ISSUES AND GUIDELINES FOR TRANSLATION IN CROSS-CULTURAL RESEARCH

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Introduction
Increasing numbers of immigrants to the U.S. pose new policy issues and increase the need for additional research of these populations. At the same time, those of us in social science research and particularly survey research are increasingly engaging in cross-cultural research, (both in the U.S. and in other countries), in which the data collection effort requires the development of a survey instrument in two and sometimes even three or more languages . Such research becomes meaningful only if the multiple versions of the instrument are equivalent. Non-equivalent instruments can lead to biased results and poor wording can lead to increased variance.

The purpose of this paper is to provide some insight into the different issues in developing instruments for cross-cultural research as well as to present a set of guidelines that RAND has adopted for the development of survey instruments.

Practical Considerations
While there are many challenges to adequately developing a survey instrument for multilingual or foreign language surveys, one of the biggest challenges is convincing the principal investigators of the importance of instrument development to the validity of the study. Often, researchers who are inexperienced in cross-cultural research tend to underestimate the importance of translating an instrument adequately and are unfamiliar with the issues involved and with the implications for reliability and validity of an inadequately translated instrument. Inexperienced researchers will more often than not want to scrimp on translation costs by using an amateur translator. In addition, they will often start the instrument design too late in the course of the study, so that if problems arise in translation, they are hindered by deadlines, budget problems, schedules for training and field periods, etc. In budgeting, they often forget to budget for additional time for instrument design, for back translation, for pre-tests, focus groups and other methods used to evaluate an instrument.

In addition to being aware of the different issues involved in developing an instrument, there are other more practical considerations that one should keep in mind. These considerations range from the size of one's budget, to the amount of time one has in the field, to the competence and availability of translators, to one's own knowledge of the target language and culture, and finally to other staffing resources available to the project. One should also consider sample size and the percent or total number of cases that are going to be interviewed in the target language and the amount of time budgeted for training for each instrument. It is clear that the same level of effort and resources will not be required when one is translating into one language, as when one is translating into two or more languages. It also seems clear that one should not devote the same level of effort and resources when only a small percentage of the total interviews will be conducted in the target language as when all or a significant percentage of the interviews will be conducted in the target language or languages.

The level of difficulty in developing and translating an instrument is directly dependent on the number of languages the instrument has to be developed in, the cultural and linguistic distance between the target language or languages and the source language, and the complexity of the instrument itself. All of these factors directly affect the total cost of instrument design and the time required to develop, translate, and train adequately. In trying to determine which approach to take for developing an instrument it is important to decide how much effort is justified by the research goals and the design of the study, by the size of the budget, and by the schedule. In order to do this the researcher should be aware from the outset, of the inherent problems and issues in developing an instrument for cross-cultural research so that he may make adequate allowances and adjustments in the budget and in the planning process. An adequately informed researcher can then decide how much time and effort he is going to spend on trying to solve these problems and decide what problems he can live with.

Theoretical Implications in Developing Instruments for Multilingual and Foreign Language Surveys

Problems of Equivalence In Translation
The problems intrinsic to developing a multilingual or foreign language survey vary in importance and are most serious when one is working in a language and culture that is vastly different from the source language and culture. The principal challenge in developing an instrument for cross-cultural comparison is achieving equivalence between the source and the target language. There are several kinds of equivalence, however, with different implications and effects. While many different authors use different terms regarding the problem of equivalence, I have chosen to use the terms cultural, conceptual and structural equivalence. It

should be noted that these concepts should be viewed independently of one another as, for example, you can have structural equivalence without having conceptual equivalence and vice-versa.

Cultural Equivalence

The most fundamental problem in developing instruments for cross-cultural research or foreign language instruments is that the translator needs to not only translate language but culture as well. The problem of cultural equivalence is compounded the more distant two cultures and languages are from one another. The most common difficulty in translation occurs when the target language lacks a certain word or concept which we generally take for granted in Western culture, but which does not exist or is viewed differently in other cultures. Examples of this are our concept of time, names of colors, seasons, not to mention concepts associated with Western standards, values, and morals. In some cases a word in English may have a highly compressed meaning which upon translation may require several sentences or even paragraphs to express. This is almost always the case when translating into Spanish and more often than not into almost any other language. In other cases there may be no alternative but to eliminate items because a counterpart does not exist or would be of too uncertain equivalence in another culture.

