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PERSONNEL TECHNOLOGY

AN EXAMINATION OF HISPANIC AND GENERAL POPULATION PERCEPTIONS OF ORGANIZATIONAL ENVIRONMENTS

(Harry C. Triandis, Principal Investigator)

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DEVELOPMENT AND VALIDATION OF AN
INDIVIDUALISM-COLLECTIVISM SCALE

C. Harry Hui

Technical Report ONR-31

July, 1984

DEPARTMENT OF PSYCHOLOGY
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Preface

A number of studies suggested that Hispanics are allocentric while non-Hispanics are idiocentric (Triandis, 1983). Conceptually, this dimension appears to be an aspect of the broader dimension or syndrome called collectivism. In this report Hui shows that collectivism can be measured both reliably and consistently with theoretical predictions. His Scale opens the way for studies that will explore how collectivism is related to other variables and will thus allow for a more careful examination of similarities and differences between Hispanics and other cultures.

Harry C. Triandis

Reference

Triandis, H. C. (1983). Allocentric vs idiocentric social behavior: A major cultural differences between Hispanics and Mainstream. Technical Report No. ONR-16, University of Illinois.

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Abstract

Individualism-collectivism (IC) appears to be related to some important social problems. The development of a scale to measure it will allow tests of hypotheses concerning such relationships. Besides being a variable of individual difference, it is also a continuum along which the world's cultures can be placed. To be more specific, collectivism is a syndrome of attitudes and behaviors associated with a concern for others and the belief that the collective, not the individual, is the basic unit of survival. A paper-and-pencil test (INDCOL Scale) was developed to measure this multi-faceted construct. As an instrument, the INDCOL Scale was shown to be sufficiently reliable and cross-culturally appropriate. Seven studies were done to established the validity of the Scale. Collectivism, as measured by the Scale, correlated with interpersonal orientation and social interest; it was socially valued in Chinese society but not necessarily in American society. Moreover, it correlated with sharing of responsibility as well as the correspondence beween obligation and behavioral intention. The assumption that various kinds of collectivism should be distinguished according to target persons was supported by the data.

Human behavior is a function of both the person and the environment. But it is unclear how completely each individual is integrated with others and the social environment. Some do their "own thing", without minding about others. Some share with others their problems as well as joys. A sliding scale can be imposed for the understanding of such difference: On one end are those who exist solely as "individuals". They can, at least they believe they can, stand or fall on their own, and survive on their own. On the other end of this continuum are those who value interdependence. For the latter, "self" is a concept foreign to them. These people establish bonds with others, and they consider the group (whatever it may be) or the collective as the basic unit of survival. Whether or not such bonds exist has a number of practical implications. The following paragraphs consider its implications in the areas of health and social problems.

Health Problems and Social Support

Data accumulated show a close relationship between socio-cultural factors and some diseases. For example, after reviewing the available literature on the low death rate among Italian-Americans in Roseto, Pennsylvania, relative to neighboring communities, Henry and Stephens (1977) concluded that social support is instrumental in controlling mortality from myocardial infarction. Henry and Stephens described this group of people as "cohesive", "mutually supportive and gregarious". The critical "difference between the inhabitants of Roseto and those of neighboring communities, such as Bangor, was their reinforcement of mutual trust and cohesion"(p. 191).

The difference between Japanese and Americans in coronary heart disease is also impressive. Both countries are economically developed, but one emphasizes competition and individualism while the other does not. "In the

West, persons are regarded as individuals more than in Japan where their behavior reflects a greater expression of attachment and interdependence. Japanese children receive more emotional support from their parents and, in general, the culture encourages attachment behavior"(Henry & Stephens, 1977, p. 197). Marmot and Syme (1976) observed this cultural variation, and attributed the low coronary heart disease rate (1.8 per 1000 as against 9.8 per 1000 in the United States) to the effectiveness of this social support system. Henry and Stephens elaborated this further: "Personal obligation and duty are regarded as more important than individual fulfillment . . . The company . . . is now responsible for the major portions of social and community life, and it succeeds in providing powerful emotional support"(p.198).

Bahnson and Bahnson (1964) postulated that lack of social support would make one vulnerable to cancer. DeFaire and Theorell's (1976) research is consistent with this viewpoint. They found that major life changes such as divorce, death of family member, a long vacation, trouble at work and so forth are only weak predictors of health problems. However, when major life changes are coupled with a lack of social support, there is a high propensity to sickness. (But see Aleksandrowicz & Zurowska, 1964, for a different view.)

Many studies have found a strong relationship between availability of social support and protection against mental illness. For example, Brown and Harris (1978) found that women inmates, in mental institutions, were more likely than the general population to have suffered the loss of a loved one. The effect of such loss would be intensified if the person did not have an intimate relationship with a husband or boyfriend, in whom she could

confide. Naroll (1983) reviewed a large number of studies conducted in different parts of the world, and came to a similar conclusion: mental illness is more frequent in socially disintegrated communities and among people who do not have strong social ties with groups outside the home (e.g., neighbors, friends, etc.). Newly-arrived immigrants who settle in a strange neighborhood, people who have lost their parents at an early age, and individuals in unhappy marriages are more prone to some kinds of mental illness than settled, interdependent people. Mueller (1980) considered the study of social networks as one useful way to understand the etiology of mental problems.

Social Problems and Social Support

Besides mental health, social problems in a society may also be affected by the presence or absence of social support. The following studies, while correlational in nature, nevertheless suggest an important role of social networks.

Zimmerman and Cervantes (1960) reported a large-scale study of high school seniors. A large portion of their sample consisted of families which had age-old relationships with other families. If such friend-families resembled the person's own family in their incomes, place of origin, and religious beliefs, and shared the same set of kins, there was a lower chance that the high-school senior would become a juvenile delinquent. Divorce in the family was also less likely. As the families are similar to each other, they formed a network which supported all members, and served as a preventive factor of youth crime and broken homes.

Naroll (1983) reanalyzed some data collected by Hirschi (1969). Those teenagers, boys and girls, who were closely supervised by their mothers were

less likely to be involved in delinquent acts. Those who admitted to the interviewers that they were involved in more than one delinquent act tended "to talk less about things that matter to them with their fathers" than those who admitted to only one (Naroll, 1983, p. 143).

Over-consumption of alcohol may be another behavior related to the lack of social ties. In a holocultural study of tribes, drunkenness was found to be negatively related to social dependency. Tribes that encouraged adults to depend on others for satisfaction of emotional needs were lower in their ted degree of drunkenness. Finally, drunkenness was lower in tribes where people eat in groups larger than a single nuclear family (Naroll, 1983). Perhaps a strong social network with others can render dependency on alcohol unnecessary.

