Functional Relationships in the Nuclear and Extended Family: A 16 Culture Study

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ABSTRACT

This study investigated the relationship between culture, structural aspects of the nuclear and extended family, and functional aspects of the family, that is, emotional distance, social interaction and communication, as well as geographical proximity. The focus was on the functional aspects of family, defined as members of the nuclear family (mother, father and their children) and the extended family (grandmother/grandfather, aunt/uncle, cousins). Sixteen cultures participated in this study, with a total number of 2,587 participants. The first hypothesis, that the pattern of scores on the psychological measures and the behavioral outcomes are similar across cultures, an indication of cultural universality, was supported. The second hypothesis, that functional relations between members of the nuclear family and their kin are maintained in high-affluent and low-affluent cultures, and that differences in functional relationships in high and low affluent cultures are a matter of degree, was also supported by the findings. The results suggest that it is less meaningful in cross-cultural family studies to ask questions about the structure of the family, as to ask about the functional relationships between member of the nuclear family and their kin. In looking only at the nuclear family, one focuses only on those residing in the household, but ignores those important members of the extended family who may reside nearby and their significant relationships with the members of the nuclear family.

A key theoretical and methodological issue in current cross-cultural psychology is the necessity for determining context variables –cultural variables– which are related to psychological variables, and which can explain universals and differences in psychological variables related to cultural dimensions. The cross-cultural study of the family in psychology represents a theoretical and a methodological issue in research. One approach to cross-cultural psychology is to employ a quasi-experimental method in which "culture" is conceptualized as an independent variable, and psychological variables are seen as outcomes among individuals who have been enculturated in a particular culture. Thus, by selecting cultures across different positions on the independent variable, and by selecting different types of families, the relationships between culture and family and psychological variables can be studied. This methodological and theoretical model has been discussed in Georgas and Berry (1995) and Georgas, van de Vijver, & Berry (submitted for publication).

Family as a key context variable, and its relationship to psychological variables has become recently the focus of study in cross-cultural psychology (Fijneman, Willemsen, & Poortinga, 1996; Georgas, 1989, 1991, 1993, 1999; Georgas, Christakopoulou, Poortinga, Goodwin, Angleitner, & Charalambous, 1997; Goodwin, R., 1999; Kagitcibasi, 1990, 1996a, 1996b, 1999; van den Heuvel, & Poortinga, 1999a, 1999b).

An important contribution to the cross-cultural study of the family has been Kagitcibasi's (1996a) contextual-developmental-functional model of family change. Three contextual patterns of family, *interdependence*, *independence*, and *emotional interdependence*, are described as prototypes of family systems and function in different socioeconomic cultural models. These patterns are differentiated according to two dimensions: emotional and material. *Interdependence* is described as the classic model of the extended family found in rural/agrarian traditional societies, with overall material and emotional interdependence. *Independence* refers to the nuclear family, characteristic of

Western industrial urban/suburban middle-class cultures. The family culture is described as separateness of the nuclear family from the extended family and of its members from one another. *Emotional interdependence* is found in the more developed areas of the Majority World characterized by emotional interdependence and material independence. Kagitcibasi states (1996b) that material interdependencies weaken with increased affluence and urban life styles but emotional interdependencies continue.

The nuclear and extended family

One of the definitions of the family is Murdock's (1949), "The family is a social group characterized by common residence, economic cooperation, and reproduction. It includes adults of both sexes, at least two of whom maintain a socially approved sexual relationship, and one or more children, own or adopted, of the sexually cohabiting adults" (p.1). Two critical concepts related to family are structure and function. According to Smith (1995, p. 9), structure refers to the "...number of members of the family and to the designation of familial positions such as parent, spouse, child, other kin, etc.", while function refers to manners "...in which families satisfy members' physical and psychological needs and to meet survival and maintenance needs."

Most of the literature on family types has focused on the nuclear family and the extended family (Nimkoff and Middleton, 1960; Spiro, 1965; Stanton, 1995). The key to studying how family structure is related to function and how it affects psychological differentiation, and how family type is related to economic base and culture, is the nuclear family. This is because, as Murdock (1949) explained, "... the nuclear family is the basic form from which more complex familial forms are compounded...a distinct and strongly functional group in every known society" (p. 2). By this, Murdock attempted to emphasize that the extended family was essentially a constellation of nuclear families across more than two generations. This was an important concept in our theoretical and methodological approach.

Perhaps the most influential family sociologist, who profoundly shaped the thinking about the structure and function of the family, particularly the nuclear family, was Parsons (1943, 1949). According to Parsons, the adaptation of the family unit to the industrial revolution required a nuclear family structure which could carry out societal functions and could satisfy the physical and psychological needs of family members. Parsons argued that the nuclear family is fragmented from its kinship network, the extended family, which leads to psychological isolation.

However, Segalen (1986) argues that recent historical and anthropological research has debunked a number of myths about the prevalence of the nuclear family in European societies from the 15th century till recently, and that the ideas of many sociologists that kinship relations were overstretched by the effects of incipient industrialization were exaggerated. On the basis of historical anthropological studies, she argues that kinship relations were in fact maintained and certain forms were even strengthened as a defense to threats of wars, epidemics, and even industrialization.

Social support and family function

Research on social support during the past 30 years played a major role in re-examining the supportive role of members of the extended family in ameliorating the deleterious psychological and somatic effects of psychosocial stress (Adler, 1994; Kessler, Price, & Wortman, 1985; Uzoka, 1979). They concluded that the nuclear family in the United States and Northern Europe was not as isolated as had been previously assumed. Segalen (1986) reported a number of studies conducted by sociologists which show the existence of active kin networks and social support in urban areas in France and Britain (Gokalp, 1978; Young & Wilmott, 1968). Her position was that the dominant ideology of the post-war years, as exemplified by Parson's analysis of the nuclear family, was that of individualism and freedom. "This has meant that each family cell tended to be seen as unique and independent

of cultural influences of economic and historical contingencies" (1986, p. 3). She maintained that many sociologists studying present day families have an a priori assumption that the domestic group is shrinking and that kinship has almost disappeared as a basis of relationships. Uzoka concluded that research on social support in many countries has refuted the "myth of the nuclear family.... as structurally nuclear but functionally atomistic..." (1979, p. 1096).

Residence patterns and the family

The definition of the nuclear family appears to be very clear cut: mother, father, and children in a single household. A major problem in many studies of the nuclear family was the undue emphasis that some researchers have placed on the structural aspects of the nuclear family and on its proximal component: common residence in a single household. One of the major arguments of this paper was that we study the functional aspects of the family, with emphasis on the interactions and residence patterns of the members of the nuclear family with members of the extended family.

