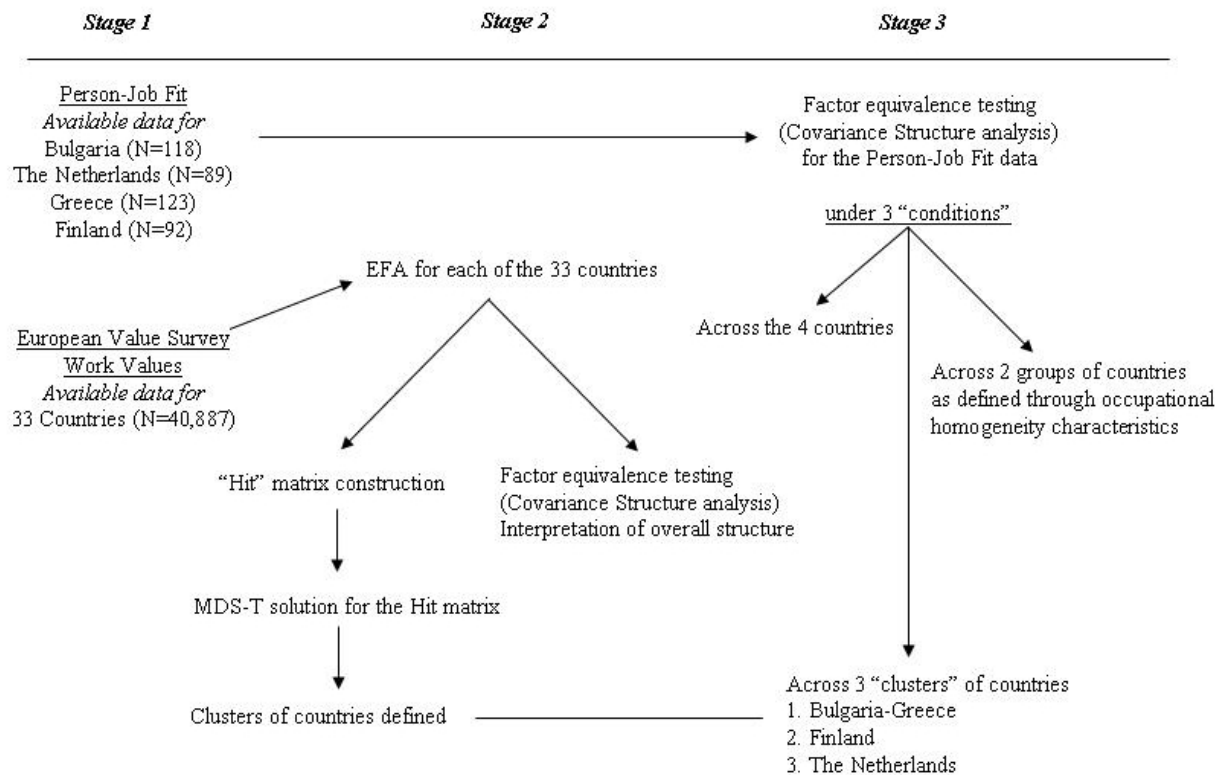
This chapter<sup>1</sup> is a brief description of an attempt to address some methodological and statistical questions related to bias in terms of culture: Can we find alternative ways to reduce such a bias, instead of removing the suspect or biased items? Can we find a method to support clustering of countries in a cross-cultural study (with at least three countries under comparison) in respect to some – any, really – correlate measures and not the target one (i.e., the one in “need” of bias reduction)? Can this clustering method reduce bias in terms of culture for the target measure, since it will (in terms of factor similarity) arrive at comparisons of more homogeneous sets of countries, in contrast to comparing the countries on a one-to-one basis?

We attempted to answer these and other related questions by working on a twofold project: We first employed the European Value Survey and a set of 15 work value measures to test for factor congruence across 33 European countries and to arrive at homogeneous sets of countries according to their similarity in terms of factor structure equivalence levels. We then located the specific countries in these clusters, for which data had been already collected on the target measure, namely, Person-Job Fit, and we tested for factor equivalence through covariance structure analysis for a) an across countries comparison, b) an across clusters-of-countries comparison, and c) a homogeneity hypothesis comparison between two types of occupations, in order to account for possible statistical and methodological artifacts.

In more detail (Figure 1), the aims of the first study in this project were a) to describe the data at the item-level for each of the 33 countries separately in order to identify any common patterns or variability of work values across countries, b) to describe the factor structure for each of the 33 countries for these 15 work values and compare them on a one-to-one basis, c) to test for factor structure equivalence across the countries using Multilevel Covariance Structure Analysis (Muthén, 1994) in order to combine all necessary information to arrive at a factor equivalence structure or a statistically universal structure within the sample units involved, and d) to combine information on the factor similarity levels in order to compute specific clusters/sets of countries based on the factor similarity derived from these 15 measures.

The second study<sup>2</sup> addressed the Person-Job Fit target measure, as assessed through a nine-item scale created by Brkich in 2002 (Brkich, Jeffs, & Carless, 2002). This study was conducted in four European countries which were located within broader specific clusters of countries as defined in Study #1 through the statistical methods employed<sup>3</sup>. We could then test a) for factor structure equivalence across all four countries for the Person-Job Fit measure, b) for factor structure across clustered countries, provided such clusters would have been identified on correlate measures through Study #1, and c) for factor structure across two types of occupations (homogenous vs. non-homogeneous groups) to test for a possible inflation of equivalence effect, attributed solely to data aggregation.





**Figure 1.** Overview of the methods employed in both studies

## Study #1. The European Value Survey Work Values: Factor Structure, Homogeneous Subsets and Their Use in Country-Clustering Methods

### Work Values

The European Values Study (EVS), a well established network of social and political scientists, gathered at the end of the seventies, aimed at empirically uncovering basic values, attitudes, and preferences of the European population and exploring similarities, differences, and changes in these orientations. Three waves of data have been collected (1981, 1990, 1999-2000) with a main goal to attain a better insight into fundamental values and value similarities in Europe. The total number of countries participating consisted of just 10 in the first wave, climbed to 26 in the second wave, and reached 33 in the third wave. Uniformly structured questionnaires have been administered in each and every wave, enabling generalizations and allowing for comparability. The third wave EVS questionnaire addressed domains of religion/morality, society/politics, primary relations, and work/leisure.

The concept of work values, as defined and measured according to research objectives and theoretical background (Dose, 1997; Roe & Ester, 1999), may lack some clarity, causing debates and controversy. For instance, work values are defined as desirable modes of behavior in work environment and work-oriented or work-related processes and outcomes (Meglino & Ravlin, 1998) or as broad tendencies to prefer certain job characteristics, outcomes or features of work environments (Furnham, Forde, & Ferrari, 1999; Hofstede, 1998; Lofquist & Dawins, 1971; Pryor, 1982; Super, 1973). Alternatively, work values are conceptualized as systems of ethics, ideologies or philosophies (Jones, 1991; Trevino, 1986). A summarized definition of this controversy defines work values as standards or criteria, relatively enduring and stable over time, that focus on specific work-related features that are perceived as important and,

consequently, guide the selection of goals or actions in work or work environment (Furnham, Petrides, Tsaousis, Pappas, & Garrod, 2005).

Theoretically, work values can be described through a bipolar dimension (Dose, 1997), contrasting *personal* to *social consensus* values. This means, work values can be conceptualized as personal characteristics that may explain individual differences in vocational or organizational behavior and value conflicts vs. values which, in turn, are shared and integrated principles in a national or in an organizational setting (Hofstede, 1980, 1998; Meglino & Ravlin, 1998; Pryor, 1982). However, such a distinction is difficult to comprehend, as the personal perspective of values is often employed to explore cross-cultural differences or differences across organizations (Berings, De Fruyt, & Bowen, 2004).

For the description of work value variability among individuals, attention has been drawn to the extent to which work values contain moral elements as well as the extent to which they are associated with the Protestant Work Ethic (PWE). The traditional form of PWE, expressed through the Calvinistic approach, encourages respect, admiration, and willingness to work hard as well as to display productivity, industriousness, negative attitudes to leisure activities, and internal locus of control (Aygün, Arslan, & Güney, 2008; Furnham, 1989, 1990). For the assessment of work values variability across countries, the Hofstede's well-known bipolar dimensions of values (Hofstede, 1980, 1998) offer a basis of cross-cultural interpretation, through "power distance", "uncertainty avoidance", "individualism", "masculinity", and "values of long-term orientation" (Hofstede, 2001). Other research findings, exploring the work values on which managers rely, resulted in two contrasting managerial value dimensions: a) "egalitarian commitment" vs. "conservatism". According to them, managers might *either* endorse values of what is right and just on the basis of impersonal criteria and objective qualifications *or* values that are based on the loyalty to one's boss and family-relationship connections; b) "utilitarian involvement" vs. "loyal involvement", a selection between organization involvement that meets an individual's goals vs. the long-term identification of an individual's goals with the organization's ones (Smith, 2004; Smith, Peterson, & Schwartz, 2002).

### **Multilevel Covariance Structure Analysis (As Expanded To Exploratory Factor Analysis)**

One of the conclusions that EVS waves had to offer was that Europe is far from unity when it comes to work orientations (Zanders, 1994). In an effort to show to what extent European citizens still differ or resemble each other, the third wave EVS questions on work focused on rating the important aspects of a job, job security, freedom to make decisions, work-money relationship, ethics in the workplace, work-gender relation, and work and minorities (Halman, 2001). In total, 33 European countries participated in this third wave with  $N = 41,125$  adults of 18 to 65 years of age at the individual level of aggregation (valid  $N$  in our analysis = 40,887, as parts of the data were missing for 238 cases). Each country contributed with a large sample of at least 1,000 participants (Halman, 2001). The 15 items employed to assess work values focused on important work aspects in life: good pay, pleasant people to work with, good job security, etc. (see also Table 1). Participants responded on a binary scale ("yes" = 1, "no" = 0). When we plotted their means (with the majority of them between .36 and .66 for all countries collapsed<sup>4</sup>), clear differences emerged across countries, as these were largely variant in respect to the assigned levels of importance within each country. Some patterns were also visible. For instance, for the Greek participants the highest means were for "good pay" and "respected job", depicting the most important aspects of work; the least two important values were "good hours" and "generous holidays". For the Finnish participants, however, the mean score for "interesting job" was the highest, but the values for "generous holidays", "chances for promotion" and "respected job" were assigned the lowest mean.

The next step was to employ exploratory factor analysis for the 15 Work Value items. We retrieved a two-factor structure (based on preliminary attempts), allowing for items to possibly cross-load on both factors across the 33 countries. This was a first indication that a rather limited level of factor equivalence was present, as the majority of the items did not "behave" the same way throughout these 33 countries. For instance, for the Greek factor structure, the "good

pay” item loaded on the second factor and the “chances for promotion” item loaded on the first factor, but for Hungary both items loaded on the first factor. Such discrepancies were scattered around in the results. Nevertheless, statistically universal items for the majority of the countries were not apparent at this stage – possibly due to bias in terms of culture suppressing equivalence. Therefore, the general outcome was to be further explored.

Our second goal was to depict discrepant items while further testing for factor equivalence through multilevel covariance structure analysis (Muthén, 1994), as extended to factor analysis by Van de Vijver and Poortinga (2002). This method is an extension of the confirmatory factor analysis approach to equivalence testing – as proposed by Muthén – into exploratory factor analysis methods. Certainly, several other methods exist in addressing factor equivalence, such as in the recent study by König, Steinmetz, Frese, et al. (2007). Many of these other methods employ hypothesis testing Structural Equation Modeling methods and use multi-group comparisons to test for factor equivalence across cultures. In this study, however, we employed Muthén’s method as we can only explore and describe correlations, because the whole study is itself of an exploratory nature. The acquired intraclass correlation coefficients, ranged from .05 to .11, with an average of .10; this was rather high and not very promising (an upper limit of .06 has been suggested by van de Vijver and Poortinga, 2002, for invariance across “classes” to be attainable). Further exploration of item discrepancies was performed through the computation of the square root of the mean squared difference indices for the loadings before and after Procrustean rotation (van de Vijver & Leung, 1997; van de Vijver & Poortinga, 2002); reaching an average of .25, these indices revealed discrepancies for some of the items, but an initially acceptable factor structure emerged (Table 1).

**Table 1**

*Procrustean Solutions for the EVS Work Values Individual Level (Estimated Between Groups Correlation Matrix Target-Rotated on the Pooled-Within) and Country Level Factor Structures*

Covariance structure analysis - Target rotated solutions (40,887 cases for 33 countries for 15 items)				
<i>Extent of importance in work</i>	<b>Individual level solution</b>		<b>Country-level solution</b>	
good pay	-.08	<b>.94</b>	-.06	<b>.94</b>
pleasant people	<b>.88</b>	.07	<b>.88</b>	.05
not too much pressure	.71	.56	.71	.57
job security	.34	<b>.69</b>	.38	<b>.68</b>
chances for promotion	<b>.66</b>	<b>.68</b>	<b>.65</b>	<b>.69</b>
respected job	<b>.61</b>	<b>.63</b>	<b>.62</b>	<b>.63</b>
good hours	.51	<b>.67</b>	.47	<b>.68</b>
use initiative	<b>.94</b>	.25	<b>.95</b>	.25
useful for society	.75	.56	.71	.60
generous holidays	.44	<b>.68</b>	.42	<b>.67</b>
meeting people	<b>.87</b>	.32	<b>.84</b>	.35
achieving something	<b>.86</b>	.34	<b>.86</b>	.32
responsible job	<b>.92</b>	.17	<b>.90</b>	.19
interesting job	.45	.22	.52	.15
meeting my abilities	<b>.68</b>	.57	<b>.69</b>	.56
Proportionality index	<b>.96</b>	<b>.90</b>	<b>.96</b>	<b>.90</b>

Employing the set of vectors corresponding to the “estimated between-groups correlation matrix” as computed through the Muthén algorithm, and the pooled within-groups solution, we performed a Procrustean rotation (which is the last stage of the overall procedure as described by van de Vijver and Poortinga, 2002). We followed the same procedure for the set of vectors as computed for the “country-level solution” (aggregated mean scores for all countries and all items, directly factor analyzed for reference and comparability reasons), and as target rotated (Procrustean rotation) on the pooled-within individual level solution. A cutoff loading score of .60 was employed for both solution sets and both target rotations, allowing for as little cross-loadings as possible.

At the individual level of analysis, it was somewhat problematic to arrive at the set of vectors, as a number of item discrepancies existed (according to the square root of the mean squared difference before and after target rotation). However, according to proportionality indices (Tucker  $\phi$ ), rotation was successful as the similarity before and after the rotation exceeded .90. Thus, we decided to further study this specific factor structure that might at least suggest statistical universality across these 33 countries. The first factor was named “Achievement parameters and social status” including items such as “not too much pressure”, “use initiative”, “meeting people”, and “chances for promotion”. These items are mostly personal goals and subjective well-being values vs. the values of a “respected job”, a “responsible job”, and a job that is “useful for society”, as these refer to social values, in accordance to the bipolar dimension of personal vs. social consensus values supported by Dose (1997). Overall, this factor resembles the Protestant Work Ethic theory in its contemporary form (Furnham, 1989, 1990), as it stresses need for achievement, personal responsibility for success-failure, and independent decision-making according to one’s abilities and initiative. It may also depict Hofstede’s individualism value dimension (Hofstede, 1980, 1998) emphasizing a combination of personal motivation and achievement with a social parameter of work status, responsibility, and social offer. The second factor, “Utilitarian involvement to work”, included traditional work values of “good pay” and “job security” along with the less traditional ones of “good hours” and “generous holidays”. This factor may possibly be interpreted under Hofstede’s values (Hofstede, 1980, 1998) of “uncertainty avoidance” in terms of planning, profits and stability on the one hand, and also with a contemporary aspect of Work Ethics that is closely associated with personal handling of time.

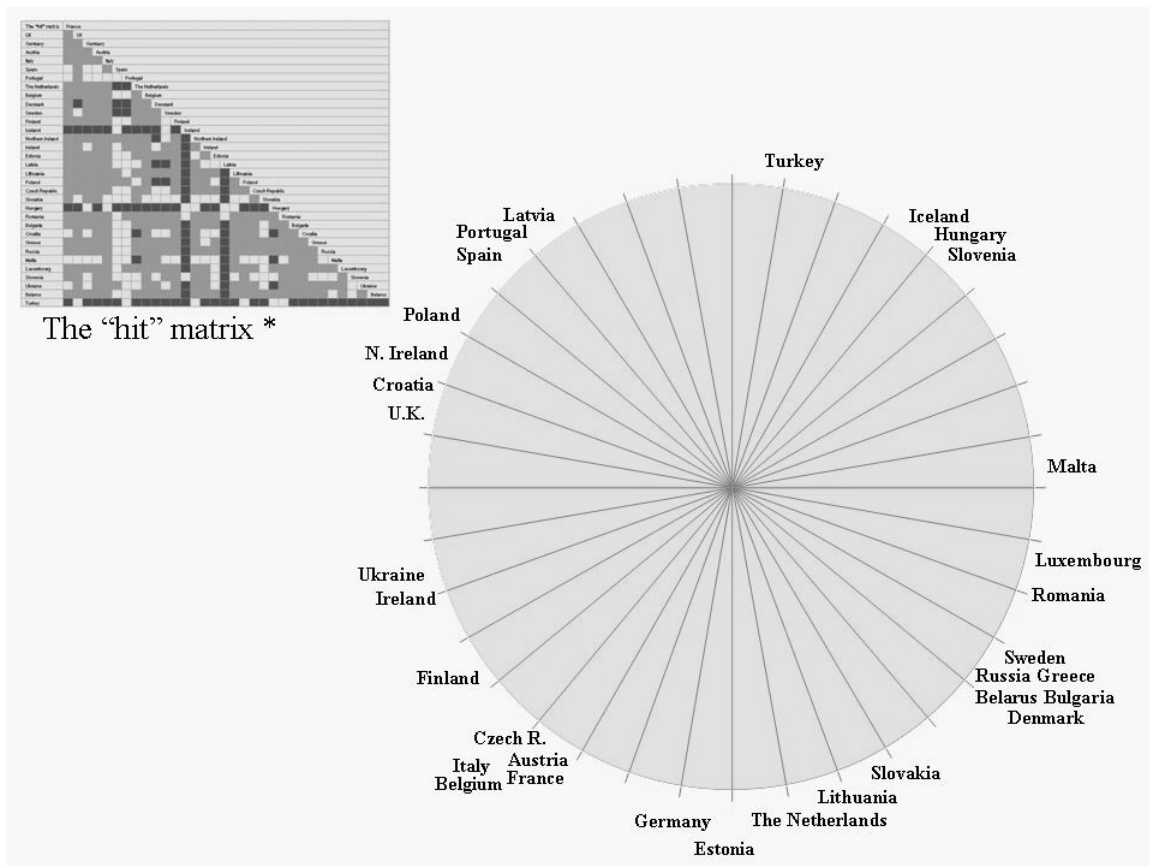
### **Homogeneous Subsets and Country-Clusters Extraction**

Having arrived at a possible set of two factors exhibiting at least some acceptable levels of equivalence across the 33 countries, we were now eligible to describe these levels of equivalence for pairs of countries. The overall method in this stage was theoretically based on the eco-cultural taxonomy as proposed by Georgas and Berry (1995) through their six eco-social factors (ecology, education, economic, mass communications, population, and religion) and their suggestion of a way to avoid the “Onomastic Fallacy” (Georgas, Van de Vijver, & Berry, 2004). Other studies have attempted to form country clusters through alternative methods. Such is the Ronen and Shenkar study (1985), in which meta-analytic techniques were employed, setting an early scene for multilevel cross-cultural modeling as the authors contend that a number of studies are important as they support the importance of individual differences “... without negating the contribution of variance that can be explained by cultural differences.” (p. 448). The supportive stance Ronen and Shenkar take towards MDS methods is similar to our study. Such methods have also been employed by other researchers in their quest for country clusters (e.g., Brodbeck, Frese, Akerblom, et al., 2000). However, a large difference is that all studies reviewed by Ronen and Shenkar, as well as the Brodbeck et al. study, have analyzed raw data (either at the individual or at the country level) to classify into country clusters; we, however, have employed factor structure similarities across countries instead.

In our attempt, we were neither interested in describing which of the 33 countries presents similar work values with other countries or not, nor in explaining these similarities and differences in terms of cultural variables. At this stage, we were simply aiming to describe factor equivalence levels for the above two factors across the countries in pairs (528 pairs of

countries). Thus, for the purposes of the present study, we employed a “hit” matrix –a method proposed by the first author – that contains information on which pairs of countries presented one, two, or no identical factors (Gari, Panagiotopoulou, & Mylonas, 2008; Georgas & Mylonas, 2006; Mylonas, 2009). This “hit” matrix (shown in Figure 2) is then considered being the basis for computing a similarity/dissimilarity Euclidean distance matrix to be analyzed through multidimensional scaling, trigonometrically transforming the coordinates to arrive at a circular continuum, a method also proposed by the first author (Mylonas, 2009; Sidiropoulou-Dimakakou, Mylonas, & Argyropoulou, 2008; Veligekas, Mylonas, & Zervas, 2007). In such a solution, the levels of factor equivalence across countries are used to portray (Figure 2) larger homogeneous sets of countries, which are formed in respect to their similarity in factor structures and can then be used as a point of reference (i.e., in a new study where some of these countries are involved).

The circumplex in Figure 2 is used to present levels of equivalence among the countries through clusters of similar country sets in respect to their factor equivalence and not in respect to their similarity in mean values or distributions. For this solution,  $STRESS = .30$  was quite high and not very promising, as values of less than .11 are required in order to achieve statistical power (Davison & Sireci, 2000, pp. 335 & 337), while  $R^2 = .75$  was also not satisfactory (Davison & Sireci, 2000, p. 336), accounting for less than the desired variance of the estimated proximity measures. However, the reason we employed this MDS-T solution was to compute homogeneous sets of countries among the 33 initial country units, not to support or refute a theory. Therefore, for reasons of interpretability (Everitt, 1996), two dimensions were retained. Thus, one cluster was comprised by UK, Croatia, Poland and Northern Ireland, along with Portugal, Spain and Latvia, as all these countries present similar levels of factor congruence in contrast to another country cluster (Iceland, Hungary, Slovenia, and possibly Turkey); in turn, this cluster was different in its factor similarities from the cluster of Denmark, Russia, Belarus, Sweden, Bulgaria, and Greece. For the second study in this project, data were already available for Greece, Bulgaria, Finland, and the Netherlands. Through the solution above, Greece and Bulgaria seemed to belong to the same homogeneous set of factorially similar countries in respect to Work Values, and could thus be aggregated in our second study and in respect to the Person-Job Fit measures; however, Finland did not seem to belong to the same country-cluster with the Netherlands, thus these two countries would not form a homogeneous set, and they should be treated as separate units during Study #2.



**Figure 2.** Multidimensional scaling solution (trigonometric transformation) for the factor equivalence levels across the 33 countries as computed through the hit matrix.

## Study #2. Person-Job Fit and Covariance Structure Analysis for Four European Countries: Reducing Bias In Terms Of Culture through Country-Clustering Methods

### Bias in Terms of Culture

The term "bias in terms of culture" is not new in the literature. It has been systematically addressed by theorists and researchers in the field, with Poortinga setting the scene back in 1989, arguing on several ways of dealing with the artifacts caused by the specific type of bias. Other theorists have addressed this bias issue since then, proposing more methods of detecting and possibly eliminating it from cross-cultural comparisons. Following an initial thesis that there is no variance left to be explained in terms of culture in a satisfactory cross-cultural study (Poortinga & Van de Vijver, 1987) and that cultural variance should be reduced to zero to derive comparable measures and cross-culturally meaningful structures; the "comparison scale" vs. "measurement scale" differentiation was also described by Poortinga (1989). In a cross-cultural comparison with respect to some variable, differences in scores between cultural groups can reflect valid differences in the construct measured. They can also result from measurement artifacts or bias. Valid differences can be generalized outside the testing situation, in the domain of behavior, or in the underlying construct measured. If we had a criterion or common scale that is identical in the different cultural groups, like the "comparison scale", valid differences between the groups on the measurement scale which is used to gather data would correspond to equal differences on the comparison scale. In a comparison affected by bias, the relation of the measurement scale and the comparison scale is not the same for the different groups. This is, for

example, when differences between two cultural groups on an IQ-test (measurement scale) do not correspond to equal differences in the level of intelligence (comparison scale) (Poortinga, 1989).

It has been supported that removal of item bias does not necessarily lead to scalar equivalence and that bias, in general, cannot be merely reduced to item bias, but a biased item can be treated as a disturbance at the item level that has to be removed (Van de Vijver & Leung, 1997). However, removal of items can easily affect the validity levels of a scale (i.e., if too many items are removed, how can content validity of the comparison or measurement scale be preserved?). In order to circumvent such a problem, a number of statistical methods have focused on bias detection and on bias elimination, in order to achieve invariant scales across cultures. Psychometric-statistical methods may be used, e.g., including confounding variables in the design of the study (Poortinga & Van de Vijver, 1987) which is followed by a covariance or hierarchical regression analysis. Valencia, Rankin, and Livingston (1995) tried to account for cultural variance by controlling for age, gender and ability for an intelligence test through partial correlation coefficients; they found more than 50% of the items to be biased. Other approaches have focused on reducing bias by aggregating countries in terms of their common characteristics, such as eco-social indices (Georgas & Berry, 1995). Yet another approach might be to account for cultural variance by estimating the amount of variance caused by “culture” for a set of items, using the information contained in these same items and not by using external measures (such as control variables). Along these lines, an earlier attempt (Mylonas, 2003, symposium presentation in Budapest) focused on MDS solutions (Individual Differences, Euclidean Models, Weirdness indices) to account for bias in terms of culture, although it entailed some possibility of zero variance situations (according to Ype Poortinga, Discussant in the respective Symposium).

### **Person-Job Fit**

For our present study we selected – and not without cause – Person-Job Fit as the construct of interest. Person-Job Fit is one several distinct constructs of Fit and contrasts with other constructs such Person-Organisation Fit, Person-Vocation Fit, Person-Preferences for Culture Fit, and Person-Team Fit (Kristof-Brown, Zimmerman, & Johnson, 2005). The construct of Person-Job Fit has been studied extensively and underlies research in many areas of organizational behavior, industrial/organizational psychology and vocational behavior. While most developments in these fields have occurred independently, for the large part they have all focused on “..the fit, congruence, matching, contingency or joint influence of the person and job in the prediction of individual and organizational outcomes” (Edwards, 1991, p. 284). There is general agreement (Holland, 1973; Klein & Wiener, 1977; Super, 1973) in respect to the importance of a person’s fit with his/her job which, in turn, is likely to result in occupational satisfaction and success. Klein and Wiener (1977) specifically support that the better the fit of the personal traits to the job requirements, the larger the probability of success in this job in respect to productivity and personal occupational satisfaction.

One construct definition of Person-Job Fit would be the level to which a person’s knowledge, skills and competence, as well as needs and values correspond to job demands. This would, however, have nothing to do with the specific employer (company/firm), as “job” refers to the line of occupation and not to the specific firm offering it (Brkich et al., 2002). While some features or requirements of a job may be more enduring (e.g. type of skills required) than others (e.g. current projects), workplaces are characterized by less stable contexts than in previous years, therefore Person-Job Fit is likely to reflect current experiences and work attitudes. Employers need to consider the dynamic nature of matching individual and organizational needs for their people management systems to be effective. When employees experience a strong sense of Person-Job Fit they tend to express a strong affective orientation to the organization. This feeling of wanting to belong to an organization appears to enhance the likelihood of positive organizational citizenship behaviours (Brkich, 1997, 2002). Employers and employees are to gain from the knowledge of this construct, as employees may enhance the likelihood of positive organizational citizenship behaviors, and as employers can greatly benefit in terms of improved

organizational performance and adaptability from employees who contribute through making extra efforts and express a willingness to participate, change and innovate.