In his rather comprehensive literature review, Lester (1970) observed that suicide was more common among the divorced and the single than the married, among those who had no children than those who were in a big family, and among those who did not get along with members of their social networks. Fuchs, Gaspari, and Millendorfer (1977) analyzed the family statistics in 16 European countries, and reported a negative relationship between family strength on one hand and suicide rate, homicide rate, and crime rate on the other. The stronger the familial tie is in a country, the lower the rate of such social problems. Smith and Hanson (1975) compared the self-reports of mothers of battered children and those of children taken to emergency rooms for other reasons. Among the abused children's mothers they discovered a substantial proportion who had impaired relationship with a parent (both currently and during childhood), and with siblings (both

currently and during childhood). Forty-six percent of these mothers said that they had no friends, while only 16% of the control group said so.

Considering such evidence as a whole, it is safe to infer a negative link between social networks and social problems. While a causal relationship has yet to be found, if we are concerned with such problems, there is already sufficient justification to look into the construct of individualism-collectivism (IC), which is related to how people are embedded in social networks.

Individualism-Collectivism as a Cultural Variable

The difference between Americans and Japanese mentioned earlier implies that IC may be a cultural variable, besides being a variable of individual difference. Indeed, both Ho (1979) and Hsu (1981) observed such a difference between Americans and Chinese. Research by Singh, Huang, and Thompson (1962), Fenz and Arkoff (1962), and Triandis (1983) similarly supported the notion of IC as a cultural variable.

A major study was done by Hofstede (1980). Responses from subjects in about 50 countries were sought. Four dimensions were extracted in an ecological factor analysis, one of which was individualism. According to Hofstede, individualism is the emotional independence of "groups, organizations, or other collectivities" (p. 221). He also noted other differences in norms between individualist and collectivist societies. In the latter, people are born into extended families or kinship systems which protect them in exchange for loyalty. The sense of "we-ness" is salient. A person's identity is derived from the social system rather than from individual attributes. There is emphasis on membership in organizations, as well as emotional dependence on them. Privacy is reduced due to the

heightened interaction between the individual and the collective. As opposed to individualist societies, where friendships are usually specific, friendships in collectivist societies are non-specific and predetermined by stable social relationships. There is also belief in and reliance on group decisions. Very often, collectivist societies emphasize particularistic values (Parsons, 1951). The United States, Australia, and Great Britain were found to be highest on this dimension, whereas Venezuela, Columbia, and Pakistan were lowest.

As a cultural variable, IC can also be employed to account for some cultural differences in social behavior. Leung and Bond (in press) claimed that Americans emphasized equity very much, because they are individualists. Hui (1984) provided empirical evidence that IC is indeed the critical variable determining the Chinese orientation towards equality, and the American emphasis on equity, in reward allocation.

IC as Concern

Whether it is other-orientation, or interdependence, or interest in other people, on the very basic level, IC is one's concern for others. Hui and Triandis (1984) argued that IC is a syndrome of feelings, emotions, beliefs, ideology, and actions related to interpersonal concern, reflected in the following seven categories:

1. Consideration of implications (costs and benefits) of one's own decisions and/or actions for other people.
2. Sharing of material resources.
3. Sharing of non-material resources.
4. Susceptibility to social influence.
5. Self-presentation and face-work.

6. Sharing of outcomes.

7. Feeling of involvement in others' lives.

Hui and Triandis (1984) polled 46 social scientists in different parts of the world, and found that such a conceptualization of IC was widely accepted. The agreement among social scientists of different cultural background and at different geographical locations demonstrates the cross-cultural generality of the construct. The problem, then, was how to measure it.

Development of the Individualism-Collectivism Scale

The investigation of a relatively unstudied psychological construct such as IC demands a valid and reliable measuring instrument. Given the inherent cross-cultural nature of this construct, the instrument must also fulfill the requirement of cross-cultural appropriateness. For this reason the development of the Individualism-Collectivism (INDCOL) Scale followed a procedure slightly different from that of usual test development.

Scale Construction and Translation

Hui and Triandis (1984) argued that concern may vary across target persons. One may be very collectivist with regard to friends but totally independent and isolated from the family. Another person may be most concerned with family and disregard people outside the family. Theoretically, therefore, different collectivisms regarding different target groups are possible. To take this into account, eight target groups were chosen as referents. They were spouse, parents, kins, family, neighbors, friends, coworker/classmates, and unknown persons/acquaintances. Each item was written to measure one of the seven aspects of collectivism with specific reference to a target group. Some items were adapted from a

preliminary scale concurrently developed by Muzcinski (1984), as well as some existing instruments designed to measure feelings of solidarity and social interest.

Two versions (English and Chinese) were constructed side by side. Translation of the scale items occurred at about the same time as they were written. Items written in English were immediately translated into Chinese. Items written in Chinese, because of their particular relevance to the Chinese culture, were also translated into English immediately after they had been written. In other words, the two versions of the scale were created simultaneously, and hence they have equal status as original. We cannot claim one as the original and the other as the translation. Both versions of the scale are as original as they are products of translation.

This method bypassed the use of back-translation (Brislin, 1970), because the writer and the translator of the scale were the same person. Decentering, namely the modification of the original so as to give a better and more accurate translation (Werner & Campbell, 1970), took place while the items were first written, in both languages. By starting with two versions of the Scale at the outset, the end product would at least be <u>not</u> mono-cultural.

The equivalence of the wordings of the two versions was further checked by three bilinguals. They detected problems in the wording of the items. Following their suggestions, changes were made.

A pool of 96 items was thus formed. The 96 items fell into eight different subscales. The Scale was pilot-tested. Revisions were made according to the comments of the pretest subjects.

Item Analysis and Item Selection

Responses to the Scale on a six-point scale were collected from 108 Chinese students at the Chinese University of Hong Kong and 132 American students at the University of Illinois. As the purpose of this endeavor was to develop a scale that was useful for the study of both individual and cultural differences, the Oriental and the Western samples were pooled for item analysis.

The Cronbach's alphas of the Family and Acquaintance subscales were very low (.18 and .08, respectively). For this reason they were dropped from the Scale. Items on the other six subscales were selected on the basis of whether they discriminated between collectivists and individualists (*per* target person), without considering whether the items discriminated well in one sample but not in the other, or they did not discriminate within either of the samples but did with the pooled sample. The subscales thus derived may then be called etic subscales, which means that they are not necessarily indigenous to the cultures studied but constitute a useful framework for the study of both populations. The subscale items together with their item-total correlations (with respective subscale scores, computed after eliminating "bad" items) are presented in Table 1.

Insert Tables 1 and 2 about here

Reliability

A group of 45 American subjects were administered the INDCOL Scale for a second time two weeks after the first session. The instrument used was basically the same as the first one, except for a few deletions and

modifications. Instead of the original six-point scale, a five-point scale was used. The test-retest reliability coefficients were computed for each of the six subscales (Table 2).

In Table 2, the Spearman-Brown split-half reliability coefficients computed from the pooled sample are also presented. The coefficients were corrected to the original length of the subscales. Finally, as Guttman (1945) has argued, all methods for computing reliability underestimate the true value, Table 2 also presents these reliabilities according to Guttman's prescriptions.