Let us look more closely at one of the elements in the definition of family, "common residence." A critical methodological question is how does one define or measure "common residence"? Most studies of the nuclear family define common residence as those who reside in the "household." However, if one measures the patterns of residence of kin a different picture of the nuclear family may emerge. Thus, if one attempts to define the nuclear family only in terms of its structural elements and those who live in the household, those functional aspects of the family vital to the analysis of the nuclear family – extended family system differentiation, are omitted. Geographic proximity appears to be the critical dimension which differentiates “individualist” cultures from “collectivist” cultures because the greater economic opportunities of more affluent individualist cultures permit the establishment of nuclear families of the younger married parents in another community and also permits the

acquisition of a home that is separate from the grandparental home. However, this does not necessarily imply that kinship ties are also severed (Segalen, 1986; Uzoka, 1979).

Purpose

The purpose of this study was to investigate the relationship between culture, structural aspects of the nuclear and extended family, and functional aspects of the family, that is, emotional distance, social interaction and communication, as well as geographical proximity. In a recent article, Georgas (1999) presented a model for the cross-cultural study of the structure and function of the family and their effects on psychological variables. The model proposes an ecocultural approach (Berry, 1976, 1979) in which psychological variables are studied as embedded within the context of the family structure, the immediate community, the social context, and the physical environment. The article reviews a number of issues in regard to family. In a previous study (Georgas et al., 1997) with Britain, Germany, the Netherlands, Cyprus, and Greece, two types of family structure were investigated: the nuclear family and the extended family, represented by grandparents, cousins, uncles/aunts. No systematic differences were found in emotional distance, frequency of meetings, or telephone contact with members of the nuclear family across the five cultures. It is with the members of the extended family that functional differences were found. In the Greek and Greek-Cypriot societies the family functions extended to a larger kinship network, with grandparents, uncles/aunts and cousins, that is, in terms of frequency of meetings and contact by phone. In contrast, in the three societies in northwestern Europe family function was more limited to parental–child networks.

As Segalen (1986, 1996) and others have pointed out, the employment of the term "nuclear" family has been accompanied by Parson's (1943) assumptions regarding its geographical and psychological isolation from its kin, primarily in the economically affluent cultures of Western Europe and North America.

The structural aspects of the family –nuclear and extended– were defined in this study as follows. Nuclear family referred to mother, father and their children. Extended family referred to grandmother/grandfather, aunt/uncle, cousins. It should be noted that there are many other family types, including variations of the extended family or joint family, one-parent family, divorced family, etc. and other kin e.g., nephews, nieces, grand-uncles/aunts, brother-in-law, etc. who we did not employ in our sample for methodological reasons. We did not differentiate between paternal and maternal kin, a critical distinction in many societies, e.g., maternal aunt vs. paternal aunt. The choice of measures of family function was based on social support theory because they were closely related to social interaction, support and communication between individuals and kin (Adler, 1994; Segalen, 1986) and are simple measures common to all cultures.

The focus of this study was on the functional aspects of the family, defined as members of the nuclear family and certain members of the extended family. If sociological theories regarding the correlation of cultural affluence and individualism with increase of functional nuclear families is correct, then one would expect a marked reduction in functional relations between members of the nuclear family and their kin in affluent cultures, as compared to low-affluence cultures.

The first hypothesis in this study, based on Fijneman, Willemsen, & Poortinga (1996) and van den Heuvel, & Poortinga (1999a, 1999b) was that the pattern of scores on the psychological measures and the behavioral outcomes would be similar across cultures, an indication of cultural universality. The second hypothesis was that the functional relations between members of the nuclear family and their kin are maintained in high-affluent and low-affluent cultures, and the differences in high and low affluent cultures are a matter of degree.

Method

Sample

The 16 cultures were chosen because they provided a range of variation on cultural variables which were employed in the ecocultural analysis, that is, Affluence, Individualism and Power Distance (see section Cultures, target variables, affluence and other psychological variables: Country-level analysis), although these variables did not represent this variation in any precise way.

The sample was composed of 2,587 university students, ages 16 to 30 years (Mean Age 20.81), from 16 countries: Bulgaria (N=57), Canada (N=328), China (N=162), Cyprus (N=180), Czech Republic (N=189), Germany (N=100), Greece (N=280), Hong-Kong (N=96), India (N=167), Mexico (N=89), The Netherlands (N=125), Serbia (N=183), Turkey (N=325), United Kingdom (N=104), Ukraine (N=94), and U.S.A. (N=108). The data from China and Ukraine were partially incomplete; therefore, for some designs the countries remaining in the analyses are 14 or 15.

Questionnaires

A four-part questionnaire was used in this study:

The first part assessed the emotional distance with different relatives: father, mother, siblings, grandparents, uncles/aunts, cousins. Respondents were asked to place different relatives in seven concentric circles. These circles represented an emotional distance scale from 1 (very distant) to 7 (very close). This method of measurement was derived from Bogardus' concept of social distance (1925) and the concept of personal space (Hall, 1963; Little, 1968). An eighth and central concentric circle represented the subjects themselves (the self). The closer to themselves (the center) the subjects assigned a relative, the closer they felt to that relative.

The second part took the place of permanent residence as a reference point. As previously discussed, proximity of residence of members of the nuclear family to kin is a critical aspect of the delineation of the nuclear family in relation to the extended family. We

stipulated that this is the home of parents or caretakers, also for students not actually living there. On the basis of this reference point we examined the degree of geographic proximity to parents, siblings, grandparents, uncles/aunts, cousins. Subjects responded on a 6-point scale (1=live far away, 2=live in the same district of the city, 3=live in the same neighborhood, 4=live in adjacent or nearby buildings, 5=live in the same building/apartment block, 6=live in the same house).

The third and fourth assessed the frequency of meetings and contact by telephone, respectively, with the same relatives. These two are measures of social interaction and communication between the nuclear and extended family. Subjects again responded on a 6-point scale (1=rarely, 2=on special occasions, 3=once a month, 4=every two weeks, 5=once or twice a week, 6=every day). In total, the four parts of the questionnaire resulted in 19 measures, which were the 19 "target" variables, grouped in four sets.

The English language questionnaire was employed as the basis for translation. Back translation with checks for translation equivalence was used for the translation of the questionnaire to the different languages (van de Vijver & Leung, 1997). The questionnaire was administered to university students.

