

# Equivalence in Cross-Cultural Research

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WHILE many theoretical and methodological problems exist in cross-cultural research, their very magnitude is in a sense an advantage because they usually cannot so easily be ignored as in the case of intra-cultural research. Basically, the problems encountered in cross-cultural research are not different in nature from those in intra-cultural research. It should be remembered that intra-cultural research is in reality frequently "cross sub-cultural" research.

Achieving equivalence is probably the most serious problem confronting the researcher interested in conducting a cross-cultural investigation. This paper presents a discussion of linguistic, sampling, and research situation equivalence.

## Linguistic Equivalence

The problem of linguistic equivalence is obvious in the use of questionnaires or interview schedules in another language. Radvanyi has emphasized that

It is one of the basic conditions of every scientific . . . survey that the question asked mean the same thing to all respondents. If not, valid results are impossible, because the same answers can mean completely different things. In certain cases a "No" answer can even have the value of a "Yes" answer, and visa versa, if the meaning

given to the question by the respondent is completely different.<sup>1</sup>

Obviously differences in the referents of "equivalent" words are a source of error. Deutscher has pointed out that the German word *freund*, the English word *friend*, and the Spanish word *amigo* are generally considered to be equivalent terms. However,

for the German, the term is reserved for a very few intimate associates of long standing. For the American, the English cognate has much broader reference to a much wider assortment of acquaintances . . . . Yet, among Mexicans, that term is employed as both a form of direct address and as an indirect reference to strangers with whom the speaker may have had only the most casual and superficial encounter.<sup>2</sup>

Probably only a relatively few words have exact counterparts in another language. English, for example, makes many distinctions not found in some languages while it fails to make numerous distinctions found in others. Boas long ago noted that the Eskimos have numerous words to refer to the different forms of the general referent of the English word

<sup>1</sup> L. Radvanyi, "Problems of International Opinion Survey," *International Journal of Opinion and Attitude Research*, Vol. 1, No. 2. (1947), p. 32.

<sup>2</sup> I. Deutscher, "Notes on Language and Human Conduct" (Syracuse University Youth Development Center, 1967, Mimeographed paper), pp. 7-8.

"snow."<sup>3</sup> Similarly, there are at least twelve Polish verbs which refer to different forms of reading.<sup>4</sup> On the other hand, English makes distinctions not found in some languages. For example, the Chinese word for old or aged has a more inclusive meaning than the English term. In the Chinese word "there is no distinction between age in chronological sense and the sense of an ethical pattern toward those who are old . . . ."<sup>5</sup> Furthermore, there are some meanings which apparently cannot be expressed in certain languages even when additional words are used. Dantzig wrote that "the Bushmen of South Africa have no number-words beyond *one*, *two*, and *many*, and these words are so inarticulate that it may be doubted whether the natives attach a clear meaning to them."<sup>6</sup>

Even when denotations are the same, connotations may differ. For example, Brown pointed out that

The German *Vaterland* is much like the American fatherland. The two words may have identical referents. If, however, we extend our notion of semantics to include all the contexts in which a word may be used—all the things said of it, all the adjectives applied to it, all the emotional slogans in which it appears—it will be clear that *Vaterland* and fatherland are not identical.<sup>7</sup>

Frequently, in seeking to achieve literal equivalence, one must select a term which is infrequently used in one of the languages. However, an infrequently used term is not a stimulus comparable to

another term more frequently used, even though their literal referents may be the same.<sup>8</sup>

Distortion of meaning can also occur via grammar. Ervin and Bower have pointed out that the grammar of some languages requires indication as to the sex and social status of the speaker or listener, or statements concerning location, agency, possession, sources of information or aspects of time which are not necessary in others such as English.<sup>9</sup> Lee reported that "the Wintu verb conjugates for validity rather than time. In naming an action the Wintu must describe his ground for believing in the action, the evidence for the action [visual evidence, hearsay evidence, etc.]"<sup>10</sup> Conversely, some information is included in English which is unnecessary in some other languages. Thus, to translate from one language to another requires the inclusion of "pseudo-information" or the loss of information. For example, in Japanese numerous social distinctions affect the language. (Especially significant is the fact that "the honorifics, syntax, and choice of lexical items are clustered according to the relative status of interaction partners.")<sup>11</sup> One who wishes to translate English speech into Japanese but who did not observe the social context of that speech must make assumptions, inferences, or guesses in order to introduce the required "information" into the translation.<sup>12</sup>

<sup>3</sup> E. Jacobson *et al.*, "Cross-Cultural Contributions to Attitude Research," *Public Opinion Quarterly*, Vol. XXIV (1960), p. 220.