Conceptual Equivalence

Conceptual equivalence refers to the absence of differences in meaning and content between two versions of an instrument. A problem common in the translation process is that of frequency of usage of a certain word. Often, although a word may be an adequate literal translation, the words will not have meaning equivalence for survey purposes if there is a discrepancy in the frequency of usage of a word in two cultures. Still, the most serious problem in this regard is that of connotation and secondary meanings. Words are focal points of complex networks of meaning and receive shades of significance from varied and unexpected sources: linkages with social class, literary and journalistic accretions, associations by historical accident, etc. (Prince and Mambour, 1967:230).

Another problem is that of non-equivalence of terms. There are times when it may be impossible to find a term that is the exact equivalent in another language. Yet another problem occurs when the target language has several synonyms and definitions for a single word. Which should be used? It is in relation to these two problems that the translator becomes extremely important (as will be explained further). A frequently attempted solution to this problem is the use of several words in the target language to try to convey an idea or concept expressed by one word in the source language. (Example: ice cream = helado / nieve; cake = pastel / torta / queque / biscocho).

Both the researcher and the translator need to have considerable knowledge of the target culture and language in order to gain cultural and conceptual equivalence. Questionnaires that attempt to preserve the exact form of questions in the original language, especially pre-coded ones, can lead to major errors. Although it might seem that one should avoid the use of idiomatic language in constructing instruments, failing to do so can have the effect of producing a highly stilted form of discourse that may be unsuitable for the population surveyed. Additionally, more and more of the literature and current research indicate that this may be the best approach. "Language specialists recommend customizing translations to the dialect most commonly spoken within the survey area. Linguists who favor this approach encourage translators to strive for conceptual rather than literal equivalence between the source and target language." (Hendricson, et. Al, Medical Care, 1989: 959). This approach essentially attempts to gain conceptual equivalence with regard to the information the researcher wants to elicit, instead of with the form of the question used to elicit this information. Put another way," instruments should offer psychological equivalence to respondents and not apparent objective equivalence to the investigator. To pose the same form of question to two people who are different may require posing that question in two different forms." (Robinson, 1984:163).

Structural Equivalence

Structural equivalence refers to equivalence in syntax, spelling, and punctuation. In this regard equivalence problems arise from the fact that languages differ widely in their grammars and syntax's and these in turn affect meaning in translation. Perhaps the most common grammatical problem in translation is achieving equivalence between verb forms, (for example the subjunctive mood does not exist in Tagalong). This becomes more problematic in longer passages than in shorter ones.

There are techniques for making an instrument more "translatable" from a structural perspective, however. One can predict the translatability of an instrument to a certain degree. Some content areas produce fewer difficulties than others, just as some languages are easier to translate into than others. In developing an instrument one will want to know the upper level of difficulty of the original English that can be expected to translate well. Furthermore, one can produce an easily translatable version of an instrument by: 1)using simple sentences; 2) repetition of nouns rather than pronouns; 3) avoiding metaphor and colloquialisms; 4) avoiding English passive tense; 5) avoiding hypothetical phrasings or subjunctive mood; 6) adding context to ideas and redundancy to sentences; 7) avoiding too much detail. (See Werner and Campbell, 1970).

Problems of Equivalence in Language Readability

While there is virtually no research on this particular problem, the issue of equivalence in language readability and comprehension is one of the most salient problems in developing a multilingual or foreign language instrument. An instrument developed in the source language at an eighth grade reading level does not automatically preserve the same reading and comprehension level upon translation, and may actually increase considerably. The problem of equivalence in reading level is further compounded if the target population is at a lower average reading level than the source language population.