A Person-Job Fit Scale has been introduced by Brkich in 2002<sup>5</sup> (initially constructed in 1997; Brkich, 1997) as a nine-item unifactorial instrument assessing an individual's perceptions of the match between his/her knowledge, skills, abilities, values and needs, and the job requirements. Construct and criterion-related validity have been demonstrated by correlating the Person-Job Fit Scale with empowerment, job satisfaction and organizational commitment. Brkich, the originator of the Person-Job Fit Scale, states that the reliability of the scale is successfully supported by the nine items of the scale and that the construct itself has a convergent relation with the prediction of future occupational satisfaction and with the emotional devotion to the job and the firm offering it. Person-Job Fit is then a global measure, overcoming the "matching along the same dimensions" problem of two scores: one on personal characteristics and the other on the work environment. Thus, personal dispositions and situational or organizational characteristics are addressed at the same time as a whole and not as a sum of the parts. The scale items focus on the "match" and "suitability" of an individual's current job. Employers and employees are to gain from the knowledge of this construct: employees may enhance the likelihood of positive organizational citizenship behaviors; employers may benefit in terms of improved organizational performance achieved through understanding the dynamic nature of matching individual and organizational needs.

### **Linking our two studies**

The Person-Job Fit unifactorial structure has been supported by its creator for a number of samples. Although the scale was created for the Australian population, under the high levels of the Australian cultural diversity (more than 40 main ancestries and more than 110 less prominent ones), it has not yet been tested cross-culturally. According to Kline (1993), exploratory factor analyses for less than ten items is not suggested, thus the Person-Job Fit structure might preferably remain unifactorial in such a study to achieve maximum stability levels in the analysis. However, this, along with the country-clustering solution, would also remain to be tested in this study.

For this study and in relation to Study #1, if we could employ relevant data (i.e., EVS Work Values) referring to psychological correlates of the construct under investigation (that is, Person-Job Fit) and then gain information from the correlate data in order to form broader and more homogeneous subsets of countries (in terms of culture), we might be in a position to at least reduce bias in terms of culture for the target measure (Person-Job Fit). Thus, the main question in this study is whether these psychological variables (EVS work values) could define clusters for a broader set of countries ( $n = 33$ , Study #1) for us to be able to identify the cluster each available country in the Person-Job Fit sample belongs to. We could, thus, group these available countries to larger sets and then possibly achieve lower levels of bias in terms of culture.

To test for the above question, we followed a three-fold design: a) we first tested for factor equivalence levels across the four countries (Bulgaria, the Netherlands, Finland, and Greece) for which there was Person-Job Fit data availability; b) based on the EVS clustering on Work Values, three "clusters" or groups of countries were visible, as Bulgaria and Greece were forming a separate cluster, so we tested for factor equivalence across these three groups (the Netherlands, Finland, and Bulgaria-Greece aggregated) in an attempt to compare across units that are more culture-homogeneous; c) we finally tested for a possible inflation effect, in terms of group-homogeneity artifact, through factor equivalence across two occupational groups (regardless of culture), one consisting of participants with the same occupation (university staff members), and the other group consisting of all other occupations present in our data.

### **Method - Study #2**

**Samples.** In total, 422 adults participated in this study. Of them, 118 were Bulgarian, 123 were Greek, 89 were Dutch, and 92 were Finnish. Age varied from 20 to 70 and the sex



distributions were slightly skewed in favor of females, with the opposite being the case in the Netherlands. In respect to occupation, all respondents were university staff members in the Bulgarian and Dutch samples; in the Greek sample, 39 respondents were university staff members, 39 were taxation officers, and 45 were computer data-bank operators. Finally, in the Finnish sample, most respondents were employed in the health sector, but many other occupations were present (such as education professionals and office workers).

**Measures.** The nine-item questionnaire, as it has been proposed by Brkich, consists of short statements such as “I feel that my goals and needs are met in this job” or “My current job is not really me” (for the scale items, see also Brkich et al., 2002). These are evaluated by the respondents on a seven-point Likert-type scale<sup>6</sup>. Although the author of the scale has supported unidimensionality of the construct, there were strong indications in the present data for two-factor structures, which were the ones we pursued in the analysis. A final note is that the averaged (across items) mean response for each of the four countries studied ranged from .52 to .56, with a variance for the aggregate measure being close to maximum.

**Design.** Three separate sets of analysis were carried out. All were conducted using the same statistical rationale under different research conditions. We tested **i)** across all four countries separately, **ii)** across three “clusters” of countries (Bulgaria and Greece being clustered through the EVS Work Values analysis in study #1), and **iii)** across two occupational groups, a homogeneous one (university staff members only) and a non-homogeneous one (any other occupation), irrespective to country. The methods of statistical analysis were based on multilevel covariance structure analysis, employing the Muthén methods (1994) as extended to factor analysis by Van de Vijver and Poortinga (2002). For each of the three research conditions, we calculated the between-groups correlation matrix along with the pooled-within groups correlation matrix and we factor analyzed each of them separately, forcing a two-factor solution. We then performed a Procrustean rotation to arrive at the final solution, describing a statistically universal structure for the groups in the analysis. We then examined the plausibility of such a “statistical universality” by means of the intraclass correlation coefficients accompanying each analysis, again as given through the Muthén algorithms. We were then able to suggest which of the “statistically universal” factor structures, as well as under which research condition, was less affected by bias due to the groups involved in the analysis. The criterion of a maximum average intraclass correlation coefficient of .05 should be met to support absence of bias in terms of the three groups (countries, clusters of countries, occupations).

## Results - Study #2

**i.** In this attempt, all four countries were treated as separate groups, and the analysis was applied across all four sampling units. This is the traditional way of conducting cross-cultural comparisons in terms of factorial structure equivalence. Hence, each country in the study is treated separately under the assumption that its culture is not similar to the culture of any other country studied. In such a way, the null hypothesis in respect to factor equivalence is that countries are *a-priori* entirely different in respect to their factor structures. Accordingly, the covariance structure analysis that follows is based on this hypothesis, calculating estimates based on this maximal divergence.

Following estimations of the between-groups and pooled-within groups correlation matrices, the intraclass correlation coefficients for this analysis across all four countries were computed. Then, the statistically “universal” factor structure was calculated (Table 2). Although this structure seemed rather acceptable hermeneutically, the intraclass correlation coefficients suggested that its “statistical universality” could not indeed be supported. The average intraclass index was .13, with the second, third, fifth and ninth items being the most discrepant ones. As for the factor solution itself, three of the nine items were cross-loading (with a cutoff score criterion of  $|\lambda_{.40}|$ ), obscuring factor identification.

**ii.** In this attempt, we aggregated the Bulgarian and the Greek data, as if they were collected from the same culture, according to the membership of both these countries in the

same cluster defined by the EVS Work Values. We then contrasted this aggregate to the Finnish and Dutch data, as if there were three and not four countries in our original pool of samples. The rationale is exactly the same with (i). The only difference is that, in this case, higher levels of culture homogeneity may have been achieved, as the possible *a-priori* similarity between two or more countries has been accounted for. However, the most important gain goes beyond that: by clustering *a-priori* similar countries (according to the correlate measures), we juxtapose them to the rest of the countries, which in turn may be clustered along with other countries. Thus, it is not the similarity gain which matters most, but the ability to distinguish more clearly amidst clusters formed by homogeneous units, those computed via correlate measures.

We repeated the statistical analysis and arrived at a two-factor structure as shown in Table 2. The cross-loading items (with the same cutoff score criterion as above) were now two, instead of three. Even though this still poses a problem in factor identification, it was clearly better than the solution in (i), at least by 11% (one out of nine items). The important profit surpassed the structure gains, since the plausibility of this structure as a statistically universal one was supported. Indeed, the average intraclass correlation index was now only .04, with the second and the ninth items being the most discrepant ones, although these discrepancies did not exceed .08. It was then evident that the aggregation of the two countries into one cluster enhanced our levels of achieving better statistical factor universality across all compared units.

Nevertheless, an objection might be that the aggregation itself created this outcome simply by homogenizing one of the compared units. This allowed for artificial inflation of concordance among raters, resulting into better intraclass correlation coefficients. In line with this, however, any homogenizing procedure would have created the same effect, which was to be tested in the next and final attempt of our analysis.

**iii.** According to Guilford (1954), population sampling is important for factor analysis and certain controls can facilitate bringing out a factor structure more clearly. The population should be homogeneous in respect to variables which the investigator does not want to appear as common factors. The variables that will be included in the factor analysis should have substantial variances. If some common variables like age, sex, educational level or intelligence are not controlled, some factors may appear to be correlated with each other because of their correlation with these variables, even if they are actually uncorrelated. Second-order factors can appear that represent only characteristics of the population sampled and not psychological relationships between the factors. Such theoretical lines emphasize the need for homogeneous sets to be analyzed and imply the possibility of the homogeneity itself, thus artificially inflating the results. Such an “overshooting” cannot be ruled out unless tested for. For this reason, we re-analyzed the data by forming two separate groups of respondents, one consisting of university staff members only (an occupationally homogeneous subgroup) and the other consisting of any other occupation present in the data (non-homogeneous subgroup). By repeating the analysis, we would be able to re-enact condition (ii) without involving countries in the homogenization procedure (homogeneous cluster vs. countries remaining inhomogeneous in the comparison), but taking types of occupation into consideration.

The results reached in (iii) through the same methods as employed in the previous two attempts did not support a clear factor structure (Table 2), although we must admit that the constructs are the same with the solution in (ii). This means that the structure itself is not vastly affected – as the current solution bore exactly the same cross-loadings with solution (ii) and was very close to solution (i) as well – and that in its interpretation, each factor would yield approximately the same constructs in any of the three attempts. However, it is the intraclass correlation indices which are vastly different, especially in this last attempt (iii). The average intraclass index at (iii) reached .22, with many items exhibiting large discrepancies. Thus, although the factor structure, as reached under all conditions of analysis, is the same in terms of interpretation, *the levels of statistical support in each case are not the same, with acceptable levels only under the clustering research condition.*

**Table 2**

*Person-Job Fit: Procrustean Factor Solutions for Each of the Three Research Conditions*

	Across all 4 countries		Across 3 "clusters" of countries		Across 2 types of occupation	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
Item 1	.71	-.07	.75	-.05	.70	-.05
Item 2 *	.01	.76	.11	.75	.03	.73
Item 3 *	.55	.51	.57	.54	.55	.49
Item 4 *	.73	.29	.74	.30	.73	.27
Item 5	.64	.24	.65	.30	.64	.21
Item 6	.67	.44	.68	.47	.68	.42
Item 7 *	.08	.76	.06	.77	.03	.76
Item 8	.40	.51	.37	.49	.37	.52
Item 9	.31	.59	.37	.60	.32	.58

\* Recoded items

Summarizing briefly, our Person-Job Fit data, as available for four countries, and as factor analyzed under three conditions, satisfied the cross-cultural statistical assumption of minimal bias in terms of culture only when the clusters of countries were formed and compared. Having arrived at those clusters through our correlate measures, we can suggest that our methods can be employed whenever a researcher is interested in clustering the countries under comparison on the basis of a correlate to his/her own target measure. Such correlate measures are usually available through other independent studies, such as the EVS. Enhancing statistical support in any cross-cultural comparison cannot be overlooked, but can only be tackled.

## General Conclusion

Many ways of handling bias in terms of culture have been proposed, some of methodological nature and others of statistical intervention. However, it is also a fact that such methods of bias in terms of culture elimination are not the mainstream in cross-cultural studies; this might be due to many reasons such as the focus of the study, its complexity, its research questions, other bias control methods applied, etc. Attempting to describe more possible ways of addressing the same "bias issue" could enhance cross-cultural research. The method proposed in the current study followed an alternative path, in the sense that the intervention proposed is not a methodological one (i.e., controlling for bias anterior to the final analysis) but a statistical one, which can be carried out during covariance structure analysis, without eliminating any of the items employed. A necessary prerequisite is, however, that clusters of countries should be possible to attain through correlate measures, gained from other research efforts. In line with Georgas and Berry (1995), the quest for such clusters of countries on different psychological constructs might give rise to new waves of research in cross-cultural psychology.

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## Footnotes

<sup>1</sup> We would like to sincerely thank the two anonymous reviewers for their valuable comments and suggestions during the revision of this chapter.

<sup>2</sup>The Person-Job Fit research project was partially supported by the University of Athens Special Research Funds (ELKE), through “Kapodistrias” grant KA 6437.

<sup>3</sup>The four countries were employed (before even computing the clustering solution and before available data for the Person-Job Fit) as we were not aiming at showing similarities or differences across specific countries or clusters of countries, but rather were we trying to test our method of country-clustering on the basis of the already available data of these four countries.

<sup>4</sup> with this mean being equal to  $p$ , accompanied by a  $p(1-p)$  variance for each item.

<sup>5</sup> Mariana Brkich is the author and copyright owner of the Person-Job Fit Scale; her permission is required for use or adaptation of the Person-Job Fit Scale.

<sup>6</sup>In this study, a binary (“yes-no”) response scale was adopted, as *Pearson r* indices computed at the ordinal level of measurement would not be ideal for covariance structure analysis that would follow; in contrast, *Phi* correlation coefficients (as computed between binary measures) are arithmetically the same with the respective *Pearson r* indices which are by default assumed and employed in factor analysis by popular packages such as SPSS. At the same time, these *Phi* indices are suppressed by the very fact that they are constructed not to misuse ordinal data; they are also theoretically eligible for factor analysis (Kline, 1993, pp. 137-138). Thus, no statistical assumptions were violated and the data were factor analyzed under even more stringent conditions than the usual ones, as the *Phi* matrix is prone to low inter-item correlations and low variance, and as the alteration of the original response scale might lead to uniform inflation of bias in terms of culture to be dealt with through our methods.

## Social Support Networks on International Assignments

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### Abstract

This study presents the role of social support and of networks for staff of small- and medium-sized enterprises and large corporations on foreign assignment. We used both, a qualitative and quantitative approach: qualitative interviews of staff of small- and medium-sized enterprises revealed the special need of support within the scope of the assignment and the immense significance of a well-functioning, supportive network. A quantitative survey with 143 respondents examined the relation between the phases of an assignment for satisfaction, stress, and company support. The outcome was that critical phases of foreign assignment were the sojourn and the return phases, marked by less life satisfaction, greater job stress and less perceived company support. We differentiated between source of support (network partner) and type of support (socio-emotional vs. instrumental). Consistent with our hypotheses, job satisfaction and job stress could be predicted by source of support and type of support, whereas life satisfaction could only be predicted by source of support. Implications for expatriate adjustment research and practice are discussed.

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We are grateful to the Bavarian research project fortrans funded by the Bavarian State, Ministry of Science, Research and Arts.

Due to the pressures of competition from the globalization of markets, professional experiences have gained in importance, and in fact have become a vital asset (e.g., Carpenter, Sanders, & Gregerson, 2001). In particular, multinational companies regard foreign assignment experience as a market advantage (Spreitzer, McCall, & Mahony, 1997). For employees, international professional experience in this context has become a prime prerequisite to becoming an executive (e.g., Daily, Certo, & Dalton, 2000).

This growing trend to send staff on foreign assignment is accompanied by the need to know what has to be done for the expatriates to adjust successfully. For the individual employee, working in a foreign country means major changes in various areas for which he/she has to be prepared and then supported during his/her foreign sojourn. If this does not occur, there is a risk that the employee may become stressed, may become unable to work effectively, and, in the worst case, may have to end his/her sojourn prematurely.

For instance, Wang and Kanungo (2004) demonstrate that the role of interpersonal networks is often neglected and that it has a direct and a significant positive influence on the transferee's well-being. Caligiuri and Lazarova (2002) developed a model showing the relationship between social network, social support, and adjustment. Caligiuri and Lazarova (2002) assume that social interaction and social support (e.g., by example family members, co-workers in the country of sojourn, transferees from home and other countries) can help mobilize psychological resources that can intensify recognition and confirmation, which on the other hand is able to substantially improve intercultural adjustment. Social support can act as a buffer against stress that usually occurs when the transferee tries to adjust to the new environment. Successful intercultural adjustment is closely related to network partners and social support.

### Theoretical Background

In recent years, a number of research projects have focused on *social support* in various contexts (family, friends, work) (e.g., Stroebe & Stroebe, 1998; Glazer, 2006). The concept of social support is founded in various research traditions which also deal with the interrelationship of social support and mental health.

From the standpoint of a resource concept (Udris, 1989), social support is, on the one hand, an external *resource* ("receive support"); simultaneously it is an internal resource that an individual can develop, respectively forget, ("provide support") (Udris, & Frese, 1999). There are different forms of social support (Duecker, 1995): material support (e.g., financial), support in the form of helping behavior (e.g., care in the case of illness), emotional support (e.g., affection, trust or sympathy), feedback (e.g., social confirmation), informative support, orientation assistance (e.g., advice), positive social activities (e.g., fun and recreation) being part of a network.

Many studies (e.g., in the overview of Cohen & Wills, 1985) showed a positive relationship between social support at work and the well-being of those who receive the support. Frese and Semmer (1991) name further social support mechanisms: First, social support is a primary need, in which humans have a phylogenetic need to work in a social group. The lack of social support automatically leads to a diminution of well-being. And second, the positive feedback connected with social support directly affects self-confidence and thus other components of mental well-being. Social support and the formation of networks are, therefore, closely related: the network concept is considered broad and multidimensional (Inkpen & Tsang, 2005) and consequently is suited as an "umbrella concept" for social support. There is a difference between the source of social support, i.e., the network partners providing the social support and the manner of support. A review literature by Ong and Ward (2005) showed four core functions of social support (Vaux et al., 1987; Wellmann, 1985): 1) *Emotional support*, e.g., assertion or displays of love, care, and sympathy; 2) *social companionship*, e.g., belongingness to a social group that provides company for a variety of activities; 3) *tangible assistance*, e.g., concrete aid in the form of financial help, required services or material resources; and 4) *informational support*, e.g., the



communication of opinion or facts relevant to a person's current difficulties (e.g., advice, personal feedback).

In the case of foreign assignment, different relationships within the interpersonal network of an expatriate are of interest: the relationship to the spouse, to friends and to co-workers, the two latter however matter in both the home country as well as in the country of sojourn. These networks may be considered an objective reality within which there are dyadic relationships of different strength.

Social support is an essential component of our daily lives and takes on a special significance in the context of assignment to a foreign country. Adelman (1988, p. 183) expresses it this way: "Our ability to cope with daily stressors, critical life transitions and environmental or cultural change is inextricably tied to the social ecology in which we are embedded." The entire social network and the accompanying social support of family, friends, and co-workers are of eminent importance in eliminating the risk of failure of the foreign assignment.

To facilitate adjustment during the sojourn, some large corporations apply comprehensive mentor programs, which are embedded in personnel development (Noe, Greenberger, & Wang, 2002; Peters, Schmicker, & Weinert, 2004). Hechanova, Beehr, and Christiansen's (2003) meta-analysis describes the antecedents and consequences of the adjustment of transferees on foreign assignment. Self-efficacy, i.e., a person's belief in his/her ability to act, the frequency of interaction with people from the host country, improved interpersonal skills and family support proved to be the main predictors for successful adjustment to the overall environment.

The mentioned risks and the antecedents for successful adjustment have been primarily studied in large corporations (e.g., Mendenhall, & Oddou, 1985; Ward, 1996). What the situation in small and medium-sized enterprises (SMEs) is like remains unclear. It may be assumed that the situation is especially difficult, because SMEs do not have the corresponding resources at their disposal. In this context, interpersonal networks for SMEs transferees on foreign assignment are gaining in significance. However, their effect is often underestimated by the company.

## Study 1

In approaching the problem, we conducted qualitative interviews of an explorative nature and a quantitative survey for the three phases – preparation, sojourn, and return (cohort design). Participants of the preparation and sojourn phase will be interviewed a second time to measure changes.

To differentiate between German SMEs and large corporations in these studies, we agreed unanimously on the following qualitative defining characteristics of SMEs: 1) the owner plays an active, decisive role in running the company, i.e., usually management and owner are the same person, 2) high degree of product, service or market specialization, 3) a legal entity, and 4) management's self-concept ("We are a small/medium-sized enterprise").

We chose a qualitative approach, because it offered more flexibility and openness for the interviewees. Moreover, the results in this new field may be quite surprising. In accordance with network analyses (Jansen, 2003), the network of interest was selected from the perspective of the interviewee, i.e., an ego-centered network with the transferees as ego. Alteri are family, friends, locals, colleagues, and the company (pointed questions were asked about them) and other network actors as the transferee perceived them. The study was of an explorative nature. The results were used to conceive a comprehensive, quantitative survey. Guidelines were developed separately for the preparation phase as well as for the two phases sojourn and return as they address different problems. The guidelines for preparation were divided according to the following items: preparation measures, questions on the network, personal significance, and the validity of the networks, support by the network for preparation, expectations, description of own and foreign culture of destination, potential particularities for the SMEs, as well as demographics.

The guidelines for the sojourn and for the return inquired about the support by the network during the sojourn and the return, to what extent the network participated, critical incidents (Flanagan, 1954) positive or negative, description of the own and foreign culture, whether there were things particular for the SMEs and demographics.

These first guidelines were intensively discussed with experts from practice and research as well as with students. The guidelines were then developed further and subsequently tested in five test interviews (countries of assignment: China/Taiwan/Japan/South Africa/Indonesia) and then revised again. Various methods were applied to select the participants: companies were approached via databases and internet forums as well as via department contacts and private initiative. The interviews were taped, transcribed, and subsequently written up without naming the respondents. The interviews underwent thorough qualitative analysis. The MAXqda program was used to encode the interviews (Schaaf, 2007). Evaluation was based on Mayring's (2007) qualitative respectively structuring content analysis.

## Results

On demographics: All the respondents were male, between 27 and 47 years old. They were in the following phase of the foreign assignment: two before the first foreign assignment, two following their return home; twelve had already previously been on foreign assignment. The interviewees worked in SMEs in Munich and surroundings in the following fields: electronics, conveyor systems, paper manufacturing, engineering, and mechanical engineering. The destination was in eleven cases China, other destinations were Japan, Thailand (2x), Indonesia, and South Africa.

Twelve of the interviewees told us that they saw a great need for advice and support particularly for SMEs regarding preparation for the foreign assignment by providing corresponding information on culture and civilization as well as support during the sojourn and upon returning home, for example, in the form of training, cultural information, and language courses.

For all 16 respondents, family assumed a very important value. However, it was also stressed that keeping in contact and cultivating contacts, mainly over the telephone and via email, demanded special effort. Especially keeping in contact with friends suffered due to lack of time: "One can only work, eat and sleep." If accompanied by a spouse: "Only a busy wife is a good wife, a bored wife is torture."

A special focal point is the experiences reported about China. Eight of the interviewed expatriates who worked in China stressed how important contacts are for the Chinese and that in China "networking runs deeper." A significant problem is language. It is not easy to find Chinese staff with good English language skills: one is dependent on interpreters. They perceived major differences between German and Chinese culture. It is, therefore, essential that the staff is prepared for the culture to prevent culture shock. One respondent who considered himself successful stressed the importance of congeniality, and to not act superior. He built up his own network by playing sports with his Chinese colleagues.

Analysis of the networks revealed that the network partners, which, apart from family and friends, also include co-workers, the company in general, locals, other expatriates, and supportive organizations, are considered subjectively very important (especially the family) and perceived as helpful. However, there is hardly any contact between them. The family offered general support but did not provide any concrete assistance during the sojourn; circles of friends diminish, colleagues often do not realize the expatriate's extraordinary situation. Nonetheless, the entire interpersonal network and the connected social support of family, friends, and colleagues was immensely important in reducing the related risks, and thus for the success of the foreign assignment. In other words, more intensive interaction between the different interpersonal networks and the network partners can be very important for effective staff support. It is also helpful to have mentor programs integrated in human resources development which may be able to take this interaction into account and promote it.

Also mentioned was that the colleagues in the country of assignment and special organizations are other important network partners. Generally, companies only provide the usual information given for normal business trips. Although literary sources (e.g., Hechanova et al., 2003) consider contacts to locals a feature of successful integration, in reality they rarely come about, often due to lack of time. Individuals sent on foreign assignment for short periods lose their usual support in Germany, but do not receive the same degree of support in the country of sojourn. In this case, too, there is a definite need for action, because building new networks is tremendously important for successful business relations.

## Study 2

It is assumed that the different areas of social support are related to the different facets of adjustment, because successful adjustment is indicated, e.g., by a high degree of job/life satisfaction, a low degree of stress, and strong ties to the company (Caligiuri & Lazarova, 2002). As in our study we refer to Caligiuri and Lazarova's model (2002), as indicators we utilize successful adjustment, life satisfaction, job satisfaction, and job stress. In addition to these, there are other factors known for successful adaptation, such as contact to locals, acculturation phases (etc.), which this study will not take up in more detail.

We differentiate between the source of social support and the type of social support. The network partners are the source of social support. Frese (1989) differentiates between the subscale support from supervisors, co-workers, friends, spouses among others. We employed this scale to determine the source of social support, and Ong and Ward's scale (2005) for the type of social support. Ong and Ward (2005) included these four domains (*Emotional support, social companionship, tangible assistance, informational support*) in the item-generation phase of the construction of their Index of Social Support for Sojourners (ISSS) scale and showed a stable two-factor internal structure of socio-emotional support and instrumental support. There are already several studies available on spouse support: Important for the success of a foreign assignment is a high degree of partner interdependence (Krause-Nicolai, 2005; Konopaske, Robie, & Ivancevich, 2005). Moreover, due to a spillover effect there is also an interdependence of the adjustment of expatriate couples (Shaffer & Harrison, 2001; Takeuchi, Yun, & Tesluk, 2002). It is also assumed that spousal social support facilitates adjustment in a new culture. Particularly life satisfaction is strongly related to social support by the companion. Moreover, life satisfaction is also strongly related to social support by friends. In this context we tested the influence of source of support and type of support on life satisfaction.

*Hypothesis 1: Successful adjustment in the realm of life satisfaction may be predicted by the source of support and the provided type of support. We assume that especially socio-emotional support and support from spouses/partners and friends contribute to life satisfaction.*

It may be assumed that a high degree of adjustment in the job realm is particularly related to the perceived support by the company (Rhoades & Eisenberger, 2002) and to the support by members of the company (Black, Mendenhall, & Oddou, 1991). In this context we tested the influence of instrumental support on job satisfaction. Moreover, job satisfaction is also strongly related to social support by co-workers and supervisors. However, there may also be cross-domain effects of social support from family and friends on job satisfaction. In this context we tested the influence of source of support and type of support on job satisfaction.

*Hypothesis 2: Successful adjustment in the realm of job satisfaction may be predicted by the source of support and the provided type of support. We assume that particularly instrumental support, as well as support from co-workers and supervisors, contributes to job satisfaction.*

Social support helps to reduce or neutralize the negative effects of stress and has a positive effect on health and well-being (Udris & Frese, 1999). It is, therefore, presumed that social support has a positive effect on the degree of job stress. The influence of job stress in

general has seldom been investigated. Usually the effect of role stressors such as role ambiguity, role conflict, role novelty or role overload on expatriate adjustment (e.g., Bhaskar-Shrinivas, Harrison, Shaffer, & Luk, 2005; Black, Mendenhall, & Oddou 1991) was studied.

*Hypothesis 3: Successful adjustment in the realm of job stress may be predicted by the source of support and the provided type of support.*

## Method

### Participants

In order to study certain aspects more closely and put them on a broader basis, we conducted a quantitative survey for SMEs and large corporations. This study is part of a larger panel study investigating the role of providing employees on foreign assignment in SMEs with social support.<sup>1</sup> We approached the companies by databases, personal contacts or by writing to them. A panel study was planned that takes the preparation phase as the point of departure, the assignment as the 2<sup>nd</sup> question period, and the return as the 3<sup>rd</sup> question period. Presently, the first questioning of all participants has been concluded. It was conducted as a cohort analysis, i.e., respondents were from all three phases. We have finished the first interviews of the cross-section study (inquiry period: from April 2007 to December 2007). All 143 individuals were interviewed: 16 in the preparation phase, 90 in the sojourn phase, and 37 in the return phase. The participating companies were in various industries, e.g., automobile, construction, mechanical engineering, telecommunications, IT.