<sup>9</sup> S. Ervin & R. T. Bower, "Translation Problems in International Surveys," *Public Opinion Quarterly*, Vol. XVI (1952), p. 598.

<sup>10</sup> D. Lee, "Conceptual Implications of an Indian Language," *Philosophy of Science*, Vol. V (1938), pp. 89-102, cited in Deutscher, p. 12.

<sup>11</sup> Jacobson *et al. op. cit.*, p. 222.

<sup>12</sup> Ervin & Bower, *op. cit.*, p. 598.

<sup>3</sup> F. Boas, ed., *General Anthropology* (Boston: Heath, 1938).

<sup>4</sup> I. Duetscher, *op. cit.* p. 10.

<sup>5</sup> *Ibid.*

<sup>6</sup> T. Dantzig, *Number: The Language of Science* (Garden City, N.Y.: Doubleday, 4th ed., rev. 2nd augmented, 1954), p. 5.

<sup>7</sup> R. Brown, *Words and Things* (Glencoe, Ill.: Free Press, 1958) pp. 259-260.

The existence of optional variations in syntax can introduce unnoticed emphasis or other meaning. In some languages, such as Finnish, certain stylistic characteristics used in speaking to children, expressing doubt, etc., may be important yet virtually impossible to translate.<sup>13</sup>

The differences between written and spoken patterns which exist in every language constitute a subtle source of distortion. However, in Arabic and certain other languages the differences between the written and spoken language are so great that when the written form is spoken it is incomprehensible to most people. Furthermore, the written language is virtually never spoken, even by those who understand it. The language is usually used, when spoken, for special purposes such as humor. Although it should be obvious that under circumstances like or similar to this interviewers should use only appropriate spoken forms, this is not always done. "Practically all surveys abroad have suffered at the hands of translators who want to use 'high-brow' language unsuitable for an interview."<sup>14</sup>

A well-known technique used in attempting to determine linguistic equivalence is to have one person translate material from language A into language B, which is then re-translated from language B into language A by a different person. However, when the first and the final texts are different in meaning it is not possible to determine whether it is the first, second, or both translations which gives rise to the difficulty. Baroiux has developed a more complicated back-translation procedure designed to eliminate this problem:

1. In the country of origin, the author of the questionnaire draws up an

exhaustive set of notes at the time that he formulates the questions. These notes explain in detail each question and word used, and includes synonyms and alternative phrases wherever possible. This helps to define the exact nature of each element making up the text to be translated.

2. In the country where the translation is to take place, the text and the notes are given to two translators who, without consulting each other, try to arrive at the best possible translation.

3. A third translator then takes both translations, as well as the explanatory notes, and *without consulting the original text*, indicates which of the translations seems to him to reproduce best the content and structure of the explanatory notes.

4. Finally, the original text, the two translations, and the choice of the third translator are compared, in order to decide definitely on the wording to be used.<sup>15</sup>

If the two translations seem to be equally good the shorter is selected.

Another approach to the evaluation of equivalence has been described by Jacobson. The evaluation is based upon

... the extent to which sets of questions among the countries are capable of providing data that allow the examination of parallel relationships. For instance, if in one country attitude 'x' is found to be related to attitude 'y' and attitude 'z' and background data 'd', the same set of relationships should be testable in the other countries. If the data are available and distributed in such a fashion that these relationships can be tested in all countries, one item of necessary, but not sufficient, evidence about equivalence has been found. If the same relationship is found among countries to a degree not attributable to chance, a very convincing demonstration for the equivalence of questions has been established. As a greater number

<sup>13</sup> *Ibid.*

<sup>14</sup> *Ibid.*, p. 600.