This is a major issue when one considers that most Latino immigrants (for example) and that the vast majority of the Latino population in the U.S. have lower educational levels than the general population. With this in mind, one has to evaluate the instrument not only in terms of cultural, conceptual, and structural equivalence but also for equivalence in reading and comprehension levels. An instrument that is appropriate in English for an average literacy level, may not be appropriate upon translation for the target population.

Ethnic Variations in Vocabulary

As has been discussed previously, (Marin and VanOss Marin, Mckay and Lavalle, and Hendricson, et. Al), there is a distinct flavor and variances in vocabulary and dialect used by people from the same ethnic group across different regions. (For example, Cuban-Americans in Florida use different terms and expressions than Mexican Americans in Texas, Mexican Americans in California, and Puerto Ricans; yet they all speak Spanish). There are various solutions to the problem of ethnic variations in vocabulary such as using all appropriate variations of a word, targeting vocabulary variations to each subgroup in a language, and using alternate phrases. (See Marin and Marin, 1991).

Other researchers have incorporated some of these suggestions but have also used a universally accepted form of the language, such as the language used in the Spanish language media in this country (for example "CNN en Español" or the language used in the "La Opinion", a daily newspaper in Spanish out of LA.) Furthermore, one has to consider that immigrant groups may use "loan" words for concepts or words that are foreign to their native culture and language, but which have become part of their daily existence in this country. (The example most often given for this, is the word "layoff", "me dieron layoff/me descansaron"). (These last two techniques are only useful when doing multilingual surveys in the U.S. They would obviously not be suitable for out of country surveys).

Finally, other researchers have used a dual language format for their instruments. This approach presents the question in the target language directly beneath the question in the source language. This dual language format may be more effective than a target language only instrument in that it allows bilingual respondents to double-check their comprehension. Another advantage to this format, particularly for self-administered surveys, mail surveys, and educational materials, is that respondents are able to consult with family or friends who are more proficient in either the target language or the source language as to difficult or confusing terms and concepts. This is particularly important when one considers individuals who as a result of social and economic factors as well as their own particular cultural experience, may experience low literacy (for example) both in English and in Spanish. The dual format could be extremely useful in increasing their level of comprehension.

Different Approaches to Instrument Development and Questionnaire Construction

De-Centering and Source Language Instrument Development

The process of de-centering is particularly important when one is doing a survey where a large percentage, if not the majority of the interviews will be done in the target language. "De-centering refers to the process of obviating cultural and linguistic biases by the initial and joint use of two languages." (Sechrest, Fay, and Zaidi, 1972:53). In this process the source and the target language versions are equally important during the translation procedure. One language does not contain content that must be translated without modification in the other. In de-centering, both the source and the target language contribute to the final set of questions, both being open to revision. Many researchers now believe that many inadequacies of research instruments for cross-cultural use stem from the fact that they are usually developed in one culture and then translated and applied to another culture, ("canned instruments"). These translations often have a disadvantage stemming from a narrow cultural base. These inadequacies and disadvantages could be overcome by developing the research instruments jointly in the two cultures by collaborators from the two cultures. Although this may result in longer versions of an instrument, they are more likely to be equivalent to each other. (Of course when you are translating into more than two languages a carrier language is needed.) A word of caution: drastic differences in the length of each questionnaire can affect formatting of the questionnaire, printing costs, training time, and the amount of time budgeted per interview. In short, you have to weigh the benefits of having a longer questionnaire against the cost implications.

Other techniques sometimes used in the de-centering process are the use of ethnographic or qualitative interviews and focus groups. These techniques are extremely useful for informing questionnaire construction not only because they identify key issues and problems, but also because the language used by respondents is actually viewed as data and utilized in constructing the instrument. (See Bauman and Adair 1992).

Back Translation
More and more there seems to be a general agreement that the method of back-translation is much more effective than direct translation. In direct translation, the original instrument is developed in the source language and then directly translated into the target language with little or no checks or validation of the translation. The translation is essentially left to the discretion of the translator and depends wholly on his judgment and competency. More often than not, this approach will yield many errors in meaning.

