

**Problems of Digital Translation from Ancient Greek Texts to Arabic Language:
An Applied Study of Digital Corpus for Graeco-Arabic Studies**

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Abstract:

In the information age that is the translation age as well, new ways of talking and thinking about translation which take full account of the dramatic changes in the digital sphere are urgently required. So, this paper aims to study the Digital Corpus for Graeco-Arabic Studies to present problems of digital translation from Ancient Greek to Arabic language and suggested solutions for them.

The proposed paper attempts to answer the following questions:

- What are the challenges in building a digital translation system?
- What are the problems of using translation that was edited more than a thousand year?
- How to store a new translation from the ancient Greek text into the Arabic Language?

Keywords: *Digital Translation System, Translation Movement, Ancient Greek, Greek Linguistics, Computational Linguistics, Arabic Translation, Digital Corpus for Graeco-Arabic Studies.*

1. Introduction:

Greek philology is one of the most important sources of the past offering a deep and extensive knowledge of language. No one can deny the impact of ancient Greek and Roman civilization on the European culture and the Arab world. In the past, investments in language preservation focused primarily on language education and translation. Between the eighth and tenth centuries AD, Muslim scholars began the largest Translation Movement in the world history, where Muslims tended to study Greek science and philosophy that served as the sum of all the sciences in this period. Huge funds were allocated for the process of translation, to the extent that remuneration for translated book equaled their weight in gold, and the monthly wage of an interpreter soared to 500 dinars of gold or the equivalent of two kilograms of gold or 80,000 dollars in current currency. Arabs worked on the establishment of schools and centers of translation in both Baghdad and Cordoba, These translations helped shape the development of philosophy and science in the Islamic world. Most importantly, Arabic translations were crucial for preserving, transmitting and extending ancient Greek thought: many Greek texts were lost in the intervening centuries and are now only extant in Arabic translation. The Arabic translators also had access to manuscripts that were often several centuries older and potentially closer to the Greek originals than those available to editors of ancient Greek texts today. The Arabic translators' understanding of their Greek sources was informed by their historical, cultural, religious and linguistic background. Their reading of these texts offers a new perspective on the ancient world that has the potential to enhance our own understanding. They have been preserved on the ancient human heritage. So the growing of digital technologies is an opportunity to re-evaluate and consolidate the humanities, where we can understand the past and promote dialogue among civilizations.¹

A. Axes of the study:

The proposed paper will discuss three points

- I. What are the problems of using translation that edited since more than a thousand year?
- II. Challenges in building a digital translation system.

III. Foundations that should be followed to create or digitize a new Translation from ancient Greek text into Arabic.

B. Resources of the study:

The researcher relied on:

- I. A Digital Corpus for Graeco-Arabic Studies. <https://www.graeco-arabic-studies.org/home.html>
- II. Perseids. <https://sites.tufts.edu/perseids/>
- III. Alpheios. <http://alpheios.net/>

2. What is the Digital Corpus for Graeco-Arabic Studies?

The Digital Corpus, which currently has ca. 1.2M Arabic and 3.3M Greek words, consists of about 230 texts, three fifths of which are Greek and the rest Arabic. The texts range in length from a couple of pages to several hundred pages, and they represent more than 180 works by 28 authors. In addition to Greek and Arabic primary sources, the corpus also contains a number of important Arabic secondary sources, mainly commentaries on ancient Greek writings, important secondary works and major bio-bibliographical sources.

The Digital Corpus for Graeco-Arabic Studies is the result of a collaborative project at Harvard and Tufts University, funded by the Andrew W. Mellon Foundation. The main aim of the project was the creation of a public-domain corpus of Greek and Arabic philosophical and scientific works. It was initiated and supervised by Mark J. Schiefsky at the Department of the Classics, Harvard University, and Gregory R. Crane, then at the Department of Classics, Tufts University; Uwe Vagelpohl, Department of Classics, University of Warwick, was responsible for assembling the Arabic corpus, vetting and tagging the raw texts and importing the corpus into the Digital Corpus database.

