Scientific Translation

الترجمة العلمية

University of Al-Mustansiriyah

College of Arts

Translation Department

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4th stage/ Morning classes

Lecture 3: Theoretical Part

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Understanding Scientific Translation

Scientific words differ from ordinary and literary words since they don't bear emotional associations and implications. This explains why the translation of a scientific work is supposed to be more direct, free from alternatives, and much less artistic than the other kinds of prose.

Scientific translation is the translation of scientific terms of all kinds: medical, physical, chemical, mathematical, technological, computer, Internet, etc.

Translating a scientific text from English into Arabic involves certain translation problems. In fact, Arabic had played an essential role in the progress of science and humanity in general, over the centuries. Arabs in sciences (such as chemistry, geometry, algebra, astronomy, engineering, medicine, etc.) made valuable and very important additions and contribution to human knowledge, for they were the "pioneers of learning and bringers of light to mediaeval Europe" (IIyas, A., 1989: 109-111). Let us consider the following Arabic terms that have entered English in the various fields of science:

:الكيمياء Chemistry

The word [chemistry](https://en.wikipedia.org/wiki/Chemistry_(word)) comes from "[alchemy](https://en.wikipedia.org/wiki/Alchemy)", (from [Arabic](https://en.wikipedia.org/wiki/Arabic): al-kīmiyā) was an ancient branch of [natural philosophy](https://en.wikipedia.org/wiki/Natural_philosophy), a [philosophical](https://en.wikipedia.org/wiki/Philosophical) and [proto-scientific](https://en.wikipedia.org/wiki/Protoscience) tradition practiced throughout Europe, Africa, and Asia, originating in [Greco-Roman Egypt](https://en.wikipedia.org/wiki/Egypt_(Roman_province)) in the first few centuries[[1]](https://en.wikipedia.org/wiki/Alchemy#cite_note-Routledge-2).

:اللوغاريتم : نظام العد Algorithm

The word 'algorithm' has its roots in Latinizing the name of [Muhammad ibn Musa al-Khwarizmi](https://en.wikipedia.org/wiki/Muhammad_ibn_Musa_al-Khwarizmi) in a first step to *algorismus*. Al- Khawarizimi was a [Persian](https://en.wikipedia.org/wiki/Persian_people) mathematician, [astronomer](https://en.wikipedia.org/wiki/Astronomer), [geographer](https://en.wikipedia.org/wiki/Geographer), and scholar in the [House of Wisdom](https://en.wikipedia.org/wiki/House_of_Wisdom) in [Baghdad](https://en.wikipedia.org/wiki/Baghdad), whose name means 'the native of [Khwarazm](https://en.wikipedia.org/wiki/Khwarazm)', a region that was part of [Greater Iran](https://en.wikipedia.org/wiki/Greater_Iran) and is now in [Uzbekistan](https://en.wikipedia.org/wiki/Uzbekistan).[[2]](https://en.wikipedia.org/wiki/Algorithm#cite_note-Hogendijk-13)

:الكحول Alcohol

The word comes from the Arabic 'Al-Kohol', (a powder used as an eyeliner). It was originally used for the very fine powder produced by the natural mineral 'Stibnite' and was considered to be the essence or "spirit" of this mineral. It was used as an [antiseptic](https://en.wikipedia.org/wiki/Antiseptic), eyeliner, and [cosmetic](https://en.wikipedia.org/wiki/Kohl_(cosmetics)). The meaning of alcohol was extended to purified substances in general, and then narrowed to ethanol, when "spirits" was a synonym for [hard liquor](https://en.wikipedia.org/wiki/Distilled_beverage).[[3]](https://en.wikipedia.org/wiki/Alcohol#cite_note-13)

:الجبر Algebra

Algebra (from [Arabic](https://en.wikipedia.org/wiki/Arabic_language): ‎, transliterated "Al-Jabr", literally meaning "reunion of broken parts") is one of the [broad parts](https://en.wikipedia.org/wiki/Areas_of_mathematics) of [mathematics](https://en.wikipedia.org/wiki/Mathematics), together with [number theory](https://en.wikipedia.org/wiki/Number_theory), [geometry](https://en.wikipedia.org/wiki/Geometry) and [analysis](https://en.wikipedia.org/wiki/Mathematical_analysis)[[4]](https://en.wikipedia.org/wiki/Algebra#cite_note-oed-1).