In the method of back translation on the other hand, the original instrument is translated first by a translator or translators who are bilingual (and preferably native speakers of the target language), from the source language to the target language, and then another bilingual translator (preferably a native speaker of the source language) independently translates this back into the source language. The two versions are compared and any discrepancies corrected. Presumably, by successive translations and back-translations, inconsistencies can be ironed out, and better approximations between the two versions can be obtained.

The Use of Translators
While direct translation is still characteristic of a great deal of cross-cultural research, there are several problems associated with it. As mentioned before, the most important of these may lie in the translator himself. The translator may not be sufficiently skilled in one or the other of the languages he is working in, he may not be culturally representative of the population to be surveyed, and he may, by reason of his own experience, have peculiarities of word use and understanding that will not be the same as those of the people to be surveyed. While few translators work without any checks on their work, (perhaps showing the translation to a friend or colleague), these checks are often unsystematic and inadequate, resulting in a high probability of inconsistencies going undetected.

In addition, most linguists would probably agree that, no matter how well one knows a second language, it is always easier to translate from the second language into the first rather than vice versa. The reason for this is that the translator is fully aware of the semantic alternatives in his own native language, but has only an incomplete grasp of the alternatives in his second language. This factor is, perhaps, the primary reason for translation distortion. (Phillips, 1959-60:189). Thus, it seems intrinsically logical that a good first rule in translation is to use translators who are bilingual native speakers of the target language and who have a good acquaintance with the language and culture as used by the prospective respondents and who are willing to use this language in the translation. Many times, a translator will be unwilling to translate using a language that is not literary as they think this reflects on his ability and knowledge of the language.

Related to the problem of non-native target language translators is the problem of "official" translations. These are translations that the translator learned in school and which are often supported by the authority of a dictionary, but which are misleading in actual usage. While a good dictionary is an invaluable resource, dictionary language is often not the language spoken by the target population. The language used in an interview may have important implications for the information elicited as languages vary considerably in their richness and expressive quality. This problem is particularly common among translators who are non-native speakers of the target language, and who learned the language in schools rather than in the course of their daily interactions.

Still, there are other issues to be considered. Some translators may have a shared set of rules for translating certain non-equivalent words or phrases. Some back-translators may be able to make sense out of a poorly written target language version. On the other hand, a poor back-translator may give you a poor translation in spite of the fact that the target language version may be quite adequate. Furthermore, the bilingual translating from the source to the target may retain many of the grammatical forms of the source. This version should be easy to back-translate, but inadequate for the purpose of interviewing target language monolinguals. (Brislin, 1970)

In selecting a translator, all of these issues should be taken into consideration. In addition to using a professional translator and preferably someone who is a native speaker of the target language, it is preferable to use someone who is familiar or experienced in doing translation for social science research and if possible, in the particular content area. If the translator is inexperienced in this regard, it is important to have a personal meeting with him, in which the purpose of the study, the demographic characteristics of the population, and other relevant issues are discussed. Furthermore, research has shown that translating a similar version of different passages, regardless of difficulty, leads to an improvement in the second translation. It seems logical then to give "warm-ups" to translators to improve the quality of translation. (See Brislin, 1970) It is also extremely helpful to provide them with sample materials from other studies that will familiarize them with the subject, with the level of language commonly used, and with certain terms and expressions.

Another option that can be useful in neutralizing the particular idiosyncrasies of a single translator is the technique of translation by committee. In this technique, several bilingual translators and back translators are given the instrument to translate, all versions compared, and decisions and corrections made by consensus. While extremely useful, this technique may be difficult to use if there is a lack of competent translators available. In addition, the use of multiple translators invariably increases the cost of translation.

In short, the particular idiosyncrasies of the translators play a significant role in the quality of a translation. While discrepancies between the original and the back-translated version may be the result of non-equivalence of terms or because the original version was inadequate, they may also be the result of inadequacies on the part of the translators. In deciding which technique to use, the overall design and the goals of the study need to be taken into consideration, and the potential benefits need to be weighed against the cost. It also follows that further validation of the instrument is required.