45% of the participants were members of SMEs, 55% of large corporations. The age of the transferees was 38.33 (s.d. = 8.58) and ranged from 25 to 63. 17% of the respondents were female. 80% of the respondents said they were living in a stable relationship or were married; about half of the respondents were accompanied by their families (52%) and children (50%). On average, participants in the preparation phase planned to go abroad for two years, participants in sojourn phase indicated on average 3.3 years (s.d. = 2.24) and in return phase 2.5 years. Three different versions of the questionnaire were developed for the preparation, sojourn, and return phases, respectively.

These data were compiled online, because all the participants were outside the country at the time. Contact was made with the company in Germany which then conveyed the link to the expatriates. The most common destinations were China (34x), USA (31x), United Arab Emirates (9), followed by Brazil and Great Britain (6x), Kazakhstan (3x), and Slovakia (3x). Mentioned twice each were Germany, India, Japan, and the Ukraine. Participation was voluntary.

### Measures

All respondents rated the extent to which they agreed with statements on a scale from 1 to 5.

**Source of support – Network partner.** We used Frese's (1989) 20-item scale to measure sources of support given by network partner. Frese's scale (1989) differentiates between support of superiors, co-workers, life-long companions, and friends. Depending on the network partner, an overall value can be calculated. Cronbach's alpha for the scales was adequate to high. (For superiors  $\alpha = .91$ , for co-workers  $\alpha = .82$ , for spouse/husband  $\alpha = .94$ , and for friends  $\alpha = .84$ .)

**Type of provided social support.** Type of social support was measured with Ong and Ward's 18-item-scale (2005), translated into German and validated by Spiess (2007), differentiates between two types of social support: socio-emotional and instrumental support. This two-factor structure has empirically proven itself. Cronbach's alpha for the scales was high (for socio-emotional support, Cronbach's alpha was .89, for instrumental support .92).

**Job Satisfaction.** Agho, Prise and Mueller's (1992) 6-item scale was used to measure job satisfaction. Cronbach's alpha for the scale was adequate ( $\alpha = .82$ ).

**Job Stress.** The interviewees were questioned about stress at work using a scale developed by Sosik and Gotshalk (2000): respondents rated the extent to which they agreed with statements such as “My job makes me jumpy and nervous.” Cronbach’s alpha for the scale was adequate ( $\alpha = .79$ ).

**Life Satisfaction.** The interviewees were asked to rate life satisfaction in eight non-job areas; such as satisfaction with health, professional success or with income. Cronbach’s alpha for the scale was  $\alpha = .68$ .

**Control variables.** A 1-item measure was used to determine whether or not the transferee was accompanied by his/her family. The item was “Did your family (spouse, companion, children) accompany you?” and could be answered with a yes or no answer. Assuming whether or not the family accompanied the expatriate may make a difference, we controlled whether the family joins the expatriate.

**Open question.** With whom did you spend your leisure time?

## Results

### Analytic Strategy

We standardized the social network variables (network partner supervisor, network partner co-worker, network partner friends, network partner spouse/husband) by a Z-score transformation to increase interpretability (e.g., Cohen & Cohen, 1983). To test hypotheses 1 and 2, we performed three sets of hierarchical regression analyses: for life satisfaction, job satisfaction, and job stress. In step 1, we included family joins (0 = family does not join, 1 = family joins), sex (0 = female, 1 = male). In step 2, sources of support were included. In step 3, we included type of support (socio-emotional vs. instrumental).

### Descriptive Statistics

As the number of participants in the preparation phase was small, the comparisons are only descriptive. We approached the companies by databases, personal contacts or by writing to them. 45% of the respondents were employees of SMEs, 55% employees of large corporations. The average age was 38.33 years. The youngest was 25, the oldest 63 years old. The percentage of women was 17%. At the time of the survey, most of the expatriates had a steady partner or were married (80%). About half of the respondents were accompanied by their family (52%) and children (50%). Those in the preparation phase said that they would stay an average of two years. The average sojourn of those on assignment was 3.3 years. The average sojourn of those in the return phase was 2.5 years. The respondents were sent to various countries: mentioned most often were China (34x), USA (31x), the United Arab Emirates (9x) as well as Brazil and UK (6x each).

The comparison of the various phases on life and job satisfaction, experienced job stress and experienced company support revealed that all the interviewed expatriates experienced the sojourn phase significantly as most unsatisfactory and most stressful.

As a cross-section interview was carried out in the first interview phase, a phase comparison with little random samplings could be conducted. Our questions included life satisfaction, job stress, and perceived company support. Reported were only statistically significant results, adjusted/corrected. The value, adjusted/corrected in the parentheses, is an average value on a scale of 1 (unimportant) to 5 (very important).

Staff life satisfaction in the preparation phase ( $M = 3.6$ ;  $SD = 0.71$ ) was greater than in the sojourn phase ( $M = 3.2$ ;  $SD = 0.79$ ) and than in the return phase ( $M = 3.3$ ,  $SD = 0.69$ ), which is an indication of the stress experienced during the assignment or is an expression of too high expectations of the assignment. This is also confirmed by the job stress results (example item “My work is stress for me”). Job stress during assignment ( $M = 2.55$ ,  $SD = 0.6$ ) and upon return ( $M = 2.4$ ,  $SD = 0.73$ ) is greater than during preparation ( $M = 2.2$ ,  $SD = 0.50$ ).

The perceived company support during the sojourn phase ( $M = 3.0$ ,  $SD = 0.80$ ) is less than during the preparation phase ( $M = 3.4$ ,  $SD = 0.71$ ) and the return phase ( $M = 3.2$ ,  $SD = 0.75$ ).

Means, standard deviations, and correlations are depicted in Table 1. Non-standardized means and standard deviations of variables are listed for informational purposes only, because standardized variables are used in all the analyses except for the dependent variables. The directions of the correlations of all the experienced variables were in the anticipated direction.

**Table 1**

*Means, Standard Deviations, and Correlations<sup>a</sup>*

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Job Satisfaction	3.30	.76	.82									
2. Life Satisfaction	3.61	.58	.29**	.68								
3. Job Stress	2.48	.64	-.26**	-.28**	.79							
4. Socio-emotional Support	2.69	.95	.16	.11	-.08	.89						
5. Instrumental Support	3.08	1.00	.33***	.21*	-.27**	.76***	.92					
6. NP Supervisor/s	3.35	1.08	.34***	.31***	-.27**	.19*	.33***	.91				
7. NP Coworker/s	3.33	.77	.22**	.20*	-.13	.10	.30**	.36***	.82			
8. NP Spouse/Husband	4.00	1.37	.02	.33***	-.01	-.01	.04	.02	-.04	.94		
9. NP Friend/s	3.65	.91	.16	.38***	-.13	.09	.10	.34***	.24**	.13	.84	
10. POS	3.07	.79	.62***	.37***	-.26**	.19*	.35***	.46***	.29***	.07	.37***	.91

<sup>a</sup>  $n = 144$ ; reliability coefficients are reported along the diagonal: Means and standard deviations reported here are for non-standardized variables. NP Network Partner, POS Perceived Organizational Support.

Two-tailed tests: \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$ .

## Regression Analysis

Table 2 shows the results of the regression analyses. Models 1 through 3 report the constants and the standardized coefficients ( $\beta$ s) associated with each individual step.

Hypothesis 1 assumes that life satisfaction can be predicted by the source and the type of support. Life satisfaction can be predicted by social support by spouse ( $\beta = .26$ ,  $p < .05$ ) and by friends ( $\beta = .31$ ,  $p < .01$ ). This result supports hypothesis 1 for source of support but not for type of support.

Hypothesis 2 proposes that job satisfaction can be predicted by the source and the type of provided support. Job satisfaction can be predicted by social support by supervisor ( $\beta = .26$ ,  $p < .05$ ) and by instrumental support ( $\beta = .36$ ,  $p < .05$ ). The results support hypothesis 2.

Hypothesis 3 assumes, that job stress can be predicted by the source and the type of provided support. Job stress can be predicted by social support by supervisor ( $\beta = -.27$ ,  $p < .05$ ) and by instrumental support ( $\beta = -.42$ ,  $p < .01$ ) and by socio-emotional support ( $\beta = -.28$ ,  $p < .05$ ).

**Table 2***Results of Regression Analysis for Life Satisfaction and Job Satisfaction<sup>a</sup>*

Variable	Life Satisfaction			Job Satisfaction			Job Stress		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Intercept	3.49***	1.88***	1.80***	2.85***	1.90***	1.72** *	2.43***	3.06***	3.08***
<b>Step 1: Control Variables</b>									
sex	0.5	0.1	0.1	.24*	.21*	.19*	.03	.06	.08
family joins	0.6	0.1	0.2	.02	.06	.07	.04	.01	.01
<b>Step 2: source of support - social support by network partner</b>									
Friends		.31**	.32**		.10	.12		-.03	-.05
Wife/husband		.26*	.26*		-.01	-.01		.04	.04
coworker		.06	.03		.03	-.04		-.06	.02
supervisor		.16	.14		.26*	.18		-.27**	-.20*
<b>Step 3: Type of support</b>									
Socio-emotional support			-.03			-.15			-.28*
instrumental support			.13			.36*			-.42**
R <sup>2</sup>	.01	.26	.27	.06	.16	.22	.01	.09	.15
R <sup>2</sup> adjusted	-.01	.22	.22	.04	.11	.16	-.02	.04	.09

<sup>a</sup>n = 127. Values are standardized estimates. Two tailed tests: +p < .10, \* p < .05, \*\* p < .01, \*\*\* p < .001. Discussion

On foreign assignment, important were both an interpersonal network that provided social support and relations within the interpersonal network. In other words, to what extent spouses, friends, colleagues, and superiors are in contact with each other. The aim of the present study was, on the one hand, to examine the social networks of expatriates as a source of social support and, on the other hand, measure received type of support (socio-emotional and instrumental support) and their influence on adjustment.

Results of our qualitative study show that most of the respondents saw a great need for advice and support particularly for SMEs regarding preparation for the foreign assignment by providing corresponding information on culture and civilization, as well as support during the sojourn and upon returning home. Analysis of the networks revealed that the network partners, which, apart from family and friends, also include co-workers, the company in general, locals, other expatriates, and supportive organizations, are considered subjectively very important (especially the family) and perceived as helpful.

The social support scale permits measuring the social network of expatriates: the support of superiors, co-workers, spouses, and friends (Frese, 1989). In addition to this, Ong and Ward's

Sojourner Social Support Scale (2005) was employed to gain information about socio-emotional and instrumental support (type of received support).

First analyses show that the source of support (network partner), as well as the type of support, is very important for life and job satisfaction and for job stress in the phases of sojourn and return. For life satisfaction, the spouse and friends are more important than perceived socio-emotional support. For job satisfaction, the supervisor and the perceived instrumental support play a major role.

The initial stages of most expatriates' assignments are often associated with stress, disorientation, and loneliness (Caligiuri & Lazarova, 2002). In this phase, socio-emotional support can help them overcome negative feelings so that they experience these feelings as a normal part of the assignment and the adjustment process. Therefore, additional research that replicates and/or extends our findings is definitely required to discover the influence of network partners on adjustment.

### **Limitations**

The study's limitations relates to the fact that the study's data hitherto only comprise cross-sectional samples. In the long term, our research project will compile data in a panel study, which is presently not available. Once available it will be possible to compare transferees in the preparation phase, during the assignment, and in the return phase of a foreign assignment. This way, on the one hand, it will be possible to draw conclusions about causalities, thus to explain the direction of the relationship which hitherto could only be assumed on a theoretical basis. On the other hand, with a large set of data we will be able to test a model that integrates social variables (superiors, co-worker, spouse, friends), socio-emotional and instrumental support and shows their influence on the cross-cultural adjustment. Although our cross-sectional data do not allow for testing causalities, it highlights the importance of network partners for adjustment.

Another limitation may be potential threats of common method or same-respondent biases.

### **Implications for Research and Practice**

Despite these limitations, our study has a number of research implications. One significant implication is that the current investigation opens a new direction for expatriate adjustment research with regard to social support. We differentiate between the source of social support and the type of social support. Studies often investigate the success of a foreign assignment, e.g., cross-cultural adjustment, performance, and that the assignment does not end prematurely (Caligiuri, 1997). Other studies focus on the adjustment of the spouse and the spouse's influence on the success of the foreign assignment (e.g., Shaffer & Harrison 2001). However, it is relatively seldom that the topic of social support during foreign assignments is taken up. When authors deal with the social support, they usually consider only partial aspects of it. There are studies on spousal social support (e.g., Takeuchi et al., 2002) and others on the company support (e.g., Kraimer & Wayne, 2004; Rhoades & Eisenberger, 2002), whereas others concentrate on social ties (Johnson et al., 2003) or social networks (Borgatti & Foster, 2003).

Relevance in practice is the necessity to point out, on the one hand, that effective support measures have to be developed for employees sent on foreign assignment and, on the other hand, that in future concepts of effective support for staff on foreign assignment are also important. It is important to prepare the transferees better and with more relevance, and to provide them with information about the culture in addition to information about the country and the job. Equally important is that the company continues the support beyond the sojourn itself. Improving the contact between the network partners, which, apart from family and friends also includes co-workers, the company itself, locals, other expatriates and supportive organizations, can contribute to reducing the risks involved with the sojourn.



In conclusion, the present research takes a significant step forward and sheds light on the concept of social support and adjustment, and differentiates between source of support and type of support.

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## **Theory of Mind Understanding in Narration: A Study among Children from Different Socioeconomic Backgrounds in India**

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### **Abstract**

This study investigates the theory of mind understanding as reflected in the narratives of children from families of low as well as high socioeconomic-status (SES). A group of 30 Hindi-speaking children from six to seven years of age and their mothers participated in this study. Children were asked to narrate six stories prompted by pictures and standard verbal probes. In addition, they were also administered false-belief tasks to assess their theory of mind understanding. Later, their mothers were asked to narrate three stories to their children. Content analysis of the stories indicated the frequency of occurrence of words referring to mental states such as emotion, intention, thought, belief, etc. The low and high SES children differ in their reference to the mental state of the protagonist in the stories narrated by them. The result was interpreted concerning the landscape of action and landscape of consciousness discussed by Bruner (1986). Interestingly, even though all the children could refer to mental states in their narratives, approximately 50% of the children from low SES backgrounds failed in the false-belief task, indicating a lack of understanding of theory of mind. The narration by the mothers from high SES families was more elaborate with significant reference to the mental state of the protagonist as compared to the narration of the mothers from low SES families. A significant relationship between mothers' narration/theory of mind understanding and children's narration/theory of mind understanding was also observed.

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Over the past three decades there has been extensive research across the globe on children's development of a theory of mind (ToM). It refers to the ability to attribute mental states such as beliefs, desires, intention to self and others. During the preschool years, children begin to understand, predict, and explain their own and others' talk and action by attributing mental states to them, such as know, think, remember, forget, dream, pretend, etc. They come to see themselves and others as mental beings, that is, as people who hold mental states. Researchers have arrived at a consensus that children generally develop a theory of mind when they are three to five years of age. However, an individual difference in the rate of development of ToM has also been observed as an outcome of different contextual factors, like child's belongingness to a family with a low or high socioeconomic status, the birth position, the number of siblings, the amount of social and linguistic interactions that the child is exposed to, and many other socio-cultural factors. Some of this research evidence will be referred to later in this paper. The present paper reports a study on the development of theory of mind in children from Indian families with different socioeconomic statuses. The research was an attempt to provide evidence to the long awaiting question of the universality versus culture specificity of theory of mind development in children. Before moving on to the research in question, it is relevant to discuss and review the emergence and current status of research in the area of theory of mind development in children.

### **Development of a Theory of Mind**

Acquisition of theory of mind permits children to reflect on their own and others' mental states, and thus interprets human behavior in sensible ways. A theory of mind is a powerful social tool that makes an enormous difference to the child's development. It transforms the way children are able to see other people, and make sense of what they are doing. It allows the explanation, prediction, and manipulation of the behavior of others. Acquiring a theory of mind may well be instrumental in the development of particular forms of reasoning and, as such, may represent a significant step in cognitive development. Effects of the child's theory of mind, thus, spread across cognitive, language, and social development. By the time children are five years old, they understand that people's beliefs represent and may sometimes misrepresent the world, and that it is people's representation of the world that determines what they say or do. Using the false-belief paradigm of Wimmer and Perner (1983), researchers have clearly shown that, after about four years of age, children recognize that other people may hold beliefs that are different from their own; they understand that a person may believe something that they know to be false, and they can anticipate that the person will act based on their false belief. At the same age, children first understand the distinction between reality and appearance, that is, the distinction between what something is and what someone might believe it to be (Flavell, Flavell, & Green, 1983). Further, children's understanding of false belief and of the appearance-reality distinction is related to one another as well as to children's understanding of change in their own beliefs (Gopnik & Astington, 1988). Four-year-olds but not year-olds recognize that their own beliefs may change over time, and they can remember and report their earlier beliefs. Four-year-olds also understand the role of perception (Wimmer, Hogrefe, & Sodian, 1988) and point of view (Flavell, Everett, Croft, & Flavell, 1981) in belief formation. Furthermore, they can identify and remember the sources of their beliefs (Gopnik & Graf, 1988).

However, there is marked variation in the particular age at which children achieve success on false-belief tasks. Some children master false-belief understanding at three years of age and others not until five years of age (Jenkins & Astington, 1996). Wellman et al. (2001) conducted a meta-analysis based on the performance of preschool children on false-belief understanding. They found that a majority of three-year-olds performed at chance, or below, on false-belief tasks, whereas, by age five, success was widespread across all tasks variations. Based on their meta-analysis, Wellman et al. (2001) concluded that theory of mind understanding reveals genuine conceptual changes during the preschool years. So, what might account for these differences in ToM development? Some of the researchers have begun to address factors producing individual differences in ToM development. The next section addresses some of these issues in theory of mind development.

## Why and How Children Develop a Theory of Mind?

The issue of major concern among researchers in this area is why and how children develop a theory of mind? Keeping in line with the age-old controversy of biology and environment, theorists in this area also disagree regarding the biological or socio-cultural perspective to a theory of mind development. The ubiquitous use of mental state language and the fact that ToM exhibits a stable pattern of development among children have convinced many that our "theory of mind" is a biological inheritance. There is more or less an agreement on this issue among theory-theorists (Bartsch & Wellman, 1995; Gopnik & Slaughter, 1991), Modularity theorists (Baron-Cohen, 1995; Fodor, 1992; Leslie, 1994; Leslie, Friedman, & German, 2004; Mitchell, 1994), and simulation theorists (Harris, 1991; Johnson, 1988). **Theory theorists** argue that older children's and adult's knowledge of the mind consists of a theory, and that development in theory of mind is essentially one of the hypothesis testing. These arguments are part of a more general tendency to think of cognitive development in terms of theory formation (Carey, 1985, 1988; Gopnik, 1988; Karmiloff-Smith, 1988). **Modularity theorists** (Baron-Cohen, 1995; Fodor, 1992; Leslie, 1994; Leslie, Friedman, & German, 2004; Mitchell, 1994) have different views about what is acquired in ToM development and how. Almost everybody agrees that theory of mind development is dependent upon the biological maturation of genetically based neurocognitive structures, or modules, of the brain. Leslie (1994) and Leslie et al. (2004), for example, postulate the acquisition of ToM through neurological maturation of a succession of domain-specific and modular mechanisms for dealing with agent versus non-agent objects. **Simulation theorists** argue that children develop a concept of mind through experience and not through maturation or theory building. Some in this group say that children's early understanding is intuitive, rather than theoretical (e.g., Johnson, 1988). What the child understands is their own phenomenal experience. Through introspection, they become aware of their own desires, beliefs, and feelings, and then use this awareness in understanding others. Harris (1991) develops this idea in some detail. He argues that the child, who in the false-belief task, for example, tells you where the other person would search for the chocolate, is not making any theoretical prediction, but is engaging in mental simulation.

The problem with the above mentioned theories is that their approach to the issue of development of social understanding or understanding of a theory of mind is individualistic. The issue to be addressed here is whether theories start with the individual or focus on the influence of social context on development. According to Raver and Leadbeater (1993), the developmental question is "whether the true starting point is to be located in the single, isolated, free mind of the individual or in a social communal world of shared experience or language" (p. 355). The discomfort in reconciling between theory construction and social construction is also evident in the writing of Astington and Olson (1995), where they suggest an alternative to theory construction. According to them, children construct a theory about human talk and action through a process of enculturation in which children internalize the folk psychology of their particular culture. In this view, social construction is equivalent to enculturation and the ability to "participate in a kind of interpretive discourse. [...] In the one case, the child is seen as constructing concepts, in the other as internalizing social understanding." (p. 185). **The enculturation hypothesis**, a radically different view, suggests that theory of mind develops to help us regulating our interaction with others, and is primarily the result of socialization or enculturation. Internalization, in this socialization approach, involves making external social norms internal. Astington and Gopnik (1991, p. 19-20) wrote: "on this view folk psychology is ... what Wittgenstein would call a 'form of life', a set of social and cultural practices and conventions. The mechanism for development in this view would be socialization and enculturation – children would learn how to psychologize appropriately in the way that they learn to dress properly or eat politely." However, there has been an attempt by the **simulation approach** and the **enculturation hypothesis** to consider the role of social landscape, as it minimizes the active social interaction in developing mental state reasoning. Concepts about mind are not just passed on from one to the other social group, nor are they completely formed by individual child-theorists. Instead, children gradually construct social understanding through the regularities they experience in interacting with others (Carpendale & Lewis, 2004). In the

course of development while constructing knowledge of the physical world, children are also constructing knowledge of other people. Triadic interaction between the child, another person (or several), and the world is essential for development of social understanding, specifically the development of a theory of mind. Around the age of two years with the acquisition of language, children's interaction in a social context becomes more sophisticated. Children now start to talk about mind, which is indicated in their acquisition and extensive use of mental state words (Babu, 2009). Language starts to function as a tool facilitating social interaction as well as a tool that is facilitated by social interaction. Mental state language here is viewed as an activity and not simple sharing of information. Learning to use mental state words is rooted in children's everyday experience with coordinating attention with others. Children learn about the meaning of mental state words through learning the adult use of such words, which became the criteria for such use. Once children start to talk about the social, emotional, and psychological world, they can begin to reflect upon and think people's action in psychological terms. In this context, it is important to note the relevance of **narrative practices as a language activity** in a social context. By engaging themselves in narratives, children learn to practice mental state reasoning and evaluate the criteria for validating such reasoning. Thus, narrative practices at home and at preschool provide a rich avenue for development of theory of mind. The narrative practice hypothesis of Hutto (2007a) will be discussed in the next section as an alternative explanation for theory of mind development. At this point, however, it is important to focus the discussion on Bruner's theorization of the dual landscapes of narratives. This has significant implication for delineating the role of narrative practice as an important tool for development of theory of mind.

### Theory of Mind and Narratives

Theory of mind is intrinsic to narration. According to Bruner, an important and noticeable feature of a story that appeals to everybody is that it simultaneously deals with reality, i.e., events and actions in the real world, and a character's perception of reality, i.e., their beliefs, desires, and intentions. Bruner says: *"Story must construct two landscapes simultaneously. One is the landscape of action where the constituents are arguments of action, agent, intention or good situation, instrument something corresponding to story grammar. The other landscape is landscape of consciousness: what those involved in the action know, think or feel or do not know, think or feel"* (p.14). Bruner (1990) argued that an individual must comprehend both landscapes simultaneously to understand a story. Indeed, evidence suggests the importance of the landscape of consciousness in order to organize and comprehend the stories. Thus, understanding stories, as well as narrating them, requires an awareness of story characters' mental representations, i.e., a character's thoughts, beliefs, and feelings. Research shows that while there is reference to dual landscape in the story narrated by a five-year-old, there is only reference to the landscape of action in the stories narrated by a three-year-old. Feldman, Bruner, Renderer, and Spitzer (1990) found that participants who heard a story containing the landscape of consciousness, as opposed to one containing only the landscape of action, were able to provide information beyond what was directly given in the stories. They not only made references to the characters' thoughts and feelings, but also gave more concluding interpretations of the story and were able to organize the events of the story in a better way. Astington (1990) suggested that young children fail false-belief tests because they understand the landscape of action but not the landscape of consciousness. In commenting on this conceptualization, Astington (1990) claimed that the meta-representational ability that is involved in ascribing propositional attitudes to others is just what is required for understanding the dual landscape of narratives. Babu (1989, 2004) has shown that at six years of age, children could report narratives by constructing these dual landscapes. At this stage, meta-representational abilities are reflected in the stories retold by them. Researchers (Yussen & Ozcan, 1996) interested in children's development of storytelling attributed the developmental differences in storytelling performance to younger children's difficulty in representing other people's mental states. Narratives of three-year-olds are described as unrelated descriptions of objects, actions, characters, and states (Trabasso et al., 1992). Four-years-olds are at a transition. Although they told goal-based stories, they still had some difficulty when the goal object was not

shown in picture. Then, the children were more prone to report action description. In a study by McKeough (1992), stories by four-year-olds resembled scripts, that is, they talk about routine events and actions that do not require any meta-representational ability. In short, the functional use of their newly acquired meta-representational ability is not evident in their stories. After five years of age, children produce goal-based stories (McKeough, 1992). Studies have also examined the role of family discourse during joint reading interaction and self-other understanding. Joint book-reading behavior is a common form of interaction for young children and their parents (Bus & van IJzendoorn, 1995, 1997; Scarborough & Dobrich, 1994; Senechal & LeFevre, 2002). Mandler (1983) described how a story may contribute to the development of representational thought through its structure and processes, more so than through the story's content. Garner, Jones, Gaddy, and Rennie (1997) asked mothers to read a wordless storybook with their children, and examined mental state references about the emotions of the characters. Mothers who explained the causes and consequences of emotions had children who did better on emotional understanding tasks than children of mothers who did not refer to emotions or did not explain them. Turnbull and Carpendale (1999) used a similar storytelling procedure and gave examples of how those children who have poorly developed interchanges about the mental states of story characters tend to show poor false-belief understanding.

### **The Narrative Practice Hypothesis**

The Narrative Practice Hypothesis (NPH) by Hutto (2007a) proposes that children only come to acquire a theory of mind by being exposed to and engaging in narrative practices. As stated, the NPH is a developmental hypothesis about how we come to acquire a theory of mind. **In his writing on Folk Psychological Narratives**, Hutto provides an extended argument for the view that our folk psychological capacities have a socio-cultural basis rather than a biological one. Narratives present what happened and what a person did in a way that allows an audience to make sense of the thoughts, feelings, and actions of the characters. Hutto states: "children normally achieve [folk psychological] understanding by engaging in story-telling practices with the support of others. Stories about others who act for reasons – i.e., folk psychological narratives – are the foci of this practice. Stories of this special kind provide the crucial training set needed for understanding reasons" (Hutto, 2007b, p. 53). During early childhood, narrative practices involve a lot of questioning by the parents and caretakers, allowing children to think of reasons for behavior. In storytelling, for example, parents ask children questions about the characters' behavior (e.g., Why do you think he did that?). This helps children to realize the importance of giving explanations. To appreciate stories, children must be imaginative and respond with reflection on their own representations of the characters representations. Such preparedness in children is also the result of an early and continuous exposure to narratives. Narratives are both exemplars and tools used to teach children how to become good folk psychologists. In the case of folk-psychological narratives, this will normally involve jointly attending to words with mental state reference (think, know, want, desire) and discussing what the story characters know, feel, and want. By attending to enough of these exemplars, it is possible for children to develop an implicit practical understanding of how to make sense of persons who act for reasons. In this respect, "conversations about written and oral stories are natural extensions of children's earlier experiences with the sharing of event structure" (Guajardo & Watson, 2002, p. 307).

The Narrative Practice Hypothesis is consistent with empirical findings stating an important link between narrative abilities and our understanding of other's mental states (Astington, 1990; Babu, 2004; Dunn et al., 1991; Feldman et al., 1990; Lewis, 1994, Lewis et al. 1994; Nelson, 2007; Peterson & McCabe, 1994). Training studies (Guajardo & Watson, 2002) involving narratives have shown that narrative training is responsible for improved performance in false-belief tasks indicating the fact that exposure to narratives is a critical determiner of folk psychological abilities. It further suggests that the relationship is stronger than mere correlation. Thus, it has been concluded that narrative is an effective tool for "at least modest improvements in children's theory of mind development" (Guajardo & Watson, 2002; p.



