

The dual-focus approach to creating bilingual research protocols requires a bilingual/bicultural research team, including indigenous researchers from the cultures being studied. The presence of indigenous researchers as full and equal members of the research team can guard against an unexamined exportation of ideas and methods developed in one culture to other cultural/linguistic communities. The team develops the research plan and a research protocol that express a given concept with equal clarity, affect, and level of usage simultaneously in two languages. The dual-focus method employs a concept-driven rather than a translation-driven approach to attain conceptual and linguistic equivalence. Examples of the application of this approach to creating new measures in Spanish and English, adapting existing measures, revising instructions to research participants, and correcting official translations are provided.

THE DUAL-FOCUS APPROACH TO CREATING BILINGUAL MEASURES

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Intercultural research is expanding and bringing with it a host of ethical and substantive concerns. An ethical concern arises when researchers from one culture or dominant group impose their vision of the proper focus of research and its methods on other cultures or among cultural/linguistic minorities in their own country. Gergen, Gulerce, Lock, and Misra (1996)

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warn that when Western concepts and methods guide research, as is often the case, the resulting product can be of little relevance to other cultures and has the potential to disregard and undermine alternate cultural traditions. Substantive problems can occur due to an unexamined transfer of concepts from one culture/language system to another and/or lack of equivalence in words used to express concepts in the two languages due to differences in affect, familiarity, and clarity. These can introduce serious biases into intercultural research, compromising the scientific integrity of the results. Any differences obtained using research protocols developed in one culture/language system and directly translated into another cannot simply be attributed to cultural differences because they could be, wholly or partly, an artifact of the nonequivalence of the two language versions of the protocol. What is needed is a method for creating research protocols that are constructed with an understanding of and respect for cultures being studied and have conceptual and linguistic equivalence in each language.

We have developed the dual-focus methodology to address the ethical and substantive concerns that arise when theories and research methods developed in one culture and language are used to study another cultural/linguistic community. The dual-focus approach has two main features. First, it involves a horizontal collaboration (see Sinha, 1984) with researchers from indigenous cultures as full and equal members of the research team. Second, it is a concept-driven rather than a translation-driven approach to attaining conceptual and linguistic equivalence. The collaboration among equals on a research team—most of whose members are bilingual/bicultural and include researchers indigenous to the cultures being studied—is a safeguard against the ethical concern about cultural hegemony when Western/Anglo theories drive the research questions posed in the study of other cultures. The concept-driven approach implemented by a bilingual/bicultural research team whose members are not only experts on the cultures but also the subject matter being studied minimizes the chances of obtaining invalid results due to the lack of correspondence in concepts and the lack of equivalence in the wording of data collection protocols.

The following examples from our own research on Puerto Ricans on the U.S. mainland illustrate the potential pitfalls in creating conceptually and linguistically equivalent research protocols. An example of lack of correspondence can be found in the word *race* when studying Puerto Ricans on the U.S. mainland. The English word *race* can be directly translated into Spanish as *raza*, but the two words do not have the same relevance to social organization in Puerto Rico and the mainland. Race on the mainland refers to group membership, which regulates many components of social interaction and has historical roots in slavery and other forms of exclusion and disenfran-

chisement. However, in Puerto Rico, people are not separated into racial groups. Rather, color differences, which can occur within families and communities, are socially recognized with different words—for example, *blanco* for white skin, *trigüeño* for wheat-colored olive skin, *chocolate* for medium dark skin, and *moreno* for dark skin. Fitzpatrick (1987) argues that there is a complex relationship among race, color, culture, and class on the island such that an upper-class Puerto Rican with dark skin can be referred to and treated as a *blanco*. Rodriguez (1989) also points out that Puerto Ricans have a concept of race that is as much behavioral and cultural as it is racial, which is evidenced by such comments as “He or she is acting White” or “but that’s so White.” Therefore, translating race as *raza* can introduce unknown errors into the data because of the lack of correspondence in the words *race* and *raza*.