3. What is the Digital Translation?

The purpose of translation is to communicate the meaning from one language (the source) to another language (the target). Modern-day translators use sophisticated tools and technologies to accomplish their work, and rely heavily on software applications to simplify and streamline their tasks. Now, we can define the digital translation as a translation that done by human translator and digitized to be ready and re-used by machine translation.

4- What are the problems of using translation that edited since a thousand year?

Translation of Ancient Greek Texts into Arabic faces many linguistic problems including grammar, context, culture, etc. Therefore, the current study attempts to investigate the problems of structure that Ancient Arab translators faced when translating from Ancient Greek, as a source language, into Arabic, as a target language. It is well known that the above mentioned languages belong to different family languages. The former is a member of the Indo-European languages, while the latter one is Semitic. Thus, this may also cause other problems in translation. These problems have great effects on translation quality. Ancient Arabs Translators did not translate directly from the ancient Greek language, but the translation is done through Syriac, an intermediate language, as shown in Figure (1).

The Syriac language as an intermediate language between Ancient Greek and Arabic language

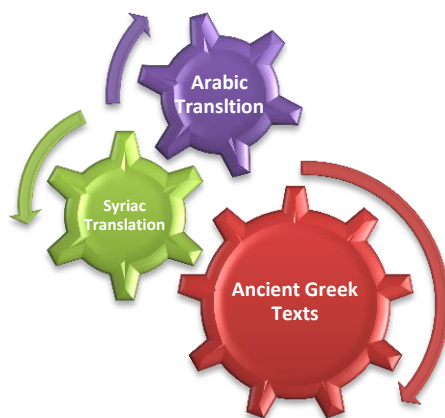


Figure (1)

The researcher noted that the use of intermediate language in translation may lead to the loss of meaning; an example would be the translation by Matthew son of Younis for “ Ἀριστοτέλους – Περί Ποιητικής” the Aristotle’s book “the Art of Poetry” from the Syriac language to Arabic –as mentioned in his book as shown in figure (2)- while he translated the word “τῆς τραγωδίας”tragedy as "praise" and the word “κωμωδία” comedy as "slander".²

► Aristotle Ars Poetica (Poetics)

Bekker chapter: 1 2 3 4 5 6 ... 10 20 ... 26

Bekker 1837

Margoliouth 1887 Tkat... Bada... 'Ay... 'Ay...

focus move close

ΠΕΡΙ ΠΟΙΗΤΙΚΗΣ.

Περὶ ποιητικῆς αὐτῆς τε καὶ τῶν εἰδῶν αὐτῆς, ἦν τινα δύναμιν ἑκαστον ἔχει, καὶ πῶς δεῖ συνίστασθαι τοὺς μῦθους, εἰ μέλλει καλῶς ἔξειν ἡ ποίησις, ἐπὶ δὲ ἕκ πόσων καὶ ποίων ἐστὶ μορίων, ὁμοίους δὲ καὶ περὶ τῶν ἄλλων ὄσα τῆς αὐτῆς ἐστὶ μεθόδου, λέγωμεν, ἀρξάμενοι κατὰ φύσιν πρῶτον ἀπὸ τῶν πρῶτων. Ἐποιοῖσι δὲ καὶ ἡ τῆς τραγωδίας ποίησις, ἐπὶ δὲ κωμωδία καὶ ἡ ἡθυσταυβαρτοπικῆ καὶ τῆς αὐλητικῆς ἢ πλεῖστα καὶ κθαριστικῆς πῆσαι

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

كتاب ارسطوطالس في الشعرا نقل ابي بشر متي بن يونس

القناني من السرياني الى العربي قال ارسطوطالس *

انا متكلمون الان في صناعة الشعرا وانواعها ومخبرون اى قوة لكل واحد واحد منها

وطى اى سبيل ينبغي ان تتقوم الاسماء والاشعار ان كانت الفواصس مزجعة بان

Figure (2)

Actually, the same error happened with Badawi (1953) as shown in figure (3), when he re-used the same translation of Matthew in a new edition.