<sup>15</sup> M. Baroiux, "Techniques Used in France," *Public Opinion Quarterly*, Vol. XII, p. 716.

of interdependent systematic relationships within sets of data in one country are replicated in other countries, the evidence for equivalence becomes stronger. . . .

Similarly, systematically different sets of relationships within data among countries, when these systematic differences have been predicted on an *a priori* basis, constitute good evidence of equivalence. The unresolved problem is the interpretation of the absence of systematic similarities or variations within data among countries. This could be the result of unanticipated cross-cultural variation or of simple methodological failure of a number of kinds as well as failure to maintain functional equivalence in translation. In general, negative evidence of this kind is very difficult to interpret.<sup>16</sup>

#### Sample Equivalence

Obtaining equivalence in sampling presents many problems. Duijker has suggested that it is frequently more useful to define populations in terms of nations (and their subdivisions) rather than in terms of cultures because many of the data usually needed are available only because the potential respondents or subjects belong to a nation rather than to a culture. An example of this is census data. Furthermore, sampling is usually based upon such objective criteria as age, sex, occupation and residence.<sup>17</sup> Participation in a culture is a more difficult criterion to conceptualize and operationalize. It is certainly easier to draw a sample of adult citizens of Spain than to draw one of adults who participate in Spanish culture. On the other hand one does not need a sample of Spanish cul-

ture to conduct valuable cross-cultural research.

While defining populations on the basis of sex, age, and similar criteria may appear to pose little difficulty either theoretically or empirically, one must nevertheless be cautious. As Stern has pointed out

A 'baccalaureat' in France, or the 'Matura' in Switzerland, means something very different from our [U. S. A.] last year in high school, but all three are the admission prerequisite to a university or college. For all kinds of factual information, similar discrepancies exist. Car-ownership, radio-ownership, and telephone-possession have different significance in each country. While one can still sensibly talk of a universe of "car-owners" throughout the different countries it would be entirely wrong to suppose that this universe has any traits of homogeneity beyond the mere fact of car-ownership.<sup>18</sup>

Similarly, Hyman stressed that "being a woman or poor is something very different depending on whether you are an American or a Japanese."<sup>19</sup>

In formulating criteria of greater precision and analytic power one tends to restrict generality. Jacobson has explained that even in attempting to draw a representative sample of all primary and secondary school teachers in seven west European countries it was not possible, largely for practical reasons, to draw equivalent samples<sup>20</sup>

Some research designs provide that the interviewer himself select respondents. It is widely known that certain biases will result unless detailed instructions are pro-

<sup>16</sup> E. Jacobson, "Methods Used for Producing Comparable Data in the OSCAR Seven-Nation Attitude Study," *Journal of Social Issues*, Vol. X, No. 4 (1954), pp. 46-47.

<sup>17</sup> H. Duijker, "Comparative Research in Social Science with Special Reference to Attitude Research," *International Social Science Bulletin*, Vol. VII (1955), p. 562.

<sup>18</sup> E. Stern, "The Universe, Translation, and Timing," *Public Opinion Quarterly*, Vol. XII (1948), p. 712.

<sup>19</sup> H. Hyman, "World Surveys: The Japanese Angle," *International Journal of Opinion and Attitude Research*, Vol. I, No. 2 (1947), p. 28.

<sup>20</sup> Jacobson, *op. cit.*, pp. 41-44.

vided concerning the procedure to be followed in making these selections. For example, in the absence of such instructions they will tend to avoid individuals who have low income, low social status, or who are foreign-born.<sup>21</sup> The problem of interviewer bias in the selection of interviewees can be virtually eliminated through the use of designs in which the interviewers are assigned to obtain interviews from specific people, from people in specific living units, or from people living in units selected according to a specific plan or pattern. While such designs may be especially difficult to develop for use in many areas of the world, they do reduce interviewer bias in respondent selection. Furthermore, the comparability of quota samples even within a single culture is highly suspect.<sup>22</sup>

Certainly the more knowledge one possesses concerning the nations, societies or cultures in which he is working, the better the research he can conduct. Even then the assistance of natives may be necessary. As a fairly simple example, Wuelker has written that "in the towns of South-East Asia the clans and family groups cling together so much that it may be almost impossible for a non-Asian to distinguish between the various dwelling units and households and devise a proper sample survey."<sup>23</sup>

#### Situational Equivalence

A large number of factors may influence the degree to which experimental, interview, or observational situations are equivalent. Although some writers have addressed themselves to problems of com-

parability in cross-cultural experimental situations (e.g., Rommetveit and Israel<sup>24</sup>), most attention has been directed toward the comparability of interview situations.