General Collectivism Index

A General Collectivism Index (GCI) was computed to indicate the overall concern of the respondent toward other people in general. To obtain the GCI, the six scores on the six subscales, obtained by dividing the subscale total by the number of items in that subscale, were summed using equal weights. The Cronbach's alpha of GCI, using the six subscales as six items, was .55.

Validation Study 1: Expert Judgment

In the development of any measuring instrument for a psychological construct that has not been studied or measured previously, one problem is almost inevitable: circularity. The instrument measures whatever the researcher says it should measure. This problem seems insurmountable when there is no accompanying theory. It boils down to a dilemma: When empirical data collected with such a new instrument do not conform to some of the researchers' hunches, should we modify those hunches (for they are not supported by data), or should we discard the instrument (for it is not

measuring the construct in such a way that our expectations can be confirmed)?

To deal with this problem it is not enough to look merely at the instrument's psychometric properties. The "known-group comparison method", which involves the administration of the instrument to two groups known to be different on the dimension, also has limited use. If we could know clearly and without bias that a certain group is high while the other is low on a certain trait, and the two are identical in all other respects, we would not have to take the trouble to develop a more objective measure. This is precisely the difficulty encountered in the development of the INDCOL Scale.

Something had to be done to break the above-mentioned circularity. Considering that it is ultimately the professional community who argue on definitions, construe new constructs, and judge the usefulness of theory and research, it may be helpful to call on their help in deciding whether the instrument, the INDCOL Scale, has content validity or not. As a minimum we expect colleagues to indicate that the INDCOL Scale can measure the degree of collectivism on an individual level.

Method

The 63-item INDCOL Scale was sent to 60 colleagues around the world. Of these social scientists, 48 participated in an earlier study of the meaning of collectivism (Hui & Triandis, 1984). Those who had primary contacts with individualist cultures were assigned the individualist role, while those who had primary contacts with collectivist cultures were assigned the collectivist role.

Result

A total of 41 responses were received. Of these, 18 were "individualists" and 23 were "collectivists". *T*-tests comparing the two groups show significant differences ($p<.025$, one-tailed) for all items except five (for details, please refer to Table 4.5, Hui, 1984). The distinctions between individualists and collectivists were clear (Table 3). The differences in subscale scores ranged from the smallest 1.13 (parent-collectivism) to the largest 1.77 (coworker-collectivism).

Insert Table 3 about here

Discussion

From the above results we can infer that the INDCOL Scale has content validity. The diversity of the respondents' cultural background is a strength of this validation study, suggesting that the Scale is acceptable to researchers in different cultures. The items did not seem to be biased. Moreover, according to the professional sample, almost all of the individual items can discriminate between individualists and collectivists. This inference provides an anchorage for us to investigate other areas of interest.

Another point worthy of mentioning is that the respondents assumed a unidimensional view of collectivism. Consequently the ideal collectivist was seen as someone who is high on all six subscales. This assumption of unidimensionality, of course, calls for further investigation. Some studies to be presented below may shed some light on this issue.

Validation Study 2: Interpersonal Orientation

In line with the discussion by Rubin and Brown (1975), Swap and Rubin (1983) contended that there exists a dimension of individual differences which may account for variations in interpersonal relationships, and bargaining behavior in particular. This construct, labelled Interpersonal Orientation (IO), is so close to the notion of collectivism that we might establish the convergent validity of the INDCOL Scale, using the IO Scale.

According to Rubin and Brown (1975; Swap & Rubin, 1983), persons low in IO are not responsive to the interpersonal aspects of relationships with other people, and are interested more in maximizing their own outcome than in cooperating with or competing against others. Consistent with Griesinger and Livingston's (1973) formulation, low-IO individual should be individualists. The focus of attention and concern is on the "self". This is also consistent with the conceptualization of individualism presented earlier.

High-IO persons are, on the other hand, described "as taking the other's behavior very, perhaps unduly, personally and as being sensitive and reactive to . . . relational features"(Swap & Rubin, 1983, p.209). Thus, the interpersonally oriented are attending to the relationship with the other persons.

IO consists mainly of the interest and sensitivity to the relationship, whereas collectivism is viewed as concern for others. Moreover, when contrasted with the conceptualization of collectivism used in this project, Swap and Rubin's notion of IO has one distinctive feature. There is no specification on what "other" is being referred to. Judging from the content of the IO Scale, "other" is probably outside one's own family. But

there are still enough ambiguities for us to suspect that IO, as measured by the IO Scale, has no specific reference to the target persons, and is more general in nature than the target-specific collectivism. For this reason, differential correlations between the various INDCOL subscales and IO were expected.

Method

Two samples were used. Sample A consisted of 45 male and female American college students, who also provided the test-retest reliability data described above. They responded to the INDCOL Scale (6-point format) and the IO Scale, two weeks apart. Sample B consisted of 25 female students. They responded to both scales during the same experimental session. A 5-point format was used for the INDCOL Scale.

Results

The correlation between GCI and IO (.43 in Sample A and .63 in Sample B) demonstrates that the INDCOL Scale measures something closely associated with Swap and Rubin's Interpersonal Orientation. Collectivist beliefs and behaviors towards one's parents, kins, and friends were also positively correlated with IO. The correlations with neighbor-collectivism and coworker-collectivism were significant in Sample B but not in Sample A. This may be due to the two-week interval between the two assessments of Sample A. But most interesting of all, there was a zero-correlation between IO and spouse-collectivism in both samples. This somehow reinforces the idea that one does not consider the spouse as someone "out there", but rather as an intimate person, the relationship with whom does not fall into the category of "interpersonal orientation". An alternative explanation is that the subjects were mostly single and hence did not consider the ratings

pertaining to the spouse as meaningful. Future studies should use married people to test this hypothesis. This pattern of correlation nevertheless suggested the necessity of a distinction between spouse-collectivism from the other kinds of collectivism.

Validation Study 3: Social Interest

Like IO, social interest, first proposed by Adler (1938/1964) and adopted by Crandall (1975), is also a construct that has no specific reference to target persons. Rather, it focuses on the person's own values and disposition. One who is high in social interest values interpersonal virtues more than "individual" or "personal" virtues, and considers cooperation as far more important than being successful. This conceptualization of social interest is in line with the idea of collectivism. For this reason, a positive correlation between social interest and general collectivism was expected.

Method

One hundred and twenty-one American college students, male and female, responded to the Social Interest Scale (SIS) as well as the INDCOL Scale. The SIS consisted of 24 pairs of personality descriptions, and the participants were asked to choose one out of each pair to describe what they would like to be. An example of the items is "I would rather be neat vs sympathetic". Of the 24, nine filler items were not scored. High social interest corresponds to 15, on a 0 to 15 scale. The norm provided by Crandall (1975) was 8.43.