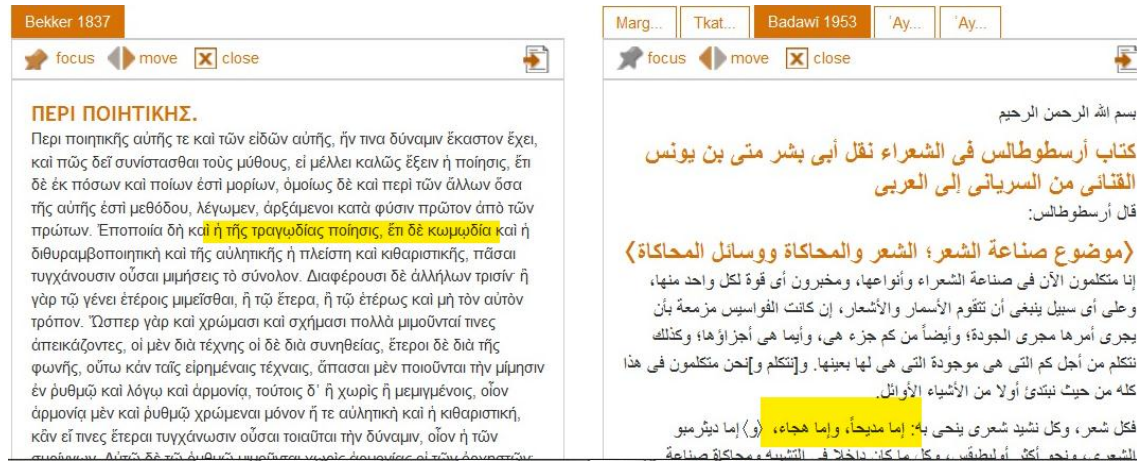


Figure (3)

In fact, we cannot consider that as a translation error, but an error resulting from the use of intermediate language "Syriac Language" on the one hand, on the other hand both of the art of comedy and tragedy were not extant in Ancient Arabic culture. It would have been better for the translator to mention that he had two terms that did not exist among the Arabs at that time rather than localize them. Arabs also recently transliterated them into Arabic as "تراجيديا" "Tragedy" and "كوميديا" "Comedy" as shown in figure (4).

► Aristotle Ars Poetica (Poetics)



Figure (4)

The researcher also noted such discrepancies when reviewing a translation into Arabic of Menander's "Sententiae" by Ullmann (1961), which was compiled by using an intermediate language (German language). But the translation was crucially valid, as shown in figure (5).

► ps-Menander **Sententiae Menandri (versio A)** (Menander's One-Verse Maxims)

Chapter: 1 2 3 4 5 6 ... 10 20 ... 24

Ullmann 1961a

focus move close

A
 άνθρωπον ὄντα δεῖ φρονεῖν τάνθρώπινα (Mon 1 M/1 J)
 ἀναφαίρετον κτήμ' ἐπί παιδείᾳ βροτοῖς (Mon 2 M/2 J)
 ἀεὶ τὸ λυποῦν ἐκδίωκε τοῦ βίου (Mon 3 M/3 J)
 αὐτὰ σε διδάσκει τοῦ βίου τὰ πράγματα (Mon 647 M/4 J)
 ἀθάνατον ἔχθραν μὴ φύλαττε θνητὸς ὢν (Mon 4 M/5 J)
 ἅπασι ἀκοῦσαι τοὺς ἐλευθέρους καλὸν (Piccolos p. 230, 1/Mon 6 J)
 ἅπαν τὸ κέρδος αἰδικὸν ὃν φέρει βλάβην (Mon 6 M/8 J)

