

TRANSLATION OF THE NATIONAL INSTITUTES OF HEALTH STROKE SCALE (NIHSS) LIST OF SENTENCES: A CHALLENGING TASK

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THE METHODOLOGICAL QUESTION BEING ADDRESSED

This poster intends to address the methodological question of translating the list of sentences of the National Institutes of Health Stroke Scale (NIHSS). The main difficulty was in developing the best methodology to create translations covering the same level of concretion/abstraction as in the original US.

INTRODUCTION

- The NIHSS was developed in the US to assess stroke severity across 11 categories. Aphasia is evaluated with a battery of items, including a list of five sentences with different levels of abstraction: “You know how”; “Down to earth”; “I got home from work”; “Near the table in the dining room”; “They heard him speak on the radio last night.”
- The objective of our study was to present the methodology used to translate this list into Canadian French, Bulgarian, Korean and US Spanish, and the resulting outcomes. The aim of the translation was not to find conceptual equivalents but sentences with the same level of concretion/abstraction and of similar length to the original.

Table 1. List of Concepts

SENTENCE	CONCEPTS
You know how	The sentence is characterized by the use of an <u>indefinite pronoun</u> (you) and a verb that does not represent a <u>concrete action</u> . Here a common expression should be used in target languages, and an abstract concept should be kept. If the same indefinite pronoun (you) is used in target languages which have a polite and a familiar form (as in Italian and Spanish), the familiar form is recommended.
Down to earth	This is an idiomatic expression which corresponds to “a common-sense personality.” In target languages an expression with the <u>same level of abstraction</u> , which does not mean what it says, should be used.
I got home from work	This is a fairly moderate sentence in terms of concretion/abstraction. The same concept should be used here. Note: “home” and “work” are opposites.
Near the table in the dining room	This one is concrete: it refers to two different locations, to two different places. The first location (here “near the table”) is contained within the second location (“dining room”). Geographical/outdoor places or buildings can be used too. In this sentence there are three elements: A (which is implied) near B (table) in C (dining room).
They heard him speak on the radio last night	This is a concrete sentence with a somewhat complicated grammar structure. The same <u>time reference</u> and <u>words related to speaking/ hearing</u> should be used. Note: “speak on the radio” has a somewhat abstract and figurative meaning, i.e., it does not mean to literally stand on the radio and speak. The preposition used should have a meaning on its own (like “on the radio” literally meaning “on top of the radio”) and a figurative meaning when used in the entire expression (like “speak on the radio” meaning being broadcast through the radio).

Table 2. Translations

Languages	You know how	Down to earth	I got home from work	Near the table in the dining room	They heard him speak on the radio last night
Bulgarian	Ти знаеш как (you know how)	Златни ръце (golden hands)	Върнах се вкъщи от работа (I got home from work)	Близко до масата в трапезарията (near the table in the dining room)	Снощи го чува да говори пред телевизията (they heard him speaking before the television last night)
Canadian French	Tu sais bien (you know indeed)	Coup de foudre (love at first sight)	Je retourne au travail après mes vacances (I get back to work after my vacations)	Près de la table, dans la salle à dîner (near the table in the dining room)	Ils l'ont entendu parler à la radio hier soir (they heard him speak on the radio last night)
Korean	네가 아는 그대로 (as you know)	빈 수레가 요란한 (the worst wheel of a car always creaks most)	조만간 한 번 뵙겠습니다 (I will see you once soon)	부엌 앞에 있는 식탁 가까이 (near the table in the dining room)	어젯밤에 라디오에서 그 남자가 이야기하는 것을 들었다 (they heard him speak from the radio last night)
US Spanish	Tú lo sabes (you know it)	Está en las nubes (you have your head in the clouds)	Llegué a casa del trabajo (I got home from work)	Cerca de la mesa en el comedor (near the table in the dining room)	Anoche lo escucharon hablar en la radio (last night they heard him speak on the radio)

For each language, the back-translation is indicated in italics between brackets.

CONCLUSION

This study showed that finding sentences equivalent to the level of abstraction of the original ones used to assess aphasia is challenging and requires the collaboration of specialists and the developer in each target language.

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METHODS

- The traditional translation process had to be adapted. In each country, instead of a classic linguistic validation (i.e., forward/backward translation, clinician review and/or cognitive interviews), a thorough forward translation was performed with a neurologist and a speech therapist, native speakers of the target languages.
- Candidate sentences were then reviewed by an expert panel to assure the meaning of the original expressions was met.
- Guidelines for the translation were provided. The main criteria to apply were:
 - To use the same level of concreteness/abstractness as in English;
 - To use sentences of similar length;
 - If possible to use the same level of language. It was specified that the sentences are not time-dependent, i.e., it was possible to use a different tense than in the original sentences; for example, if using the past tense in the sentence “I got home from work” would render the sentence more complicated in the target language, it was possible to use the present tense. The translators had to keep in mind that basically the sentences go from the simple to the more complex nature, and that this progression should be maintained.
- Table 1 presents the concepts behind each sentence.

RESULTS

- All sentences had challenges to consider. Table 2 presents the solutions found for each language.
- Two sentences proved especially difficult to translate.
 - For the expression “down to earth,” it was not possible to use direct equivalents of the English expression in the language versions. Other expressions using the same level of abstraction had to be found in each country. After discussion with the speech therapist and neurologist, idiomatic expressions in all languages were found: “golden hands” in Bulgarian, “love at first sight” in Canadian French, “the worst wheel of a car always creaks most” in Korean, and “she is in the clouds” in US Spanish.
 - The other difficult sentence, particularly in Bulgarian, was “they heard him speak on the radio last night.” The preposition used should have a meaning on its own and a figurative meaning when used in the entire expression. In Bulgarian, this was not the case. Another idiomatic expression was found that conveyed the confusion caused by the preposition: “they heard him speak before the television last night.”

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