RESULTS

Cultures, target variables, and family roles: Individual level analysis

Hypothesis 1 stated that the patterns of scores on the four sets of target variables, emotional distance, geographical proximity, frequency of meetings and contact by telephone would be similar across cultures. This was investigated with four multivariate analyses of covariance designs: the 16 cultural groups was the first independent variable for these designs and gender was the second independent variable; the four sets of target variables were the dependent variables in each of the analysis designs referring to family roles: mother, father, siblings, grandparents, uncles/aunts and, cousins. Post-hoc Scheffé comparisons served to

clarify the "cultural levels" independent variable effects present in the analyses. To improve for metric equivalence, adjustments were also made for two covariates: age, and father's level of education. The multivariate effects for "gender", the covariate effects and the interaction (gender × covariates) effects were statistically significant in very few instances; and even then –except for one covariate effect– the amount of explained variance was so small (less than 1%) that these effects were not explored further.

Emotional distance with relatives.

The dependent variable in this Mancova design was *Emotional Distance* with scores for: mother, father, siblings, grandparents, uncles/aunts and, cousins. The multivariate main effect for the 16 Cultural levels was significant, indicating that emotional distance with relatives varied significantly with cultures. Inspection of mean scores (see Figure 1) suggested that the patterns of emotional distance with relatives across cultures were similar, as hypothesized (Hotelling's T^2 criterion, $F_{(90, 15290)} = 4.71$, $p<.001$). The Wilks' ? criterion accounted for approximately 15% of the model's total variance. This suggested that although significant mean differences in emotional distance with relatives were found in different cultures, the percent of variance explained was relatively weak.

The univariate level of analysis indicated that the strength of the relationship between emotional distance with different relatives and cultural group was small to weak, with $?^2$ indices ranging from .028 (mother) to .062 (cousins): (Univariate Main Effects: Mother: $F(15, 2555) = 4.89$, $p<.001$, $?^2$ .028; Father: $F = 6.20$, $p<.001$, $?^2$ .036; Siblings: $F = 5.04$, $p<.001$, $?^2$ .029; Grandparents: $F = 7.06$, $p<.001$, $?^2$ .040; Uncles/Aunts: $F = 10.9$, $p<.001$, $?^2$ .060; Cousins: $F = 11.2$, $p<.001$, $?^2$ .062). These indices, in respect to each other, suggested that the variability accounted for by cultural differences was minimal for the nuclear family members (mother, father and siblings) and larger for member of the extended family (grandparents, cousins and uncles/aunts). To check this, two separate Manova analyses were run: 1) for the

nuclear family (mother, father, siblings) and 2) for the extended family (grandparents, uncles/aunts, cousins). The Wilks' ? for cultural level effect on the nuclear family model was .93, and approximately the same (.90) for the extended family model, indicating no differences between them.

For the univariate analysis results, the post-hoc Scheffé comparisons indicated the specific country differences for each of the six family roles for the emotional distance target variable (see Table 1).

Geographic proximity to relatives

As discussed earlier, geographic proximity was hypothesized to be a significant determinant of nuclear-extended family functioning. The dependent variable in this Mancova design was *Geographic Proximity* with scores for: parents, siblings, grandparents, uncles/aunts and, cousins. The Age covariate effect was statistically significant and accounted for approximately 8% of the variance. This effect was mainly due to the fact that younger people live mostly with their parents ($?^2 = .07$) and with their siblings ($?^2 = .04$) in contrast to older people. Such a covariation was expected but was still minimal; thus it was not necessary to make any adjustments to the observed means.

The multivariate main effect for the 16 Cultural levels was significant (Hotelling's T^2 criterion, $F_{(75, 10942)} = 6.90$, $p<.001$). As with emotional distance, the patterns of mean scores of geographic proximity (Figure 2) with relatives across cultures were similar, as hypothesized. Wilks' ? accounted for approximately 20% of the model's total variance. This suggested that the significant mean differences in geographic proximity with relatives found in different cultures, were of medium effect size.

According to the univariate level of analysis that followed, Geographic Proximity to parents, siblings, grandparents, cousins and uncles/aunts varied significantly with cultural group. The strength of the relationship between geographic proximity to different relatives

and cultural group was small, with $?^2$ indices ranging from .06 (siblings) to .079 (cousins): (Univariate Main Effects: Parents: F(15, 2194) = 10.2, p<.001, $?^2$ 2.065; Siblings: F = 9.39, p<.001, $?^2$ .060; Grandparents: F = 8.99, p<.001, $?^2$ .058; Uncles/Aunts: F = 11.7, p<.001, .074; Cousins: F = 12.6, p<.001, $?^2$ .079.).

As with emotional distance, in order to further clarify the issue of possible differences of geographic proximity to nuclear family vs extended family members, two separate Manova analyses were run for members of the nuclear family (parents, siblings) and for members of the extended family (grandparents, cousins, uncles/aunts). The percent of variance attributed to each of the two models was nearly the same (Wilks' ? for cultural levels multivariate effect on nuclear family was .89 and for extended family .88) indicating that geographic proximity to nuclear and extended family members was similarly distributed among the 16 cultures.

For the univariate analysis results, the post-hoc Scheffé comparisons indicated the specific country differences for each of the five family roles for the geographic proximity target variable set (Table 1). An interesting "switch" in the geographic proximity for Bulgaria, where the students did not live very close to parents and siblings, but they lived closer to members of the extended family than in most other cultures, can be attributed (personal communication, V. Marinova) to grown sons and daughters who work in other cities and live with or close to kin.

Frequency of meetings with relatives

The dependent variable in this Mancova design was *Frequency of Meetings* with siblings, grandparents, uncles/aunts and, cousins. Scores for mother and father were not employed in this analysis because, since the respondents were university students, the instructions were to keep the permanent place of residence in mind as the basis for the ratings. The multivariate main effect for the 15 Cultural levels (Chinese data were not available) was

significant (Hotelling's T^2 criterion, $F_{(55, 8526)} = 8.45$, $p<.001$) indicating frequency of meetings scores for siblings, grandparents, cousins and uncles/aunts varied significantly with cultural group. Wilks' ? accounted for approximately 19% of the total variance, approximately the same as with geographical proximity. Once again, inspection of the means of frequency of meeting (see Figure 3) indicated similar patterns across cultures.

Univariate analyses indicated that the strength of the relationship between frequency of meetings scores to these relatives and cultural group was small to medium, with $?^2$ indices ranging from .049 (siblings) to .10 (uncles/aunts): (Univariate Main Effects: Siblings: F(14, 2136) = 7.94, $p<.001$, $?^2$ .049; Grandparents: F = 11.8, $p<.001$, $?^2$ .072; Uncles/Aunts: F = 16.9, $p<.001$, $?^2$ .100; Cousins: F = 15.8, $p<.001$, $?^2$ .094).