Ullmann 1961a

focus move close

A
 ينبغي للإنسان أن يفهم الأمور الإنسانية (Št 1, Mhb 1)
 إن الأدب للإنسان نخر لا يسلب (bH 1, Št 2, Mhb 2)
 ارفع من عنرك ما يحزنك (Št 3, Msr 8, Mhb 3, Šz 1)
 إن أمور العالم تعلمك العلم (Št 4, Šz 2)
 إن كنت ميتا فلا تحقر عداوة من لا يموت (Št 5)
 إن الأحرار يكتفون بأن يسمعوا الشيء مرة واحدة (bH 2, Mhb 4)

Figure (5)
*Ἄπασι ἀκοῦσαι τοὺς ἐλευθέρους καλόν.*³
It's good for freemen to hear something once only.
من الخير للأحرار سماع الشيء مرة واحدة.

But Ullmann's translation is *"Freemen satisfy to hear something once only."* He used the word *"satisfy"* instead of the impersonal verb *"It's good"*, I think it is acceptable and does not affect the meaning of translation.

5- What are the Challenges in building a digital translation system?

Translation has always been understood to refer to a written transfer of a meaning or message from one language to another. This is what the ancients tried to transfer to us, when they carved on the Rosetta-Stone three writings; Hieroglyphic, Demotic, and Greek languages. The Rosetta-Stone was the perfect experience for multi-language translation and was not stored on the computer but inscribed on stone.

Many of the texts in the Digital Corpus for Graeco-Arabic Studies have not been annotated till now. Some researchers prefer not to engage in corpus annotation: for them, the un-annotated corpus is the 'pure' corpus they want to investigate — the corpus without adulteration with information which is suspect, possibly reflecting the predilections, or even the errors, of the annotator. For others, annotation is a means to make a corpus much more useful — an enrichment of the original raw corpus.⁴

Now Perseids Project can fill a critical need of the digital classics community of scholars and students. Perseids supports textual transcription, annotation, analysis a large scale of data. By using tools in Perseids Project, we can re-edit Greek-Arabic translations to, and annotate them by XML. For example, one common type of annotation is the addition of *tags*, or labels, indicating the word class to which words in a text belong. This is so-called part-of-speech tagging (or POS tagging), and can be useful, for example, in distinguishing words which have the same spelling, but different meanings or pronunciation. If a word in a text is spelt *present*, it may be a noun (= 'gift'), a verb (= 'give someone a present') or an adjective (= 'not absent').⁵

The serious challenge that faces the translator to Arabic is a semantic ambiguity, many of words have multiple meaning, for example when we pronounce “ذهب” it may be a noun (=’gold’), or a verb (“ I go somewhere ”).

The benefits of tagging Greek and Arabic texts may help us to export many specialized dictionaries, like, Greek-Arabic dictionary of Aristotle, Plato, Homer,...and etc. which should help Arab scholars in their studies.

6. Conclusion:

The Researcher finds through the study that:

- I. The Digital Corpus for Graeco-Arabic Studies is most benefit to create many specialized bilingual dictionaries, as (Ancient Greek -Arabic) for Aristotle, Plato, Menander,etc., those dictionaries can help for translating the whole works of Greek writers into Arabic.
- II. The digital translations from Ancient Greek to Arabic can be re-used in a new application of machine translation for translating Ancient Greek Texts to Arabic Language, because which were translated -although plentiful- still not enough.
- III. Foundations to create a new application for digital translation:
 - a) **Human Translation:** by reading, editing, re-editing (Ancient Greek-Arabic) translations, and by using tools in the Project Presides and Alpheios.
 - b) **Translation Analysis:** Translation analysis as a Part of Translation Process.
 - c) **Machine generated Translation:** By analyzing existing translations, automated systems can produce new translations.

¹ - <https://www.graeco-arabic-studies.org/home.html>

² -Arist., Poet., 13-14

³ -Men., Sent., 6.

⁴ - Wynn M.,(2004) Developing Linguistic Corpora: a Guide to Good Practice, University of Oxford, <https://ota.ox.ac.uk/documents/creating/dlc/chapter2.htm>

⁵ - Ibid.