Factors influencing the latter type of situation include the respondent's age, personality characteristics, education, status in the community, status and ethnic differences with the interviewer, verbal competence, familiarity with the nature of social science research; the topic under discussion; the environment of the interview (e.g., private or in the presence of others); the characteristics of the interview schedule itself (e.g., structured or unstructured, sequence of questions, etc.); the interviewer's age, sex, appearance, status, behavior, language characteristics, knowledge of customs and mores, skill and experience, method of introducing interview and the timing of interviews.

It must be emphasized that researchers frequently manipulate one or more of these variables for specific purposes. It is only when such variability is unintended and leads to undesired consequences that it constitutes error. The difficulties in maintaining the comparability of relevant factors is especially difficult in cross-cultural research.

Many potential biases which could arise on the part of the interviewers can be reduced by careful selection, training, practice and supervision. Parten has asserted that "unless interviewers are adequately trained in the art of asking questions and reporting . . . they are likely to bias returns."<sup>25</sup> Many years ago Rice analyzed data on homeless men collected

<sup>21</sup> F. J. Stephan & P. J. McCarthy, *Sampling Opinions* (N. Y.: Wiley, 1958), Ch. 10.

<sup>22</sup> *Ibid.*

<sup>23</sup> G. Wuelker, "Questionnaires in Asia," *International Social Science Journal*, Vol. XV (1963), p. 45.

<sup>24</sup> Rommetveit & J. Israel, "Notes on the Standardization of Experimental Manipulations and Measurements in Cross-National Research," *Journal of Social Issues*, Vol. X, No. 4 (1954), pp. 61-68, especially, p. 63.

<sup>25</sup> M. Parten, *Surveys, Polls, and Samples* (N. Y.: Harper, 1950), p. 408.

by two investigators, one a prohibitionist and the other a socialist. The prohibitionist reported that in most cases the problems of the men were caused by liquor while the socialist found the difficulties to arise from industrial factors.<sup>26</sup> Similarly, experiments on verbatim recording have indicated that "interviewers tend to select from long answers those parts that most nearly conform to their own expectations or opinions and to discard the rest"<sup>27</sup> Other researchers including Girard,<sup>28</sup> Fink,<sup>29</sup> and Weulker<sup>30</sup> have stressed the value of careful selection, training and supervision of interviewers. The implications for cross-cultural research are obvious.

It might be pointed out parenthetically that occasionally interviewers will purposely falsify information. On the basis of his research experiences in modernizing areas, Wilson reported that

Interviewers falsified information less from a desire to cheat or from laziness than from a reluctance to disappoint the study director. Feelings of national pride also occasionally lead interviewers to make up responses in an effort to mask what they regard as unseemly evidence of mass ignorance or apathy among their fellow citizens.<sup>31</sup>

Fortunately methods have been developed to detect interviewer dishonesty.<sup>32</sup>

<sup>26</sup> S. A. Rice, "Contagious Bias in the Interview," *American Journal of Sociology*, Vol. XXXV (1929), pp. 420-423.

<sup>27</sup> C. Sellitz et al., *Research Methods in Social Relations*, rev. ed. (N.Y.: Holt, Rinehart & Winston, 1963), p. 585.

<sup>28</sup> A. Girard, "Introduction," *International Social Science Journal*, Vol. XV (1963), pp. 16-17.

<sup>29</sup> R. Fink, "Interviewer Training and Supervision in a Survey of Laos," *International Social Science Journal*, Vol. XV (1963), p. 33.