Results

Table 4 shows the correlation between scores on the SIS and the INDCOL scores. All correlations, whether statistically significant or not, were

positive. Different from the case of IO, social interest correlated positively with spouse-collectivism. This, however, is not surprising, as the forced-choice instrument uses only trait-adjectives without specifying the "others", whereas the IO Scale, though fairly non-specific regarding the target persons, pertains to the acquaintances and less intimate others primarily. For the entire sample, social interest was moderately correlated with the GCI, and somewhat lower for the subscales. This pattern can also be seen with the female subgroup. As for the male respondents, social interest correlated with kin-collectivism, but only weakly with the rest.

Insert Table 4 about here

An examination of the point-biserial correlation between INDCOL scores and the responses on some of the forced-choice items may shed some light on the concurrent validity of the INDCOL Scale. Collectivists as defined by the GCI preferred the trait "generous" to "individualistic"(r=.35, p<.001) and "sympathetic" to "individualistic"(r=.31, p<.001). There were also differences on the subscale scores between those who valued being "individualistic" and those who valued being "generous". People who chose "individualistic" rather than "generous" were significantly lower on all INDCOL subscales with the exception of the Neighbor subscale. Similarly, those who were low on spouse-collectivism or coworker-collectivism preferred "individualistic" to "sympathetic"(p<.05).

Validation Study 4: Need for Social Approval

One essential characteristic of a self-report type psychological instrument is reactivity. In responding to questions posed in such

instruments respondents may have a need to present themselves in the best light. Even when full anonymity is assured, people are still reluctant to admit to themselves that they are doing some negatively valued things or holding some negatively valued beliefs. Therefore it may be reasonable to assume that when interpersonal harmony is emphasized, to present oneself as some sort of collectivist serves a self-presentational purpose. On the other hand, if the social and cultural milieu values independence, one who has high need for social approval and desirability may not want to appear particularly collectivist. For this reason, a positive correlation between IC and need for approval among the Chinese, but a negative correlation among Americans were expected.

Method

The 240 Chinese and American subjects who provided data for item-analysis of the INDCOL Scale responded to 30 items from the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964).

Results

Since the correlation coefficients of social desirability with the subscales were very similar among themselves, to simplify reporting, only the correlation coefficients with GCI are presented. As hypothesized, there was a small but significant correlation (.25) between GCI and social desirability for the Chinese sample. The stronger the need for social approval, the higher was the collectivism score. For the American sample, social desirability was not related to IC (r=-.01) or any of its subscales. The cultural difference on the relationship between social desirability and GCI was significant at the .05 level (one-tailed test).

What can be inferred from this pattern of relationships? For one thing, the positive correlations in the Chinese sample support the contention that the INDCOL Scale measures something that is valued in Chinese culture. This adds credibility to the validity of the Scale. (But it is also helpful to note that the need for social approval accounted for only 6% of the variance on the IC dimension.) On the other hand, the lack of significant correlation in the American sample hints at the possibility that there is no dominant value in this pluralistic society. It may also suggest that Americans are so individualist that they have their individual ways to impress the self and others.

Validation Study 5: Responsibility Sharing (I)

The previous sections examined how IC as measured by the INDCOL Scale relates to other psychological (primarily personality) variables. The following sections will focus more on its behavioral implications.

The first aspect at issue is sharing of responsibility. It was mentioned earlier that collectivism is concern with others. This concern is based on the belief in the solidarity and interdependence of human beings. To practice interdependence and to maintain harmonious relationships, one element in the collectivists' behavioral repertoire is the willingness to share others' blame, and to let others share one's own responsibility. On the other hand, individualists tend to take responsibility only for their own actions, and are not willing to share in others' predicament, because "we get what we deserve".

Method

Twenty-five American female college students responded to the INDCOL Scale. After completing the scale, they were asked to imagine themselves

playing frisbee with two friends in the backyard. While playing, they themselves broke the neighbor's window. They indicated on a 5-point scale (1 to 5) how fair it would be, and how unhappy they would be, if they were asked to pay for all, one-third, or nothing of the cost of repairing the window.

Another three sets of questions were asked about the same topic, but in this case the window was broken by one of the two friends, and not by the subjects themselves. This forms a 3 x 2 within-subject design, and the responses in these six cells have unique meanings.

The first cell could be labelled Self-sufficiency. In this cell, people paid 100 percent of the cost, for the trouble they caused. Second, Letting others share is the case where one caused the trouble, and shared one-third of the consequence, i.e. others were allowed or expected to share some responsibility. Irresponsibility is the case where she did not pay for the damage caused by herself. In the fourth cell, the person paid for everything although the trouble was not caused directly by her. This cell was labelled Sacrifice. The fifth cell was theoretically a mirror image of the second cell, for this time the person paid one-third of the cost incurred by the other's carelessness. This was Sharing. Finally, the sixth cell represented a situation in which the other person was the immediate cause of the trouble, and the person was left on his/her own. This was called Indifference. This cell and the first one, Self-sufficiency, were two instances of individualism.

It was predicted that collectivists would be less favorable towards the Self-sufficiency and Indifference situations than to the two sharing situations. Individualists, on the other hand, should prefer "going dutch"

in most matters. In line with the theoretical formulation set forth earlier, no difference between the individualists and collectivists was expected for Irresponsibility and Sacrifice. The basic tenet of collectivism is the perception of the collectivity as a unit of survival. From this perspective, neither Irresponsibility nor Sacrifice would serve the function of collective survival.

Results

Table 5 shows the correlations between the ratings of the six options and GCI. Although most of the correlation coefficients did not reach an acceptable level of significance (due to the small sample size used in this exploratory study), they were consistent with the pattern predicted earlier. Collectivists considered Self-sufficiency, Irresponsibility, Sacrifice, and Indifference (Cells 1, 3, 4, and 6) as less fair than individualists did. Ratings of unhappiness also followed this pattern, except that the individualists and collectivists did not seem to differ much when the option chosen did not require them to pay anything. Furthermore, collectivists were more unhappy than individualists when asked to carry the total burden of their mistakes. Perhaps they assumed that since this was a game of three persons the responsibility should be divided among the three.