Furthermore, even if the concepts are relevant and have fairly strong correspondences in the two linguistic communities under study, the particular words chosen to represent the concepts in the two languages may not be functionally comparable in affect, word frequency (familiarity), and clarity/ambiguity. The words *pain* in English and *dolor* in Spanish are an example of nonequivalence in affect. Whereas *pain* refers to hurting primarily due to a physical and secondarily to emotional injury, *dolor* indicates emotional and physical pain equally and encompasses sorrow and the sadness of regret. An example of nonequivalence due to differences in word frequency (familiarity) can be found in the English word *hair* and the Spanish word *cabello*. Although these two words are identical in meaning, *cabello* is rarely used on the island and is familiar primarily to highly educated Puerto Ricans. The average Puerto Rican refers to hair as *pelo*. Therefore, employing *cabello* for hair would introduce an education bias. Nonequivalence in clarity/ambiguity of meaning can be illustrated by the Spanish word *tremblor*. Depending on context, the same word can mean shaking (as in an earthquake), trembling (with fear), shivering (with cold), and having a tremor (e.g., palsy). When the same meaning is expressed using a context-free word in one language (e.g., shivering) but its clarity is context-dependent in another language (e.g., *tremblor*), direct translation from Spanish to English can result in use of the wrong word, such as “She is trembling without a coat.”

Many cross-cultural researchers have written about the shortcomings of translation-driven methods (e.g., Bontempo, 1993; Olmedo, 1981; Triandis, 1976; Werner & Campbell, 1970)—the most rudimentary form of which is direct translation. Even though it may continue to be one of the most frequently used methods of developing non-English versions of a research protocol (see Sperber, Devellis, & Boehlecke, 1994), direct translation from the source language to the target language has been repudiated as an unreliable method for achieving language equivalence (see Brislin, 1970; Olmedo,

1981; Sechrest, Fay, & Zaidi, 1972; Sperber et al., 1994; Streiner & Norman, 1995; Triandis, 1976; Werner & Campbell, 1970).

The state-of-the-art method for generating bilingual measures has been back translation used in combination with the decentering method of determining interlanguage equivalence (see Brislin, 1970, 1986; Werner & Campbell, 1970). To create a Spanish version of a measure originally developed in English by using the back-translation method, one person (or a team of translators) translates from English into Spanish, and a different person (or a team of translators) translates from the Spanish version back into English. Discrepancies in the translated versions are dealt with through decentering—a process of several iterations, each time decentering the instrument away from the idiosyncrasies of the source language. Back translation used in conjunction with decentering is viewed to be superior to direct translation because the multiple steps involved in this combined process increase opportunities to detect and correct nonequivalence, yielding more reliable translations.

However, we share concern with Bontempo (1993) and Olmedo (1981) over the validity of the back-translation/decentering method. Bontempo (1993) argues that measurement equivalence cannot be assumed when the concepts and wording for scale items are originally produced in only the source language. Sechrest et al. (1972) have noted other shortcomings of decentering. They claim that it is time consuming and that decentering is impractical for multilingual studies. Sechrest and colleagues (1972) recommend employing one source language to serve as a carrier in which the measure is developed and on which multiple language versions can be based when several language versions are needed.

As early as 1970, Werner and Campbell (1970) had recognized the problems arising from having a source language and a target language. They recommended that measures should be developed by collaborators in two cultures and that the items should be generated jointly in the two cultures using the decentering method. To date, this proposed methodology has not been widely implemented.

Triandis (1976) has also proposed a method of generating language equivalence that bypasses translation. He has suggested that this can be accomplished by borrowing the concepts of *etic* and *emic* from linguistics and anthropology. Etic concepts are those that have proven cross-cultural validity, whereas emic concepts only have validity in a specific culture. The process involves teams of experts familiar with each culture working jointly to decide on the research goals and questions in terms of etic concepts known to be cross-culturally valid. Etic concepts are then operationalized in each culture using emic concepts whose validity may be culture bound. In this

way, multiple-language versions of a measure can be obtained that are functionally, if not linguistically, equivalent.

This approach, although conceptually appealing, is not widely used. A major difficulty is convening teams of experts who are (a) familiar with several cultures and the topics being studied, (b) can generate a list of concepts, and (c) can agree on which concepts have cross-cultural validity. Moreover, using different words that may have different meanings to achieve functional equivalence can be intimidating to research methodologists who are trained to strive for stimulus equivalence across all respondents.

The dual-focus approach, which we have developed as an alternative to the translation strategies described above, borrows from Werner and Campbell's (1970) and Triandis's (1976) recommendation to employ a team of researchers who have expertise both with the topics of study and with the cultures where the research will be carried out. Similar to Triandis's etic-emic model, it is concept driven, yet unlike the etic-emic model, the dual-focus approach attempts to preserve vocabulary as well as grammatical and syntactical equivalence within the limits imposed by conceptual equivalence. Finally, similar to the iterative process of decentering, the dual-focus approach involves revisions until the research team as well as bilingual and monolingual informants agree on the final wording.