<sup>30</sup> G. Wuelker, "Questionnaires in Asia," *International Social Science Journal*, Vol. XV (1963), pp. 46-47.

<sup>31</sup> E. C. Wilson, "Problems of Survey Research in Modernizing Areas," *Public Opinion Quarterly*, Vol. XXII (1958), p. 232.

<sup>32</sup> Sellitz et al., *op. cit.*, p. 583.

The use of interviewers who exhibit particular characteristics or appearances may strongly influence certain respondents under certain conditions.

In one study, 50 per cent of a sample of non-Jewish respondents told non-Jewish interviewers that they thought Jews had too much influence in the business world, whereas only 22 per cent of an equivalent sample voiced the opinion to Jewish interviewers. Similar experiments have shown that Negroes will frequently answer differently when interviewed by white people, and that working-class respondents are less likely to talk to middle-class interviewers . . . Negroes spoke more frankly with white interviewers in New York than they did in Memphis, Tennessee.<sup>33</sup>

Ralis *et al.* have reported similar findings with the use of Indian and non-Indian interviewers in India.<sup>34</sup>

Girard suggested that interviewers should be of the same racial or ethnic group and, in so far as possible, the same status category as those they interview.<sup>35</sup> However, Segall has argued that this only disguises the problem and that both similar and dissimilar interviewers should be used to determine the variability attributable to specific interviewer characteristics.<sup>36</sup>

A generally ignored problem is the affect of dialect upon responses. Stern and D'Epiny have pointed out that in the German-speaking part of Switzerland the spoken language is not pure German but "Swiss" (*Schwyzerdeutsch*), which consists of a number of dialects. While pure German is understood, it is strongly re-

<sup>33</sup> *Ibid.*, p. 584.

<sup>34</sup> M. Ralis, *et al.*, "Applicability of Survey Techniques in Northern India," *Public Opinion Quarterly*, Vol. XXII (1958), pp. 245-250.

<sup>35</sup> Girard, *op. cit.*, 16.

<sup>36</sup> M. Segall, in a personal communication to the writer.

sented by many people and frequently creates an atmosphere of hostility in the interview situation. Hence it was found necessary by those interviewers to use the dialects spoken.<sup>32</sup> Even within a single culture language itself may arouse animosity, a sense of inferiority, a desire to impress the interviewer, or other distorting affects.

Interviewers should understand and, so far as possible, adhere to the customs of those with whom they are dealing. DuBois asked Southeast Asian students in the United States what would be the most important thing for Americans going to their countries to be told. A representative answer was

Warn them that politeness is very important to us . . . It is not polite to rush bluntly into a discussion of the purpose of your visit. We like to make the *sawasti*, to exchange polite remarks while we are getting used to strangers. In the East it is customary and courteous to derogate one-self and one's achievements and possessions. We feel one must be very modest. You must not boast or force yourself on people. If you are very modest and very quiet, then people want to do things for you. That is how to get things done.<sup>38</sup>

There is more to this code of behavior than simply courtesy. Jones has identified what appear to be its main characteristics as follows.

1. The atmosphere between people must be kept pleasant and agreeable, free from anger or contradiction.
2. No one may disagree openly with a person of higher status.
3. Nothing should be said which wounds or affronts, or causes hurt to another.

<sup>37</sup> E. Stern & R. L. D'Epinay, "Some Polling Experiences in Switzerland," *Public Opinion Quarterly*, Vol. XI (1947), p. 5.

<sup>38</sup> B. L. Smith, "Communications Research on Non-Industrial Countries," *Public Opinion Quarterly*, Vol. XVI (1952), p. 554.