:المومياء Mummy

The English word *mummy* is derived from medieval Latin *mumia*, a borrowing of the medieval Arabic word *mūmiya,* which means a preserved corpse[[5]](https://en.wikipedia.org/wiki/Algebra#cite_note-oed-1)

:صفر Cipher, Zero

The word "cipher" in former times meant "zero" and had the same origin: Medieval Latin as *cifra,* from the Arabic Sifr = zero. There are many theories about how the word "cipher" may have come to mean "encoding" [[6]](https://en.wikipedia.org/wiki/Algebra#cite_note-oed-1).

:الكبريت Kibrit

From the [Arabic](https://en.wikipedia.org/wiki/Arabic) ‎word (kibrīt), which is originally taken from [Aramaic](https://en.wikipedia.org/wiki/Aramaic), and from [Akkadian](https://en.wikipedia.org/wiki/Akkadian_language) [[7]](https://en.wikipedia.org/wiki/Algebra#cite_note-oed-1).

Translating Scientific Texts

Translating scientific texts is said to need less skills than translating literary texts since the translator does not have to be a poet or to go behind the literal meaning, but at the same time he should be aware of the scientific terms and their exact meanings according to the text being translated (Ilyas, 1989: 109). The translator's concern is on the content of the text rather than the form but this doesn't mean that the translation process is a mere of transferring information only without the need to have a linguistic knowledge or a translation strategy.

Translating technical texts is more than just handling terminology. Technical Translating involves more than just replacing a word with its equivalent in another language. (Byrne, 2006) highlights this in his book on technical translation:

*“the main concern for technical translators is not only to make sure that information is conveyed accurately but they are also responsible for ensuring that the information is presented in the correct form, that it is complete and that the information can be used correctly and effectively*.

The Requirements of A scientific Translator

The translator of a scientific text has to possess some knowledge (at least a general sort of knowledge) of the subject matter he undertakes. The most important thing that should be focused in rendering scientific texts is to take into account the accuracy in transferring the source language concepts and ideas in one hand, and how to handle foreign terms in the target language on the other hand. In order to be a successful scientific translator one should have the following 5 elements (Gasagrade, 1954: 335-40):

1. **Broad knowledge of the subject-matter** of the text to be translated.

2. Intelligence, to be able to fill in the missing links in the original text.

3. A sense of judgment, to be able to **choose the most suitable equivalent term** from the literature of the field or from dictionaries.

4. The ability to use one's own language with **clarity, conciseness and precision**.

5. **Practical experience** in translating from related fields. In short, to be technical translator one must be a scientist, or engineer, a linguist and a writer.

To conclude, science does not have its own syntax only (impersonal style, use of acronyms, and clarity), but also its own terminology. Therefore, it is not the language itself which is special, but certain words or their symbols.

References

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Ilyas, A. (1989). *Theories of Translation*: *Theoretical Issues and Practical Implications*. Mosul: Ministry of Higher Education and Scientific Research, University of Mosul.

Wikipedia References:

<https://en.wikipedia.org/wiki/Chemistry> 1-

<https://en.wikipedia.org/wiki/Algorithm> 2-

3- <https://en.wikipedia.org/wiki/Alcohol>

4- <https://en.wikipedia.org/wiki/Algebra>

5- <https://en.wikipedia.org/wiki/Mummy>

6- <https://en.wikipedia.org/wiki/Cipher>

7- <https://en.wiktionary.org/wiki/kibrit>