IMPLEMENTING THE DUAL-FOCUS APPROACH

We describe in the following paragraphs the steps for implementing the dual-focus approach (see Figure 1 for a summary of the steps). The first step requires the collaboration of a research team, most of whose members are bilingual/bicultural, and which also includes researchers indigenous to both cultures. The team members jointly define the research questions, study design, and implementation (see Alarcón, Erkut, García Coll, & Vázquez García, 1994). Having a project led by indigenous researchers as full members of the research team provides a safeguard against an unexamined exportation of ideas and methods because people from the cultures being studied take a leading role in defining what will be studied and how.

The second step involves operationalizing the content area of the construct(s) being studied by deciding on concepts that provide equally valid definitions of the constructs in both cultures. By virtue of familiarity with the cultures being studied, especially as indigenous researchers, the team may decide that a review of the existing literature is sufficient (if such literature exists). Otherwise, field work is recommended. In our case, when we embarked on creating a bilingual measure of psychological acculturation, we

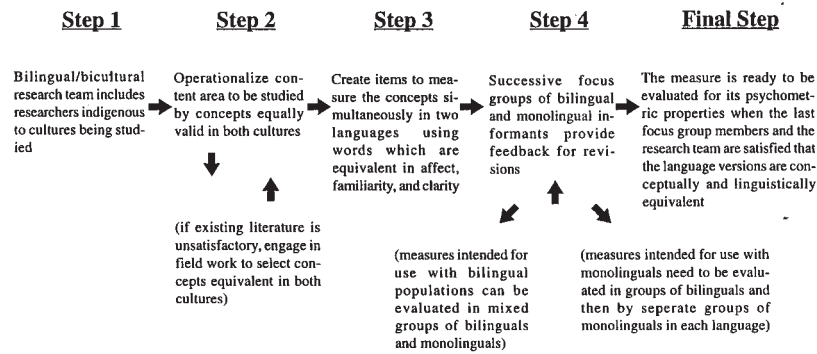


Figure 1: Steps in Creating a Bilingual Measure Using the Dual-Focus Approach

operationalized psychological acculturation as the subjective experience of exposure to two cultures. Reviews of the acculturation research had identified loyalty, solidarity, identification, and comprehension as overlapping components of the psychological impact of cultural exposure (Berry, 1997; Betancourt & Lopez, 1993). The research team agreed these concepts were relevant and had correspondences in both Puerto Rican and mainland Anglo cultures.

On any given topic, a research team may decide to engage in field work because the existing literature is too sparse or of poor quality. For example, when researching the literature on family functioning for creating a family values measure, we decided to explore possible differences in the meaning of family enmeshment in Anglo and Puerto Rican cultures. The strong emotional attachment characteristic of so many Puerto Rican families had led Canino and Canino (1980, p. 536) to describe Puerto Rican families as normally enmeshed, which is to say that they described the enmeshment they observed in Puerto Rican families as normal. On the other hand, in the tradition of family therapy in the U.S. majority culture out of which grew the notion of enmeshment, the word *enmeshment* connotes pathology in family functioning—too much family closeness eroding intergenerational boundaries of authority and respect (see, e.g., Minuchin, 1974; Minuchin, Rosman, & Baker, 1978). In focus group meetings, we asked direct questions about the coexistence of intergenerational boundaries with close attachments between parents and children. The results of the discussions confirmed that family enmeshment did not have conceptual equivalence in the two cultures. Among Puerto Ricans, warmth and emotional closeness between generations

were separate from respect for parental authority. Consequently, we developed different items to measure each dimension.

Once members of the research team reach consensus on concept equivalence, they enter the third step and jointly generate items to measure the concepts. The twin questions "How would we say it in Spanish?" and "How would we say it in English?" initiate the discussion. Wording for each scale item is determined simultaneously in both languages. No newly constructed items are included in the protocol that cannot be directly and easily expressed and understood with parallel wording in the other language. The wording of each item is examined to see if it has the same level of difficulty, affect, and clarity of meaning in both languages. Therefore, constraints of one language are just as likely to influence choice of final wording as constraints of the other language. In effect, both Spanish and English become target languages, whereas the conceptual base serves as the source.

The fourth step involves getting external input from monolingual and bilingual members of the communities for whom the measure is intended. Focus groups are especially useful in this step because they allow for discussion and consensus building, and where there is lack of consensus, they give the researchers an opportunity to get to the root of the sources of differences. Whenever the research team finds the feedback useful, items are reworded and then evaluated in successive focus groups until everyone involved is satisfied with the wording.