4. If possible, what is said should please and compliment.
5. Nothing should be said which another would not like to hear.
6. Courtesy in conversation demands that the main subject be delayed.
7. To ask personal questions is well within the bounds of courteous behavior.
8. The most basic of courtesies-hospitality is extended to the stranger in the form of food shared or shelter offered from rain or sun . . . .
9. Detailed attention to the needs of others is an integral part of the pattern of social behavior.<sup>39</sup>

It has been demonstrated by Jones that three characteristics, especially number seven, can be of considerable help to the interviewer. Furthermore, she has described practical ways to reduce adverse effects of the other courtesy norms.<sup>40</sup>

Mitchell has written that a courtesy bias is common throughout Asia. However,

the direction of the courtesy bias is different in different countries. For example, the humility of the Japanese is said to lead them to under-evaluate their own achievements, class positions, and the like. On the other hand, some researchers in the Middle East claim that respondents there tend to exaggerate their achievements, class position, knowledge of the world, and extent to which they are moderate rather than traditional. In practical terms, this means that the type of question wording appropriate in Japan and the West would be inappropriate in Turkey and Iran.<sup>41</sup>

<sup>39</sup> E. L. Jones, "The Courtesy Bias in South-East Asian Surveys," *International Social Science Journal*, Vol. XV, No. 1 (1963), p. 71.

<sup>40</sup> *Ibid.*

<sup>41</sup> R. E. Mitchell, "Survey Materials Collected in the Developing Countries: Sampling, Measurements and Interviewing Obstacles in Intra- and International Comparisons," *International Social Science Journal*, Vol. XVII (1965), p. 678.

On the other hand, Deutscher wrote that there are societies (and ethnic groups within societies) in which all outsiders - including interviewers - are considered fair game for deception. He has cited evidence supporting the existence of such a "sucker" bias.<sup>42</sup>

Different customs and traditions other than courtesy and sucker biases can influence the data one collects. In discussing opinion research, Hyman argued that in the United States and certain other countries there is a long tradition supporting the ideal that the beliefs, opinions and attitudes of "ordinary people" have value. However, in Japan and many other nations there is the tradition that the average person's beliefs and opinions do not count and are not worth-while. For example, the Osaka Public Opinion Institute reported that refusals to be interviewed resulted largely from the respondent's feeling that his opinions were not worth recording. Hyman also wrote that while in some countries there is a long tradition of freedom of expression, in others there is no such tradition. In fact in many nations there has been considerable experience with rigorous "thought control" and punishment for deviant opinion.<sup>43</sup>

In many regions other traditions and political experiences tend to encourage purposeful distortion of answers given to any investigator. Residents of many places may reasonably suspect that a survey or investigation is being conducted for tax, military recruitment, or "security" purposes. Hoffman reported that until very recently taxation and military recruitment

were the main reasons for which strangers came to many remote African villages.<sup>44</sup>

The interpretation of responses can frequently be more difficult in cross-cultural investigations because of different customs and usages. A Japanese research agency reported that in some of its surveys the more highly educated were more likely to answer "Don't know." This is the converse of the usual results in Western research and suggests that Western and Japanese "Don't know's" may not always be functionally equivalent responses. The agency offered the explanation that Japanese intellectuals have a tradition of rejection of mundane affairs, and therefore tend to answer "Don't know" to practical questions. Hyman pointed out that no valid inference can be drawn comparing such responses with other Japanese or Western "DK's" or by tabulating them in a single affirmative or by tabulating them in a single category.<sup>45</sup> Under certain circumstances, interpreting even simple affirmative or negative responses may be difficult. It has been reported that

A simple English 'no' tends to be interpreted by members of the Arabic culture as meaning 'yes.' A real 'No' indicated a desire for further negotiation. Likewise a non-emphasized 'yes' will often be interpreted as a polite refusal.<sup>46</sup>

As Shouby has explained,

Arabs are forced to overassert and exaggerate in almost all types of communication, as otherwise they stand a good chance of being gravely misunderstood.

<sup>44</sup> M. Hoffman, "Research on Opinions and Attitudes in West Africa," *International Social Science Journal*, Vol. XV (1963), p. 66.

<sup>45</sup> Hyman, "World Surveys . . ." *op. cit.*

<sup>46</sup> E. S. Glenn, "Semantic Differences in International Communication," *American Review of General Semantics*, Vol. XI, No. 3 (1954), p. 164, cited in Deutscher, p. 9.

<sup>42</sup> Deutscher, *op. cit.*, p. 19.

<sup>43</sup> Hyman, "World Surveys . . ." *op. cit.*, p. 19.