Techniques for Validating the Translation

Other techniques for validating and evaluating a translation, primarily the use of bilinguals and pre-testing, should be used as a complement to the back-translation technique. After back-translation, it is extremely useful to get bilingual raters to critically evaluate the source, target, and back-translated versions. Once all errors in meaning are resolved, one can then pretest the target language version on target language respondents. Bilingual examinations of each improved version of the instrument are recommended. Other options for validating translation are holding focus groups with target language respondents and debriefing field interviewers as to the overall quality and problems with the instrument.

Deciding Which Approach To Use

In trying to decide which approach to take in developing a multiple language or foreign language survey, one should take into consideration such practical issues as the goal of the study, overall design,, budget size, and the schedule. By taking these issues into consideration and setting them against the different approaches, one can weigh the costs and benefits, and make the most rational decision in terms of the study.

De-centering and parallel questionnaire construction are typically used for foreign language surveys or for multiple language surveys where the sampling strategy is designed to over sample for a particular population or targeted at a particular population. (Again, in this technique all instruments are equally important, and collaborators from the target language and culture are equally involved in instrument design).

This technique is recommended for surveys in which the overriding concern is validity of the questionnaire as opposed to equivalence between questionnaires. De-centering is close to ideal when combined with the back translation technique and with adequate validation of the instruments. The drawback to this technique is that it tends to be a rather expensive and lengthy process and requires competent collaborators from the target language or culture.

The back translation technique is usually used in studies in which the overriding concern is equivalence between different versions of an instrument and when only some of the interviews conducted will be done in the target language. It is also the preferred technique in studies restricted by the size of the budget (back translation tends to be less expensive than parallel construction), the schedule, and the availability of resources such as competent collaborators from the target culture. Back translation is less than ideal but can produce adequate instruments if done correctly. It tends to be the technique most often used given the limitations and goals most of us confront in our studies, as well as being the technique with which most people are most comfortable.

Direct translation is the least attractive option and likely to yield a high percentage of errors in meaning. Instruments developed using this technique are not likely to be very equivalent, and may lack validity. While few researchers use this technique anymore, the fact that it is the fastest, easiest, and cheapest way of translating an instrument may still tempt some into taking this approach.

Guidelines for Translation Adopted By RAND

An increasing demand for the development and translation of multi-lingual and foreign language instruments for cross-cultural research at RAND, required the development of a set of guidelines (adapted mostly from Brislin, 1970) for translation now widely used in RAND's Survey Research Group. These guidelines have helped standardize the instrument development process as much as possible, which RAND believes has improved the quality of instruments used for primary data collection.

1. Decide how much effort is justified by the budget, schedule, research goals and study design.

2. Budget adequately for translation.
3. Write an easily translatable source instrument.
4. Secure competent translators familiar with the content in the source language materials, and whenever possible, native speakers of the target language.
5. Inform translator/s of the nature of the study, the purpose of the instrument, and the cultural and demographic characteristics of the population to be surveyed. Provide them with practice materials and models, and allow for practice time.
6. Instruct one translator to translate from the source to the target language, and another to blindly translate back from the target to the source.
7. Have several bilingual raters compare source and target for conceptual differences. If errors are found, repeat step 6, modifying the original, the process known as de-centering.
8. Pretest with target language speaking respondents. Revise the translation and/or the original in light of insights gained during pretest.
9. Finally, document the process.

Conclusion

In recent years, much has been learned about how to ensure adequate construction of multilingual and foreign language survey instruments. Today there are well established and tested methods for ensuring and evaluating relative equivalence and for dealing with problems such as ethnic variations in language and vocabulary. These lessons learned are useless however, if an awareness of the problems and issues of developing an instrument for cross-cultural research is lacking among the project staff, and if the willingness to deal with these issues is not there. Before deciding which approach to take to developing an instrument one has to take into consideration such practical issues as the design and goals of the study, the budget and schedule, the number of languages involved, staff resources for instrument development, etc. Translation for cross-cultural research in the life of any organization is a cumulative learning process. By documenting the process one can hopefully ensure that other researchers can benefit from ones' experience and more adequately approach and budget for instrument design and translation.

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