An analysis of variance for members of the extended family (grandparents, cousins, uncles/aunts) resulted in a reduction of the percent of variance explained to 16% (Wilks' ? = .84), a weaker effect than the design with siblings.

For the univariate analysis results, the post-hoc Scheffé comparisons indicated the specific country differences for each of the four family roles for the frequency of meetings target variable set (see Table 1).

Contact by telephone with relatives

The fourth set of target variables was *Frequency of Contact by Telephone* with siblings, grandparents, uncles/aunts and, cousins. Scores for mother and father were not employed because the instructions were regarding permanent place of residence, as with Frequency of Meetings. The multivariate main effect for the 14 Cultural levels (data from China and Ukraine were not available) was significant (Hotelling's T^2 criterion, $F_{(52, 5642)} = 10.1$, $p<.001$). Wilks' ? accounted for approximately 28% of the model's total variance, a large effect, and the largest among the four sets of target variables. The patterning of scores was again similar across cultures (Figure 4), as with emotional distance, geographic proximity,

and frequency of meetings.

The univariate analyses indicated that the strength of the relationship between frequency of contact by telephone with the relatives and cultural group was medium, with $?^2$ indices ranging from .058 (grandparents) to .176 (uncles/aunts): (Univariate Main Effects: Siblings: $F(13, 1415) = 12.9$, $p<.001$, $?^2$ .106; Grandparents: $F = 6.68$, $p<.001$, $?^2$ .058; Uncles/Aunts: $F = 23.2$, $p<.001$, $?^2$ .176; Cousins: $F = 21.6$, $p<.001$, $?^2$ .165).

An analysis of variance for members of the extended family (grandparents, cousins, uncles/aunts), as with frequency of meetings, resulted in a Wilks' ? = .78 for the cultural levels multivariate effect, the strongest effect present in our analysis.

For the univariate analysis results, the post-hoc Scheffé comparisons indicated the specific country differences for each of the four family roles for the frequency of contact by telephone (Table 1).

Cultures, target variables, affluence and other psychological variables: Country-level analysis

The second hypothesis was that the functional relations between members of the nuclear family and their kin are maintained in high-affluent and low-affluent cultures, and the differences in high and low affluent cultures are a matter of degree.

The results up to this point were based on *individual-level analyses*, that is, the scores of each participant in each culture. Country-level analyses were employed to study of relationship between Affluence (Georgas, van de Vijver & Berry, submitted for publication), country mean scores on the variables Individualism-Collectivism, and Power Distance (Hofstede, 1980), and the country-level mean scores on the four sets of target variables (emotional distance, geographic proximity, frequency of meetings, and frequency of telephone contact). These country-level analyses, named *ecological analyses* by Hofstede (1980), would aid in the determination of the relationship of the measures of family function

to context variables such as national economic level and to the concept of individualism-collectivism, which has been hypothesized by Kagitcibasi (1996a) to be related to nuclear or extended family type.

Mean scores of nations for target-psychological variables and context measures.

Since, in the Mancova analyses among cultures, no covariance effect was large enough to dictate adjustments to the target-psychological variables, the country means were computed and inserted in a 16 cultures by 19 target-psychological variables matrix (means of emotional distance with 6 family members, means of geographic proximity to 5 family members, means of frequency of meetings with 4 family members and, means of frequency of telephone contact with 4 family members).

A social index of national economic level, named *Affluence*, was determined (Georgas & Berry, 1995; Georgas, van de Vijver & Berry, submitted for publication). We employed the same methodology, electronically retrieving several economic activity indices from the World Bank Organization and United Nations databases. These indices were the Gross National Product per Capita in U.S. dollars, the Consumption of Commercial Energy per annum, Electricity Consumption in kilowatt hours, National Energy Product in Million Tonne Equivalent, percentage of People employed in Agriculture, percentage of People employed in Industry and percentage of People employed in Services for each of the sixteen cultures. For these indices a Principal Component analysis was employed in order to derive a unidimensional factor score index. The percentage of People Employed in Services was not employed in this analysis, since it was linearly dependent to the remaining two percentages participating in the model. Principal Component analysis explained 64.4% of the total variance and resulted in one principal component for which the respective factor score was computed. The factor score for each nation was defined as the *Affluence* ecological index.

Two psychological variables, *Individualism* and *Power Distance* from Hofstede (1980) were selected. Individualism refers to private goals and Collectivism refers to collective goals. Power distance refers to the degree of inequality between a more powerful person and a less powerful person. The country-level scores from Hofstede were employed, but were not available for all 16 cultures in our study.

Because the number of nations is very small, sixteen for Affluence and eleven for Individualism and Power Distance, the Pearson Product-Moment Correlation coefficients[1] computed should be interpreted with caution, as potentially indicative of some degree of association, but not definitive.

Emotional Distance

There appeared to be no strong association of emotional distance with Affluence, Individualism, or Power Distance for any family role among the 16 cultures. The correlations range from Pearson $r = -.39$ to .47, with an absolute median value of .15.

Geographic Proximity

Significant correlations were found between geographic proximity and the three variables. The Pearson *r*'s ranged from –.76 to .87, with an absolute median value of .65. Nations with high affluence had grandparents, aunts/uncles, and cousins who lived further away than nations with low affluence (*r* coefficients: –.72, –.73 and, –.71, respectively). Nations with greater power distance had grandparents, aunts/uncles, and cousins who lived closer together than nations with low power distance (r: .55, .85 and, .87, respectively). Nations with individualist values had grandparents, aunts/uncles, and cousins who lived further away than nations with collectivist values (r: –.76, –.68 and, –.65, respectively).

Frequency of Meetings

[1] The critical Pearson r values for the a level of .05 are, for n=11, $r \approx .60$ and for n=16, $r \approx .50$.

The pattern of correlations of meetings with members of the extended family were not as clear. The Pearson r correlations ranged from –.59 to .79, with an absolute median value of .51. Nations with high affluence met grandparents and cousins less often than nations with low affluence (r: –.49, and, –.51, respectively). Nations with greater power distance met aunts/uncles and cousins more frequently than nations with lower power distance (r: .73, and, .79, respectively). Nations with individualist values met cousins less frequently than nations with collectivist values (r = –.59). The above correlations were expected, since the geographic distance between relatives in more affluent nations is prone to be greater.

Frequency of contact by Telephone

The pattern of correlations regarding telephone calls with members of the extended family were clearer than with meetings. The Pearson r correlations ranged from –.68 to .87, with a median value of .65. Nations with high affluence telephoned their grandparents, aunts/uncles, and cousins less frequently than nations with low affluence (r: –.62, –.68 and, –.67, respectively). Nations with greater power distance telephoned siblings, grandparents, aunts/uncles, and cousins more frequently than nations with lower power distance (r: .74, .70, .84 and, .87, respectively). Nations with individualist values telephoned aunts/uncles and cousins less frequently than nations with collectivist values (r: –.63 for both aunts/uncles and cousins correlations with frequency of telephone calls).