320). Similarly, it has been observed that “frequent conversations about the mind can accelerate growth of a ToM” (Garfield et al., 2001, p. 513).

### **Tom and Narrative Practices in Different Socioeconomic Backgrounds**

Hutto's (2007a, b) theory allows for the fact that there will be differences both in the acquisition of a theory of mind and in narrative practices across cultures. In cultures where there is less storytelling or storytelling of a different sort, the theory of mind will differ or be less robust. The vast majority of research on ToM-studies has consisted of Caucasian children from middle to upper income, well educated backgrounds, with only few studies examining the performance of children from a low socioeconomic background (for review of studies in India see Babu and Mohanty, 2001). Moreover, the study of Murray et al. (1999) on 125 same-sex twins failed to find a significant relationship between false belief and social class. Cole and Mitchell (1998) found that a low socioeconomic status is negatively correlated with false-belief performance. It was also evident that children from middle-class backgrounds had higher scores on false-belief tasks than working-class children (Cutting & Dunn, 1999), and African American low-income preschoolers performed poorly than European Americans (Curenton, 2003). Hughes et al. (1999) found an association between socioeconomic status (SES) and ToM, although this association was no longer significant when language ability were taken into account. Pears and Moses (2003) and Farhadian, Abdullah, Mansor, Redzuan and Kumar (2010) evidenced that a mother's occupational status had a significant contribution to ToM development. Children of employed mothers had a better performance on ToM-development compared to housewife-mothers. The authors concluded that it might be due to the quality of relationship between mothers and their children and the amount of time that mothers may spend with their children. In addition, employed mothers may talk more about the mental states and feelings with their children. The findings of studies on parental demographic backgrounds and ToM development are few and somewhat inconclusive. However, it is not yet clear why low-income preschoolers performed poorly in false-belief tasks. One plausible explanation would be the discrepancy in language proficiency between the low-income children and the middle- and upper-income children. Another explanation following Lilliard (1998): speculation would be that using mental states behavior is an affluent Western European view of human behavior. Curenton (2003) speculates that low-income children may be at a disadvantage because the task was originally developed using white middle-class samples (Wimmer & Perner, 1983).

Therefore, the present research attempted to investigate the theory of mind understanding of children from families of two different socioeconomic statuses by administering false-belief tasks as well as a story-narration task. In addition to investigating ToM understanding, performance in story-narration would also help in looking at the difference in language proficiency among children of low and upper middle SES. The present research tries to address the following objectives:

1. To compare the narrative skills and theory of mind understanding of six-to-seven-year-old children and their mothers from low- and upper middle-class backgrounds.
2. To investigate the relationship between theory of mind understanding and the narrative skills of children and their mothers from the two socioeconomic backgrounds.
3. To investigate the theory of mind understanding as reflected in story narration (as indicated by the landscape of action and landscape of consciousness) of children from the two socioeconomic backgrounds.

## **Method**

### **Participants**

A group of 30 six- and seven-year-old children (mean age of upper middle-class = 6.793 and of low SES = 6.844), with 15 children from each SES background, participated in the study. Their mother tongue was Hindi and medium of instruction in school was also Hindi. All participants from low SES were taken from a slum area in Delhi, India. The parents' average

monthly income is Rs 5,000 (approximately 80 Euros). The family in average consists of six people living in a single room. All the families have their bed, sofa, television, and refrigerator in that room. The mothers were primarily occupied with household chores and nurturing their babies. They were either illiterate or had two to three years of schooling. During the day children spend their time in school; in the afternoon they attend tuition classes (either for extra help in regular studies or for completion of home assignments), and in the evening they play in the neighborhood. Interaction between parents and children was very little. Participants from upper middle-class families live in big housing complexes. The average monthly income of the parents is Rs 25,000 (approximately 400 Euros). Mothers were educated and children attend public schools. All the mothers are non-working and spend their time at home. After school, in the afternoon, mothers help the children in completing the home assignments. In the evening, the children spend their time either on the playground or engage themselves in pursuing their hobbies like learning to sing, playing an instrument or drawing and painting.

## Measures

1. Story-narration task: The only tool that had been included in the study to elicit stories from the children and mothers were standard verbal leads for six stories, and two pictures based on each story.

2 Theory of Mind task:

(a) Maternal Mental State Input Inventory: In order to assess mothers' sensitivity to ToM, Maternal Mental State Input Inventory (MMSII) was prepared based on the original inventory by Peterson and Slaughter (2003). In this inventory (given in appendix A) the mothers were given seven vignettes that depicted episodes from daily-life family interactions, like a mother's forgetfulness to bring toffee, wrapping a birthday gift for the child, etc. In each vignette, a four-year-old child questions his/her mother. Each vignette ends with a dilemma leading to open answers from the mothers. All the responses given by the mothers were studied thoroughly and were categorized into four categories. Examples of these responses are discussed in the result section.

1. Non-elaborate non-mental state (NENMS) (rating given was 1): Brief answers with no reference to the mental states of the character in the vignette.

2. Elaborate non-mental state (ENMS) (rating given was 2): Elaborate explanations with no reference to the mental states of the character in the vignette.

3. Non-elaborate mental state (NEMS) (rating given was 3): Brief answers with explicit reference to the mental states of the character in the vignette.

4. Elaborate mental state (EMS) (rating given was 4): Elaborate explanations with explicit reference to the mental states of the character in the vignette.

(b) False-belief Task: Following the paradigm of Wimmer and Perner (1983), the two tasks (a) Unknown location and (b) Unknown content were used in order to assess children's theory of mind understanding. A detailed description is given in the appendix B. The tasks were presented in the form of stories that were enacted in Hindi language with the use of puppets.

## Procedure

The data was collected by two female researchers in the slum (low socioeconomic class) as well as in upper middle-class families. Before starting the interview, a good rapport was formed with the children and their mothers. Mothers were informed about the purpose of the present study. One researcher sat with the child in an isolated corner of the house/room. To avoid interference from the mother, the other researcher conducted the interview with the mother. After building a warm conversation with the child, the interviewer instructed the child and said, "I will show you some pictures, you have to look at them very carefully and then tell me a story using those pictures." The picture sets were shuffled and arranged randomly before they were presented to the child. After presenting each set, the child was given sufficient time to look at the pictures and to understand what was happening in them, and then was asked to tell the

story. Story leads and probing were also given, including “What happens next?” or “Do you want to tell us more?” When the child said that the story was finished and s/he has nothing more to say, the next set of pictures was shown to the child. The same procedure was followed with all six stories. The child’s responses were recorded. After the completion of the task, the child was given a small gift as reinforcement. After the story-narration, the false-belief tasks were administered.

The mothers who were interviewed at the same time were also given the story pictures. The researcher said, “Look at the pictures carefully, and construct a story and narrate it as if you were telling it to your child.” Three sets of pictures were selected. Before presenting the sets of pictures to each mother, the pictures were reshuffled to ensure randomized order of presentation. The mothers were given time to look at the pictures carefully and construct the story. After the completion of one story, another set of story pictures was presented, and the same procedure followed. After the completion of the third story, MMSII was conducted and the responses were recorded.

### Coding

**Narrative transcription.** All the narrations by children and mothers were first recorded in a voice recorder, and later transcribed verbatim including all remarks by experimenter and children. Only the children’s/mothers’ comments that were specifically related to the story were of interest and were considered in the analysis. Other utterances were deleted following the deletion procedure given in Table 1. The final transcript consists of only children’s/mothers’ remarks that are relevant to the story.

**Table 1**

*Criteria for transcript deletion*

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1. The transcripts were modified to include only statements that are directly relevant to the story. All irrelevant remarks were deleted.
  2. All experimenter statements were deleted.
  3. Participant’s responses to the experimenter’s questions or request for elaboration/clarification were excluded, except for those that were responses to the standard probes.
  4. Filler words (e.g., hmm, uhuh, and huh) were deleted.
  5. Participant’s denial (e.g., I do not know) and refusals were deleted.
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**Narrative volume.** The total number of words in the narratives of children and their mothers were calculated to indicate the narrative volume. It indicates the overall richness of story-narration. As discussed earlier, one of the purposes of administering the story-narration task is to compare the language proficiency of the participants from the two socioeconomic backgrounds. The analysis of communication units in the present context is considered as an indicator of language proficiency of the participants.

**Communication unit.** This is a method for assessing the syntax of narratives (Loban, 1976). It is defined as an independent clause and all its modifiers; it is a syntactic unit that is based on a clause structure (i.e., subject-verb-proposition). Because the C-unit is a measure of a syntactically constructed unit, it demonstrates the child’s ability to tell a linguistically coherent story, which provides a measure of syntactic coherence. In addition, C-units can provide a measure of syntactic complexity because they accurately measure the complexity of longer sentences. In the present study, the syntactic features of children’s and mothers’ narratives, both coherence and complexity, are examined by C-units.

Two independent transcribers divided the narratives into C-units. Utterances with a strict causal structure involving a subject-verb proposition, “the boy was looking for toys,” would be counted as one C-unit. “A boy, a toy, the store,” however, would not because they do not contain a verb. The C-units are parsed at coordinating conjunctions (e.g., but, and, so) if they were preceded and followed by subject-verb propositions. For example, “The boy ate one chocolate

and gave one to the sister.” Hence, it was possible for one utterance to be parsed into multiple C-units if that statement contained two independent clauses. However, subordinate clauses were not considered as two C-units because the subordinate clauses modify independent clauses. Subordinate clauses are preceded by subordinating conjunctions (e.g., because, if, when). “The boy is crying because he didn’t get the toy” was counted as one C-unit.

Fragments that are part of the dialogue are considered as C-units, even if they fail to conform to a causal structure. For example, the comment “the boy said, I won’t give the chocolate to her, she is naughty, she never shares anything” was counted as four C-units. As dialogues are an important part of narratives, special consideration was made for their inclusion as C-units. Finalization of the C-units was done based on consensus between two experts who did not participate in the collection of the data.

**Narrative component.** Four aspects of the narratives were analyzed: **coherence, complexity, frequency of the occurrence of mental state words, and narrative quality.**

**Narrative coherence** is indicated by the communication unit (C-unit). Based on the deletion procedure, utterances that are irrelevant and not related to the story as well as incomplete utterances were deleted. Thus, the number of C-units represents the number of utterances that are syntactically constructed and relevant to the story. The number of C-units produced by the child is not synonymous with the narrative volume because coherence is not a measure of overall narrative talk. On the contrary, coherence by definition is a measure of syntactically constructed sentences that indicates the child’s ability to tell a coherent story. Another measure of narrative skill is **complexity**, which is indicated by the mean length of C-unit. The third aspect of narrative analysis is the occurrence of **mental state words (MS words)** such as: think, know, guess, pretend, hope, etc. These words are used to talk about one’s own and others’ cognition, intention and desire, and emotion. Research has indicated that mental terms, such as know, think, and remember start to appear in children’s lexicon in the second and third year of life (Bretherton & Beeghly, 1982; Shatz, Wellman, & Silber, 1983). A complete understanding of the semantic and pragmatic properties of such mental state words in English occur when children are four to five years of age (Moore, Bryant, & Furrow 1989; Moore & Davidge, 1989; Moore, Harris, & Patriquin, 1993). Studies done on early acquisition of mental state verbs in Oriya language (a regional language in India) have revealed that words such as say, know, think, sad/happy are acquired by children between the age of two to five years (Satpathy, 1993, Babu & Mishra, 2000).

It is important to note here that mental states can be experienced without being verbalized using any mental state words, and that those words can be uttered independent of any experience of the mental states. Thus, there could be a discrepancy between use of internal state words and communication about internal states. In any normal conversation in English, for example, when someone says “Anita knows the answer,” the intended meaning has something to do with Anita’s knowledge. On the other hand, when someone says “you know she is a good dancer,” the intention is not to talk about knowledge as such. In the second case, “you know” is used rather as a conversational device. These are highly stereotyped phrases containing internal state words, which have absolutely no reference to mental states. In order to designate the words as ‘mental state word’ certain criteria were followed. Words without explicit reference to mental states and words used as conversational devices such as: ‘let’s see’, ‘do not know’, were eliminated. In addition, only those words that were used by the participants to refer to the mental state of the protagonists in the narratives were considered. The narrative-relevant mental utterances were thus extracted and then categorized into four categories: cognitive, affective, linguistic, intention and desire. This categorization helped us in analyzing the fourth aspect of narratives, **the narrative quality**. It was considered to differentiate Bruner’s dual landscapes: the landscape of action and the landscape of consciousness in the narratives of the participants.

## Results and Discussion

### Narrative Analysis

As discussed earlier, the mothers were asked to narrate three stories and the children were asked to narrate six stories. The narrative volume of the two groups of children, i.e., slum and upper middle-class is 7808 and 7865 words respectively, whereas that of the mothers is 3539 and 4489 respectively.

As per the coding procedure explained earlier, the coherence and complexity of each story was calculated and analyzed. The coherence, i.e., C-units per story, was calculated for each story narrated by the child, and was estimated accordingly for all six stories. The mean C-unit was calculated for each child first, and was then calculated for the respective group (upper middle-class and slum). The same procedure was pursued to calculate the group mean of coherence of mothers from both socioeconomic backgrounds. The children from upper middle-class and slum did not differ in their narrative coherence. The mean scores of narrative coherence of slum children were 12.24 and those of upper-class children were 12.37. On the other hand, the mothers from the slum and upper middle-class background differed in the narrative coherence having a mean score of 8.24 and 9.69 respectively.

The complexity score of each narrative was calculated by dividing the total number of words in each story by its respective coherence. The complexity score of each story was calculated for each child and was then estimated accordingly for all six stories. As in the case of coherence, the group mean complexity-score was calculated for the children as well as for the mothers. The narrative-complexity mean score for slum and upper middle-class children is 7.01 and 7.43 respectively. It indicates that there is no difference between the two groups of children. However, the mean scores of mothers of the slum and upper group differed with a mean score of 7.97 and 9.31 respectively. Overall, the result shows that children of two groups do not differ in their narrative coherence and complexity irrespective of the fact that their mother differed correspondingly.

Mental state words (MS words) were divided into four categories, i.e., cognitive, affective, linguistic, and intention and desire (Table 2). For each category, words were first counted for each story, and later for all six stories. In order to see the relationship of MS words with other variables in the study, the combined score of all four categories was taken. Table 1 shows the frequency of occurrence of the four categories of words. The frequency of occurrence of cognitive words is higher in the narratives of the upper middle-class children, whereas the frequency of occurrence of affective, linguistic, and intention/desire words is higher in the narratives of the slum children. Consideration of mothers' narratives indicated that the frequency of cognitive, linguistic, and intention/desire words is higher in the narratives of upper class mothers, whereas the frequency of occurrence of affective words is higher in the narratives of slum mothers. The chi square analysis (chi square = 8.58, df = 3,  $p < .05$ ) indicates that the upper middle-class and slum children differ significantly in the use of the four different categories of mental state words in their narratives. The chi square analysis (chi square = 26.43, df = 3,  $p < .01$ ) indicates that the upper middle-class and slum mothers differ significantly in the use of the four different categories of MS words in their narratives.

**Table 2***Frequency of mental state words of mothers and children.*

<b>Children</b>	<b>Cognitive</b>	<b>Affective</b>	<b>Linguistic</b>	<b>Int/Desire</b>	<b>Total</b>
Upper	121	117	141	14	393
Slum	99	162	163	15	439
Total	220	279	304	29	832
<b>Mother</b>					
Upper	75	23	75	20	193
Slum	49	48	52	3	152
Total	124	71	127	23	345

When the narratives were analyzed, it was found that the variety of cognitive words was more extensive in the upper-class children and their mothers in comparison to that of slum children and their mothers, while the variety of affective, linguistic, intention/desire words was found to be more in slum children and their mothers in comparison to the other group. The variety of words in Hindi with their translation in English is given in tables 3a and b.

**Table 3a**

*Variety and mean frequency of occurrence of cognitive and affective words in the narratives of children (upper and slum) and mothers (upper and slum).*

	Mean Frequency			
	Children		Mothers	
Cognitive	Up per	Slum	Upper	Slum
<b>Dekhata Hai (See)</b>	2.7 33	3	2	1.2
<b>Samajh (Understand)</b>	0.2	0	0.933	.6
<b>Pata Nahin (Don't Know)</b>	1.9 33	1.4	0.133	0.533
<b>Sun Na (Listen)</b>	0.1 33	0.067	0.2	0.267
<b>Sochna (Think)</b>	1.1 33	1.333	0.867	0
<b>Yaad Aata Hai (Remember)</b>	0.2	0	0	0
<b>Mann (Mind)</b>	0.2	0	0.133	0.133
<b>Lagta Hai (Feel)</b>	1.5 33	0	0	0
<b>Idea/Choice</b>	0	0	0.333	0
<b>Promise</b>	0	0	0.267	0
<b>Dhyan (Concentrate)</b>	0	0	0.133	0.133
<b>Natak Kerna (Deception)</b>	0	0.8	0	0
<b>Bhool Na (Forget)</b>	0	0	0	.2

	Mean Frequency			
	Children		Mothers	
	Upper	Slum	Upper	Slum
<b>Affective</b>				
<b>Rona (Cry)</b>	0.667	1.533	0.333	0.733
<b>Accha Lagega (Feeling Good)</b>	2.067	3.467	0.133	0.933
<b>Bura Lagega (Feeling Bad)</b>	2.8	4.133	0.267	1.067
<b>Khush (Happy)</b>	0.867	0.667	0.8	0.333
<b>Dukh (Sad)</b>	0.333	0.6	0	0.133
<b>Udas (Gloomy)</b>	0.667	0	0	0
<b>Ganda Lagega (Feeling Miserable)</b>	0.4	0	0	0
<b>Ajeeb Sa Laga (Feeling Differently)</b>	0	0.267	0	0
<b>Gussa (Anger)</b>	0	0.133	0	0

**Table 3b**

*Variety and mean frequency of occurrence of linguistic and intention/desire words in the narratives of children (upper and slum) and mothers (upper and slum)*

Linguistic	Mean Frequency				Intention/ Desire	Mean Frequency			
	Children		Mother			Children		Mother	
	Upper	Slum	Upper	Slum		Upper	Slum	Upper	Slum
<b>Bolti Hai (Tell)</b>	3.467	6.533	0.2	1.733	<b>Chaiye (Want)</b>	0.933	0.8	1.333	0.2
<b>Batana (Say)</b>	0.6	0.4	0.6	0.267	<b>Man Kar Raha Hai (Wish)</b>	0	0.2	0	0
<b>Kehta Hai (Say)</b>	4.6	3.067	3.533	1.2					
<b>Poochega (Ask)</b>	0.733	0.867	0.667	0.267					

### Narrative Quality

As introduced earlier, according to Bruner (1986), a story must construct two landscapes simultaneously. One is the landscape of action where the constituents are arguments of action, agent, situation, and instruments, corresponding to story grammar. The other landscape is the landscape of consciousness: what those who are involved in the action know, think or feel, or do not know, think or feel. Considering Bruner's viewpoint, an attempt was made in the present study to find out level of action and level of consciousness in the narratives of children and their mothers. For this purpose, action-based statements (AB), consciousness-based statements (CB), and combined action- and consciousness-based statements (ABCB) were extracted from the narrative. The action-based statements (AB) are those that involve simple action-description



without any reference to mental states. The consciousness-based statements (CB) are non-elaborate and involve simple reference to mental states with no explicit causal reference. The combined action- and consciousness-based statements (ABCB) are elaborate and have an explicit causal explanation of psychological state. There is an attempt to link the protagonist's action in the real world with that of his mental state. The action-based (AB) and the consciousness-based (CB) statements are found more frequently in slum children, whereas the combined action- and consciousness-based (ABCB) statements are found more often in the narratives of upper-class children. The same trend was observed in the narratives of mothers (Table 4). Some of the verbatim responses (in Hindi language) from each of these categories are given below along with the English translations.

**a) Action-based (AB):** *"Mamma aur baby market jaate hai aur fruits lete hai aur phir mamma baby ko balloon dilate hai aur who ghar chale jaate hain."* (Mother and baby go to the market, and they bought fruits and the mother gave a balloon to the baby and they go home.) As can be seen in the example, there is no reference to mental state.

**b) Non-Elaborate consciousness-based (CB):**

1. *Sochenge ki "hum aadha aadha baant lete hain."* (They think, "we will divide it equally.") There is a reference to thinking.

2. *"Ladke ne toffee ladki ko dikhaayi."* (The boy has shown a toffee to the girl.) This is a simple reference to a process of perception, i.e., sight.

**c) Elaborate consciousness-based (ABCB):**

1. *"Phir who sochta hai ki shayad who school gaye honge toh woh school chale jaate hain."* (He probably thought the ice cream seller had gone to school, they went to school.) There is a causal explanation of psychological states.

2. *"Chaadar hataa kar phir Dekhti ha, nana naatak karte hain."* (She removed the blanket and saw that grandfather was pretending.) There are references to cognition as well as affect.

**Table 4**

*Frequency of action-based (AB), non-elaborate consciousness-based (CB), and elaborate consciousness-based (ABCB) statements in the narrations of children and their mothers*

Children	AB	CB	ABCB	Total
Upper	536	126	204	866
Slum	591	320	73	984
Total	1127	446	277	1850
Mothers				
Upper	156	91	69	316
Slum	162	88	58	308
Total	318	179	127	624

### Theory of Mind Understanding

Theory of mind understanding is assessed by means of the false-belief tasks in case of children and by means of the Maternal Mental State Input Inventory (MMSII) in case of the mothers. All the children from the upper class could answer the questions correctly in the false-belief task, whereas six children from the slum failed to answer the questions in the false-belief task. The mean score in the unknown location-task was 2.2 and 1, and in the unknown content-task was 2 and 1.33 for the upper middle-class and slum children respectively. There was a

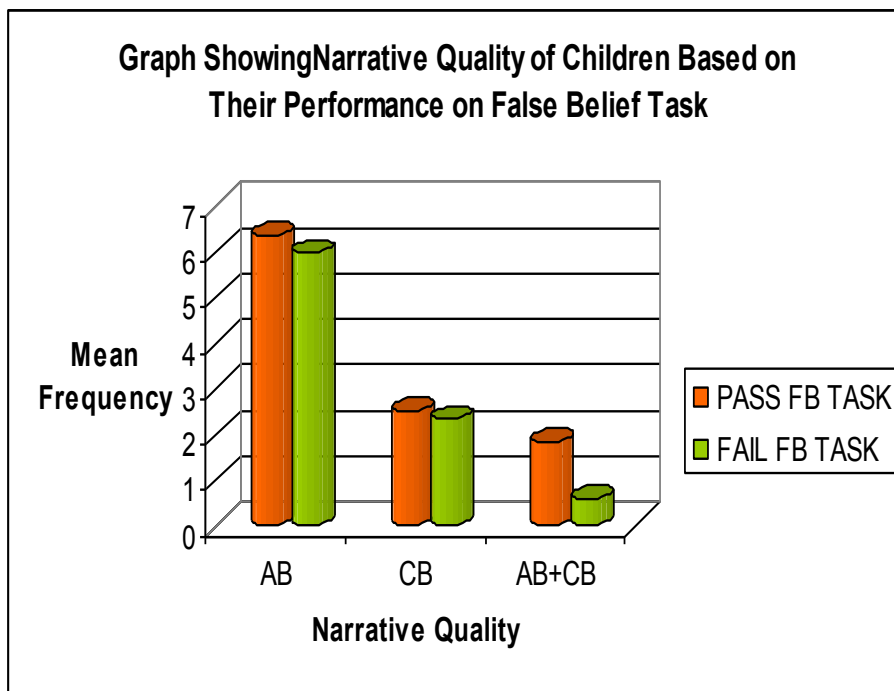
significant difference ( $t = 2.38$ ,  $df = 28$   $p < .02$ ) between the children from the upper middle-class (mean = 3.93) and the slum (2.3) in their false-belief task performance.

There was no significant difference between the mothers from the upper middle class (mean = 2.59) and the slum (2.29) in their theory of mind understanding as assessed by MMSII ( $t = 1.68$ ,  $df = 28$   $p > .05$ ).

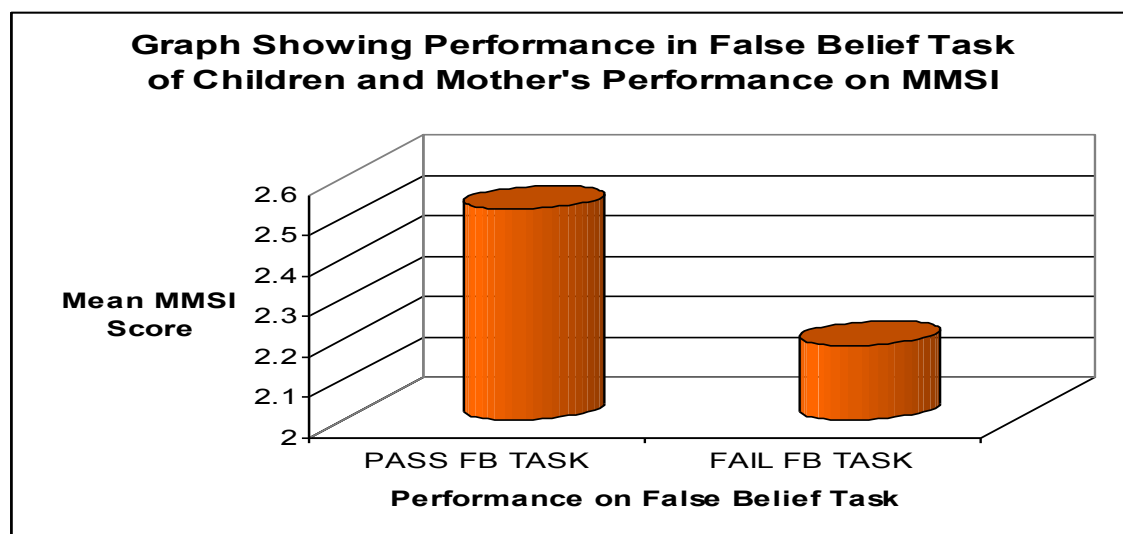
There was an attempt to see the relationships between the different variables used for studying the theory of mind performance of children and their mothers, as well as their performance in storytelling. There is a significant correlation between mothers' performance in MMSII and children's performance in the false-belief task ( $r = .361$ ,  $p < .05$  in the unknown location-task and  $r = .428$ ,  $p < .05$  in the unknown content-task), which indicates a strong relationship between mothers' understanding of theory of mind (ToM) and children's development of a theory of mind reflected in their performance on both tasks of false belief. Results also indicated a significant relationship between mothers' use of mental state words in their narratives and children's use of elaborate consciousness-based statements ( $r = .630$ ,  $p < .01$ ) in their narratives. A significant relationship was also indicated between mothers' use of non-elaborate consciousness-based (CB) and elaborate consciousness-based (ABCB) statements in the narratives, and children's use of elaborate consciousness-based statements in their narratives ( $r = .495$ ,  $p < .01$ ;  $r = .435$ ,  $p < .01$ , respectively). Mothers' use of mental state words was found to be significantly related to children's false-belief task performance in both the unknown location- and the unknown content-tasks ( $r = .361$ ,  $p < .05$ ,  $r = .428$ ,  $p < .05$ , respectively). Results also indicated a significant relationship between mothers' use of mental state words in their narratives and children's use of elaborate consciousness-based statements ( $r = .630$ ,  $p < .01$ ).

There is also a significant relationship between the use of mental state words (MSW) and the narrative quality indicated by elaborate consciousness-based statements in the narratives in case of the mothers ( $r = .612$ ,  $p < .01$ ), as well as the children ( $r = .440$ ,  $p < .05$ ). Additionally, children's narrative quality (use of elaborate consciousness-based statements in narratives) is also related significantly to their performance on the false-belief task evidencing the link between development of ToM and improved narrative quality ( $r = .486$ ,  $p < .01$ ).