Insert Table 5 & Figure 1 about here

It should be noted that the six options had different degrees of appeal to the subjects, as shown in Figure 1. It was fair for a person who broke the window to pay for the repair cost, and it was extremely unfair if somebody else had to pay, while the culprit could get away without paying a

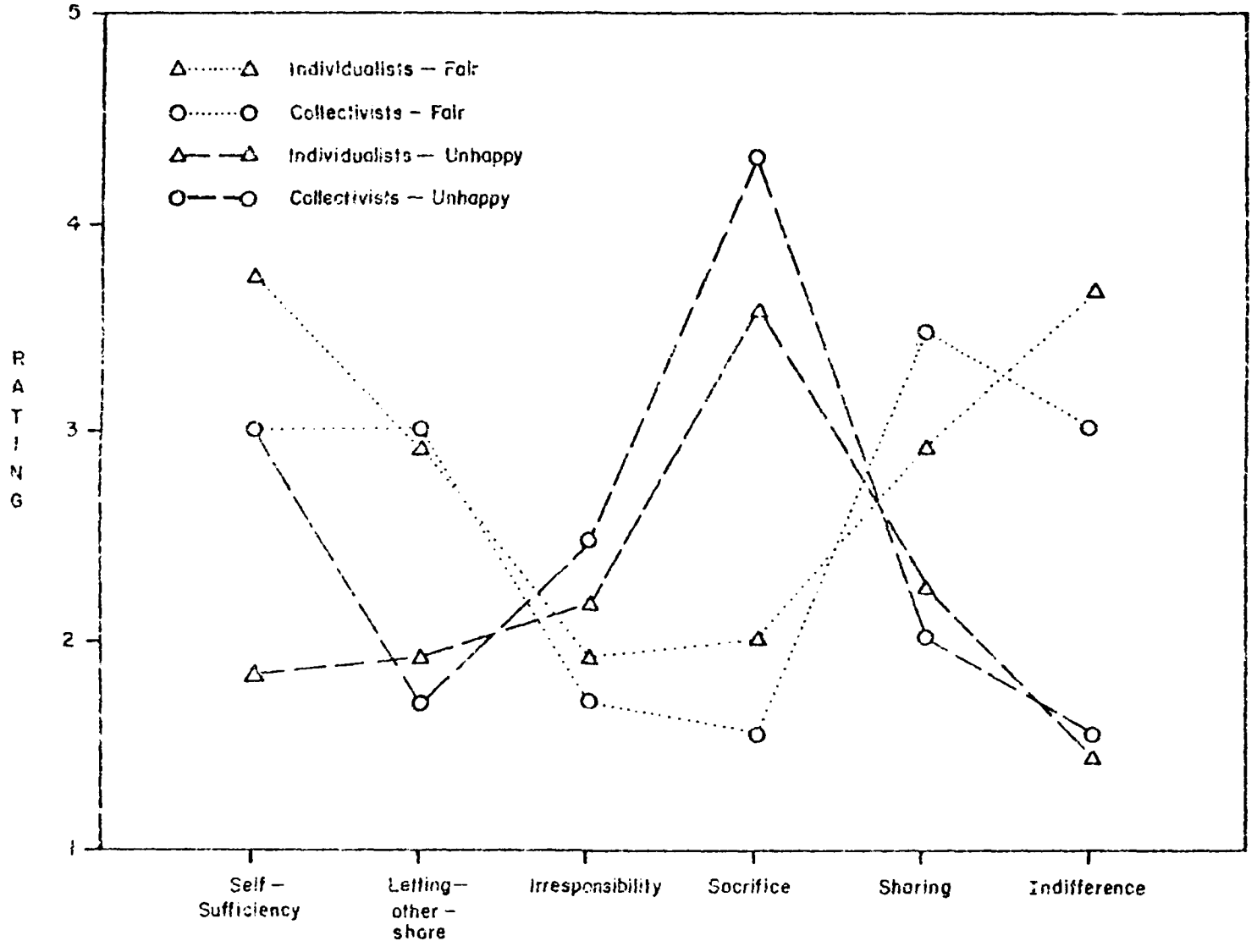

Figure 1. Fairness and Unhappiness Ratings of Six Responsibility-Sharing Options

penny. However, there were crossing-overs of the two lines representing the individualists (N=12) and the collectivists (N=13). Collectivists considered both Self-sufficiency (Cell 1) and Letting-other-share (Cell 2) as equally fair, but individualists thought that the former was even fairer. When the other person had caused the trouble, collectivists considered Sharing (Cell 5) as fairer than Indifference, while exactly the opposite was true for the individualists. If the person paid nothing, as in Cells 3 and 4 (Irresponsibility and Sacrifice), collectivists considered these situation as less fair than individualists did. Although these patterns were suggestive, and did not reach an acceptable level of statistical significance, when taken together they pointed to a simple hypothesis: Collectivists prefer sharing to other kinds of "lone-ranger" type activity, whether it is impertinence, indifference, altruism or even self-sacrifice. If we can describe accountability in terms of a continuum, ranging from denying responsibility for any event that occurs in a group, through assuming partial responsibility, to assuming full responsibility for others, it is conceivable that how the cognitive judgment of fairness and the emotional reaction of happiness vary depends on whether the person is an individualist or a collectivist. The typical individualist function is linear, showing least perceived fairness and most unhappiness with taking full responsibility for others, and most perceived fairness and happiness with denying responsibility for what one is not immediately associated with. The collectivist function is, however, curvilinear, with the peak at some optimal point in between the two extremes. Moreover, collectivism is neither irresponsibility nor sacrifice.

Validation Study 6: Responsibility Sharing (II)

It was argued earlier that IC should be viewed as target-specific. One simply cannot afford to be concerned for everyone in the world. Therefore, a person can be high in coworker-collectivism but low in parent-collectivism, and so forth. Logically, prediction of responsibility sharing or any other collectivism-related behaviors directed to a certain target should be better by collectivism toward that target than by collectivism toward other targets.

Data in the previous study are suggestive of an interesting difference in correlation when different INDCOL subscales were used. Friend-collectivism correlated -.19 with approval of Irresponsibility, derived by equally weighing the fairness ratings and the unhappiness rating, whereas neighbor-collectivism correlated .24 with the same composite. The difference between these two correlation coefficients was marginally significant (t=1.95, df=22, p<.08). This suggested a possible difference between the friend-collectivists and the neighbor-collectivists, in their evaluation of this option. Perhaps the friend-collectivists were so concerned with their friend that they hated to let the friend pay for everything. On the other hand, the neighbor-collectivists were more concerned with the neighbor, whose window they broke, and hence were more eager to get the window fixed, even at the expense of their friends.

Owing to the limited size of the sample used in the previous study, the hypothesis could not be adequately test. Another set of data was collected to investigate the differences among the INDCOL subscales in their differential relationships with responsibility sharing.

Method and Predictions

The sample size was larger (N=45) than the previous study. It consisted of both male and female American college students. Needless to say, they responded to the INDCOL Scale as well.

The subjects were only confronted with two situations, one in which the person himself/herself caused the trouble (self-sufficiency, Cell 1) and the other, a friend caused the trouble (sharing, Cell 5). Again, they rated the perceived fairness of the compensation and whether they would be unhappy about it. It was reasoned that friend-collectivists, as compared to the friend-individualists, would be more positive toward sharing the cost incurred by the friend's carelessness. Moreover, to the extent that friend-collectivism and neighbor-collectivism are unrelated, the latter would not be related to the ratings of Sharing, for in this case the sharing was a matter between the friends. In other words, the social behavior as such did not involve the neighbor. It was further hypothesized that since "paying 100% for the repair cost incurred by oneself" was more a matter between the person and the neighbor than between the person and the friends, attitude towards being fully responsible would be better predicted by neighbor-collectivism than by friend-collectivism.