Discussion

The purpose of this study was to investigate the relationship between cultures, family roles and kin of the nuclear and extended family, and geographical proximity, psychological and social interaction variables in different cultures.

An important finding was that the effects of culture on the variables were statistically significant, expected with such a large number of subjects, and the percent of variance attributable to culture was acceptable on statistical grounds. The Wilks' ? criterion for the

effect of culture on the psychological variable *emotional distance* accounted for 15% of the total variance, *geographic proximity* 20%, the social interaction variables *frequency of meetings* 19%, and *telephone contacts* 28%. Thus, it would appear that there are significant differences in means among the cultures in terms of emotional distance, geographical distance, meetings and telephone communication. This would support the argument that cultures vary in terms of significant differences in emotional distance to members of the nuclear and extended family, in terms of how close or far they live from these members, how often they meet these members, and how often they telephone them (Kagitçibasi, 1999).

However, if one looks at the patterns of the mean scores across the cultures, there is a picture of universality across the different relatives. There is a similar step-wise pattern across all cultures, in which the mean scores decrease, as predicted by Fijneman et al. (1996) and van den Heuvel & Poortinga (1999a, 1999b). These findings suggest that while contacts between members of the nuclear family and members of the extended family may differ between the cultures of northern Europe and North America and cultures from other areas of the world - primarily developing cultures– these differences are relative and not so great as to conclude that there are no functional relationships between members of the nuclear family and kin in individualist Western cultures. That is, looking at the pattern of mean scores across the cultures, where would one draw the line between the nuclear family and the extended family in high-affluent as compared to low-affluent cultures in terms of geographical proximity, social interaction and emotional distance?

Thus, the findings are like looking at the "head or tail" of a coin. If one looks at mean differences, the interpretation might be that cultures differ significantly in emotional distance, geographical proximity, meetings and telephone communication with relatives. But, on the other hand, if one looks at the patterns of means across cultures, the interpretation might be that emotional distance, geographical proximity, meetings and telephone communication with

these family members occur in the same fashion in all cultures, supporting the hypothesis of cultural universality.

These findings are consistent with the conclusions of Segalen (1986) who questions Parson's hypothesis regarding the "psychological isolation" of the nuclear family from the extended family in northern European and northern American cultures, as well as Uzoka's (1979) conclusions regarding the "myth of the nuclear family", based on his review of the social support literature in the United States.

More specifically all countries show close emotional bonds with mother, father and siblings, although small differences exist between cultural groups. The patterns of means of emotional distance across cultures is similar, with closest emotional distance with mother, followed by increasing emotional distance with siblings, father, grandparents, cousins and aunts/uncles respectively. Also, although cultural differences were found in emotional distance for grandparents, uncles/aunts and cousins, culture accounted for a relatively small percent of the explained variance. That no strong association was found in the country-level analysis between emotional distance with Affluence, Individualism, or Power Distance for any family role among the 16 cultures, is consistent with the conclusions of Fijneman et al. (1996) and van den Heuvel & Poortinga (1999a) that patterns of emotional closeness do not differ systematically across cultures.

More specifically, similar patterns of differences in geographic proximity among the cultural groups were found; proximity was closest for parents, followed by siblings and relatively distant for grandparents, uncles/aunts and cousins, in approximately that order.

For frequency of meetings, the highest frequencies were with siblings, decreasing respectively with grandparents, aunts/uncles and cousins. However, in all cultural groups the frequency of meetings with siblings was relatively high and moderate for frequency of meetings with grandparents.

The patterns of means across cultures of frequency of meetings of family members was similar with the patterns of telephone calls, that is, the highest frequencies of telephone calls were with siblings, decreasing respectively with grandparents, aunts/uncles and cousins. The frequency of contact by telephone with grandparents, uncles/aunts and cousins, were relatively low, but differences among the cultural groups existed. These differences were split into two cultural groups; Cyprus, Greece, India, Serbia, Turkey, Bulgaria and Mexico formed the first group with frequent contact by phone, particularly with uncles/aunts and cousins. The U.S.A., the Netherlands, Canada, Hong-Kong, Czech republic, Britain and Germany contacted with relatives by phone less frequently, particularly uncles/aunts and cousins.

The findings suggest that affluence is related to geographic proximity, as well as frequency of visits and telephone calls, to members of the extended family. Affluence provides the opportunity of married offspring to acquire their own home and live apart from the grandparents. This is an important value in all societies. In low affluent cultures, the grandparents attempt to provide a separate domicile for their married offspring, often an adjacent plot or nearby in the village. High affluence provides the opportunity for married offspring to buy their home and live in another section of the community or even of the country.

One question, which arises from this study is, "If married offspring live in a separate house and/or in another area of the community or country, does this lead to the breaking of psychological ties with the grandparents and members of the extended family"? Parson's answer to this question was, "yes". The results of this cross-cultural study provide a negative response to this question, or at least a qualified "no". That is, affluence leads to a lessening of social interactions. There are fewer visits with kin in affluent societies, possibly because the family members have the "choice" to settle to geographically more distant places than in low affluent societies. There are also fewer telephone contacts with kin in high affluent societies.

This may reflect a complex relationship between frequency of telephone calls and affluence. On the one hand, one might have expected more telephone contact with kin in high affluent cultures, since telephone costs are lower –both in absolute terms and in proportion of income– than in low affluent cultures. On the other hand, since kin live further apart in high affluent cultures, telephone calls are long distance and hence more expensive than local calls in low affluent cultures. However, overall, the findings suggest relative differences in communication and social interaction between high and low affluent cultures, but not lack of these interactions.

The results from the country-level analyses are to be interpreted with extreme caution due to the small number of cultures involved. In addition, the fact that the samples are composed of students also detects caution. The question is to what degree do students represent the total populations of these cultures. Kwak, Ataca and Berry (personal communication) point out that in the case of Canada, Queens University students do not necessarily represent the typical university student. It is an elite, selective university where over 75% of students live away from their home communities. These factors certainly influence responses for these students, and other factors may also influence responses in other samples. Thus, similarities in findings may be due in part to a shared international youth-student "culture".

This study could not throw light on aspects of van den Heuvel and Poortinga's (1999a, 1999b) debate with Kagitcibasi (1999) regarding the relative changes in material and psychological dependencies in the family model of emotional interdependence, since only a measure of national affluence was employed and not, as would be required, measures of family affluence. However, our findings provide some confirmatory evidence to Kagitçibasi's theory (1990, 1996a, 1996b) that changes in the material domain do not necessarily mean changes in the psychological domain. Kagitcibasi refers specifically to collectivist cultures

with economic development, while the above results might indicate a similar pattern in all cultures, as suggested by her.