Based on their performance in the false-belief task, the slum children were divided into two groups: those who passed the false-belief task and those who failed it. Six children from the slum failed the false-belief task and thus showed failure in understanding theory of mind. It is interesting to note here that, despite their failure in performing the false-belief tasks, these children's use of consciousness-based (CB) statements in their narrative are at par with those who passed the false belief-task. However, their use of elaborate consciousness-based statements was very little (fig. 1). It has also been observed that mothers of children who failed the false-belief task scored less in MMSII in comparison to the mothers of children who passed the false-belief task (fig. 2).



**Figure 1.** Graph showing narrative quality of children based on their performance in false-belief task



**Figure 2.** Graph showing the MMSII performance of mothers of children who passed and mothers of children who failed the false-belief task (low SES background).

### Discussion and Conclusion

The primary purpose of the present study was to investigate the theory of mind understanding of children and their mothers from families of low as well as the upper middle-class by administering false-belief task as well as an informal story-narration task. It was also intended to investigate the role of mothers' sensitivity to mental understanding of theory of mind and their language proficiency on their children's development of theory of mind. As already discussed in the beginning, it is not clear why socioeconomic backgrounds mediate the individual difference in ToM understanding. Some of the reasons cited are: 1. the discrepancy in language-proficiency between low-income children and middle- and upper-income children; 2.

the original false-belief task was meant for white children of the middle class; 3. mental states-behavior is an affluent Western European view of human behavior. The purpose of using the story-narration task was to deviate from the formal assessment of theory of mind using false-belief tasks, and to create an informal assessment-context for the children and their mothers. In storytelling, attempt was made to have an informal dialogue between the mother, the child, and the researcher. It was also intended to investigate the role of mothers' understanding of theory of mind on their children's development of theory of mind.

In consistency with the previous research by Cole and Mitchell (1998), Hughes et al. (1999), and Pears and Moses (2003), the present study indicated the significant impact of children's belonging to low SES and their ToM development. The performance of children from low SES families was significantly poorer than that of children from upper middle-class families. Out of fifteen children from low SES backgrounds, six failed the false-belief task. Analysis of the stories of the children who failed the false-belief task showed interesting results. These children appropriately used non-elaborate consciousness-based statements in their narratives. However, they failed at linking the protagonist's action with his/her mental state. The fact that these children could successfully refer to the protagonist's mental state in their narratives suggests that they have started to talk about mental states successfully, which is difficult for a researcher to assess in the traditional false-belief task. Under such circumstances, there is a need to have alternative assessment procedures than the use of the traditional false-belief tasks. Further, children's narrative quality is also significantly related to their ToM performance. Largely, the findings suggest that narratives provide an opportunity to talk about mental states, and can be used as a resource for the parents to facilitate children's ToM understanding. Narration is a natural day-to-day activity for these children, and it provides the arena for practice of explaining behavior by providing mental state reasons. This supports the narrative-practice hypothesis (NPH) by Hutto (2007a, b). It is interesting to note here that the mothers from the two socioeconomic backgrounds do not differ in their sensitivity to the mental state of others. However, so far as the usage of mental state words in their narratives is concerned, there was a difference between the two groups of mothers. In addition, as it is discussed in the next paragraph, the narrative quality and complexity of the mothers from an upper middle-class background was better than that of those mothers from a slum background. A significant relationship between children's theory of mind understanding and mothers' MMSII score further strengthen the argument that mother-child interaction significantly influences children's ToM understanding.

The stories narrated by children and their mothers evidenced the role of SES on development of narrative skills, which was reflected in narrative coherence, complexity, and narrative quality. The result shows that children from the two SES groups do not differ in their narrative coherence and complexity irrespective of the fact that their mothers differed correspondingly. This suggests that the language proficiency of the children from both groups do not differ, whereas the language proficiency of the mothers from the two groups differs. Considering the data on narrative quality as indicated by the reference to dual landscapes of narratives, a significant difference in performance of slum- and upper middle-class children and their mothers was observed in the occurrence of elaborate consciousness-based (ABCB) statements. Mothers' use of mental state language was also significantly related to children's use of elaborate consciousness-based (ABCB) statements in their narratives. As a whole, this finding supports the earlier research (Meins et al., 2003; Ruffman et al., 2002) on the role of maternal input in theory of mind development in children. It indicates that mother-child interaction mediated by storytelling activities at home provides an opportunity for the child to develop an understanding of the concept of mental states and to use such states to explain behavior. The narrative skill (measured by coherence and complexity) as well as the narrative quality (measured by occurrence of action-based and consciousness-based statements in the narratives) of mothers from slum areas is poor compared to that of mothers from upper middle-class backgrounds. This has probably significantly delayed the development of theory of mind in children from this background, as a result of which approximately 40% of the children failed the

false-belief task. These children also reported less non-elaborated and elaborated consciousness-based narrations.

Broadly, the present study suggests that development of theory of mind understanding is facilitated by talking about such processes during family conversations, and most importantly through narrative practices at home. This is in conformity with earlier research (Babu, 2009). Meins et al. (2003) has shown that mothers' appropriate mind-minded comments to six-months-old children (i.e., comments that accurately reflect the child's mental states) but not inappropriate ones predicted the child's performance on a false-belief task at 45-48 months of age. Ruffman et al. (2002) specifically compared mothers' mental state language with non-mental state language. They found that it was only mental state language, mothers' use of "think" and "know," modulations of assertion, and desire term used with three- to four-year-old children that predicted later success on theory of mind tasks and children's mental state talk. Research has also confirmed that maternal talk significantly relates to desire language and emotion understanding in children (Taumoepeau & Ruffman, 2006).

Several pertinent facts obtained from the present research are as follows. 1. False-belief tasks are not the only method for assessing theory of mind, and such type of understanding can be better assessed through informal dialogue and discourses between adult and child. 2. Story-narration not only provides the scope for practice of mentalist concepts, but also is a better measure of such concepts in children. 3. Mother-child or adult-child interaction plays a significant role in development of theory of mind.

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## Appendix A

### Maternal Mental State Input Inventory (MMSII) (English translation of the inventory in Hindi)

*Instructions:* Here are seven stories, or vignettes, each describing a parent with a young child. We would like you to try to imagine that you are that parent, and that the child in the story is your son or daughter [Child's First Name] during the year when he or she turned four. Listen to the story carefully and answer the question that the child in the story will be asking. Give the response that you think is the most appropriate one in that context. There is no right or wrong answer to any of these questions. Please be realistic and answer in terms of your best estimate of your own actual behavior, either as you recall it, or as you imagine it would be.

Vignettes:

1. Today when mother went to the market, she promised her four-year-old son that she would bring toffee for him. But mother completely forgot to bring the toffee from the market. When the son asks the mother about the toffee after she returns from the market, what will the mother say?
2. A mother and her four-year-old son went to the market and the mother wanted to buy a gift for her older son. She bought a new dress from the market for him. While the mother was packing the gift and was planning to give it as a surprise, the younger son said that he is going to tell his brother what they have bought for him. What will the mother say?
3. When a dog was barking excitedly in the night, a four-year-old son asks his mother "Mother, why is the dog barking?" What will the mother reply?
4. A mother left her keys on the bed and then rushed out of the room to the kitchen. While she was gone, the keys slid down under the bed and disappeared from view. The four-year-old daughter watched this happening. When the mother came from the kitchen, she did not see the keys on the bed. The mother thought that she had left the keys in the kitchen and as she was leaving for the kitchen to get the keys, her four-year-old daughter asked her "Mother, where are you going?" What will the mother say?
5. A four-year-old son was playing in the rain. The mother thought that her son might catch a cold. How will she persuade him to go inside the house?
6. A mother and her four-year-old daughter were at home together when somebody knocked on the door. The mother went outside to see who it was, while the daughter was inside the house. She heard her mother talking to someone very courteously and the mother was very happy. When she came back to the room, the daughter asked "Mother, who was there?" The mother said, "It was the lady from next-door calling me to show her new clothes. But I don't want to go." The daughter told her "But you were so happy when you were talking to her." What will the mother reply?
7. One day, an old friend of the father sent sweets to him. The father was sad when he saw the sweets. The four-year-old son asked the mother, "Why was father sad when he got his favorite sweets from his friend?" What will the mother say?

## Appendix B

### Theory of Mind Tasks

#### False-belief task:

A false-belief task has unknown location- and unknown content-tasks that involve presenting a child with an object with a different identity or content from what is apparent.

##### (a) Unknown location-task:

There are two boxes. One is blue and another is pink. Mickey puts his chocolate in the blue box and leaves for school. When he is away (and cannot see), his mother moves the chocolate from the blue box to the pink one. Now Mickey returns from school and wants to eat the chocolate. Here, the child is asked some control questions and some test questions.

#### Control Questions:

1. *Where was the chocolate in the beginning? Blue/pink box. (Aarambha main chocolate kahan tha?)*
2. *Where did the mother put the chocolate? Blue/pink box. (Maa chocolate kahan rakhi thi?)*

#### Test questions:

3. *Where does Mickey think the chocolate is? Blue/pink box. (Mickey kya sochta hai chocolate kahan hai?)*
4. *Why does he think that the chocolate is in the blue/pink box?/How did he know that the chocolate is in the blue/pink box? (Woh kyun sochta hai chocolate blue/pink dibbe main hai?)*

##### (b) Unknown content-task:

The researcher takes a match box and keeps some candy in that box. The subject child was not aware of this change. Then she asks the child:

1. *What is this box? (Yeh dibba kya hai?)*
2. *What is in the box? (Dibbe main kya hai?)*

Then the child is allowed to open the box and look inside. The child is then asked to close the box. The researcher at this point says that she will now call Baunty (a puppet) who has not seen the content of the box. She brings the boy doll in front of the child and asks the following questions:

3. *What would Baunty think is inside the box? Candy or matchsticks? (Baunty kya sochega ke dibbe main kya hai? Candies/matchbox?)*
4. *Why would Baunty think that there are matchsticks inside the box?/How would Baunty know that there is candy inside the box?(Baunty kyun sochega ke dibbe main candies/matchbox hai?)*

## **Validation of the Infant-Toddler HOME Inventory among Households in Low Income Communities at the Kenyan Coast**

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### **Abstract**

The aim of this paper is to describe the adaptations made to the Infant-Toddler version of the Home Observation Measure of the Environment for use in a low income Kenyan population. A total of 425 (214 girls) children aged 6-35 months were involved in this cross-sectional study. Focus groups and in-depth individual interviews were used to generate culturally appropriate modifications. Translations and back translations of the HOME were carried out using a Panel Approach. A significant number of items from the original HOME (N = 26) showed limited variability and were excluded from the final schedule. Two more items were excluded because of negative item total correlations and ambiguity in scoring. The remaining 17 items had a modest internal consistency ( $\alpha = .63$ ). We failed to replicate the factor structure of the published measure. The measure did, however, demonstrate a theoretically meaningful relationship with antecedent (maternal education) and child outcome variables (psychomotor development) providing partial evidence for convergent validity. These findings support the idea of a universality of core features of environmental stimulation. However, they also illustrate the need for more in-depth studies of the home environment to identify culture-specific sources of variability between households.

**Authors' Note:** This chapter is published with permission of the Director of KEMRI. Amina Abubakar and Penny Holding were supported by NIMH Fogarty R21 award (Grant MH72597-02). The authors would like to thank B. Kabunda, R. Mapenzi, C. Mapenzi, P. Nzai, J. Maitha, M. Mwangome, K. Rimba, G. Bomu, L. Mbonani, and R. Kalu for their role in the data collection, and K. Katana and P. Kadii for data entry. We would also like to thank Prof. R. H. Bradley for his guidance during the test adaptation process. Our sincere gratitude goes to the participating families who generously gave their time to make this work possible.

The lack of a cognitively and social-emotionally stimulating environment has been identified as a leading restriction on optimal development among children in low income countries (Walker et al., 2007). It would, therefore, aid early childhood practitioners to have access to an instrument that will enable them to assess home stimulation opportunities in a standardized manner. The Home Observation Measure of the Environment (HOME) (Caldwell & Bradley, 2003) is such a measure. The potential sensitivity of the HOME across different cultural groups has been demonstrated through significant correlations with developmental outcomes, including motor, language, and socio-emotional functioning (Totsika & Sylva, 2004; Bradley, Corwyn, & Whiteside-Mansell, 1996). However, extensive reviews by its authors and others have also identified limitations in the applicability of the full HOME measure across cultures. In addition to the inclusion of items that are inappropriate to other cultural settings, limited reliability has been reported of the full measure (Bradley & Corwyn, 2005; Bradley, Corwyn, & Whiteside-Mansell, 1996). There is also no available literature to support the equivalence of the HOME constructs across contexts. Bradley et al. have suggested that there may be specific core concepts that are universal, while other relevant behaviours may be culturally specific. To develop a means of assessing home stimulation within the East African context, we identified appropriate core concepts from the full HOME protocol, and evaluated additions that were based upon information from the community members.

The original HOME was designed to measure the quality and quantity of stimulation and support available to children in low income households in the USA. The activities sampled mainly focus on the provisions being made by the child's mother. Four versions of the HOME exist, taking into account the changing influences and activities provided for children at different ages. The current study focused on children aged 0-36 months, employing the Infant-Toddler version (IT-HOME). The IT-HOME consists of 45 items which are divided into six aspects of child stimulation and support, described in its manual (Caldwell & Bradley, 2003) as:

- Responsivity – the extent to which a parent responds to the child's behavior, offering verbal, tactile, and emotional reinforcement for desired behavior, and communicating freely through words and actions;
- Acceptance – the degree to which the parent permits the child to elicit less than optimal behavior without resorting to restrictions and punishment;
- Learning material – deals with the provision of appropriate play and learning materials capable of stimulation development;
- Variety – the inclusion of people and events in the child's daily life that bring some variety (without disorganization) into the life of the child;
- Organization – the extent to which there is regularity and predictability (without monotony) in the family schedule, safety of the physical environment, the utilization of the community services as part of the family support system;
- Involvement – defines the extent to which the parent is actively involved in the child's learning and provides stimulation for increasingly mature behavior.

The IT-HOME is designed to be administered during a home visit that takes approximately 60-90 minutes. A binary-choice (yes/no) format is used to score the items through the combination of observation and a semi-structured interview.

The aim of this paper is to evaluate the extent to which the original IT-HOME provides a schedule of home-based stimulation activities appropriate for the specific cultural niche, consisting of low income households at the Kenyan Coast. We were primarily interested in establishing the validity of items through the exploration of their sensitivity to within-household variation and the association between full-scale scores and antecedent factors and outcomes (Bradley et al., 1996; Bradley & Whiteside-Mansell, 1998). We report on the psychometric properties of the resultant schedule of items.

## Method

### Study Sites

The study took place at two sites selected to represent both rural and urban settings at the Kenyan coast. The rural site was a designated study-area of the Kenya Medical Research Institute, Centre for Geographic Medicine Research (Coast), located in Kilifi District. The majority of the population in Kilifi belongs to the Mijikenda ethnic/linguistic group with most families depending upon subsistence farming. Low literacy levels and high poverty levels characterize the population (Government of Kenya, 2001). Many families are polygamous, and the care of children is shared within the homestead. As the child is weaned, increasing amounts of time are spent under the care of older siblings.

The urban site was Kisauni Location, Mombasa District. This is an area of informal settlements, with approximately 47% of the population living below the poverty line (Ministry of Planning and Development, 2001). The population consists of people from a variety of ethnic and linguistic backgrounds, but with Kiswahili the widely spoken *lingua franca*. Most families live in single-roomed households sharing facilities with other renters. The care of children in the absence of the mother largely falls on the 'ayah' (nursemaid) or older siblings.

The Kenya Medical Research Institute National Scientific and Ethical Committees approved the study. Prior to eliciting individual consent, we held a series of meetings with elders and leaders within the communities. We informed them of the study and obtained consent and cooperation at a community level. The consent form was read out to participants in the language with which they were most familiar, and written consent was obtained from all families and guardians of study participants prior to participation.

### The Adaptation Process

We followed a four-stage process of test adaptation developed through extensive experience (Abubakar, 2008; Alcock, Holding, Mung'ala Odera, & Newton, 2008; Carter, Lees, Murira, Gona, Neville, & Newton, 2005; Holding, Abubakar, & Kitsao-Wekulo, 2008; Holding & Kitsao-Wekulo, 2009 ). Stage 1: Construct Definition; Stage 2: Preparation of the Item Pool; Stage 3: Developing the Administration Procedure; and Stage 4: Evaluation of Adapted Schedule.

**Stage 1: Construct definition.** The main aim of this stage was to identify ecologically valid expressions of the concept '*promotion of child development*'. This was achieved by defining activities relating to child stimulation and support in the target communities, as well as developing an appropriate vocabulary to express the concepts raised. Information on local beliefs and customs was generated through focus group discussions and direct observations of infants and young children. The six focus groups were used to define local child-rearing practices considered salient in shaping developmental outcomes in infancy. Four of the focus groups were composed of mothers from the community ( $N = 21$ , 4-7 per group), one of teachers ( $N = 7$ ), and the sixth of paediatric nurses ( $N = 7$ ). Each discussion group was led by a moderator (author EO/AA), and lasted for one hour. In addition to taking written notes, the note taker also recorded and transcribed the proceedings. The points raised were recorded if they were uncontested, or when consensus had been reached following further discussion. Thematic analysis was carried out and is summarized in Table 1.

**Table 1**

*Themes Arising From the Focus Group Discussions on Child-Rearing Practices Considered Salient in Shaping Developmental Outcomes*

		Group:					
		Nurses		Teachers	Mothers		
Theme	Sub themes	Town		Village 1	Village 2	Village 3	Town
Proper feeding	Breastfeeding healthier than bottled milk	X	X	X	X	X	X
	Provide food that allows them to grow	X			X	X	
Play	Playing with the child	X	X	X		X	
	Let child play	X	X				
	Sing for the child before they sleep			X		X	
	Provide toys for child; bought or made	X	X	X	X	X	X
Good care	Sleep with child	X					
	Keep the child clean			X	X	X	X
	Toilet train	X		X		X	
	Clean sleeping place			X			
	Protect and keep child away from dangerous things						
	Medical care			X		X	X
	Monitor any changes in child's behaviour and health						
Discipline / Training	Spank moderately	X			X	X	
	Teach obedience	X	X				X
	Teach the child to behave well in the presence of visitors	X		X		X	X
	Avoid being too harsh	X			X		
	Teach the child to share	X					
	Try to use talk to avoid beating the child			X		X	
	Avoid the use of foul language	X				X	
	Teach good manners			X			
Experiencing new things	Go with the child everywhere you go	X	X			X	X
Train the child	Include in household chores at 3 yrs.		X				
	Send to school/ Madrassa			X		X	
Family harmony	Harmony between mother and family		X		X		
Show love to the child	Hug/ Play with them/ throw them up and down			X			

Relevant examples of available child-friendly equipment were collected through systematic field observations carried out by a doctoral level medical anthropology student and a field worker who is a member of the community. Older siblings were asked to demonstrate the toys used by their younger siblings, aged 6-35 months. The toys were photographed and then categorized based on the function they serve. Our field observations suggested that toys in this environment differ significantly from those referred to in the HOME manual (Taylor & Katana, 2004).

**Stage 2: Preparation of the item pool.** The aim was to produce a final schedule of items initially through the production of a conceptual translation of all original items/concepts from the IT-HOME (Caldwell & Bradley, 2003). The descriptions of the items in the original manual provided the guidelines for the conceptual translations. Possible replacement items and probes were identified through participant consultation as described above.

The cultural relevance of each original item was then evaluated by comparing its content to the child-rearing concepts described by community members. The original items were found to fall into three levels of adequacy, determining the degree of complexity of modification required. The highest level of adequacy consisted of activities that demonstrated a common purpose both in the HOME and in the local context. Even at this level activities may differ slightly in content, requiring different prompts or probes in our context. For example, the IT-HOME includes items such as “child is taken to grocery store at least once a week” and “child gets out of the house at least four times a week.” Local mothers talked about taking the child with them when going out to sell things, to fetch water, to the ‘shamba’ (farm) or to visit relatives (31/45 items).

At the second level were items that represented activities appearing in both the HOME and our group discussions, but which have a different conceptual meaning in the two contexts. Items at this level required changes in the coding of responses in order to maintain item equivalence. The role of physical discipline is one example. While in the USA regular use of physical punishment is indicative of a negative relationship, among Kilifi mothers ‘minimal spanking’ is seen as an essential component of good parenting. Negative behavior was differentially defined by “not spanking every day,” but also by “not being too harsh” (10/45 items).

Finally, some activities were context specific. Reading or owning children’s books, present in the original HOME, was not an activity reported as important by householders in our community. Activities promoting good health/good grooming (brushing teeth, cutting nails, washing after meals, sleeping in a clean place, breastfeeding, and taking action when a child is ill) were not in the original, but were identified locally as important indicators of good child-rearing practices (4/45 items). Despite the lack of apparent cultural suitability, even items at this level were initially retained for inclusion, with four additional items taken from the community, extending the schedule.

Both the original items and the additional items were expressed in Kiswahili, as the most commonly shared language across the region of interest. The conceptual translation was then back-translated into English by four separate members of the field staff. A panel consisting of child development professionals (psychologists, a paediatric nurse, and educationalists) compared the scripts, paying particular attention to inconsistencies between them that may indicate ambiguities and conceptual errors. This process was continued until a final draft was agreed upon. The draft was submitted to a professional translator, who evaluated the language and content for semantic clarity, and suggested appropriate modifications to the vocabulary used.

**Stage 3: Developing and refining the administrative procedure.** To evaluate the acceptability of the interview procedure we completed ten in-depth individual interviews with mothers of children aged 3-36 months. Households were selected at random from a census database kept of the study area. Mothers were invited to talk about each item as it related to the target child and his/her family. Parents reported satisfaction with the questioning, suggesting both the content and the interview procedure were acceptable to the community.

**Training in administration.** A team of six field workers, fluent in the local dialect and familiar with the culture, was trained to administer the inventory. The team came from a diverse background (two males with training in special education, two female high school graduates, one female with background training in early childhood, and one female with background training in assisting with speech therapy). Direct instruction on administration began with role-play sessions, and continued with practice sessions in volunteer homes.

The training process included a sample of 70 children aged 6-35 months, randomly selected from the community. The field-based training began with the trainer acting as

interviewer, with trainees observing, recording and coding responses. Discrepancies in coding were discussed between the team and resolved until consensus was reached. Subsequently, the trainees carried out the interviews, sometimes observed by the trainer, and at other times independently. All answers were written on the interview forms, and coded by at least two team members for comparison. This process was carried out until the trainees attained 90% agreement with the trainer, as described in the U.S. manual (Caldwell & Bradley, 2001).

Responses collected through the training process were also used to further refine the instrument. Changes made included additional clarifications to the vocabulary, to minimize ambiguities. Additional probes and prompts were included to the interview schedule to provide context relevant examples. The responses received also suggested the need for a major revision of the coding system.

**Identification of a coding scheme that aimed to maximize variability between households.** A review of the responses indicated that only eleven out of the 45 items of the HOME showed adequate variability when we used the binary scoring system of the original. In other resource-limited settings, a three point Likert scale (0, 1, and 2) has been found to increase within-population variance (Baker-Henningham, Powell, Walker, & Grantham-McGregory, 2003). We used the detailed written responses recorded to develop such an approach. Features such as the regularity of an activity and the family member involved in the provision of the activity were used to separate out into the three-point scale. Table 2 provides examples of the extended coding system.

**Table 2**

*Example for Scoring Guidelines*

Item	Scoring guidelines
Parent tells child name of object or person during visit	No item is mentioned. One or two items mentioned. 3+ items mentioned.
Parent caresses or kisses child at least twice	Does not caress/kiss child Caresses/kiss child once Caresses/kiss/stroke hair affectionately throughout/more than once
Parent or sibling structures child's play periods	Nobody structures child's play Parent structures child's play periods Siblings structures child's play
Parent or sibling keeps child in visual range, looks at him/her often	Nobody keeps an eye on the child Siblings keep an eye on the child Parent/caregiver keeps an eye on the child
Parent talks to child while doing housework	Child chased away Child allowed to watch parent Child involved in the activity

**Stage 4: Evaluation of adapted schedule.** The Kiswahili-IT HOME, consisting of adaptations of the original 45 items and four additional items, were administered alongside a battery of child development measures in households from Kilifi and Kisauni. The Kilifi sample consisted of 320 children (161 girls) with a mean age of 18.70 months ( $SD = 8.43$ , range: 6-35 months). A smaller sample of 105 children (53 girls) was recruited in Kisauni, with a mean age of 29.08 months ( $SD = 3.53$ ; spread: 24-35 months). The Kisauni children were recruited from a larger test validation exercise, which accounts for the more restricted age range of this sample (Abubakar et al., 2008).

### Additional Measures

1. *The Kilifi Developmental Inventory (KDI)* assesses psychomotor development in young children, including locomotion, manual dexterity, eye-hand coordination, and balance (Abubakar



et al., 2008). In administering the KDI, an assessor interacts with a child in series of standardized activities. Scores represent achievement in gross motor, fine motor and overall psychomotor development. The KDI has shown excellent internal consistency, inter-observer and retest-test reliability. Evidence for validity includes sensitivity to maturational change and to membership of at risk groups (Abubakar et al., 2009).

2. *Socioeconomic status* was represented by maternal education (the number of years in formal schooling). The mean number of years of schooling was 4.17,  $SD = 3.82$ ; with 36% of the sample with no schooling.

## Procedures

All instruments were administered in the child's home. The HOME interview was administered in a conversational manner with the child's main caregiver and in the presence of the child. The caregiver's responses were recorded during the interview (using written notes made by the interviewer). Both the original interviewer and a second member of the interview team used these notes to score the responses according to the coding guidelines provided, with final item scores achieved by consensus.

## Data Management and Analysis Strategies

Data were double entered in FoxPro and verified before being transferred to SPSS (Version 12) for analysis. Item level analysis focused on selecting items demonstrating variability in response (defined as < 70% of responses endorsing one coding) (Gregory, 1992). The psychometric properties of the schedule of the remaining items were then evaluated. Cronbach's alpha was used to compute internal consistency, while Principal Component Analysis (PCA) was carried out to compare the underlying factor structure of the adapted scale to that of the original measure. The convergent validity of the tool was assessed in a path analytic procedure using Amos 5 (Arbuckle, 2003). The model explored the relationship between scores on the home stimulation interview, maternal education, and psychomotor outcome. The fit of the overall model was evaluated using the chi-square statistic, which tests the exact fit of the model, as well as various other fit indices such as the Root Mean Square of Approximation (RMSEA), which measures the discrepancy between the predicted and observed models per degree of freedom.

## Results

### Rural – urban comparison

Scores from the urban sample of children were compared to those of the rural children from the same age group (24-36 months). In terms of background characteristic mothers from the urban group were significantly more educated ( $M = 6.49$  years of schooling  $SD = 3.6$ ) than those from the rural group ( $M = 3.44$  years of schooling  $SD = 3.67$ )  $t(200) = -5.86, p < .001$ . However, there was no significant difference in either the modal response by item or in the overall HOME score between the urban and rural samples. The two groups were, therefore, combined for all analyses.

### Analysis of the 45 items – three-point scale checklist

Restricted variance was demonstrated, with limited variability in response observed in 57.7% (26) of the original 45 items (see Table 3). The four introduced items also demonstrated little variability. Variance in response on one of these items, *breastfeeding*, was strongly related to age. Under one year of age 96.8% ( $N = 61$ ) were breastfed, between 12-24 months, 82% ( $N = 126$ ), with only 8.5% ( $N = 17$ ) of those over two years still being breastfed. The internal consistency of the 45-item schedule was very low (Cronbach's alpha = .43). PCA identified 17 factors with an eigenvalue greater than 1, in contrast to the original six factors of the published HOME, which was also not replicated by a forced six-factor solution.