Results

Insert Table 6 about here

The data were supportive of these speculations. Table 6 presents the correlations between the INDCOL subscales and the composite score of favorability towards the options. (Patterns of correlations were very

similar for both fairness and unhappiness ratings, and therefore a composite score was used.) One's concern with the neighbor predicts the evaluation of shouldering the responsibility all by oneself, but does not predict whether one is willing to share a friend's burden if it was the friend who caused the trouble. By the same token, one's concern with the friend predicts the evaluation of sharing in the friend's trouble, but does not predict whether one would take up full responsibility towards the neighbor. This is another justification for the distinction among various kinds of collectivism.

Validation Study 7: Obligation-Intention Correspondence

In both Triandis' (1980) and the Fishbein-Ajzen (1975) model of attitude-behavior relationship, "obligation" to do something is best construed as the social component (in Triandis' model) or the subjective norm (in Fishbein and Ajzen's model). It is a combination of the belief that one is expected by someone to do a certain thing, and the willingness or motivation to comply with the expectation. Whether the sense of obligation is created explicitly by others, or by subtle socialization, it is one of the factors that determine behavioral intention.

It is reasonable to assume that individualists would weigh the attitude towards the behavior more than the social norms that obligate them, while collectivists would pay more attention to the subjective norm (social component). However, there has not been a study that compares the two, except for a study of Mexican women's birth control behavior (Davidson, Jaccard, Triandis, Morales, & Diaz-Guerrero, 1976), which alluded to the speculation that collectivists are more concerned with obligations to others than with their own feelings about the behavior. Their intention to do a certain thing will therefore correspond with the sense of obligation whereas

for the individualists, the major determinant of intention may be something else, such as the attitude toward the act.

More likely than not, such a difference will be seen only in social behaviors dealing with a certain group of people. It may be recalled that individualists have a narrower circle of people with whom they are concerned, and collectivists are concerned with a broader range of people. Assuming that there will be a higher obligation-intention consistency when dealing with people one is concerned with than with people one is not too concerned with, there shall be a higher consistency in social behaviors involving some close others than in behaviors involving acquaintances. As mentioned earlier, since collectivists are generally higher in concern, such consistency should be higher for collectivists than for individualists.

Method

To test this hypothesis a scenario was presented to 25 female subjects who also responded to the INDCOL Scale. The scenario described this situation: "A classmate, whom you have only recently known, suggested that the two of you should go out for lunch, and chat. So you and your classmate went to a restaurant. You had agreed to each pay for your own meal. The cost for each of you was about $6. Before leaving the restaurant, your classmate put a tip of $1.50 on the table." Subjects were asked to indicate how much did they feel obliged to pay the classmate back for the tip. Then they indicated how much did they intended to give back. The subjects were further requested to imagine that the person was not a classmate whom they had just met, but a very good friend. They indicated the obligation and intention to pay in that situation as well.

Results

Pearson product-moment correlation coefficients were computed for the obligation-intention for both target persons, classmate and good friend. Consistent with the contention that concern with acquaintance is generally lower than concern with close friends, the correlation in the classmate condition was lower than that in the friend condition (rs=.55 and .81 respectively). The sample was further partitioned into two groups, collectivists and individualists, according to the GCI. The correlation coefficients were computed for each of the groups. The results are shown in Table 7.

Insert Table 7 about here

As it can be seen, there was a positive correlation between obligation and intention to pay a classmate among subjects classified as collectivists, but a negative correlation among those classified as individualists. The difference between the two correlation coefficients was significant, in spite of the fact that there were only 20 useable cases. This difference, however, occurred only in dealing with someone one has recently met. When the target person is a good friend, both individualists and collectivists display strong obligation-intention consistency, although a slightly higher consistency can still be seen among the collectivists.

The study demonstrates an important point. Individualists are those who have narrow ingroups and therefore there is not much correspondence (in fact there was negative correspondence) between obligation and intention to an outgroup member. This is consistent with Parsons' formulation of the

differences between individualists and collectivists. Hence a global measure of IC is also useful in predicting certain behaviors.

General Discussion

Taken together, the above studies form a promising picture of IC as an important variable, and the INDCOL Scale as an appropriate measure of IC. As an instrument of this multi-faceted construct, it is sufficiently reliable. In terms of validity, the INDCOL Scale indeed measures something in the domain of interpersonal relationships. The study involving the personality psychologists, social psychologists, and some anthropologists demonstrates the agreement between the Scale's content and the research community's understanding of the concept. Based on its correlation pattern with various social psychological constructs, we can infer, with some confidence, that IC is being measured. It is the belief in the group as the basic unit of survival, and yet it is not identical to self-sacrifice. However, it is related to interpersonal orientation and social interest. It is something socially valued in Chinese society but not necessarily in American society. Moreover, sharing of responsibility and obligation-intention correspondence are related to INDCOL scores. The notion that IC is distinguishable according to the target person is also supported by the differential correlations with the various psychological variables. However, this position will be further strengthened by subsequent studies using techniques such as factor analysis.

The Uniqueness of the INDCOL Scale

There exist several approaches to measure one's cooperative vs competitive vs individualist tendencies. Direct questioning is one, but more elaborate methods are available. For example, Luce and Tukey (1964),

Radziicki (1976), and Sawyer (1966) have proposed ways (collectively known as conjoint measurement) to assess such motives. Other instruments such as the decomposed Prisoner's Dilemma Game (Pruitt, 1967), the Social Behavior Scale (Knight & Kagan, 1977), and the Social Orientation Choice Cards (Knight, 1981) are more behavioral. Besides these characteristics, they are different from the new INDCOL Scale in several ways.

First, most of them do not measure collectivism as a construct. There are only the competitive, cooperative, and individualist motives, as three forces each of which opposed to the other two (see, e.g., Knight, 1981; Mead, 1967). Collectivism is not precisely defined nor measured by these instruments.

Second, they do not share the assumption behind the INDCOL Scale, that collectivism is a multi-faceted construct. As we have seen in the earlier sections, it is useful and even necessary to distinguish among various kinds of collectivism, in terms of the human relationships of interest. Therefore there is a Coworker subscale, which measures primarily the concern and solidarity in work and study relationships. There is the Spouse subscale, measuring concern and solidarity in marital relationships. Many existing instruments do not make such distinctions. Respondents may have difficulty in answering the questions if their choice of cooperativeness, competitiveness, or individualism "depends" on whom they are interacting with.