One issue not studied in this project was the different types of families. We did not look at divorced families, one-parent families, etc. Also, there are different types of extended families which vary across cultures, and which differ in terms of both structure and function.

Another issue not studied was the different types of functions of members of the family, e.g., cooking, household chores, contributions to family income, care of children, transmission of family values, etc. In addition, another issue is the relationship of psychological variables to family roles and functions across cultures. In this study, emotional distance and frequency of interaction and communication were the psychological variables studied. In an ongoing project, the co-authors, in addition to other collaborators are in the process of studying more specifically the relationships between culture, family structure and function, and psychological variables.

Thus, the results of this study suggest that it is less meaningful in cross-cultural family studies to ask questions about the structure of the family as to ask about the functional relationships between members of the nuclear family and their kin. There is no functional discontinuity between the nuclear family and the extended family types. It is a matter of degree. From the structural point of view, the distinction between the nuclear and the extended family is primarily based on geographical proximity – those living in the household. Instead, in studies, one should take as the basic family unit the nuclear family and members of the extended family and focus on the functional aspects of members of the family, even in affluent cultures, and in particular the psychological interactions between these members. This also applies to the study of the one-parent family, the divorced family, and other types of families. Otherwise, important functional relations between the members of the core family and their significant relatives do not emerge. In looking only at the nuclear family, one

focuses only on those residing in the household, but ignores those members of the extended family who may reside nearby and their significant relationships with the members of the nuclear family – even in affluent societies. Thus, this approach looks at functional relationships in the entire family, that is, the constellation of nuclear families in which the individual is embedded in his/her nuclear family, and also at the significant kin in which their nuclear families are embedded.

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Table 1. Post-hoc Scheffé pairwise comparisons results for Emotional Distance, Geographic Proximity, Meetings, and Telephone Calls.

Emotional distance with family members

Emotional distance towards:	**Close**	**Distant**
Mother	China	Canada, Germany
Father	China	Bulgaria, Mexico, Germany
Siblings	China, Czech Rep., Cyprus, Greece	Mexico
Grandparents	China, Cyprus, Czech Rep.,	India, Germany
Uncles/Aunts	China, Cyprus, Czech Rep.,	Ukraine, Bulgaria
Cousins	China	Ukraine, Bulgaria, Germany

Geographic proximity to family members

Geographic Proximity to:	**Near**	**Far**
Parents	Cyprus, India, China, Greece, Turkey, U.S.A., Hong-Kong, Serbia	Bulgaria
Siblings	Hong-Kong, Greece, India, Cyprus	Canada, Bulgaria, Germany
Grandparents	Bulgaria	Canada
Uncles/Aunts	Bulgaria, India	U.S.A., The Netherlands, Canada
Cousins	Bulgaria, India	Canada

Frequency of Meetings with family members

Frequency of Meetings with:	**Many**	**Few**
Siblings	Cyprus, Greece, Hong-Kong, India	Bulgaria, USA, Germany
Grandparents	Cyprus, Czech Republic	Hong-Kong, Canada, USA
Uncles/Aunts	Cyprus, Greece	USA, Canada, Ukraine, Hong-Kong, UK, Germany
Cousins	Cyprus, Greece	Canada, Hong-Kong, UK, Germany

Frequency of Contact by Phone with family members

Telephone calls to:	**Many**	**Few**
Siblings	Cyprus, Turkey	Germany, Czech Republic
Grandparents	Cyprus, Greece	Hong-Kong
Uncles/Aunts	Cyprus, Greece, India, Serbia, Turkey	The Netherlands, Canada, USA, Hong-Kong, UK, Germany
Cousins	Cyprus, Greece	Canada, Czech Rep., Hong-Kong, UK, Germany

