Technical Translation as Technology

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My interest in translation began while I was preparing the copies of my M.S. Thesis in Meteorology. In our department, it had become a custom, though not a rule, for students coming from abroad to translate the abstract of their thesis or dissertation into their own language. Almost everyone did it: those from Costa Rica, China, the Middle East, Thailand, Indonesia, and even someone from Burma. The only ones who didn't—and couldn't—do it were us Filipinos.

Driven by envy and the belief that more people would understand me, not just my professors, if I translated my abstract into Filipino, I decided to be the first to do so in the College of Science. For someone like me with no experience in this, the difficulty was immense. What delayed me further was a certain leaning or bias against the method I was then using for translation—the simple borrowing of words and Filipinizing their spelling, such as using “Unibersidad” for “University” instead of “Pamantasan.” I wasted several weeks looking for someone to teach me the correct equivalents for “sea breeze,” “concentration,” or “numerical modelling” without simply changing the spelling. This is how I met Prof. Bienvenido Miranda, who shared a similar mindset: that in the Tagalog way of thinking, these might not be the exact equivalents for any given concept. It now appears that my refusal to easily yield to my policy was a huge mistake, not only because it took three weeks to translate two short paragraphs, but because when the abstract was finished, I was the only one who understood it. I did not end up pursuing my plan to use indigenous script for my abstract as my Chinese and Thai classmates had done.

Whenever discussions arise regarding whether Filipino can or should replace English, the field of science is always mentioned as a heavy obstacle. To show that this argument is wrong, the path for scientific literature in translation must be widened and examples multiplied. The result of this would be the emergence of a vibrant program for writing or translating science into the language. While the sentiment on this issue may be unified, let us admit that the view that science cannot be written in Filipino has long been a part of our perspective, provided the evidence for it is strong.

I am not here to discuss the theory of technical translation itself. For that, I would like to refer you to a meticulously researched work by Mario I. Miclat, where you will find the philosophy and practice of technical translation which I would not be able to present as well as he did. Furthermore, I will clarify that the methods and problems of technical translation are almost no different from translation with different goals, so I will try to avoid repeating the ideas contained in the previous papers.

I stand here as a representative of the scientists in this gathering. More beneficial would be our time here if we discuss the process of translation and its relationship to the process of science itself. My hope is that when the nature of translation in science and the reasons why it should not disappear are clarified, one major obstacle in the path toward propagating a national

language will be set aside. You who understand it best are likely the ones who can help us most if you are sensitive to the history of the relationship between language and science.

First, the language of science and the discourse of science are intertwined. What this means is that whatever method you use to understand a phenomenon is also determined by the method (often called a paradigm) of what can be studied and what cannot. A good example is mathematics. Before Isaac Newton fully understood the mechanism of the planets' orbits around the sun, he first needed a language or symbol for his philosophy. The philosopher Gottfried Wilhelm von Leibniz, almost a contemporary of Newton in the creation of Calculus, used a different notation, yet they still understood each other. And this is one characteristic of the language of science: the meaning of a language is not lost even if only one person has spoken it. The meaning is for translation: do not be afraid even if the result of the translation is extremely strange, as long as you are certain that it is the most appropriate way to convey a concept. If we believe that through the Filipino language—the language we use in thinking—we can fully grasp and understand a scientific concept or anything else, then the creation of an artificial language is not necessary.

The lament over technical translation—the creation of a "pure" language, a language without literature, used by no one but one person—is a long-standing sentiment, but it is not a reason to oppose Filipino, but rather a servant to it. However, it appears from my examples in the field of science that this lament is baseless. Translation is a laboratory for building the tools of discourse. All that is needed is the maintenance of the life of the process of enrichment and propagation.

This is the second difference of science or technical fields: the way of giving sanction to any chosen method of a translator. You have heard that there are various ways to derive equivalents in Filipino, but all the chosen methods are open. More so in technical use than in other goals of translation, it is practical to propagate any method through official agreement amidst a collective of experts, a proclamation from a committee, or the approval of a respected journal. Unlike artistic writing where acceptance depends on its beauty (whatever the definition of beauty is) or on market forces, there is still room in all fields of science and the profession for standardization. For example, the naming of old physical units was based on respected people passed through a committee, such as *langleys, hertz, joules,* etc. If these new words could be propagated in this manner to the whole world, there is no reason not to go through a national committee for translation—the imposition, not just the offering, of the words that should be used as translations.