A third feature of the INDCOL Scale that distinguishes it from other existing instruments is its coverage of various beliefs, attitudes, behaviors, and behavioral intentions. From a purely psychometric point of view, this increases the generality of measurement. From the theoretical

position on which the INDCOL Scale was constructed, this treats collectivism as a syndrome rather than as a unitary predisposition. On the contrary, other instruments, especially the behavioral measures, assume that the individualist, competitive, and cooperative inclinations are manifested through a choice dilemma posed by the researcher. It is further assumed by those researchers that such manifestations are sufficiently rich in content for an accurate mapping of the respondent onto a point on the social motive continuum. A legitimate question at this point is: Are the responses on those instruments more indicative of the person's relatively stable trait, or of the transient situation created by the researcher?

Finally, the INDCOL Scale is a group-administered test. This is not to say individually-administered tests are bad and inadequate. But the availability of only the less economical individually-administered tests for research is an important limitation that INDCOL Scale overcame.

Directions for Future Research

Given that the construct is satisfactorily tracked down, some more hypotheses in various areas of human behavior can be tested. Chances are that the construct will attain an important place in research in organizational behavior, environmental psychology, social behaviors, cross-cultural interactions, personality, and mental health.

In the area of industrial-organizational psychology and organizational behavior, IC may be relevant to the managerial style of superiors, as well as to organizational commitment and withdrawal of employees. Collectivist supervisors may be more paternalistic and dominant, demanding submission, while individualist supervisors may be more concerned with getting the job done. Personal success may be more emphasized by individualist managers,

while team achievement by collectivist managers. Employees who are high in coworker-collectivism may be more committed to work and less likely to withdraw from the organization. Absenteeism, tardiness, and turnover rates may be lower among collectivist workers. Such differences are clearly suggested by Japanese organizations, which are likely to be benefiting from (or reinforcing) workers high in coworker-collectivism.

Work environments are more harmonious among collectivists. But whether competition and struggles among colleagues are more frequent among individualists or collectivists is an empirical question requiring research. Individualists have the reputation of being competitive for their own gain, but collectivists are specially concerned with comparison with others. One observation is nevertheless expected: Even when the collectivists compete against each other, they do so in such a way that they do not destroy the harmony of the group surface. Another topic of future research will be on the effect of the composition of groups within the organization. Problems may be created when the composition of the organization is very heterogeneous on the dimension of IC. If the superior is a collectivist and the subordinates are individualists, or vice versa, tensions may result.

In the area of social attitudes and behaviors, people hold more negative stereotypes against those the concern for whom is low, and less negative stereotypes against those the concern for whom is high. For instance, one who is a spouse-collectivist and a parent-collectivist, but low on the other INDCOL subscales, may have relatively more negative stereotypes about kins, coworkers, and perhaps foreigners. Since the person views the spouse and parents as the ingroup, and the rest possibly as outgroups, stereotyping may occur. Moreover, self-disclosure is more

frequent among collectivists than individualists. (Of course, the target of self-disclosure is specific since the collectivism we are talking about is also target-specific.) A target-specific collectivist should like the corresponding target more than an individualist would.

The relationship between two collectivists, who belong to the same ingroup, should endure in the face of tensions that would normally split two individualists. Gossiping (speaking to a third party about the person) is a more frequent way of dispelling uncomfortable feelings than confronting (speaking against the person), as the former is less likely to harm the original relationship on the surface. Even better, the tie between the gossiper and the listener can be strengthened. When the tensions become too great to ignore or suppress, two collectivists will break up, not to go on their own ways, but to become enemies. Just as attraction is more intense between two collectivists than between two individualists, pain and rivalry can sometimes be more intense between the former than between the latter. This is applicable to various kinds of relationships: friendship, kinship, and even marriage.

Social psychologists have recently focused their attention on group performance and group dynamics. It is probable that collectivists prefer working in groups, while individualists prefer working alone. But whether collectivists are necessarily more effective in groups than when alone is an interesting empirical question.

Research on collectivism may also interest environmental psychologists. For instance, how one perceives others may contribute to feelings of crowding. A parent-collectivist or a kin-collectivist may not mind sharing a small living quarter with family members, but an individualist may

consider such a situation too crowded. Similarly, a dense workplace may be more tolerable to coworker-collectivists than coworker-individualists. We may further hypothesize that collectivists are less likely than individualists to engage in physical and verbal aggression when frustrated or angered. However if their social environment provides models and vicarious reinforcement for aggressive behavior, collectivists may be more aggressive than individualists.

There may be a negative correlation between need for achievement and IC. This however does not indicate that collectivists are not motivated to achieve. But achievement motivation, as currently defined and measured, pertains to individual achievement. It is a strife for personal success. It does not include achieving for the group. Therefore, if need for collective achievement is measured, a positive correlation between this alternative measurement and IC may be found.

The relationship between IC and mental health is worth investigating too. Perhaps collectivists receive supports which lead to less stress, more happiness, and hence are less susceptible to psychological disorders. But the relationship may be far more complicated than this.

Finally, IC will be a very important variable for research in cross-cultural encounters and interaction. People from different cultures which differ in values concerning individualism vs collectivism may experience difficulties in communication and building friendships. Inaccurate person perception, inappropriate attributions concerning the other's behaviors, and unrealistic expectation regarding exchange between the two are only a few of the possible problems in interaction between an individualist and a collectivist. These should be thoroughly studied, and the findings

incorporated in cultural training materials. With the increase of international economic, cultural, and educational exchanges among countries in different parts of the world, this effort of basic and applied research seems necessary and worthy.

Notes

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Table 1

INDCOL Scale Items and Item-Total Correlations in Subscales

SPOUSE

S1. If a husband is a sports fan, a wife should also cultivate interest in sports. If the husband is a stock broker, the wife should also be aware of the current market situation. +.21

S2. A marriage that is a model for us is when the husband loves what the wife loves, and hates what the wife hates. +.17

S3. Married people should have some time to be alone from each other everyday, undisturbed by their spouse. -.18

S4. If one is interested in a job about which the spouse is not very enthusiastic, one should apply for it anyway. -.27

S5. Even if my spouse were of a different religion, still there would not be any interpersonal conflicts between us. -.11

S6. It is better for a husband and wife to have their own bank accounts rather than to have a joint account. -.22

S7. The decision of where one is to work should be jointly made with one's spouse, if one is married. +.32

S8. It is desirable that a husband and a wife have their own sets of friends, instead of having only a common set of friends. -.14

(Table 1 continued)

PARENT

P1. My musical interests are extremely different from my parents. -.37

P2. In these days parents are too stringent with their kids, stunting the development of their initiative. -.20

P3. When making important decisions, I seldom considered the positive and negative effects my decisions could cause my father. -.32

P4. Teenagers should listen to their parents' advice on dating. +.36

P5. Even if the child won the Nobel prize, the parents should not feel honored in any way. -.38

P6. It is reasonable for a son to continue his father's business. +.60

P7. I would not share my ideas and newly-acquired knowledge with my parents. -.57

