Translating Scientific Text: Practicalities and Pitfalls

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"The work of scientific translators is to achieve one primary goal: to write information in a clear, concise, and accurate manner", speaker Bethany Thivierge stated. That was the point emphasized by the panelists.

Ann Conti Morcos, medical editor and writer and owner of MorcosMedia, described the three basic types of translation:

- *Word-for-word* directly replaces the word in the source language.
- *Literal* adheres to the linguistic structure of the original language.
- *Free* communicates the "sense".

Morcos discussed questions she has dealt with when editing scientific translations. What in the manuscript is from the translator, and what is from the author? Do you eliminate wordiness, or is this the style of the source language, the author, or the translator? Are content errors made because the translator is not familiar with the subject matter? Has the author made a mistake?

"A power struggle", said Morcos, "often exists between the translator and the editor." The best translator is also an editor. Translators who are not editors will not focus on the things an editor would focus on, such as consistency of terms throughout a manuscript, adhering to a particular style (such as that of the American Medical Association), and making reference format fit the style of the journal.

Diane Howard, a freelance medical and scientific translator and editor, described the translation unit at the National Institutes of Health (NIH), where one person translates Spanish, Italian, and French documents and another Russian and German documents. Materials in other languages are contracted out to translators like Howard, who works from Chinese and Japanese into English. NIH puts out questionnaires in about a dozen languages and must have consent forms for research available in the language most familiar to the subject.

There are two major translation organizations in the United States: the American Translators Association and the Translators and Interpreters Guild. Howard mentioned translation agencies, the better of which employ bilingual proofreaders and professional in-house proofreaders for quality control. Once it has been determined that a translation is needed, *what you are asking* is very important. When NIH asks its English-Spanish translator to work on public-information materials, it often wants the documents changed from an English eighth-grade to a Spanish sixth-grade level, and this requires the material to be both translated and rewritten.

Some factors that influence translation are *difficulty of the text*, ranging from level I, in which isolated words can be identified, to level V, in which the translator brings technical and specialized cultural knowledge to the text; *linguistic difficulty*, which is defined by the differences between the writing, grammatical, and semantic systems of one language and those of the other; and *language difficulty*, which is calculated by the number of weeks it takes to learn a language.

Bethany Thivierge, biomedical writer and editor and owner of Technicality Resources, discussed the nature of worthwhile work: *clear goals, stable rules, and an optimal match between the challenges and the skills*. Applied to scientific translation, conscientious efforts in this regard will benefit clients, audiences, and translators.

Scientific communication depends on two sets of rules: laws of nature and the principles of language. Effective scientific translators must understand not only the fundamental science they are translating but also the principles of two written languages: the source language and the target language. With that understanding comes the recognition of cultural differences, which fosters respect in querying an author. "The optimal match between challenges and skills remains elusive", said Thivierge.

In conclusion, Thivierge discussed nine desired items:
- Work appropriate for the intended audience.
- Respect for choices made by the author.
- Respect for preferences.
- Understanding of sciences.
- Understanding of languages.
- Constructive queries.
- Work suitable for publication.
- Familiarity with current practices.
- Timely exchange of work.