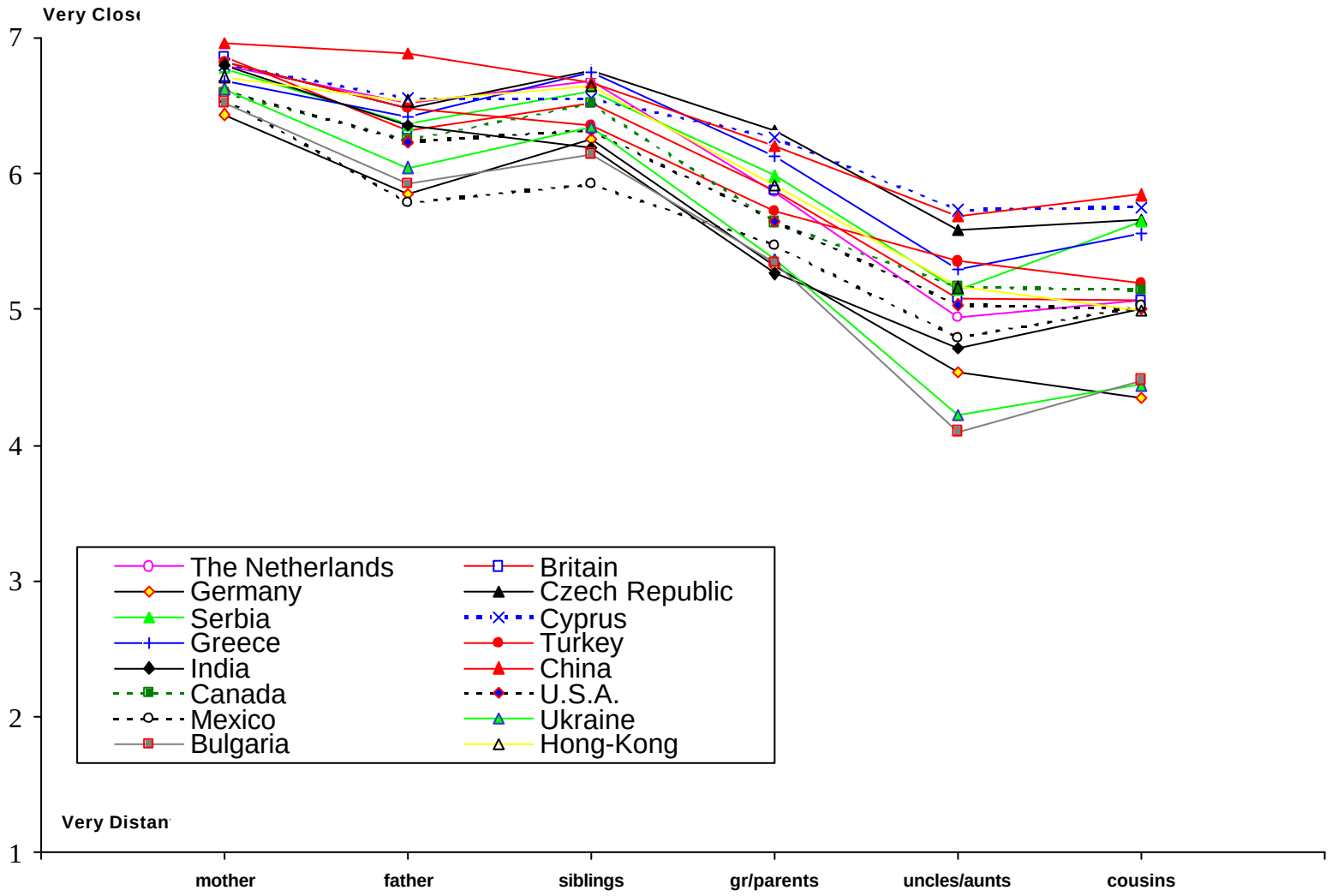

Figure 1. Means of Emotional Distance with Different Relatives in Sixteen Cultural Groups.

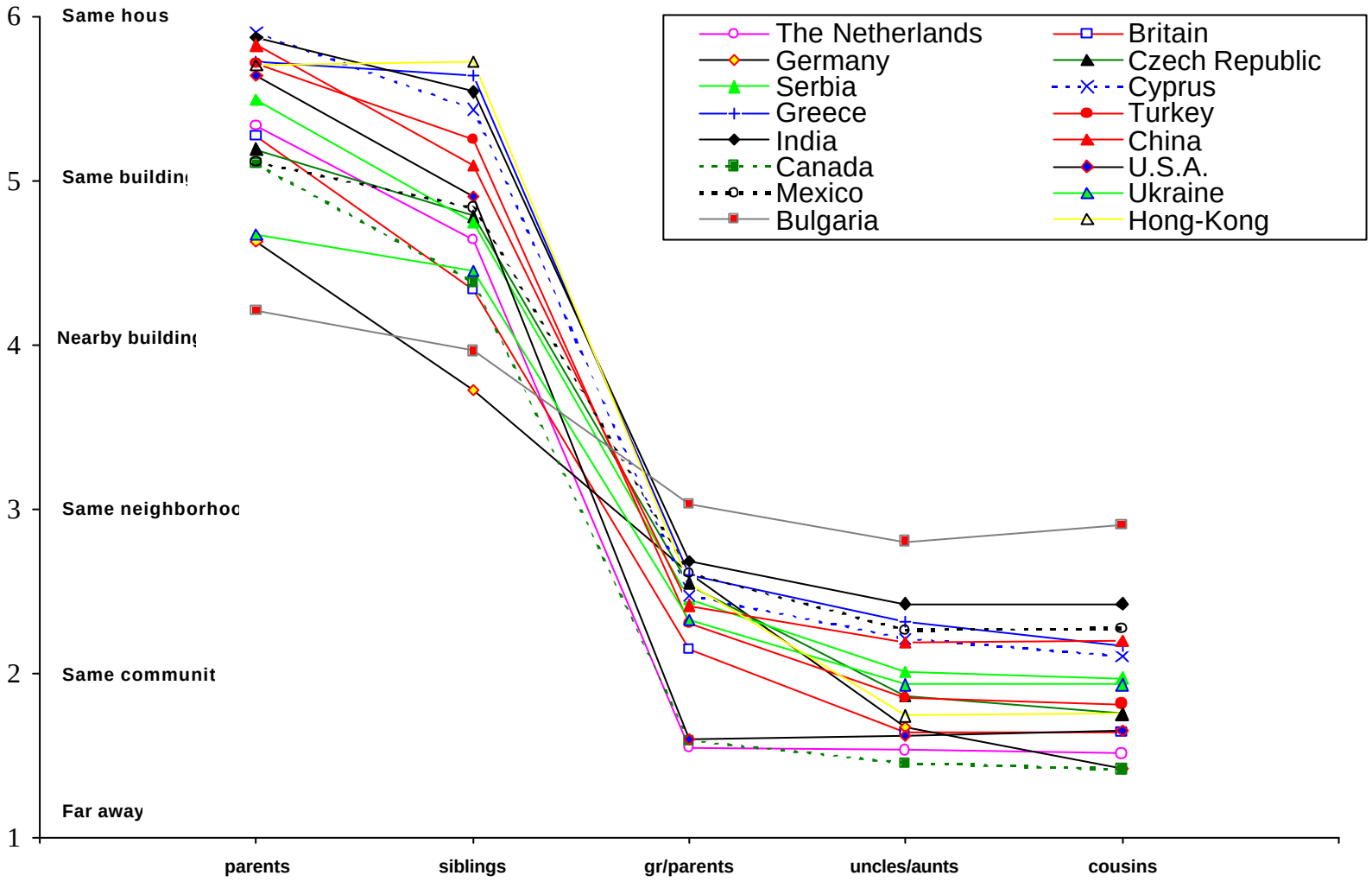

Figure 2. Means of Geographic Proximity to Different Relatives in Sixteen Cultural Groups.