**Table 3***Score Distribution per Item – 45 Original Items*

Items	% endorsement at each level		
	0	1	2
Parent permits child to take part in messy play	2.4	3.3	94.4
Parent spontaneously vocalizes to child at least twice	0.9	77.9	21.6
Parent responds verbally to child's vocalizations or verbalization	1.6	27.3	71.1
Parent tells child name of object or person during visit	7.1	67.3	25.6
Parents speech is distinct, clear and audible	0.2	0.2	99.5
Parent initiates verbal interchange with visitor	1.6	1.2	97.2
Parent converses freely and easily	0.5	0.2	99.3
Parent spontaneously praises child at least twice during the visit	68.5	17.6	13.9
Parent conveys positive feelings towards child	0.2	6.1	93.6
Parent caresses or kisses child at least twice	40.2	28.0	31.8
Parent responds positively to praise of child offered by visitor	0.9	89.4	9.6
No more than one instance of physical punishment during the past week	8.7	31.5	59.8
Family has a pet	37.2	59.3	3.5
Parent does not shout at child	1.2		98.8
Parent does not express overt annoyance or hostility to child.	0.9		99.1
Parent does not slap or spank child during visit	1.2		98.8
Parent does not scold or criticize child during visit	2.8		97.2
Parent does not interfere with or restrict child during visit	0.7		99.3
At least ten books are present and visible	78.4	19.3	2.4
Child care if used is provided by at least one of three regular substitute	8.5		91.5
Child is taken to grocery stores at least once a week	9.2	31.5	59.3
Child gets out of house at least 2 times a week	5.2	18.8	76.0
Child is taken regularly to doctor's office or clinic	42.4	0.9	56.7
Child has access to toys and treasures	7.8	64.5	27.8
Child's play environment is safe	2.8	0.7	96.5
Muscle activity toys and equipment	26.8	68.7	4.5
Push or pull toys	30.6	63.1	6.4
Stroller or walker or kiddie car, scooter or tricycles	40.0	52.7	7.3
Cuddly toys or role playing toys	34.6	43.8	21.6
Learning facilitators-mobile, table and chairs, high chair and play pen	97.9	1.9	0.2
Simple Eye Hand coordination toys	45.6	53.9	0.5
Complex Eye Hand coordination toys	78.6	18.1	3.3
Toys for literature and music	70.1	29.6	0.2
Parents provides toys for child to play with during visit	45.9	51.8	2.4
Parent talks to child while doing housework	34.4	6.1	59.5
Parent consciously encourages developmental	19.1	0.5	80.5

Items	% endorsement at each level		
	0	1	2
advances			
Parents invest maturing toys with value via personal attention	80.2	2.6	17.2
Parent or sibling structures child's play periods	24.5	62.4	13.2
Parent provides toys that challenge child to develop new skills	87.5	3.8	8.7
Parent or sibling keeps child in visual range, looks at him/her often	0.5	49.4	50.1
Father provides some daily care	11.5	84.5	4.0
Parent reads or tells stories to child	95.5	4.2	0.2
Child eats at least one meal a day with mother and father	70.1	0.9	28.9
Family visits relatives or receives visits once a month or so	8.7	72.7	18.6
Child has his or her own books	98.8	0.5	0.7

### Evaluation of a reduced schedule

All items with limited variability were excluded from subsequent analyses. The children's relationship with the "family has pet" initially retained with reservations, continued to prove ambiguous and was also excluded. Another item "mother spontaneously praises child at least twice during the visit" was excluded for eliciting an extremely low and negative item total correlation. The remaining 17 items demonstrated a modest internal consistency ( $\alpha = .63$ ). Although PCA (with retention of factors with eigenvalues  $>1$ ) identified six factors, factor loadings did not suggest any clear underlying structure. A forced single factor solution only accounted for 17% of the variance observed.

**Convergent validity.** Using a path analytic model we investigated conceptually meaningful associations between maternal education and psychomotor development. In our model, the score on the HOME was conceptualized as having an intervening role between maternal education (antecedent factors) and psychomotor development (outcome). The parameters of the model are presented in Figure 1. The chi square fit value of the model was non-significant ( $\chi^2 (1, N = 425) = .15, p = .70, \chi^2/df = .15$ ), which supports a good fit of the predicted and observed relationships. Other statistical indices confirmed the appropriateness of the model: Tucker Lewis Index was 1.00 (recommended  $> .90$ ), and RMSEA was .00 (recommended  $< .08$ ). The model indicates that mother's schooling is positively associated with HOME scores ( $\beta = .17, p < .01$ ), which in turn is positively associated with psychomotor skills ( $\beta = .17, p < .01$ ). However, the amount of variance explained by the model is minimal. Differences in maternal education accounting for only 3.0 % of the variance observed in the HOME score, and the HOME score accounting for only 2.8% of the variance observed in psychomotor outcome.



**Figure 1.** Relationship between scores from the brief HOME, maternal educational levels and psychomotor scores measures

## Discussion

The 45-item Infant-Toddler HOME did not provide a reliable instrument for identifying between-household differences in our target community. This was demonstrated by the restricted variability of response to the majority of items from the original schedule and the associated poor internal consistency. This is in contrast to the high internal consistency demonstrated in the population for which the schedule was originally devised (Caldwell & Bradley, 2003), but is consistent with other applications in diverse population groups (Van Baar, 1991; Vedder, Eldering, & Bradley, 1995). These discrepancies may be explained by both cultural differences and the specific socioeconomic context of the sample population being investigated. The different experience of the HOME across different contexts suggest that the original HOME items are relevant to the cultural niche of low income/low education households from societies with moderate to high prosperity, but that the range of activities sampled is less relevant to the extremes of economic conditions such as the target population of the present study.

Poor reliability has been found in contexts other than those where there is restricted availability of child stimulating equipment or activities. Limited variance in response on HOME items, low standard deviations, poor alpha values, and poor discrimination between risk groups is also found among middle-class European households, characterized by widespread availability of resources (Van Baar, 1991). Our premise is further supported by unpublished data from South Africa. Within a national context of relative economic advantage, a more acceptable reliability of the full instrument has been observed when applied to relatively disadvantaged communities (Kvalsvig, personal communication).

The restricted variation, in response to the activities sampled in the original HOME, also contributed to our inability to replicate the original factor structure (Bradley, Mundfrom, Whiteside, Casey, & Barrett, 1994; Bradley & Cadwell, 2001). When we limited our analysis to those items with a less restricted variability in response, the reliability of the measure was demonstrably improved, but we were still unable to demonstrate a meaningful conceptual structure underlying the remaining items. While, through participant consultation techniques, we were able to identify more relevant activities, our results suggest that modifications made to the schedule need to go beyond finding acceptable alternatives to the original activities (Van de Vijver & Tanzer, 2004).

Discussion with our Kenyan mothers indicated that there was a significant degree of overlap between the concepts central to the published HOME and those described by our mothers regarding child stimulation. Significant differences in child-rearing practices, as manifestation of the underlying constructs, may account for the many items from the original HOME that showed restricted variance in our sample. For example, studies show that among African caregivers the pattern of interaction and *responsivity* can differ from that observed more commonly in the West (Kilbride & Kilbride, 1983). When responding to children's request for attention, African caregivers are more likely to move towards the child, as opposed to the more western response of vocalizing support. More detailed observations within households may have more readily elicited alternative examples of the underlying constructs of interest.

One major area of divergence was the importance given to child health by the Kenyan sample. Only one item in the original HOME related to health care issues, namely "*regularity of visit to the doctor*". In our sample population this item had a negative correlation with outcome, which may largely result from the fact that in resource-limited settings children are taken to a health care facility largely when they are ill, rather than for monitoring or evaluation. The manner in which we chose to expand this concept to reflect the interest of local participants resulted in restricted variability in response, and limited our ability to evaluate the sensitivity of these items as indicators of children at risk. Other manifestations of these activities, such as the timing or nature of weaning habits, may prove to be more sensitive to between-household differences in risk and resilience.

Another difference between the original schedule and our own modifications was the coding scheme. While there were improvements in variance observed by extending the scheme to a three-point scale, in future initiatives we would recommend a return to the binary approach, as being more straightforward to illustrate and to train. A return to a binary approach would require a radical change in coding to reflect true differences in regularity and approach between households. This, too, will require detailed observations at the household level to obtain the salient knowledge. For example, there is a need to address differences in family structure and family roles between communities. This study indicated that the focus on the input of the mother may lead to an inadequate sampling of the child's environmental experiences. In many collectivistic societies, a child's world is defined by multiple caregivers. We currently know little about ways to define key roles appropriately, although responses collected indicate that siblings were actively involved in organizing and structuring the child's daily life, especially for those aspects that relate to play. Indeed, the importance of the role of the sibling is vastly different in collectivistic societies to that found in western countries (Wenger, 1989; Zuckow-Goldring, 2002). The responsibilities of each family member in childcare need more careful documentation and integration into item construction. This observation is similar to that experienced in other collectivistic communities, where it has been concluded:

“...the HOME was generally less ecologically valid with families from collectivist, interdependent cultures than with those from individualistic, independent cultures” (Bernstein et al., 2005, p. 248).

Despite the limitations described, the more restricted 17-item version was able to show differences between households in our target community. In our context, the suggestion is that the availability of child-friendly equipment in the home (a common feature of the remaining items) is sensitive to both between-household variation and differences in child outcome. The relationships observed, with the home environment measure mediating the relationship between maternal education and psychomotor development is consistent with findings from research across different populations (Bradley et al., 1996). However, in common with data from the US, much of the variability between households' remains unexplained, which suggests that the 17-item schedule provides no more than a core of potentially sensitive items. Future efforts in this population should begin with more detailed ethnographic work to identify other items that have a socio-cultural relevance and that capture child stimulation in a way not currently included in the HOME inventory.

## Conclusion

The 45-item HOME inventory, despite extensive adaptations to fit the cultural context, demonstrated limited reliability and sensitivity to within-household differences in low income communities in coastal Kenya. Despite the problems experienced with the psychometric properties of the HOME measure (i.e., a large number of items with limited variance, poor internal consistency, and a lack of an identifiable factor structure), we were able to demonstrate theoretically meaningful relationships with antecedent factors and developmental outcome of a restricted 17-item schedule. This finding indicates that the adaptations made to the HOME were adequate enough to maintain similar levels of discriminant ability to those found in other contexts. Further development is required to incorporate a wider range of sample behaviours, in order to ensure acceptable psychometric properties and account for a greater proportion of variance in outcome observed. However, an adequate measure can only be developed after an extensive ethnographic search aimed at identifying context-specific items and procedures for assessing childcare and parenting behavior.

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## **The Functions of Music-Listening across Cultures: The Development of a Scale Measuring Personal, Social and Cultural Functions of Music**

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### **Abstract**

We examined the functions of music-listening from a cross-cultural perspective. Two studies were conducted to capture personal, social and cultural experiences with music. Young people were sampled; mainly online surveys were used. Study 1 is a qualitative multicultural study that identified seven main functions of music: background, memories, diversion, emotion, self-regulation, reflection of self, and social bonding. In study 2, based on the qualitative data, we developed and validated a scale measuring Ratings of Experienced Social, PErsonal and Cultural Themes of MUSIC functions (RESPECT-MUSIC) in three cultural samples (Latin-American, Anglo-Saxon, and Germanic). A ten-factorial solution was found to be structurally equivalent and reliable across three cultural samples. The factors represent the functions: background, dancing, emotions, venting, focus, value development, political attitudes, social bonding with friends, family bonding, and cultural identity. Limitations of this research and future directions are discussed. The investigation complements previous psychological research on music with a cross-cultural perspective.



Music has been identified as a strong human universal (e.g., Blacking, 1974; Cross, 1999, 2001; Falck & Rice, 1982; Merriam, 1964). But are the psychological functions that music serves in different cultures also universal? The current research explores this intriguing question from a cross-cultural perspective.

### **Which Functions Does Music Serve?**

Merriam (1964) generated a list of ten functions of music, which are "equally applicable to all societies" (Merriam, 1964, p. 218). Naturally, as an ethnomusicological account, the focus was on analyzing what music does for and in human society; however, the functions Merriam identified also imply a number of individual and social psychological constructs. The list of musical functions can be categorized into individual (emotional expression, aesthetic enjoyment, entertainment, physical response), social (communication, symbolic representation), and cultural functions (enforcing conformity, validating institutions, cultural continuity, integration).

More recently, a number of models were developed compiling psychological functions of music (e.g., Behne, 1997; Hargreaves & North, 1999; Tarrant, North, & Hargreaves, 2000; Sloboda, 2005). However, it is often assumed that music-listening is an individual practice that is done alone (Juslin & Lukka, 2004; Sloboda, 2005). Hence, there is a predominant focus on the individual level of musical functions neglecting collective aspects of musical experiences (Hargreaves & North, 1999; Rentfrow & Gosling, 2006). Sociologists and ethnomusicologists remind us that music is also a fundamental feature contributing to social and cultural settings (DeNora, 2000; Frith, 1987; Merriam, 1964; Mitchell, 1996). Therefore, music also serves functions at the social and cultural level. Previous psychological research has largely ignored these different levels of musical experience. Advancing research in this regard, the present paper takes three levels into account: significance of music at individual, social, and cultural levels.

### **Cross-Cultural Approaches**

A growing body of studies takes cross-cultural psychological perspectives on various functions of music. For instance, Saarikallio (2008) focused on the use of music for mood regulation. Her study with Finnish and Kenyan adolescents revealed that the nature of mood regulation through the use of music is similar across the two cultural samples. Gregory and Varney (1996) conducted a study on the affective responses to music comparing European and Asian listeners. They found that European and Asian listeners responded differently to Western and Asian music. Rana and North's (2007) study on Pakistanis revealed striking similarities on the role of music in everyday life compared with a British sample (North, Hargreaves, & Hargreaves, 2004). Finally, Schaefer, Sedlmeier, and Tipandjan (2008) examined 17 functions of music and their links to music preferences in a German and an Indian sample. Their results revealed that in India music seems to fulfill the same functions in everyday life and to the same extent as in Germany (Schaefer, Sedlmeier, & Tipandjan, 2008). These studies suggest that there are universalities, but also cultural specifics in the functions of music.

Empirical psychological studies show a tendency to apply imposed etic approaches (application of theory and methodology from one culture to other cultures without culture-sensitive adaptation). The pitfalls of such approaches have been intensively discussed, and the advantages of derived etic approaches (appropriate adaptation of culture-specific theory and methods to other cultures) have been promoted in the cross-cultural literature (e.g., Berry, 1969, 1989; Segall, Lonner, & Berry, 1998).

In order to develop a framework of functions of music that is applicable across cultures, we need to consider major methodological issues that are neglected in imposed etic research. The decentered approach has been promoted to ensure a cultural balance and avoid construct bias in cross-cultural research (van de Vijver & Leung, 1997). Generally, in a decentered approach, multiple cultural perspectives on the studied phenomenon are gathered reducing the likelihood of construct bias. Hence, we intended to engage participants from various cultural and geographical regions. More precisely, we aimed to sample participants from Latin-America,

(South) East Asia, the Anglo-Saxon region, and Western Europe. These regions differ with regard to particular cultural characteristics (e.g., Hofstede, 1980; Schwartz, 2004).

In short, Latin-American cultures, such as Brazil or Mexico, accentuate collectivistic cultural values (putting group goals over individual ones) and lean towards mastery values (dominance over others and nature). (South) East Asian cultures, such as the Philippines or Hong Kong, are also collectivistic and value hierarchical structures. Anglo-Saxon societies, such as New Zealand, the UK, and the USA, are individualistic (independence of individuals) cultures and are characterized by affective autonomy (freedom of emotional expression and experience) and mastery. Western European cultures, such as Germany, are also individualistic and emphasize egalitarianism, intellectual autonomy, and harmony values (harmonious relationship with others and nature).

### **Aim of This Research**

The aim of study 1 is to identify functions of music experienced by culturally diverse music fans. In a qualitative survey-study, we include questions regarding the personal, social and cultural meaning of music, since these three levels comprise the multifaceted nature of musical functioning (Merriam, 1964). Based on the qualitative data of study 1, we then develop a scale measuring functions of music (RESPECT-MUSIC). In study 2, RESPECT-MUSIC is tested in three cultural samples using three language versions (English, Spanish, and German). The comparability of instruments is a major issue in cross-cultural research, because various factors can bias cross-cultural measurements (Fontaine, 2005; van de Vijver & Leung, 1997). Therefore, the aim of study 2 is to provide first findings for the reliability, structural property, and comparability of RESPECT-MUSIC across three cultural samples from Anglo-Saxon, Latin-American, and Western European regions. The culturally diverse samples in our studies allow multicultural input in form of qualitative data (study 1) and a first cross-cultural validation of a new instrument (study 2). However, they do not allow generalizations with regard to the cultures from which participants are drawn.

## **Study 1**

The first study aimed to gather qualitative input from young people about their personal, social and cultural experiences with music. We analyzed the responses to open-ended questions asking about the meaning of music in young people's lives from a variety of cultures. Study 1 intended to gain rich descriptions of musical functions from music fans of four distinct cultural regions (as described earlier). We took an inductive approach to the function of music-listening in a culturally decentered study. In this study, we aim to develop a model of musical functions that is sought to be applicable across cultures.

## **Method**

### **Data Collection and Participants**

We used the Internet in order to get responses from a culturally heterogeneous population of music fans and young people. The link to the online survey was posted in discussion boards of music-related websites hosted in seven countries, because they are located in Latin-America (Brazil), (South) East Asia (Singapore, Hong Kong, the Philippines), Anglo-Saxon regions (New Zealand, USA), and Western Europe (Germany).

The sample of 222 participants had an average age of 23 years ( $SD = 9.05$ ; range = 13-69) and 58% of the participants were female. 87% of the participants were residing in the seven targeted countries (30 in Brazil, 5 in Hong Kong, 82 in Germany, 32 in New Zealand, 7 in the Philippines, 23 in Singapore, 13 in the USA). Regarding their cultural backgrounds, participants can be categorized for descriptive purposes in four cultural clusters based on their stated home country (country where they grew up) and ethnicity: South-American, Asian, Anglo-Saxon, and European (Table 1). These cultural clusters overall match with the cultural regions we described

earlier. However, the European cluster contains participants from other parts of Europe [e.g., Greece, or Russia], not only Western Europe.

**Table 1**

*Sample description (study 1)*

Region	South-American	Asian	Anglo-Saxon	Europe
N	34 <sup>1</sup>	44	49	95
Female	50%	34%	45 %	81%
Age	26 years	25 years	26 years	18 years
Home country (N)	Bermuda (1) Brazil (30) Chile (1) USA (1)	Hong Kong (7) India (2) Kazakhstan (1) Malaysia (4) Philippines (8) Singapore (21) Vietnam (1)	Canada (4) Ireland (1) New Zealand (24) South Africa (1) UK (8) USA (11)	Austria (2) Croatia (1) Finland (4) Germany (68) Greece (1) Italy (3) Luxembourg (1) Netherlands (3) Poland (1) Romania (1) Russia (1) Sweden (2) Switzerland (7)

*Note.* <sup>1</sup> One participant resided in Brazil but did not state home country or particular ethnicity. This person was categorized as South-American based on country of residence. One participant stated the USA as home country, but emphasized Hispanic roots and ethnicity, hence the categorization as South-American.

## Questionnaire

The online questionnaire consisted of two parts. First, demographic details were obtained: age, gender, home country, ethnicity, and country of residence. In the second part, open-ended questions regarding the meaning and functions of music in people's lives were asked. Those questions covered three levels of significance: personal meaning of music, social meaning of music, and cultural meaning of music.

Asking multiple questions enhances the validity and reliability of capturing the phenomenon qualitatively. Therefore, we phrased three questions to capture the personal significance of music. The first question targeted the meaning of music in life (*What does music mean to you? Please write your thoughts about the role that music plays in your life.*). The second question was about the perceived influence of music in life (*How does music influence your life?*). The third question targeted the situational experiences with music (*Think about one specific situation when you were listening to music in the last 3 days. Please describe what you thought, felt and did in that situation.*).

The social significance of music was obtained in two social contexts: music in the social context of being with friends (*What role does music play when you are hanging out with your friends?*) and meaning of music for the family (*What is the meaning of music for your family members?*). The cultural significance of music was asked in two further questions (*What is the meaning of music in your home country?* and *What is the meaning of music in your cultural community?*).

Participants completed survey-versions that randomly contained three of the seven open-ended questions in the second part to shorten the survey. We included responses if participants answered at least two of three questions. 361 participants started filling in the survey. Of those, 139 individuals only answered the demographic part or one of three open-ended questions, which indicated low commitment to participation. Hence, these responses were omitted from analysis and the final sample comprised 222 participants (92% answered all three questions).

Enhanced drop-out rates are a concern in Internet studies; however, the current drop-out rate is in the common range (e.g., Birnbaum, 2004; Reips, 2000).

### Analytical Strategy

The content of the responses was analyzed using inductive thematic analysis. Thematic analysis is a qualitative method that identifies, analyzes and reports patterns within data (Braun & Clarke, 2006). The cultural background of participants or the different questions were not explicitly considered in the qualitative analysis, given that we did not want to force cultural differences or a predefined structure onto the analyses.

## Results and Discussion

We identified seven main themes in the qualitative responses: music in the *background*, *memories* through music, music as *diversion*, *emotion* in music, *self-regulation* through music, music as *reflection of self*, and *social bonding* through music.

1. *Music in the Background.* Music is used as a background element while doing something else or to help passing time. The use of music as a background element while being engaged in other activities was mentioned by a Singaporean (36 years, male), who considered music as “*something meant to be played (softly) in the background while [...] doing something else.*” Previous research referred to the background function as a facet of individual use, for example, as a diffuse listening style (Behne, 1997), or the use of music for distraction from routine tasks (Sloboda, 2005).

Additionally, this study revealed the social element of this function. For instance, it was brought up by a participant from Malaysia (34 years, male) who uses “*Background music to keep the ambience warm and cosy*” when spending time with his friends.

2. *Memories through Music.* Particular songs can trigger memories and can connect the listener to her/his past. A participant from England (15 years, female) stated: “*I also have lots of memories linked to music, so listening to a particular song can remind me of someone.*” The reminiscence function has been studied previously as a facet of individual use of music (e.g., Behne, 1997; DeNora, 2000; Frith, 1987; Schulkind, Hennis, & Rubin, 1999; Sloboda, 2005).

However, this function of music can also operate when music is listened to with friends or family member. In this case, conjoint listening to a particular song can trigger memories of shared moments. A female New Zealand Maori (32 years) said that “*we think of our memories*” when listening to music with friends. Therefore, the music is a source for reminiscence alone or with others. An important issue to note is that it is *not* music in general that seems to serve the reminiscence function, but rather particular songs, favorite music or sometimes even parts of songs that remind participants of individuals, events, and occasions.

3. *Music as Diversion.* Music is a medium of entertainment as it is used to feel good and enjoy oneself. Music is “*mainly to have fun,*” as a German participant (15 years, female) stated. Furthermore, music is essential for dancing. A Brazilian (28 years, female) provided the following quote: “*along with listening to the music there is the dancing that helps on the “felling good” part.*” The diversion function is distinct from the next emotional functions since the simple enjoyment of music is without connection to prior mood and emotions. The entertaining function of music contains social aspects, for instance, dancing as a social practice (e.g., DeNora, 2000; Merriam, 1964; Saarikallio & Erkkilä, 2007; Sloboda, 2005).

4. *Emotion in Music.* The emotional function of music is complex. Music can convey emotions and also trigger emotions or emotional reactions. Listening to music can express the emotions of the listener. Therefore, particular songs are chosen by their emotional content in order to express a specific emotional state. People also choose particular songs to change their emotions and mood. A 30-year-old female participant from Germany summarized the emotional function of music by saying, “*Music can transport and express emotions. And what is more powerful than a song or just a tune which is able to bring tears in your eyes?*”

The emotional function of music has been intensively analyzed by music psychologists (e.g., Behne, 1997; Saarikallio & Erkkilä, 2007; Sloboda, 2005) and sociologists (e.g., DeNora, 2000; Frith, 1987).

5. *Self-regulation through Music.* The listener uses music actively to alter or improve the current state of mind. Music can help to relax and relieve stress, or to enhance creativity and intellectual focus. On the one hand, listening to music can reduce loneliness; on the other hand, it can be an escape from this world. For instance, music is *“an escape and a comfort from the difficulties of life”* for a 37-year-old female from New Zealand. Certain music can help venting frustration and aggression. Music can be a form of therapy: it can ease sorrow and negative moods in times of crisis.

Within the self-regulation function of music, the listener is an active agent, using music consciously to change a current mental state. This function of music has also been studied within music psychology and sociology (Behne, 1997; DeNora, 2000; Saarikallio & Erkkilä, 2007; Sloboda, 2005).

6. *Music as Reflection of Self.* Music can indicate three kinds of identities: individual, social and cultural identity. First, music can be an outlet for personal self-expression. It can express a person's individuality and lifestyle. For a 31-year-old female New Zealander music is *“a way for me to express my individuality - liking a particular sound or band was a way of saying who and what you stood for.”* Music expresses and influences values and attitudes; it can be an inspiration and can give guidance. Secondly, music indicates social identity through signifying group membership, for instance, belonging to a particular social group (alternative, rave) or the current 'cool group' in school. Thirdly, music can reflect identification with a culture, comment on its history and current conditions for its members. A 29-year-old Romanian woman stated that *“the folk, traditional music is more related to national identity, Romanian customs and traditions, and history.”* In summary, music preference of a person communicates identity, values, and attitudes to others, which has also been described in previous studies (DeNora, 2000; Frith, 1987; Hargreaves & North, 1999; Merriam, 1964).

7. *Social Bond through Music.* Music can provide a collective activity, e.g., listening to music or going to concerts. These shared musical activities can influence the relationship to friends and family members. Music can create a special bond. A participant from the US (17 years, male) pointed out that music *“gives us a topic. [...] It helps us bond in a way that nothing else can.”*

The sociological and social psychological investigation of the social bonding function started growing recently (Bakagiannis & Tarrant, 2006; Boer et al., 2010; DeNora, 2000; Frith, 1996; Hargreaves & North, 1997; Rentfrow & Gosling, 2006). Further studies from evolutionary studies (Cross, 2001) and biomusicology (Freeman, 2001) underline the importance of music for human development and social bonding.

## Summary of Study 1

The seven main functions of music are not new discoveries. They have been described in previous literature, but - to the best of our knowledge - have not been compiled within one holistic model. Although our study is limited in several ways, it provides two major advances in the research of music. First, we considered culture in the process of developing a model of psychological functions of music. In the study of music, this perspective has not been taken into account since the paradigm shift in ethnomusicology from etic to emic approaches in the 1980's (Falck & Rice, 1982). Secondly, we included multiple levels of significance, which are important for a holistic understanding of musical experience.

However, we need to address some shortcoming in our study. The nature of internet sampling introduces self-selection and pre-selection biases to the study. Only individuals that have access to certain resources, who are committed to music and who are engaged in internet activities make up the population of this study. The sample is by no means representative and therefore, the results cannot be generalized to the cultures of the participants. The cultural distribution of the sample is not balanced, although we aimed to culturally balance the sample

by posting the link in the same amount of discussion boards per host country. The reasons for the unbalanced distribution may be various, e.g., variant frequentation of homepages, or cultural differences in willingness to voluntarily participate in posted surveys.

## Study 2

Based on the multicultural qualitative responses in study 1, we developed an inventory measuring the essence of each main function of music (Ratings of Experienced Social, Personal and Cultural Themes of MUSIC functions, RESPECT-MUSIC). Study 2 describes the scale development of RESPECT-MUSIC and presents first evidence for reliability, internal validity, and comparability across three language versions (English, Spanish, and German).

### Item Generation for Respect-Music

Based on the qualitative responses in study 1, we generated four to fifteen items for each main function of music (depending on the number of sub-functions). We extracted items directly from responses or generated items summarizing responses. For instance, from the quote *“And what is more powerful than a song or just a tune which is able to bring tears in your eyes?”* we generated the item *“Some songs are so powerful that they are able to bring tears into my eyes.”*

The clarity and content validity of the initial 229 items was assessed in a multicultural committee approach (Beck, Bernal, & Froman, 2003) with postgraduate students ( $N = 7$ ; one participant each from Sweden, Hong Kong, and Estonia, 2 from New Zealand, and 2 from Germany). The committee session included three tasks: 1) an open commentary task regarding the clarity of items and general translatability into participants' native languages, 2) a free sorting task in which couples of participants were asked to categorize items according to content similarity, and 3) the selection of the most appropriate response scale for measuring functions of music listening using the given items.