P8. I practice the religion of my parents. +.48

P9. I would not let my needy mother use the money that I have saved by living a less than luxurious life. -.19

P10. I would not let my parents use my car (if I have one), no matter whether they are good drivers or not. -.31

P11. Children should not feel honored even if the father were highly praised and given an award by a government official for his contribution and service to the community. -.39

(Table 1 continued)

P12. Success and failure in my academic work and career are closely tied to the nurture provided by my parents. +.15

P13. Young people should take into consideration their parents' advice when making education/career plans. +.31

P14. The bigger a family, the more there are family problems. -.40

P15. I have never told my parents the number of sons I want to have. -.42

P16. The number of sons my parents would like me to have differs by [0 / 1 / 2 / 3 or more / I don't know] from that I personally would like to have. -.20

KIN

K1. I would help, within my means, if a relative told me that he(she) is in financial difficulty. +.50

K2. If I met a person whose last name is the same as mine, I start wondering whether we are, at least remotely, related by blood. +.32

K3. Whether one spends an income extravagantly or meanly is of no concern to one's relatives (cousins, uncles). -.41

K4. I would not let my cousin use my car (if I have one). -.30

K5. When deciding what kind of work to do, I would definitely pay attention to the views of relatives of my generation. +.33

K6. When deciding what kind of education to have, I would pay absolutely no attention to my uncles' advice. -.38

(Table 1 continued)

K7. Each family has its own problems unique to itself. It does not help to tell relatives about one's problems. -.58

K8. I can count on my relatives for help if I find myself in any kind of trouble. +.48

NEIGHBOR

N1. I have never chatted with my neighbors about the political future of this state. -.46

N2. I am often influenced by the moods of my neighbors. +.39

N3. My neighbors always tell me interesting stories that happened around them. +.56

N4. I am not interested in knowing what my neighbors are really like. -.46

N5. One need not worry about what the neighbors say about whom one should marry. -.25

N6. I enjoy meeting and talking to my neighbors everyday. +.34

N7. In the past, my neighbors have never borrowed anything from me or my family. -.31

N8. One needs to be cautious in talking with neighbors, otherwise others might think you are nosy. -.24

N9. I don't really know how to befriend my neighbors. -.44

(Table 1 continued)

N10. I feel uneasy when my neighbors do not greet me when we come across each other. +.25

FRIEND

F1. I would rather struggle through a personal problem by myself than discuss it with my friends. -.23

F2. If possible, I like co-owning a car with my close friends, so that it isn't necessary for them to spend much money to buy their own cars. +.16

F3. I like to live close to my good friends. +.20

F4. My good friends and I agree on the best places to shop. +.22

F5. I would pay absolutely no attention to my close friends' views when deciding what kind of work to to. -.26

F6. To go on a trip with friends makes one less free and mobile. As a result, there is less fun. -.16

F7. It is a personal metter whether I worship money or not. Therefore it is not necessary for my friends to give any counsel. -.14

F8. The motto "sharing in both blessing and calamity" is still applicable even if one's friend is clumsy, dumb, and causing a lot of trouble. +.21

F9. There are approximately [0 / 1 / 2 / 3 / more than 3] of my friends who know how much my family as a whole earns each month. +.15

(Table 1 continued)

F10. On the average, my friends' ideal number of children differs from my own ideal by [0 / 1 / 2 / 3 or more / I don't know my friends' ideal].
-.18

COWORKER

C1. It is inappropriate for a supervisor to ask subordinates about their personal life (such as where one plans to go for the next vacation...).
-.18

C2. I do my own thing without minding about my colleagues/classmates, when I am among them. -.17

C3. One needs to return a favor if a colleague lends a helping hand.
+.15

C4. I have never loaned my camera/coat to any colleagues/classmates.
-.25

C5. We ought to develop the character of independence among students, so that they do not rely upon other students' help in their schoolwork.
-.18

C6. A group of people at their workplace were discussing where to eat. a popular choice was a restaurant recently opened. However, someone in the group had discovered that the food there was unpalatable. Yet the group disregarded this person's objection, and insisted on trying it out. There were only two alternatives for the person who objected: either go or not go with the others. In this situation, <u>not going</u> with the others is a better choice. -.31

C7. There is everything to gain and nothing to lose for classmates to group themselves for study and discussion. +.31

(Table 1 continued)

C8. Classmates' assistance is indispensable to getting a good grade at school. +.38

C9. I would help if a colleague at work told me that he(she) needed money to pay utility bills. +.25

C10. In most cases, to cooperate with someone whose ability is lower than oneself is not as desirable as doing the thing on one's own. -.22

C11. Do you agree with the proverb "Too many cooks spoils the broth"? -.36

Table 2

Reliability coefficients of the INDCOL Subscales

Subscales	Test-retest (U.S. Subjects)	Split-half (pooled)	Guttman's Estimation (pooled)
SPOUSE	.62	.38	.48
PARENT	.78	.66	.78
KIN	.71	.76	.76
NEIGHBOR	.73	.67	.72
FRIEND	.79	.46	.50
CO-WORKER	.71	.57	.58

Table 3

Mean INDCOL Scores of Experts Role-playing Individualists and Collectivists

Subscale	Individualist	Collectivist	t	p
Spouse	2.22	3.55	6.85	.000
Parent	2.72	3.85	5.27	.000
Kin	2.43	3.73	6.29	.000
Neighbor	2.25	3.70	6.77	.000
Friend	1.92	3.71	10.04	.000
Co-worker	2.11	3.88	9.16	.000

Table 4

Correlation between Interpersonal Orientation and IC

	Subscales						
Sample	Spouse	Parent	Kin	Neighbor	Friend	Co-worker	GCI
A N = 45 both sexes	.00	.43**	.25*	.07	.51**	.20	.43*
B N = 25 female	-.00	.37*	.46**	.43*	.52**	.46*	.63*

* $p<.05$

** $p<.005$

Table 5

Correlation between GCI and Ratings of six Responsibility-Sharing Options (N=25)

	Rating	
	Fair	Unhappy
Self-sufficiency	-.33	.44*
Letting-other-share	-.02	-.10
Irresponsibility	-.30	.12
Sacrifice	-.26	.29
Sharing	.23	-.14
Indifference	-.30	.08

* $p<.05$

Table 6

Correlation between two INDCOL Subscales and Ratings of Responsibility-sharing (N=45)

	Friend-Collectivism	Neighbor-Collectivism
Fully responsible for own mistake, compensation to neighbor	.04	.42**
Partly responsible for friend's mistake	.41**	-.17

** $p<.005$

Table 7

Correlations between Obligation and Intention in Returning Tips to Classmate/ Good Friend

	Recently Met Classmate			Good Friend		
	N	r	Difference (z)	N	r	Difference (z)
Collectivists	11	.71*	2.66**	11	.87**	.94
Individualists	9	-.50		10	.69*	
Pooled	20	.55*		21	.81**	

* p<.005

** p<.005

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