If an Arab says exactly what he means without the expected exaggeration, other Arabs may still think that he means the opposite. This fact leads to misunderstanding on the part of non-Arabs who do not realize that the Arab speaker is merely following a linguistic tradition . . . . the failure of the Arabs to realize that others mean exactly what they say if it is put in a simple, unelaborated manner [results from this tradition]; even repetition may not be enough for an Arab to realize that the communication cannot perhaps mean the opposite of what the speaker intends . . . .<sup>47</sup>

It is widely recognized that respondents tend to be influenced by whether others are present during the interview. However, it is sometimes virtually impossible to conduct private interviews, especially in some societies. Hoffman explained that in many West African villages the chief, in addition to wanting to select the respondents, will insist on being present during the interviews. When questions concern traditional life, the chieftainship, conflict between generations, etc., the probable distortive affects upon the responses is obvious. Furthermore, others also often insist on being present:

During our last survey on the attitudes of young people, the heads of families and the elders wanted to be present at the interviews both because they were proud of seeing their children questioned by educated people, the investigators, and because they were suspicious of the answers that might be given to questions concerning them or relating to tradition. The young people themselves, in spite of the efforts made by the investigators to interview them

singly, often gathered round the boy or girl being questioned who thus became their spokesman, and they waited for his or her answer which they then criticized and argued about.<sup>48</sup>

A factor often overlooked in cross-cultural research is that of timing. Stern has demonstrated the importance of international events in changing the meanings which an interview question can have for respondents as well as upon changing attitudes *per se*.<sup>49</sup> Hyman has discussed the problem of timing in obtaining uncontaminated responses from villagers in Japan who would discuss with other the questions being asked.<sup>50</sup> Although of particular importance in attitude research, the time factor can also be relevant in other types of investigation. However, in these other investigations the crucial time span might be years or even decades. Hudson *et al.* have stressed that one cannot always know when time factors may be important and that therefore it is best to collect data simultaneously if possible.<sup>51</sup>

The use of different research agencies in an investigation can sometimes intensify problems. Because of recent evidence of falsified interviews, the data collected by International Research Associates of Mexico for the well-known cross-cultural political study by Almond and Verba reported in *The Civic Culture*<sup>52</sup> is now considered to be of doubtful validity. The recruitment, training and supervision of interviewers by different agencies varies

<sup>48</sup> Hoffman, *op. cit.*, pp. 66-67.

<sup>49</sup> Stern, *op. cit.*, p. 714.

<sup>50</sup> Hyman, "World Surveys . . ." *op. cit.*, p. 18.

<sup>51</sup> B. B. Hudson et al., "Problems and Methods of Cross-Cultural Research," *Journal of Social Issues*, Vol. XV, No. 3 (1959), pp. 6-7.

<sup>52</sup> G. Almond & S. Verba, *The Civic Culture* (Princeton, N. J.: Princeton U. Press, 1963).

<sup>47</sup> E. Shouby, "The Influence of the Arabic Language on the Psychology of the Arabs," *Middle East Journal*, Vol. V (1951), pp. 284-302 in D. Krech et al., *Individual in Society* (N.Y.: McGraw-Hill, 1962), p. 290.

within a single country. When agencies from different countries are used, the probability of great diversity increases.

In this paper numerous sources of non-equivalence in cross-cultural research have been discussed along with some

methods of dealing with them. However, it should be obvious now that the best insurance against serious non-equivalence is a researcher who is highly sensitive to the problem and determined to reduce it.

The first source of non-equivalence is the use of different agencies. For example, the use of different agencies in a cross-cultural study may result in different methods of data collection and analysis. This is because different agencies may have different standards and procedures for research. This can lead to differences in the way data are collected and analyzed, which can result in non-equivalence. To avoid this, researchers should use the same agency for all data collection and analysis.

Another source of non-equivalence is the use of different methods. For example, the use of different methods in a cross-cultural study may result in different results. This is because different methods may have different strengths and weaknesses. For example, a method that is good for collecting quantitative data may not be good for collecting qualitative data. To avoid this, researchers should use the same method for all data collection.

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