The committee approach yielded 74 items covering a selected number of sub-functions which represent the seven main functions of music that were identified in study 1. The committee perceived the 74 items as clearly phrased and holding face validity. The third aim was to identify the most appropriate instruction and response scale to measure functions of music listening. The committee agreed that the following response scale was the most appropriate for RESPECT-MUSIC: Please indicate the degree to which each of the following statements applies to your experience with music from “1 – not at all” to “7 – to a great extent.”

The initial set of items and response scale were developed in English and translated into German and Spanish. A German-speaking research assistant translated RESPECT-MUSIC into German. We subsequently proofread and corrected the translation if necessary. The validity of the translation was then confirmed and finalized in a committee approach including three bilinguals. The translation into Spanish was conducted by three collaborators. They translated and back-translated the instrument. We examined the back-translation and provided comments regarding potential translation issues. The initial translation was then revised and finalized.

Study 2 aims to reduce the initial pool of 74 items to a more practical scale size. We assess reliabilities and structural properties of RESPECT-MUSIC in three language versions (tested in three cultural samples primarily from Mexico, New Zealand and Germany). The simultaneous development and item selection in multiple languages and cultural groups reduces the likelihood of culture-sensitivity or language-sensitivity of the instrument. The assessment of structural equivalence of RESPECT-MUSIC across three language samples will provide first evidence of possible universal or cultural-specific dimensionality of functions of music as measured by the newly developed RESPECT-MUSIC.

## Method

### Participants

A total of 854 participants took part in this study. We collected data using online surveys (60%) and paper-and-pen questionnaires at universities (40%) in New Zealand, Mexico, and Germany. Online data was collected by sending email invitations (snowballing approach) and posting the invitation to the survey in various online forums with a wide scope of interest. This multiple site entry technique aims to reduce self-selection bias, which may be an issue in online surveying (Reips, 2000). The link to the survey was available in three languages (English, Spanish, and German) on the webpage that was created for this project (<http://www.jungedenkmusik.net>).

350 participants filled out the English version of the survey. Their average age was 22 years ( $SD = 7.31$ ), 50% of them were female and 83% were students. The majority of the English speaking sub-sample came from New Zealand (78%), 11% from the US, and the remaining 11% lived in other Anglo-Saxon countries.

175 participants completed the Spanish version of the survey. Their average age was 22 years ( $SD = 6.27$ ), 51% of them were female, and 87% were students. The majority of the Spanish-speaking sub-sample came from Latin America (71% Mexico, 15% from other South American countries), 11% came from Spain, and the remaining 3% were Hispanics living in other countries.

329 participants filled out the German version of the survey. Their average age was 24 years ( $SD = 6.54$ ), 48% of them were female, and most of them (77%) were students. The vast majority of the German-speaking sub-sample came from Germany (95%), 4% came from Austria and Switzerland, and the remaining 1% were Germans living in other countries.

The three samples were matched with regard to age and gender distribution.

### Analytical Strategy

The analytical strategy involved a series of factor analyses in order to assess the most appropriate factorial structure and to identify items that did not load clearly on factors. Considering that RESPECT-MUSIC is a new instrument, an exploratory factor analytical approach was used. In order to assess the factor structure, Principal Component Analyses (PCA) were conducted on the pooled within-groups correlation matrix. Pooled factor analysis was chosen as this approach adjusts for unequal samples sizes (Bond, 1988; Fischer & Fontaine, in press). We rotated the pooled factor solution with Varimax rotation in order to identify independent functions of music.

Structural equivalence was investigated by applying procrustean target rotation (for details see Fischer & Fontaine, in press; van de Vijver & Leung, 1997). This analysis assesses the structural similarity of a factor solution to the factorial solutions of a target group. The Varimax-rotated factor solution of the pooled within-groups correlation matrix was used as the target group. For each sample, a PCA was conducted extracting the given number of factors, and the solutions were then rotated towards the target group factor structure in order to assess the fit between them (Fischer & Fontaine, in press; van de Vijver & Leung, 1997). Tucker's Phi is an agreement coefficient that was examined as a statistical indicator of factor similarity. Is Tucker's Phi higher than 0.95, it gives evidence for factorial similarity (van de Vijver & Leung, 1997); while indices between 0.90-0.95 would not suggest a perfect, but still adequate, level of similarity of factor structures (Leung et al., 2002).

## Results and Discussion

### Structure of Respect-Music

The first PCA including 74 items extracted thirteen factors; however, several items loaded on single factors, had cross or low loadings, or were of inconsistent content across samples.





5. Music is emotion flowing in sound.	0.62											<b>0.58</b>
6. I meet with friends and listen to good music.		0.76										<b>0.65</b>
7. Through music my friends and I can commemorate happy past moments together.		0.77										<b>0.72</b>
8. Listening to music with friends is a way of sharing good old memories of our lives.		0.75										<b>0.66</b>
9. Going to concerts and listening to records is a way for me and my friends to get together and relate to each other.		0.72										<b>0.68</b>
10. We live these moments of true connection when I listen to music or go to concerts with my friends.		0.71										<b>0.66</b>
11. Music allows me to have a common interest with my family.			0.84									<b>0.81</b>
12. Our shared music taste is something that brings my family together.			0.82									<b>0.78</b>
13. I like talking to my family about music.			0.82									<b>0.74</b>
14. I enjoy listening to music with my family / relatives.			0.80									<b>0.71</b>
15. Music is what alleviates my frustration.				<b>0.76</b>								<b>0.77</b>
16. Music is a means of venting my frustration.				<b>0.77</b>								<b>0.79</b>
17. Through listening to music I can let off steam.				<b>0.81</b>								<b>0.79</b>
18. Music seems to reduce stress.				<b>0.74</b>								<b>0.71</b>
19. I like dancing to certain music.					<b>0.92</b>							<b>0.88</b>
20. Some music makes me want to dance.					<b>0.86</b>							<b>0.81</b>
21. I like to go dancing, and the type of music is essential for this.					<b>0.86</b>							<b>0.79</b>
22. I need music in the background while doing something else.						<b>0.86</b>						<b>0.85</b>
23. In many situations I need music in the background.						<b>0.81</b>						<b>0.78</b>
24. Whatever I do, I listen to music in the background.						<b>0.81</b>						<b>0.83</b>
25. I can keep my focus on a task while listening to the right music.							<b>0.85</b>					<b>0.84</b>
26. Music helps me to focus.							<b>0.81</b>					<b>0.84</b>
27. Listening to music allows me to concentrate.							<b>0.82</b>					<b>0.88</b>
28. Music is very important in the process of developing my values.								<b>0.77</b>				<b>0.79</b>
29. Somehow music steers my									<b>0.71</b>			<b>0.75</b>

approach to life and my values.											
30. My personal development was positively influenced by music.								<b>0.74</b>			<b>0.75</b>
31. My favorite music is often political.									<b>0.87</b>		<b>0.79</b>
32. I usually listen to music that goes somewhat with my political beliefs.									<b>0.80</b>		<b>0.70</b>
33. Music plays an important role in my life as a means of political engagement.									<b>0.80</b>		<b>0.76</b>
34. The music of my country represents an image of my country to the outside world.										<b>0.84</b>	<b>0.78</b>
35. The music in my country is part of building our identity.										<b>0.80</b>	<b>0.74</b>
36. Music is a reflection of a country's culture and history.										<b>0.79</b>	<b>0.68</b>
<i>Eigenvalue</i>	27.77	9.88	7.42	<b>6.60</b>	<b>5.38</b>	<b>4.88</b>	<b>4.13</b>	<b>3.42</b>	<b>2.90</b>	<b>2.85</b>	
<i>Variance explained (75.23%)</i>	9.33%	8.97%	8.47%	<b>8.27%</b>	<b>7.12%</b>	<b>7.06%</b>	<b>7.04%</b>	<b>6.50%</b>	<b>6.44%</b>	<b>6.03%</b>	
<i>Factor congruence Tucker's Phi</i>											
Anglophone sample	0.99	0.98	0.98	<b>0.97</b>	<b>0.97</b>	<b>0.98</b>	<b>0.95</b>	<b>0.95</b>	<b>0.98</b>	<b>0.99</b>	
Hispanic sample	0.98	0.99	0.98	<b>0.96</b>	<b>0.97</b>	<b>0.96</b>	<b>0.97</b>	<b>0.95</b>	<b>0.97</b>	<b>0.97</b>	
German sample	0.99	0.99	0.99	<b>0.99</b>	<b>0.99</b>	<b>0.98</b>	<b>0.98</b>	<b>0.98</b>	<b>0.99</b>	<b>0.98</b>	
<i>Internal consistency Cronbach's alpha</i>											
Anglophone sample	0.84	0.78	0.88	<b>0.87</b>	<b>0.90</b>	<b>0.89</b>	<b>0.92</b>	<b>0.87</b>	<b>0.87</b>	<b>0.84</b>	
Hispanic sample	0.88	0.88	0.87	<b>0.87</b>	<b>0.91</b>	<b>0.91</b>	<b>0.90</b>	<b>0.89</b>	<b>0.76</b>	<b>0.82</b>	
German sample	0.84	0.87	0.89	<b>0.90</b>	<b>0.87</b>	<b>0.88</b>	<b>0.93</b>	<b>0.83</b>	<b>0.82</b>	<b>0.72</b>	

Note. Factor loadings above 0.30 displayed;  $h^2$  – communality (measures the percent of variance of each item explained by all factors)

## General Discussion

The current paper gathered a holistic picture of personal, social and cultural functions of music from a culturally diverse sample of young music lovers (study 1). The identified seven main functions of music (background, memories, diversion, emotion, self-regulation, reflection of self, and social bonding through music) are not new discoveries. These functions, however, show an intriguing trend of social aspects in musical functions including cultural identity, considering that previous models primarily encompassed personal psychological functions of music (e.g., Sloboda, Lamont, & Greasley, 2009). The subsequently developed scale RESPECT-MUSIC (study 2) captures the essence (emotion, social bonding, background) or particular sub-domains (venting, dancing, focus, values and development, political attitudes, cultural identity) of the qualitatively identified functions.

Several functions of music, which have been identified as separate domains in study 1, merged in study 2. For instance, music as a means of social bonding is strongly associated with the collective reminiscence function of music, when collective listening to music triggers memories of shared events. This is an interesting link that has not been investigated before. It appears that social bonding through music is a long-term process based on shared musical activities and experiences that are memorized, and thus, can become an integral part of the interpersonal attachment.

Furthermore, several functions being grouped together in study 1 represent separate facets of musical functions as measured by RESPECT-MUSIC. For instance, the self-regulation sub-domains *venting* and *focus* appear as distinct factors, and three sub-facets encompassing

reflection of self were measured as the separate functions value development, political attitudes, and cultural identity. RESPECT-MUSIC allowed the structural assessment of musical functions that have been subjectively categorized into seven themes in study 1. Study 2 revealed a more detailed picture of ten musical functions.

RESPECT-MUSIC was simultaneously tested in three languages providing first evidence for applicability, reliability, and structural properties in English-speaking, Latin-American and German samples. The 36 items inventory RESPECT-MUSIC was found to be structurally equivalent (ten factors) across three cultural samples. Study 2 provided first indications for a universal underlying structure of functions of music. A multi-lingual approach was employed in the instrument development and validation. This enabled the selection of appropriate items based on the data collected in three languages. This reduces the likelihood that the newly developed instrument RESPECT-MUSIC is language sensitive, which improves its cross-cultural applicability. However, it should be noted that the functions were based on a study conducted in languages within the Indo-European language family and limited applicability to non-Indo-European languages cannot be ruled out. Before we can suggest that these factors are universal dimensions, they ought to be tested in and adapted to other cultural settings, samples, and other languages. Furthermore, before claims about the robustness of RESPECT-MUSIC can be made, re-test reliability needs to be assessed in future research.

The current research was conducted by sampling young educated, urban adults as participants. In order to generalize the findings of this research, further studies with samples of different age groups, occupational groups and rural regions would elucidate the research on functions of music. Research could explore whether the holistic topography of musical functions entails similar functions and a similar structure in other samples. The qualitative and quantitative approaches inform and complement each other by capturing functions of music in a comprehensive model. Multicultural and multi-lingual approaches were used providing rich cultural input and a relatively low risk of language sensitivity in the captured functions of music. Nevertheless, the present studies cannot fully preclude possible domain under-representation. For instance, rural populations in traditional societies may use music for spiritual and religious purposes, which is not explicitly captured in this research (somewhat implicitly in the value and identity function). Moreover, the potential domain under-representation of culture-specific musical functions in study 1 may have carried over to study 2, since the items were developed based on the qualitative responses.

The studies of this paper relied solely on self-reports. Self-report research may be subject to social desirable responses, response sets, methodological artifacts due to survey method, or potential translation issues. Future research including participatory observational studies, archival analyses or content analysis of lyrics is welcomed to further examine the identified functions.

Despite its limitations, this research opens avenues for future research on music across cultures. RESPECT-MUSIC is a practical, comprehensive and relatively brief tool that can be included in surveys assessing other psychological and demographic variables. This enables for instance the exploration of cross-cultural similarities and differences in the importance and psychological determinants of the ten functions of music.

Musical behaviors offer an exciting applied field for cross-cultural psychological research. Emerging cross-cultural psychological research methods emphasize a paradigm shift from exploring cross-cultural similarities and differences to explaining them (van de Vijver & Leung, 2000). While emic, ethnopsychological, and indigenous approaches advance our understanding of processes rooted within one particular culture, cross-cultural approaches systematically examine similarities and aim to explain occurring differences based on cultural dimensions, ecological factors or other culture-relevant components such as history. Music is one of the most impressive elements of human life encompassing both culture-specifics and universals. The dominant approach in ethnomusicology has explored culture-specifics in much detail. It is time to complement these in-depth cultural studies with a broader view on the cultural dynamics and similarities. Given the centrality of music to culture, a cross-cultural psychology of music could

advance our understanding of musical universals and cultural processes in the expression and function of music (Huron, 2008). The integrated examination of both universals and culture-specifics may be a key ingredient for future research on music and culture.

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## **The Significance of Positive Perceptions of Counseling in Willingness to Seek Counseling Help: An Indonesian Study**

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### **Abstract**

This paper describes a study designed to investigate the relationships between perceptions relevant to counseling and willingness to seek counseling. A total of 1,279 undergraduates who came from an urban area in Indonesia volunteered to participate in the questionnaire survey. Results show that those who were potentially highly likely and those who were less likely to seek counseling showed significant differences in most of the areas of perceptions of counseling. Generally, the potential high seekers had better perceptions of counseling than the potential low seekers. The study suggests that those with more positive perceptions are more disposed to seek counseling. Widespread and accurate information about counseling is recommended to improve students' willingness to seek counseling.

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Many studies have found that a counselor is not a preferred helper among students (see Benedict et al., 1977; Cook et al., 1984; Dubow et al., 1990; Gibson et al., 1992; Boldero & Fallon, 1995; Raviv et al., 2000; Lin, 2001; Rudowicz & Au, 2001; Setiawan, 2004). Numerous studies have been carried out to identify factors that influence the decision to seek counseling. According to Fischer, Winer, & Abramowitz (1983), there are three broad categories of factors influencing individuals to seek psychological help or not. Those categories are personal, socio-cultural, and agency factors. Personal factors include things relating to personal characteristics and situations. Socio-cultural factors refer to cultural values or certain social group's characteristics. Factors relating to counseling services, such as the service, counselors, or other administrative issues, are grouped into agency factors.

### **Personal Factors**

A study conducted by Dubow, Lovko and Kausch (1990) in a semi rural, industrial, midwestern community found that the perception of self-ability to handle problems was a discouraging factor. Supporting this, Kuhl, Jarkon-Horlick and Morrissey (1997) point out in their study, which was mostly among Caucasians, that self-sufficiency is one of the factors that hinder willingness to seek help from a mental health professional. Furthermore, Surf and Lynch (1999) showed in their study among young people from the UK that the sense of powerlessness in relation to difficulties prevented individuals from seeking counseling. The study also showed that adopting denial as a coping style also prevented individuals from seeking counseling. This result is also supported by a study conducted by Seiffge-Krenke (1989).

Some people might develop a reluctant attitude to discussing personal difficulties with others. In their study, Surf and Lynch (1999) also found this attitude as stopping people from seeking counseling. Other studies also came to the results that the availability and the use of other helpers were the reasons for not seeking a counseling service (Bosmajian & Mattson, 1980; Goodman, Sewell, & Jampol, 1984; Sherbourne, 1988; Kuhl et al., 1997). Another personal factor that inhibits people from seeking counseling is the lack of time (West et al., 1991; Kuhl et al., 1997).

### **Socio-Cultural Factors**

Numerous studies have found that embarrassment, threat to self-esteem, and perception of stigma related to counseling also influence the decision to seek help (Williams & Williams, 1983; Stefl & Prospero, 1985; Sibicky & Dovidio, 1986; Komiya et al., 2000; Ey et al., 2000). The findings were confirmed by Deane and Chamberlain (1994) as well as Surf and Lynch (1999). Sue and Sue (1987) have pointed out that stigma and shame in talking about personal problems are frequently found in Asian-American people and serve as discouraging factors against making use of counseling.

The study of Komiya et al. (2000) has found that fear of emotion also potentially contributes to individuals' reluctance to seek professional psychological assistance. For people from certain cultures, external expression of emotion and the internal experiencing of strong emotions could produce uncomfortable feelings (Komiya et al., 2000). Studies by Sue and Sue (1990), Narikiyo and Kameoka (1992), Sue (1994), Lin and Yi (1997), Kim, Atkinson and Yang (1999) have found that emotional control is valued and the expression of emotion is undesirable in traditional Hispanic and Asian cultures.

Collectivism which is more frequently found in Asian countries (Hofstede, 1997) might also be a discouraging factor from seeking counseling (Nadler, 1983). In a collectivist society, the family has a strong influence in the individual's life. Individuals are also expected to secure the image for the family. Therefore, individuals are concerned about the consequences of their behavior on their family (Tata & Leong, 1994). This condition might inhibit individuals in a collectivist society to seek help from somebody outside the family.

The preference for counselors' gender might also influence the decision to seek counseling help. People from certain cultural backgrounds might have preferences for the counselor's

gender. In their study among Native American students, Haviland, Horswill, O'Connell, and Dynneson (1983) found that the students had preferences for the counselors' gender, and this influenced their decision to seek counseling. Similar results were found in a study by Atkinson, Wampold, Lowe, Matthews, and Ahn (1998) among Asian American students. Giles and Dryden (1991) found the overall preference for female therapists in their study among subjects in the UK.

Counselors' religion may also influence the decision to seek counseling. Studies by Belaire and Young (2002) found that the majority of the participants had preference for counselors' religion. Furthermore, racial or ethnic background of counselors may also influence an individual's decision to seek counseling help. Dissimilarity of racial backgrounds between clients and counselors might also discourage the willingness to seek counseling. Previous studies show that ethnic similarity is one of the preferred counselor characteristics (Atkinson et al., 1989; Leong et al., 1995). Jenkins (1999) points out that ethnic dissimilarity could be a barrier to seeking help for people from ethnic minorities.

### **Agency Factors**

Numerous studies have found that the lack of knowledge of counseling can prevent individuals from seeking counseling (West et al., 1991; Surf & Lynch, 1999; Bradley, 2000; North, 2002). Included in this category is the lack of knowledge of the benefits of counseling, problems appropriate for counseling and also the counseling process. Perceptions of the usefulness of counseling and the capacity of counselors to help contribute to the decision to seek help were also found to contribute to the decision to seek counseling help (Parker et al., 1986; Puchkoff & Lewin, 1987; Seiffge-Krenke, 1989).

In addition to the competence of counselors, previous studies have found that the perception of the personal quality of counselors also determines seeking help (Grayson et al., 1998; Surf & Lynch, 1999; Howieson & Semple, 2000). For some people, concerns for counseling fees are also a barrier in seeking counseling (Stefl & Prospero, 1985; Leaf et al., 1987; Waehler & Hardin, 1994), especially because they are uncertain about the total cost (Merton et al., 1983).

Having reviewed factors that influence the decision to seek counseling help, the researcher found that the majority of the studies were conducted in a western context. Only few studies were carried out in Asian or an Eastern context, so that limited information is available to explain whether those factors are relevant in the Indonesian context. In her study, Setiawan (2004) found that Indonesian students had a low level of willingness to seek counseling. Therefore, a study is needed that investigates the factors influencing the willingness to seek counseling in the Indonesian context. As counseling is not very popular in Indonesia, students might have certain perceptions of counseling that discourage them from seeking help. This study aims to investigate whether Indonesian undergraduates' perceptions that are relevant to counseling relate to their willingness to seek counseling. To achieve this aim, the research would like to see the differences of perceptions of counseling between the potential high seekers (PHS) and the potential low seekers of counseling (PLS).

## **Method**

### **Participants**

The total respondents participated in the study were 1,279. They were undergraduate students from two private universities in an urban area in Indonesia. They studied Electrical Engineering, Computer Science or Industrial Engineering. The three study programs were chosen randomly from study programs available at both universities. The mean age of participants was 19.7. In terms of gender distribution in the sample, 66.2% were male students and 33.8% were female. In regard to ethnicity, the participants consisted of 77.9% Chinese Indonesians and 18% native Indonesians; 4.1% had other ethnicities. With respect to year of study, 26.8% of the participants were in their first year, 30.3% of the participants in the second



year, 23.1% of the participants in the third year, and 19.9% of the participants were in their fourth year and onwards.

### **Data Collection Method**

The study adopted a quantitative approach, which used two kinds of questionnaires for data collection, including perceptions relevant to counseling and willingness to seek counseling.

**Perceptions relevant to counseling.** The questionnaire of perceptions relevant to counseling aims to investigate all perceptions or assumptions that respondents may have that are relevant to seeking counseling. The questionnaire consisted of 44 items that were constructed based on literature review and pilot work regarding factors that influence the help-seeking of counseling. The items were grouped into three aspects including personal, socio-cultural, and agency aspects.

In personal aspects, items investigated how they perceive themselves regarding these topics: the ability to solve own problems, sense of powerlessness in relation to the difficulties, denial of problems, reluctance to discuss personal difficulties with others, the availability of other sources of help, and time availability. Items constructed in socio-cultural aspects investigated how respondents perceive themselves in relation to the following topics: stigma related to counseling, emotional discomfort, collectivism, preference related to the counselor's ethnic background, preference related to the counselor's religion, preference related to the counselor's gender. In agency aspects, items examined were the perceptions relating to the usefulness of counseling, problems that are appropriate for counseling, knowledge about the counseling process, theory/practicality of counseling, social norm in counseling versus reality, control of one's own life, confidentiality, the personal qualities of the counselor, the competence of the counselor, and counseling fees.

In each item, respondents were asked to rate 1 (strongly disagree) to 4 (strongly agree) to indicate the degree of their agreement with the item statement. The split-half reliability coefficient of the questionnaire was 0.998 ( $p < 0.001$ ).

**Willingness to seek counseling.** The questionnaire aims to investigate how willing the respondents are to seek professional counseling when they have serious problems in their lives. The questionnaire consisted of 14 items. In each item the respondents were asked to imagine experiencing a serious problem in a specific area of concern. They were then asked to rate these items on a 4-point scale (1 = very low, 2 = low, 3 = moderate, 4 = high), showing the degree of likelihood that they will seek professional counseling outside the university in such a situation.

The areas of concern presented in the questionnaire were based on the categorization of client concerns by the Association for University College and Counseling (AUCC, n.d.) and factor analysis of problem checklist scales (Zalaquett & McManus, 1996). Therefore, the areas of concern presented in the questionnaire can be assumed as representing the concerns that students might have during their academic career at university. The areas of concern included academics, transitions, welfare, parental relationships, romantic relationships, other relationships, loss, physical health, self, depression or mood change, anxiety, compulsive behavior, and abuse. The split-half reliability coefficient of the questionnaire was 0.949 ( $p < 0.001$ ).

**Data analyses.** Research data showed that the level of undergraduates' willingness to seek professional counseling outside the university was generally low. The mean score of willingness was 1.8, whereas the median score was 1.79, and the mode score was 1.0. These descriptive data mean that the range of difference in willingness was very small. In order to examine the relationship between perceptions of counseling and the willingness to seek professional counseling outside the university, the researcher compared the perceptions of counseling between the two ends of the scale of willingness to seek counseling. In other words, the researcher compared the perceptions of counseling between the potential low seeker group (PLS) and potential high seeker group (PHS). The statistical test used in the comparison was the

Mann-Whitney U test. The relationship will be assumed when there is a significant difference of perception of counseling between two groups.

Before selecting the members of the low seeker group and high seeker group, the average score of willingness to seek professional counseling outside the respondent's university was calculated. Then the values of percentile 20 and 80 were used as the standard to define low seekers and high seekers, respectively. Students whose average score was lower than the value of percentile 20 were selected into low seeker group (PLS). There were 264 students included in this group. Those whose average score was higher than the value of percentile 80 were selected into high seeker group (PHS). The total of students selected in this group was 241.

## **Results**

### **Personal Aspects**

In personal aspects, six topics were examined through twelve items. Following the comparisons of perceptions relevant to counseling between potential low seekers (PLS) and potential high seekers (PHS) of professional counseling outside the university using the U-Mann Whitney test, only three topics were significant, and only four out of twelve items were significant. The significant topics were ability to solve own problems, denial of problems, and time availability. The topics that were not significant included sense of powerlessness in relation to difficulties, reluctance to discuss personal difficulties with others, and the availability of other sources of help.

The results of the comparisons between the potential high seekers and the potential low seekers are shown in Table 1.

**Table 1**

*Comparisons of Perceptions of Counseling between Potentially Low and Potentially High Seekers of Counseling: Personal Aspects*

Aspects and Items	Mean		SD		Z
	PLS	PHS	PLS	PHS	
Ability to solve own problems					
I am normally able to solve my problems without seeking help from others.	<u>2.5</u>	2.3	0.7	0.7	-2.933**
Sometimes, I feel the need to discuss my problems with a counselor <sup>®</sup> .	<u>2.5</u>	2.0	0.7	0.6	-7.889***
Sense of powerlessness in relation to the difficulties	1.5	1.5	0.5	0.5	-0.333 (NS)
There is always a way of dealing with problems <sup>®</sup> .					
Nothing can be done to help me deal with my problems.	1.8	1.8	0.7	0.6	-1.056 (NS)
Denial of problems					
Problems will resolve themselves without seeking any help.	<u>2.0</u>	1.9	0.7	0.6	-2.494*
Problems need to be dealt with rather than ignored <sup>®</sup> .	1.3	1.3	0.5	0.5	-0.028 (NS)
Reluctance to discuss personal difficulties with others					
It is better to keep my problems to myself rather than to discuss them with others.	2.1	2.0	0.7	0.7	-1.401 (NS)
I do not mind discussing my personal problems with others when necessary <sup>®</sup> .	1.9	1.8	0.6	0.6	-1.651 (NS)
The availability of other sources of help					
I have friends who can help me deal with personal problems.	3.0	3.1	0.6	0.6	-1.563(NS)
I have family members who are able to help me deal with my personal problems.	3.0	2.9	0.7	0.7	-0.622 (NS)
People who are close to me cannot help me deal with my personal problems <sup>®</sup> .	3.0	3.0	0.7	0.6	-0.988 (NS)
Time availability					
I do not have the time to go for counseling even if I need it <sup>®</sup> .	2.4	<u>2.6</u>	0.7	0.6	-4.161***

PLS = Potential low seekers of professional counseling outside the university

PHS = Potential high seekers of professional counseling outside the university

Underlined mean score = significantly higher mean score

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

NS Non significant

Results show that in terms of the perception of ability to solve own problems, those who were less likely to seek counseling reported a higher ability to solve their own problems without any help. Those who were less likely to seek counseling perceived themselves as denying problems more frequently than those who were more likely to seek counseling. On the other hand, those who were more likely to seek counseling perceived themselves more often as having time to seek counseling than those who were less likely to seek counseling.