Instructions to bilingual focus group members emphasize looking for nonequivalence between the two language versions; instructions to monolingual members stress examining whether the language is stilted or whether it sounds natural to the ears of native speakers. Whereas the usefulness of feedback from bilinguals as essential for evaluating language equivalence is widely shared (see Streiner & Norman, 1995), the importance of feedback from monolingual informants is less well recognized (see Hulin, 1987). Monolinguals' input is crucial because their speech is not influenced by the mastery of a second language. Altarriba and Santiago-Rivera (1994) have found that bilingual Spanish speakers on the U.S. mainland often mix English and Spanish (see also de Groot, 1993, and Grosjean, 1992, on language mixing among bilingual speakers). Hence, monolinguals may be better able to detect awkward constructions in comparison to bilinguals.

When the measure being developed is intended for use with monolinguals in both cultures under study, input from monolingual informants takes on added importance. In this case, after getting feedback from bilingual informants, the research team can schedule separate meetings with English and Spanish monolinguals to examine the appropriateness in wording. Focus group meetings with bilinguals and then with two groups of monolinguals

can continue until all concerned, including the research team members, are satisfied.

Ending the revisions when all informants and the researchers are satisfied is necessarily arbitrary. It is dependent on the language skills of the bilingual and monolingual informants and the members of the research team. On the other hand, being limited by the language skills of translators is a problem endemic to all efforts involving more than one language. The dual-focus approach offers an advantage over translation-based methods not only because bilingual indigenous researchers who have expertise in the content area take active part in generating the two language versions, but also because the approach incorporates input from both bilingual and monolingual informants.

Some researchers may prefer to supplement reliance on informants' and researchers' qualitative judgments with a more quantitative examination of conceptual overlap. Cognitive research on bilingual speakers (see Altarriba, & Mathis, 1997; de Groot, 1992) offers an alternative in the form of more direct, quantitative techniques for assessing the degree of overlap between two concepts across languages. These include asking bilingual respondents to name words out loud, to perform a cognitive task such as lexical decision on the words in question, or to judge whether two words have the same meaning. Responses to these tasks are then timed. Going through a list of paired concepts, the researcher selects the concepts to which participants responded most quickly.

The last step in the dual-focus approach is to evaluate the measure's psychometric properties with respect to the validity and reliability of its two language versions. Whereas this last step is intended to quantify and confirm the appropriateness of the two language versions, item analyses can also point out weakness in the measure. Armed with information on how well each item is contributing to the overall measure, the researchers can reexamine the non-conforming items' conceptual base and language and make the necessary revisions until adequate reliability and validity information is obtained (see DeVellis, 1991).

APPLICATIONS OF THE DUAL-FOCUS APPROACH

The dual-focus approach is readily applicable when a new measure is being developed. For example, the Psychological Acculturation Scale that we created using this approach has resulted in a psychometrically sound instrument both in its Spanish and English versions. The scale consists of 10 items, which pertain to acculturation from a phenomenological perspective

(for more details, see Tropp, Erkut, García Coll, Alarcón, & Vázquez García, in press). Internal consistency estimates ranged from .83 to .90 for the Spanish version and from .83 to .85 for the English version. With respect to construct validity, the scale scores upheld hypothesized differences between groups with respect to language use, percentage of lifetime of the mainland, and cultural behaviors (see Tropp et al., in press). Moreover, 36 self-identified bilinguals were administered both the English and Spanish versions, presented in a counterbalanced random order. The correlation between their scores on the English and Spanish version was $r(35) = .94$.

We have found the dual-focus approach useful also for adapting existing measures originally developed in English. Even in cases where the original developers have published a Spanish version of their instrument, it is useful to have a bilingual/bicultural research team examine the official translation. Scrutinizing the conceptual base of the words used in the source and target language can sometimes reveal that the concept is not clearly stated in the source language or in the developers' translation. For example, a widely used measure of children's behavior (Conners, 1973) has an item, "unable to stop repetitive activity," that suggests that it is intended for measuring autistic tendencies. The Spanish version available from the distributor of this measure has the item translated as "*Incapaz de terminar una actividad repetitiva.*" Our research team changed *terminar*, which literally means *finish*, to *parar*, meaning *stop*. If this item were not intended to measure autistic tendencies, the minor difference in the meaning of finish and stop could have been overlooked. In this case, however, an inability to finish a repetitive activity is not an indicator of autistic tendencies; the wording must ask about an inability to stop such activity.

