Ich Weiss Nicht Was Soll Es Bedeuten: Language Matters in Medicine

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For better or worse, English (with its many words annexed from Latin and other languages) is today's lingua franca in the medical and life sciences. It is nearly impossible to be a successful medical or life scientist without basic skills to read and communicate in English. There are, however, many other potential consumers of medical and scientific research results—health-care professionals, educators, and the general public—for whom proficiency in English is a luxury that only some can afford. Moreover, important research results are published in languages other than English. And whereas many English-speaking scientists are content to ignore such publications despite the potential adverse effects of ignorance, for some types of research—for example, systematic reviews—the consequences of restricting the search to English titles or keywords defeats the purpose of providing a comprehensive summary of the existing information.

The good news is that language barriers are likely to become less of a problem in the future as machine translation (i.e., translation software) is becoming better. While still far from producing elegant prose, even the basic services available free online today (see Text S1 for some examples) are useful. In most cases, they are able to produce a translated version of an abstract that gives a basic sense of what the article is about. As such, these basic translation services can help the reader to decide whether to invest the effort and obtain a better translation.

And proprietary machine translation packages can do quite a bit better. One example relevant to medical content is the Pan American Health Organization (PAHO) machine translation system (http://www.paho.org/English/AM/GSP/TR/Machine_Trans.htm), a system developed by PAHO that translates among Portuguese, Spanish, and English (http://www.icml9.org/program/track3/public/documents/Julia%20Aymerich-174140.pdf). It has been used and improved daily since 1980 to generate raw translations, which are subsequently edited by human translators to the level of proficiency required for each purpose. PAHO has licensed the system to 84 other users, including ministries of health, educational institutions, and freelance translators. One user is a hospital in Panama that receives daily health news headlines in English. These are machine translated, and the raw translations are scanned by doctors, who decide quickly which articles are of interest to them.

A few years down the line, these and other products (hopefully some of them from the open-source community) might evolve far enough that anybody literate in one language can find and read online content in any other language—so long as it is freely available to access and to translate.

But what can we do to overcome language barriers in the meantime? As with the content of other open-access journals, articles published in any of the PLoS journals can be translated without the need to ask for permission, and the translated versions can be printed, displayed online, given away for free, or sold. We encourage translations and other creative uses that are permitted under our open-access license. For example, we were delighted to see a translation of an article on health disparities in Italy reprinted in Italian in the Italian magazine *Modus Vivendi* (Text S2). Some translations of PLoS content have been initiated by the authors; others by third parties interested in broadening the audience for a particular article. We are happy either way; all we ask is that the authors are credited and that the PLoS article is referenced as the source of the translated material.

Another remedy was prompted by the question of a Brazilian graduate student at the recent International Seminar on Open Access for Developing Countries (http://www.icml9.org/meetings/openaccess/). She asked why international journals don't allow people to publish their articles in both English and their native languages. As a result, PLoS journals now encourage authors who are fluent in languages other than English to provide translations of their abstracts or entire articles as Supporting Information. The recently published article by Ieraci and Herrera (DOI: 10.1371/journal.pmed.0030101), for example, includes Spanish and Italian versions of the abstract.

We hope that many authors will provide such translations, and that this will allow people who search in languages other than English to find open-access content. We also hope that it will at least in part alleviate a dilemma that authors from non-English-speaking countries face. If they publish in English in an international journal, members of their communities might not be able to read the paper (even if they have access to the journal). On the other hand, if they publish in their native language in a local journal, the international community will likely remain ignorant of their findings, and their contribution might be judged as less important by funders and promotion committees.

Language barriers are daunting, but with your help, we can make progress toward overcoming them. ∎

Supporting Information

Text S1. List of Free Online Translation Software

Found at DOI: 10.1371/journal.pmed.0030122.st001 (24 KB DOC).

Text S2. An Italian Translation of Bonati and Campi's Policy Forum (DOI: 10.1371/journal.pmed.0020250)

Found at DOI: 10.1371/journal.pmed.0030122.st002 (1.2 MB PDF).