### Socio-Cultural Aspects

In socio-cultural aspects, six topics were examined through 13 items. Five out of those six topics were significant and only eight out of 13 items were significant. The non-significant topic

was preference related to counselor's ethnic background. The results of the comparisons between potentially high seekers and potentially low seekers are shown in the following table.

**Table 2**

*Comparisons of Perceptions of Counseling between Potentially Low and Potentially High Seekers of Counseling: Socio-Cultural Aspects*

Aspects and Items	Mean		SD		z
	PLS	PHS	PLS	PHS	
Stigma, threat to self-esteem <i>No B1-10</i>					
Seeking counseling is something that is embarrassing.	<u>2.0</u>	1.8	0.6	0.6	-3.799***
Seeking counseling does not necessarily mean having serious mental health problems <sup>®</sup> . <i>No B1-23</i>	1.8	1.8	0.7	0.7	-0.576 (NS)
Seeking help from counselors means having no close friend to talk to.	<u>1.9</u>	1.7	0.7	0.6	-2.726**
Seeking counseling will not cause embarrassment to my family <sup>®</sup> . <i>No B1-40</i>	<u>2.0</u>	1.8	0.6	0.5	-2.772**
If I seek counseling, I will try to keep it as a secret from my friends.	2.8	2.8	0.7	0.7	-0.328 (NS)
Emotional discomfort <i>No B1-07</i>					
Having counseling will make me relive my bad experiences and/or feelings.	2.5	2.5	0.7	0.7	-0.112 (NS)
I will feel comfortable in expressing my emotions to a counselor if necessary <sup>®</sup> .	<u>2.4</u>	2.1	0.6	0.5	-4.994***
Collectivism <i>No B1-20</i>					
It is not appropriate to discuss one's personal problems with people outside the family.	2.0	2.0	0.7	0.6	-0.462 (NS)
<i>No B1-24</i>					
It is more important to hear what my parents say about my problems instead of what counselors may say.	<u>2.7</u>	2.6	0.7	0.6	-2.504 (*)
Some problems can be better discussed with a counselor than with family members <sup>®</sup> .	<u>2.3</u>	2.0	0.7	0.7	-4.712***
Preference related to the counselor's ethnic background					
If I seek counseling, the counselor's ethnic background does not matter <sup>®</sup> .	2.0	2.0	0.7	0.8	-0.659 (NS)
Preference related to the counselor's religion					
If I seek counseling, I do not care about the religious background of the counselor <sup>®</sup> .	<u>2.3</u>	2.1	0.9	0.8	-2.298*
Preference related to the counselor's gender					
When I seek counseling, the counselor's gender does not matter <sup>®</sup> .	<u>2.1</u>	1.9	0.7	0.8	-1.983*

PLS = Potential low seekers of professional counseling outside the university  
PHS = Potential high seekers of professional counseling outside the university  
Underlined mean score = significantly higher mean score  
\* p < 0.05\*\* p < 0.01\*\*\* p < 0.001 NS Non significant

Compared to those who were less likely to seek professional counseling outside the university, those who were more likely to seek counseling were lower in perceiving stigma related to counseling, as well as in perceiving that seeking counseling is embarrassing. They also

showed less discomfort in expressing their emotions to a counselor, and they reported less preference in terms of counselors' religion or gender. On the contrary, those who were less likely to seek counseling perceived that sharing and discussing their problems with family members were more important than with counselors.

### **Agency Aspects**

In agency aspects, ten topics were examined through 19 items. Nine topics were significant, and only 15 out of 19 items were significant. The comparisons that were not significantly different between two groups concerned knowledge of the counseling process. The results of the comparisons between potentially high seekers and potentially low seekers are shown in the following table.

**Table 3**

*Comparisons of Perceptions of Counseling between Potentially Low and Potentially High Seekers of Counseling: Agency Aspects*

Aspects and Items	Mean		SD		Z
	PLS	PHS	PLS	PHS	
Usefulness of counseling					
Counseling will enable me to see my problems more clearly.	2.9	<u>3.1</u>	0.6	0.5	-3.906***
Counseling will only make my problems more complicated <sup>®</sup> .	2.9	<u>3.0</u>	0.5	0.5	-3.014**
Counseling is not always able to help me deal with my problems <sup>®</sup> .	2.0	<u>2.1</u>	0.5	0.5	-2.648**
Problems appropriate for counseling					
Counseling is needed only by those with serious mental health problems <sup>®</sup> .	2.7	<u>2.9</u>	0.8	0.7	-3.230***
Somebody with simple problems can also benefit from counseling.	3.0	<u>3.1</u>	0.6	0.4	-3.599***
Knowledge about the counseling process					
I do not have any ideas what to do during the counseling session <sup>®</sup> .	2.3	2.4	0.6	0.6	-0.854 (NS)
I do not know the process during a counseling session <sup>®</sup> .	2.0	2.1	0.7	0.6	-1.665 (NS)
Theoretical versus practical issues					
The approach that counselors use will be too theoretical to suit reality.	<u>2.8</u>	2.7	0.7	0.6	-2.584**
Social norm versus reality					
I think counselors will only place importance on social norms without considering my life pressures.	<u>2.5</u>	2.3	0.7	0.7	-2.945**
Control of one's own life					
I still can make my own decision though I have counseling <sup>®</sup> .	1.5	<u>1.7</u>	0.5	0.6	-2.042*
If I go for counseling, the counselor will keep controlling my life.	2.1	2.2	0.7	0.7	-0.805 (NS)
Confidentiality					
I am confident that counselors will not disclose my problems to others without my consent.	3.0	<u>3.2</u>	0.7	0.7	-2.236*
I am not sure that counselors will keep my personal information confidential <sup>®</sup> .	2.7	2.8	0.7	0.7	-1.032 (NS)
Personal qualities of counselors					
Generally, counselors are genuinely concerned to help their clients.	2.8	<u>3.0</u>	0.6	0.6	-4.057***
I am confident that counselors will be able to understand young people's ways of thinking.	2.7	<u>2.9</u>	0.7	0.6	-3.558***
Seeking help from counselors involves risk of being looked down on by the counselors <sup>®</sup> .	2.8	<u>2.9</u>	0.6	0.7	-2.054*
Competence of counselors					
I am confident that counselors have the competence to help the clients in dealing with their respective problems.	2.8	<u>3.0</u>	0.6	0.5	-3.590 (NS)
Counseling fees					
Counseling normally costs a lot of money.	<u>2.9</u>	2.6	0.8	0.7	-3.562 (NS)
If I need counseling, the counseling fee does not matter <sup>®</sup> .	<u>2.7</u>	2.5	0.7	0.7	-2.756**

PLS = Potential low seekers of professional counseling outside the university

PHS = Potential high seekers of professional counseling outside the university

Underlined mean score = significantly higher mean score

\*  $p < 0.05^{**}$   $p < 0.01^{***}$   $p < 0.001$  NS Non significant

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Compared to PLS, PHS had better perceptions of the usefulness of counseling, not only for those with mental illnesses. PHS also had better perceptions in terms of the personal qualities and competence of counselors. Furthermore, PHS reported higher perception of confidentiality in counseling. Compared to PHS, PLS showed higher degree in perceiving that counseling is more theoretical than practical and that counseling puts higher importance on social norms than real concerns of clients. PLS showed more concerns of counseling fees. PLS scored a significantly lower degree in perceiving that counseling leads to the loss of control of one's life.

As shown in Table 1, 2, and 3, PLS and PHS were significantly different in 27 out of 44 items of perceptions presented in the questionnaire. However, due to the large sample size, statistical significance was very likely with a very small effect. Therefore, the effect size on the statistical tests should also be considered when looking at the results.

## Discussion

This study drew comparisons of perceptions relevant to counseling between potential high seekers and potential low seekers of counseling. Most of the comparisons showed a significant difference between the two groups. However, as stated earlier, due to the large number of respondents in this study, a small difference between the mean scores could lead to a statistical significance. Therefore, in order to see the relationship between perceptions relevant to counseling and willingness to seek counseling, it might be better to look at the results of comparisons between PHS and PLS which achieved the highest level of significance ( $p \leq 0.001$ ). Those results are as follows:

- Compared to those who were less likely to seek counseling, potentially high seekers scored higher in perceiving the need to discuss their problems with a counselor.
- Compared to those who were less likely to seek counseling, potentially high seekers scored higher in perceiving themselves to have time to attend counseling.
- Compared to those who were less likely to seek counseling, potentially high seekers scored higher in perceiving that some problems were better discussed with a counselor than with a family member.
- Compared to those who were less likely to seek counseling, potentially high seekers scored higher in perceiving that counseling is useful in helping them see problems clearly.
- Compared to those who were less likely to seek counseling, potentially high seekers scored higher in perceiving that counseling is useful not only to those with very serious problems.
- Compared to those who were less likely to seek counseling, potentially high seekers scored higher in perceiving that counselors are genuine, understand young people's ways of thinking, and are competent.
- Compared to those who were more likely to seek counseling, potentially low seekers scored higher in perceiving that counseling is embarrassing.
- Compared to those who were more likely to seek counseling, potentially low seekers scored higher in anticipating emotional discomfort in expressing emotions to counselors.
- Compared to those who were more likely to seek counseling, potentially low seekers scored higher in perceiving counseling as more costly financially.

Potential low seekers scored higher in perceiving that counseling is embarrassing as well as in anticipating emotional discomfort in expressing emotions to counselors. These uncomfortable feelings might be related to the nature of Indonesian society as a collectivist one. As stated earlier, in a collectivist society, individuals are expected to secure the image for the family. Furthermore, Hofstede (1997) also describes collectivist societies as shame cultures. The infringement does not only lead to shame and loss of face for the actor, but also his/her family.

Therefore, stigma and emotional discomfort related to counseling can prevent Indonesian people from seeking counseling.

Compared to potential low seekers, potential high seekers trusted counselors more in terms of their personal and professional qualities. Thus, a lack of trust hindered participants from seeking counseling. This situation might also be explained by the fact that counselors are seen as outsiders. The perception that counselors were unfamiliar people led students to distrust them. Students did not believe that counselors, whom they perceived as outsiders, would be able to understand their situation fully, and that they genuinely want to help them.

Potential low seekers scored higher in perceiving counseling as more costly financially. This result showed that monetary concern was a discouraging factor. This result could be understood given that the majority of the participants were still economically dependent on their parents. Additionally, the economic condition of the country also contributes to this problem as the people still struggle with their basic needs (van Beek, 2002).

Those who had positive perceptions of counseling, especially regarding the usefulness of counseling and who had the understanding that counseling can be useful not only to those with serious problems, showed a higher level of willingness to seek counseling. These results show that various efforts should be taken to promote students' understanding the nature of counseling, in order to increase their willingness to seek counseling help.

Although most of the comparisons showed a significant difference between the two groups, five out of 22 topics of perceptions that are relevant to counseling showed no significant difference between the two groups. These five topics were as follows: sense of powerlessness in relation to the difficulties, reluctance to discuss personal difficulties with others, the availability of other sources of help, preference of counselors' ethnic background, and knowledge of the counseling process.

Results indicated that both potentially high and low seekers did not have a sense of powerlessness in relation to the difficulties, were not reluctant to discuss their personal difficulties with others and have other sources of help available. These results suggest that there is no relationship between sense of powerlessness in relation to the difficulties, reluctance to discuss personal difficulties with others, the availability of other sources of help, and willingness to seek counseling.

The data showed that the two groups reported a low level of both, preference in terms of counselors' ethnic background and knowledge of the counseling process. The results suggest that there is no relationship between the individual's knowledge of the counseling process, their preference of counselors' ethnic backgrounds, and the level of willingness to seek counseling. It seems that preferences for counselors' religion and gender are more influential in the decision to seek counseling. These suggest that ethnic background of counselors is not as important as their religion and gender backgrounds.

These findings are not consistent with the study conducted by Surf and Lynch (1999). They found that a sense of powerlessness in relation to the difficulties influenced the willingness to seek counseling. Surf and Lynch (1999) also found that the attitude towards the idea of discussing personal difficulties with others influenced the willingness to seek counseling. Results of the current study were also not in parallel to the findings of Bosmajian and Mattson (1980), Goodman et al. (1984), Sherbourne (1988), Kuhl et al. (1997), which showed that the availability and the use of other social support such as family and friends are the reasons for under-utilization of a counseling service. It seems that cultural values in a collectivist country like Indonesia influence people to be more open to discuss their personal difficulties and to be more caring to friends and family members, irrespective of their willingness to seek counseling.

## **Conclusions and Recommendations**

The potential high seekers of professional counseling outside the university generally perceive counseling more positively than the potential low seekers of professional counseling



outside the university. Therefore, efforts to improve students' perceptions relevant to counseling are very important, so that they are more willing to seek counseling help. Students should have more information about the usefulness of counseling, so that they understand that the time and money they spend for counseling is worthwhile. Students should also be given information regarding problems that can be helped in counseling. With correct information regarding counseling, it is expected that students have better perceptions so that they will no longer think that counseling is embarrassing and stigmatic. Information about counseling as a source of help should also be disseminated widely amongst Indonesian wider society. With a better understanding, it is expected that people in wider society would be more acceptant of counseling. With this understanding, the family of students can also encourage students to seek counseling help if needed.

In relation to the efforts to help students have better/correct perceptions of counseling, the distribution of written information such as brochures is not enough. Counselors are encouraged to present and give explanations in person as it would be more effective in changing the misperceptions of counseling (Gelso & McKenzie, 1973).

Given that students' concerns about the counseling fee also relate to willingness to seek counseling, it is advisable that counseling centers adjust their service fee according to students' economic condition. Counselors should also improve their personal qualities, since these also relate to students' willingness to seek counseling. In relation to this, counselors should improve their understanding towards students' life. Counselors should also enhance their genuineness, care, and respects towards students. The positive personal qualities of counselors do not only need to be demonstrated in a counseling session, but also in everyday life, so that students can be encouraged to seek counselors for help.

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## **It Can Be Taught: Explorations into Teaching the Foundations for Multicultural Effectiveness**

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### **Abstract**

Connections are drawn between the development of intercultural sensitivity, interpersonal skills, and critical thinking. A case is made that fostering particular critical thinking skills in courses enhances interpersonal skills, and that enhanced interpersonal skills facilitate movement along Bennett's (1993) proposed continuum of development of intercultural sensitivity. Discussion centers on how to integrate these qualities (e.g., critical thinking, intercultural sensitivity, and interpersonal skills) and facilitate them in courses. Furthermore, it introduces a call for research on how to test these assumptions with experiences beyond the classroom.

In primary and secondary education, educators have begun to call for experiential learning that focuses on developmental issues (e.g., Bennett, 1993; Edwards, Mumford, & Serra-Roldan, 2007; Thomsen, 2002). The main argument is that education can and should foster skills in young people that best position them to interact successfully with others in the broader social world—a world that is becoming increasingly multi-cultural. Indeed, recent work demonstrates that fostering intercultural competence can enhance Anglo-Navajo relations (Debebe, 2008), that multiculturalism can be successfully measured (van de Vijver, Breugelmans, & Schalk-Soekar, 2008), and that identification with the broader group can be enhanced by actually valuing difference (Luijters, van der Zee, & Otten, 2008).

The main goal of this paper is to outline how, in the opinion of the authors, critical thinking, interpersonal and multicultural effectiveness skills can be fostered and enhanced in students. In order to draw these connections, however, it is important to outline for the reader what the authors mean by: (1) critical thinking, (2) interpersonal skills, and (3) multicultural effectiveness. While outlining each of these and, when possible, drawing connections to the literature, the authors make connections to an internet-based course on the politics and psychology of hatred that they use to foster and develop these skills. It is the belief of the authors that critical thinking skills are an essential precursor to interpersonal effectiveness, and that interpersonal skills are an essential prerequisite for multicultural effectiveness. Because of these assumptions, the authors first outline each of these elements before drawing conclusions. Details of relevant citations are provided when those resources have been used specifically to make particular decisions about how to structure the course and/or design specific assignments within the course.

Osborne and Kriese (2008) present a critical thinking model developed to assist students in articulating the relationships between their own views and the views of others. This is an important starting point in assisting students in developing the interpersonal skills that intercultural sensitivity requires. These researchers provide students with the following description of this four-step model:

1. **“Recitation** – state known facts or opinions. A critical component of this step is to acknowledge what aspect(s) of what is being stated is factual and what is based on opinion.
2. **“Exploration** – analyze the roots of those opinions or facts. This step requires digging below the surface of what is believed or known and working to discover the elements that have combined to result in that fact or that opinion.
3. **“Understanding** – involves an awareness of other views and a comprehension of the difference(s) between one’s own opinion (and the facts or other opinions upon which that opinion is based) and the opinions of others.
4. **“Appreciation** – means a full awareness of the differences between our views and opinions and those of others. To truly appreciate differences, we must be aware of the nature of those differences. The active dialogue undertaken in the third step (understanding) should lead to an analysis of the opinion as recited by the other. The result should be a complete awareness of the similarities and differences between our own opinions (and the roots of those opinions) and those of the “other.” (Osborne & Kriese, 2008, pp. 45-46).

But do enhanced critical thinking skills lead to stronger interpersonal skills? Osborne and Kriese (2009) addressed this question in a research in which student’s progress on employing the levels of critical thinking were assessed in relationship to student scores on course etiquette. The course etiquette involved course requirements centering on successful interpersonal skills. Naïve raters assessed student’s use of the levels of critical thinking demonstrated through written responses to course assignments, and student use of the qualities of course etiquette (interpersonal skills) in course postings (the entire course was conducted online). There is a clear relationship between the two such that students assessed by naïve raters as demonstrating the most successful use of interpersonal skills were also assessed by other naïve raters as

demonstrating the highest levels of critical thinking in written course assignments (Osborne & Kriese, 2009). Although this is correlational and not causal, we use this finding as a first step in building a case for the importance of critical thinking in enhancing interpersonal skills. Further research is needed to determine if this relationship is causal and, if it is, the direction of that causality.

The connection between critical thinking and the development of interpersonal skills in such course, however, is further compounded by research showing that even providing students with training in interpersonal skills in online courses is not sufficient because these students lack “real world practice” with these skills (Doo, 2006). For this reason, Osborne and Kriese (2008) call for faculty to connect the growth of these skills to the real world via carefully constructed and guided civic engagement (service-learning) experiences. In other words, fostering these skills within the context of a structured classroom is an essential first step but should be followed with real-world experiences (still somewhat structured) via civic-engagement.

But as the research already outlined (and dozens of other studies) suggests, these intercultural sensitivity and multicultural competence skills do not, usually, occur without nurturing and must be considered in a developmental context (e.g., Bennett, 1993; Thomsen, 2002). A fundamental challenge to the educator, then, is to develop classroom experiences that “prepare” the student for cross cultural explorations beyond the classroom, and then to follow that training (preparation) with experiences beyond the classroom in which those skills can be practiced.

One critical focus of this beyond the classroom is in understanding how people develop relationship and other social skills (e.g., Jalongo, 2008; Mishra, 2006). Cultural factors play an important role in our expanded behavioral analysis of youth development relationships. Milton Bennett (1986, 1993) provides a developmental model of intercultural sensitivity, for example, that assumes that increasing one’s “experience” of cultural differences can lead to a more sophisticated view of difference, and that this more sophisticated view enhances one’s intercultural competence.

Bennett (1993) outlines the following six developmental levels of intercultural sensitivity: (1) denial, (2) defense, (3) minimization, (4) acceptance, (5) adaptation, and (6) integration. As one can see from the levels of the model, movement along this continuum requires experience and practice within a somewhat protected environment. So, how does one provide students with practice in developing these skills? To answer this question, we focus on civic engagement in these contexts as our beginning point. Intercultural sensitivity, we believe, can be added with the tenets of positive youth development (Thomsen, 2002) and civic engagement (service-learning oriented work with the community), to accomplish the goal of nurturing, developing, and enhancing intercultural sensitivity and cross cultural competence.

Personal biases and values are likely to affect the students’ interactions with others in the community. The bottom line is this – intercultural sensitivity skills will not develop in isolation and must be nurtured and practiced. To address this concern, we developed an internet course on the Politics and Psychology of Hatred specifically designed to assist students in uncovering, exploring, analyzing, and learning from their personal biases and values. We developed a four-step thought model to facilitate this uncovering process.

Raising issues without requiring students to explore their biases and values may reinforce prejudices by giving them voice without question. The themes in the course of: (1) social justice, (2) having a voice through vote, (3) condoning hatred through silence, (4) exploring image and stereotypical views of others, (5) environmental hatred, and (6) self-reference thinking assist students in exploring their role in the broader community.

According to Thomsen (2002), research shows that teaching students to cope effectively with their emotions frees up working memory and enhances learning. This is referred to as “positive youth development” (Thomsen, 2002). We glean from this assumption that it would be

important to teach students to deal effectively with their emotions before placing them into emotionally-charged community-based civic engagement experiences.

**Connection** includes connecting self to community. Clearly, this can be done with community placements. It might be wise, however, to have students reflect on their connection to the broader community before placing them into that community. **Confidence** involves believing that “real” problems can be addressed and that those problems can be resolved or that they could be a vital contributor to the resolution of any such problems. Students must have experience with problem-solving before they can have confidence that the community problems they will face can be resolved. **Competence** involves recognition on the part of the student that he/she has the actual skills or abilities needed to be an effective part of the solution to whatever problem is being confronted. Again, we would argue that students must be given experiences with this competence before being placed into the community.

With **compassion** students learn to care about others. This focus on what we consider to be the “others” (put in quotes to recognize that this is a generic person who may or may not be present in the current situation) is not automatic. But well-designed service-learning experiences can result in students becoming more externally focused (e.g., Osborne & Renick, 2006). **Character** traits must also be modeled, practiced, and reinforced. Character refers to qualities that promote an awareness of others rather than hinder it. Examples would be sensitivity, sociocentrism in contrast to egocentrism etc.

**Connection** means that students must connect with others who are different from them. In order to do this, we require them to reach consensus on how to define “middle class mentality.” They must post that definition to the course site. They are required, in their responses to the course site, to be sure and include answers to the following questions: (1) can anyone “become” middle class?, (2) why or why not?, (3) what all different aspects of society does the middle class mentality permeate?, (4) how is the concept of middle class mentality linked to legal issues such as immigration laws, welfare policies, and access to resources for higher education? This assignment was designed to assist the students in getting outside of themselves and truly connecting with the other students in the class and others in the world who are coming from a different place (both physically and psychologically) than they are.

**Confidence** comes through experience. How can we expect students to be confident in their ability to interact with culturally diverse others, when they have very little experience in doing so. As Robert Zajonc (1965) suggested long ago, people confronted with unfamiliar situations will revert to dominant ways of responding. If those dominant ways of responding are beneficial to the interaction, success in that interaction will be enhanced. If, however, the dominant response is not beneficial or is in direct conflict with the cultural behavior or value of the other, conflict will result. Students cannot have confidence in the real world with a skill that has not been reinforced in the more “secure” environment of the classroom. By struggling through these assignments (and many students contact us and claim “we cannot do this, we cannot reach agreement, we cannot build consensus in this group”) students gain confidence that they can work with others in ways that they never thought possible.

**Compassion** is illustrated through a nuclear shelter assignment. Students work in groups and are told that warheads have been launched toward the United States. They are responsible for a particular nuclear shelter that will hold eight people. Students are given a list of 12 people. They are required to decide who will get into the shelter and state the reason why they have chosen those eight individuals. Furthermore, they must explain why they are leaving out each individual they have not chosen. Students note that the assignment is not “fair” because it forces them to discriminate. We remind them that one definition of discrimination is, “to distinguish accurately,” while another is, “to make a distinction in favor of or against a person or thing on the basis of prejudice” (Webster, 1990). The key, of course, is to determine when that discrimination is accurate from the times in which it is based on prejudice. Students must describe the selection process they are using (what is the “goal” of the choices they are making?). Although excluding people from survival (access to the shelter) may not strike the reader as developing compassion, it is, nevertheless, achieved through the struggle, not necessarily

through the exact decisions that are made. By forcing students to confront the assumptions and judgments they make, it shines light on the relationship (often unprocessed) between decision-making and value judgments about others. Although this, initially, creates discomfort, compassion can only be created and reinforced when people care about others. The faculty guides this discussion very carefully and, when necessary, assists the groups in reaching consensus. Part of the discovery process is that everyone has something to offer, everyone has value. Compassion is fostered more readily (in our opinion) when the students actually disagree. As students cite their reasons for including the individuals they have, they expose the value they see in that individual. This brings compassion to the forefront even if briefly.

After students have chosen eight of the twelve persons, they are told that part of the shelter has now been contaminated and they must “go back” and decide which two individuals who were originally allowed into the shelter will now be eliminated. They are asked to consider: (1) who is being excluded and why, as well as (2) why they are now being excluded when they were included in the first place.

**Character** is demonstrated through an assignment we call The Diversity Philosophy. Using a survey developed by Thomas and Butler (2000), students must assess their philosophy about the concept of diversity. Questions include issues of socioeconomic, race, and religion. Student responses categorize their diversity philosophy on a continuum from assimilation to multiculturalism. Students have to categorize their responses by placing them into one of these four categories: (1) assimilation, (2) tolerance, (3) multiculturalism, and (4) inclusiveness. They are then asked to reflect on those placements, what those placements say about them, and why they think they might have given the answer they did. It is important that students understand the definitions of each of these categories, so we provide Thomas and Butler’s (2000, p.3) definitions:

**“Essentialism/Assimilation** = the practice of categorizing a group based on artificial social constructions that impart an “essence” of that group, which homogenizes the group and effaces individuality and differences. The word implies that we are forming conclusions, relationships, and other cultural ties based only on the essential elements, as determined by “us.” It also implies that there is some minimal level of understanding that applies to groups.

**“Tolerance** = acceptance and open-mindedness of different practices, attitudes, and cultures; does not necessarily mean agreement with the differences. Implies an acknowledgement, or an acceptance or respect. Not necessarily an appreciation and usually consists of only surface level information.

**“Multiculturalism** = the practice of acknowledging and respecting the various cultures, religions, races, ethnicities, attitudes and opinions within an environment. The word does not imply that there is any intentionality occurring and primarily works from a group, versus individual, orientation.

**“Inclusiveness** = the practice of emphasizing our uniqueness in promoting the reality that each voice, when, valued, respected and expected to, will provide positive contribution to the community.”

It is important to note that the exploration of the assignments in the course and the qualities of positive youth development, intercultural sensitivity, and multicultural effectiveness are, at this point, anecdotal. The authors are not claiming that the course and assignments, as described, create or enhance these skills. More research is needed with pre-post assessments of these skills in order to gain confidence that the course and the assignments aid in the development of these competencies. The purpose of this chapter was to outline the possibilities, explain how the course was structured and why, and to lay the foundation for future efforts to assess the causal relationships.

At the core of this chapter is the notion that cross-cultural competency or intercultural sensitivity is not something that most students “bring” with them to the university. This is not



due to anything purposeful or nefarious. It is due to the developmental nature of these skills (e.g., Bennett, 1993). Before expecting students, then, to leave the university with the ability to engage successfully in cross-cultural interactions or to demonstrate intercultural sensitivity, they must be given opportunities to learn AND practice these skills. These levels – (1) denial, (2) defense, (3) minimization, (4) acceptance, (5) adaptation, and (6) integration – are similar to the kind of adjustment that most people make to any identity-altering event such as the loss of a loved one (e.g., Kubler-Ross, 2005). They are also similar to the adaptations that immigrants and refugees must make to host countries (Berry, 1997) and that international students make (Zeynep & Falbo, 2008).

Of course, research is needed to determine: (1) if the assumptions we make about what students do or do not “bring” with them to the university in terms of cross-cultural competency and intercultural sensitivity are valid, (2) if progress can be made on the developmental stages of intercultural sensitivity as outlined by Bennett, (3) what types of course assignments (such as those outlined above) promote movement along the intercultural sensitivity developmental continuum, (4) the degree to which developmental progress in intercultural sensitivity demonstrated in the classroom “transfers” to the real world, and (5) whether progress in intercultural sensitivity, brought about through higher education, persists across time as individuals connect with the broader world outside academia.

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