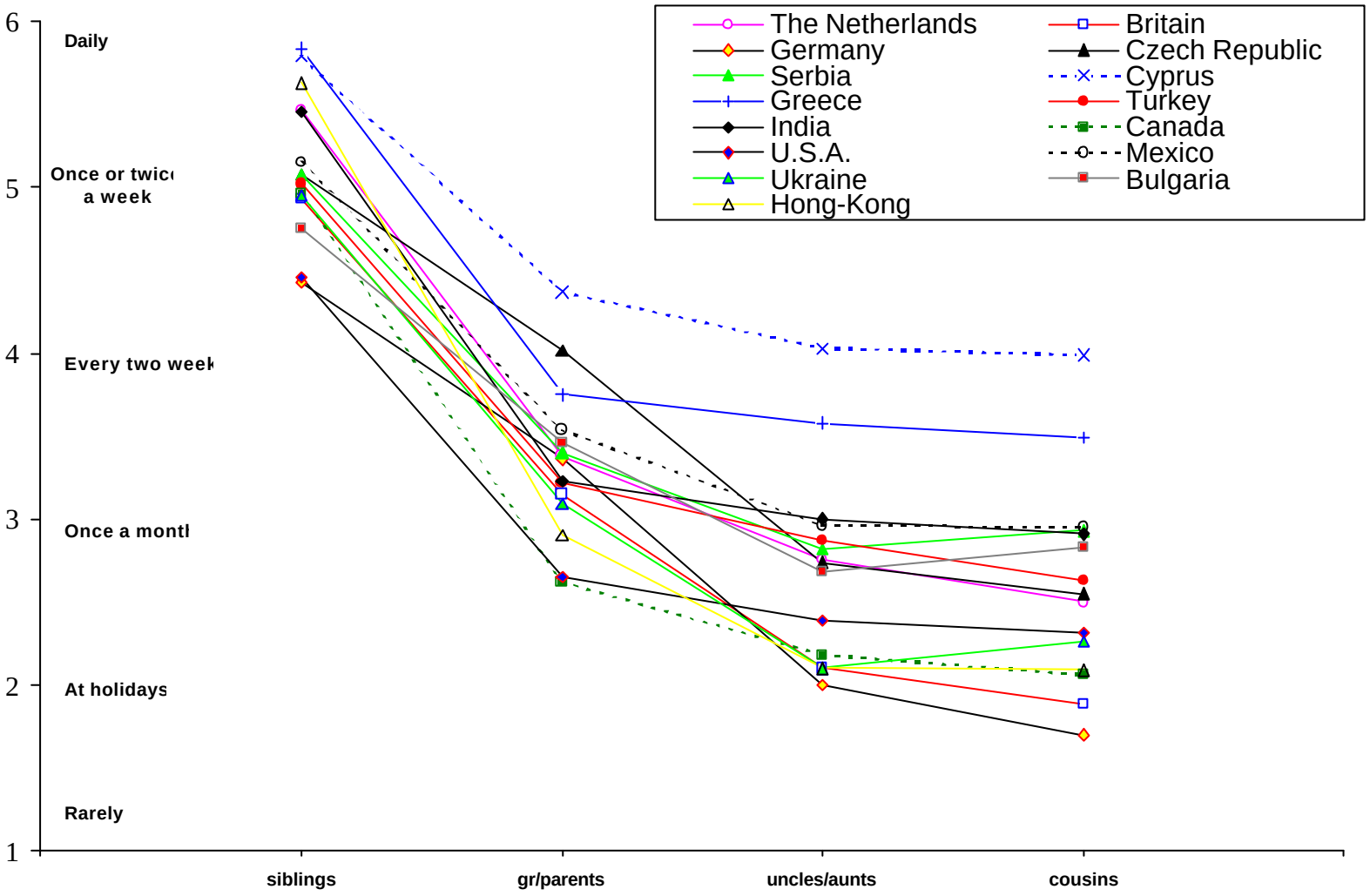

Figure 3. Means of Frequency of Meetings with Different Relatives in Fifteen Cultural Groups.

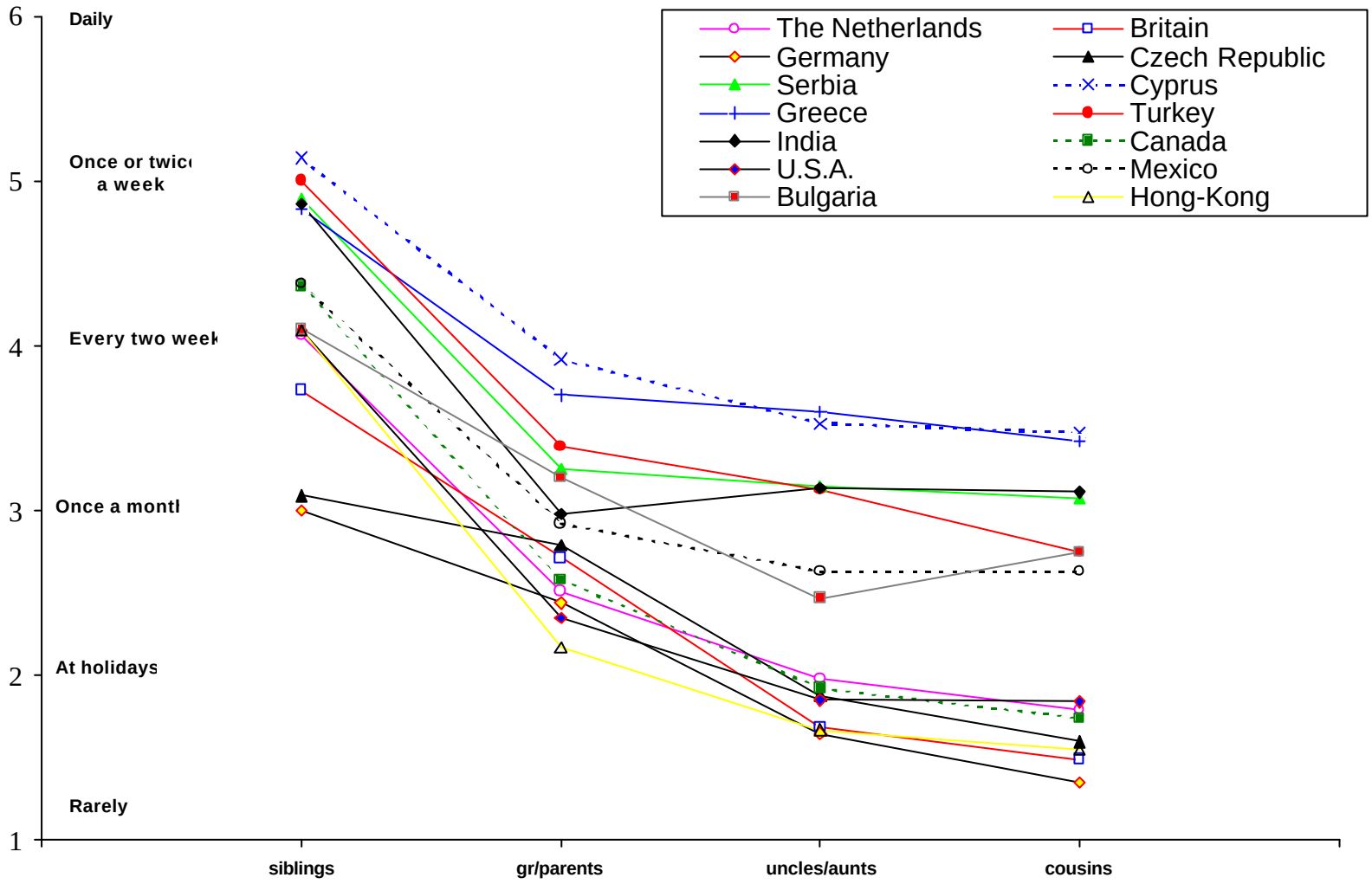

Figure 4. Means of Frequency of Contact by Phone with Different Relatives in Fourteen Cultural Groups.