Aside from formal proclamation, there is also a massive informal path to acceptance and propagation in every field. There is no forgiveness for the physicist here. These new discoveries in elementary particles (even if their meanings are not the same as what we know as rotation), *spin, color* (even if it has nothing to do with color), or *charm* (???). However, because these classifications are sufficient, and there are almost no words originating from our daily experience that can be directly associated with these characteristics, they were fully accepted even before they were used in a scientific journal.

There is an important reason why the scientific community accepted these words even if they were not as reliable as the words of other nations. What is needed for informal acceptance is that many have heard it, many have propagated it, and the frequency of instances is enough to talk about it. This amount of frequency is the "critical mass." In the Philippines, because there are few people and most of them are not fully spread across any given field, we will be hindered. Many have already translated, but they are isolated in every field. How often do we hear or read a paper written in Filipino regarding the results of research in a conference on pure science? Even if the tools of discourse are already there, they have no value until they are used repeatedly.

Third, if there is one word that could be the core of the basis of success for a translation in science, it is the word "agreement" (kasunduan). At first glance, it seems self-evident and shallow. However, the greatness of technical translation is the offering of innovation to the language, and there is no other word that can represent and describe what can be used as a measure of whether the public will accept a new part of the language except that word.

The existence of an agreement to be consistent is different. Having a set of rules for Filipino translation to be consistent is one of the favored characteristics of any method of translation because it makes the process portable. This means that if you know the rules, wherever you are and whatever word you want to translate, you can do it through the use of any appropriate rules. Furthermore, if you are the one reading and you encounter a strange word, you will recognize the original word through the reversal of the rules.

It would be very easy to say that passing these rules in the field of science is easy because only agreement is needed. But I know this is not true. People in the college of science have a sense of the beautiful and the ugly too. Once when Director Virgilio S. Almario spoke at the college, we shuddered when he offered as an example to us that all soft sounds be made hard, like *geology*, or to keep the soft *g* but spell it as *j*, like *jiyoloji*.

In my conversations with colleagues in the college of science, it is a paradox perhaps that we are the ones who are not comfortable with the methods chosen in other colleges for simple and consistent translation, which is essentially "scientific," like borrowing and Filipinizing the spelling. Why, it seems we would prefer a more creative way of finding root words to be compounded and affixed. In our department, because "wind-science" (agham-hangin) is not consistent with the method recommended by the university as a translation for our field, we would prefer to keep our old name.

The lesson here is this: even in science, as has long been noticed in other fields, beauty is more important than being consistent in propagating rules for translation. Furthermore, because technical language is personal, only those who use it can decide what translation they want to use, even if it is not consistent with the method chosen by others.

Fourth, let us admit that the pessimism (regarding the use of Filipino in science) has a basis. It is hard to teach science or any advanced subject in any language.

And as narrated in my experience in translating my thesis abstract, understanding is not always made easier by translation. Here is where some proponents of the national language are slightly mistaken—in the wrong belief that technology will progress faster in the Philippines because our workers do not understand physics or engineering books written in English. Even in the United States, the language of the engineer and the plumber is different even if they are both interested in a faucet.

This is one reason for the stubbornness or lack of interest of many in our college toward translation. It is now a challenge to all of us, that more than love for our own language, the proof that there is a practical advantage to translation is needed. It is made even harder to encourage if we remember the reaching tentacles of the Internet, where English stands as the global language of communication, especially for scientists. They say, while the whole world is learning English, are we now going to insist on Filipino?

Naturally, this is an old complaint in any movement toward the development of one's own language. For me, we should not be discouraged by such a view because these are still legitimate issues. These protests will only disappear once it is proven that our diligence is not a waste of effort. In the current need for a research program, beyond showing the effectiveness of using Filipino, let us not expect the participants to increase as long as it does not become easy. For there to be a "critical mass" of scientists, a local community of experts in science who are sufficient in number to independently develop science is still unlikely; how much more to have a critical mass, a self-sustaining community of scientists who speak in Filipino and agree on the language they will use?

In closing, in the 15th century, there was a German businessman who asked a professor where it was best for his son to study business. The professor said, the boy is likely sufficient to enter universities in Germany to learn *addition* and *subtraction*, but he would need to be sent to Italy to be taught *multiplication* and *division*. Before you wonder, try first multiplying MCMXIV by DCLIX without first translating the Roman numerals into Hindu-Arabic numerals. As I said, mathematics is a language, and language is technology. You will understand from this anecdote one reason why wisdom blossomed during the Renaissance when modern numbers began to be used. This kind of revolution in language is likely the required fruit of translation to achieve a blossoming of ideas.