Another example of the benefits of a conceptual focus can be found in the instrument our team developed to assess self-esteem among Puerto Rican children. This example illustrates how, when working from a conceptual base as the source, both Spanish and English become the target languages. The self-esteem measure we created included an adaptation of several items from Harter and Pike's (1983) Perceived Competence and Social Acceptance for Young Children Scale. One of the items we were interested in was "Good at running." This was relatively easy to express in Spanish as "*Yo corro bien,*" which translates into "I run well," rather than the literal translation into Spanish as "*Yo soy bueno(a) corriendo,*" which is an awkward phrasing in Spanish. At this point, for the sake of linguistic equivalence, we could have changed the English to "I run well." However, we were uneasy with the vagueness of this rendition—does running well refer to style, speed, or endurance? Going back to the conceptual base of asking about a child's

physical accomplishments, we came up with speed as being closest to what a child would construe as running well. Therefore, we adapted this item as “I run fast,” and “*Yo corro rápido.*” We believe that these adaptations led to the construction of a psychometrically sound measure in both languages. The internal consistency (alpha) of the Spanish version of the self-esteem measure we adapted was .85 based on a sample of 191 Puerto Rican girls and boys in first, second, and third grade. The English version of the same measure yielded an alpha score of .89 based on a sample of 94 Puerto Rican girls and boys in the same grades. With respect to construct validity, self-esteem scores showed a predicted positive association with a measure of school adjustment and a negative association with a measure of children’s depression (see Szalacha, 1997).

A concept-driven approach also has advantages for achieving linguistic equivalence in the instructions for completing a measure. Sechrest et al. (1972) point out that this is one area of cross-cultural research that has not received sufficient attention. We confronted this issue when adapting Phinney’s (1992) measure of multigroup ethnic identification to examining only Puerto Rican ethnic identity on the mainland. Phinney’s instructions for the measure include the word *ethnicity*. The research team decided that the Spanish translation, *etnicidad*, does not have the same relevance to social life in Puerto Rico as it does on the mainland. The team thought *herencia cultural* would better express the concept. Therefore, we rewrote the instructions in English using *cultural heritage* followed by *ethnicity* in parentheses. The Spanish instructions referred to *herencia cultural (etnicidad)*. These changes were evaluated in focus groups of bilingual and monolingual informants who agreed that cultural heritage would be more accessible to Puerto Ricans with little exposure to mainland society, while at the same time, having the word *ethnicity* in parenthesis next to it would clarify its meaning for highly acculturated Puerto Ricans.

CONCLUSION

Intercultural research carried out by psychologists of one culture based on their own cultural concepts can be irrelevant or without direct correspondence to other cultures, but even more important, such research can undermine alternative cultural traditions. Aside from this ethical consideration, the data collection methods may be invalid because of their foreign conceptual foundation and translation-based methods. The dual-focus approach was developed as a tool for intercultural research to minimize a cultural bias,

which in contemporary times is based mostly on a Western/Anglo point of view, and to maximize conceptual and linguistic equivalence in research protocols.

The dual-focus method is a concept-driven, collaborative team approach to developing bilingual research protocols. The research team, most of whose members are bilingual/bicultural, includes researchers indigenous to both cultures being studied. Team members jointly decide on research questions and study design. Given that defining the research questions being asked and the methods through which answers will be sought is central to any knowledge-building enterprise, the leadership provided by indigenous research team members makes it less likely that cross-cultural research will be an exercise in cultural imperialism.

The bilingual/bicultural research team creates an opportunity for dialogue among professional peers who are experts both in the subject matter and the cultures being studied. As a team, they are in the best position to know whether a given concept has relevance in the cultures being studied and how best to express a concept in two languages. In effect, the research team functions as a focus group of experts but one that does not disband after the 2-hour group discussion. Rather, the research team members continue to work together—building on each other's ideas, challenging each other, learning from each other—until there is consensus on the conceptual and linguistic equivalence of the measure being developed.

A bilingual/bicultural team of experts can save time in establishing the linguistic equivalence of original as well as adapted bilingual measures. The simultaneous development and examination of items in both languages by experts in the subject matter and cultures bypasses the lengthy process of back translation. The work of bilingual/bicultural experts in the subject matter can minimize translation errors that can result from employing translators who are not experts on the topic being studied. Professional translators may have superior linguistic skills, but these skills cannot compensate for lack of familiarity with the content area.

The dual-focus approach is easiest to implement when only two languages are involved. When the research involves more than two cultural/linguistic communities, the same dual-focus principles can be transformed into a multi-focus approach, starting out with researchers indigenous to all the cultures being studied. Although creating research teams that include researchers indigenous to all the cultures being studied may be a difficult challenge, we believe that the quality of the end product would justify the effort necessary to meet the challenge.

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