

Methodology of Translation Alignment of Georgian Text of Plato's "Theaetetus"

Maia Shukhoshvili

Classical Philology

Ivane Javakhishvili Tbilisi State University

Tbilisi, 0128, Georgia

Abstract

The paper considers the process, methodology and results of translation alignment from Ancient Greek to Georgian (Plato's "Theaetetus"). As a translator I discuss methodology and strategy of translation of Plato from Ancient Greek to Georgian. The methodology and model of alignment is discussed in the paper. The conclusions are introduced.

Keywords: Translation, Greek, Georgian, Alignment, Plato.

1. Introduction

To begin the alignment of translation isn't easy. One must decide, that he/she really wants to do it. It needs a lot of time and a lot of things to considerate in this process. As a translator of Plato's trilogy: "Sophist", "Statesman", "Theaetetus" from Ancient Greek in Georgian I decided to try to align my translation with source texts and started from the "Theaetetus".

2. Translation Strategy

First of all, I want to mention that when translating ancient Greek text into Georgian, you must have clear methodology and way of translation. As far as Plato's dialogues are not only philosophy but also literary works it becomes twice difficult to choose the way of translation. In the process of defining translation strategies I decided that my translation will be very close to original text even in some cases it doesn't sound nice in Georgian. Therefore my way of translation is very close to the methodology which we call as "word-for-word translation" in which the source language word order is preserved, but it also includes elements of semantical and literal translation, as the words are translated not singly by their most common meanings, but considering the context. There is a minimum change, that is, a literal translation, without regard to connotative or contextual meaning. I could say that I choose to have very precise technical translation instead of wonderful one. This fact was very convenient for alignment process as the process of translation alignment brings up some fundamental issues that are currently at the center of translation theory. Translation alignment requires a model of kinds of units below the sentence level that can contract alignment relations. First of all it needs model of translation again. But unlike translation itself alignment requires less detailed model than translation itself. Before describing methodology used in alignment process, I want to underline some peculiarities of Georgian Language.

3. Georgian Grammar

Georgian grammar is remarkably different from European languages and has many distinct features, such as split ergativity and a poly-personal verb agreement system.

3.1 Case System

Georgian has seven grammatical cases: nominative, ergative, dative, genitive, instrumental, adverbial and vocative. The nominative, ergative and dative are core cases, and due to the complex morphological-syntactic alignment of Georgian, each one has several different functions and also overlap with each other in different contexts. They will be treated together with the verb system. The non-core cases are genitive, instrumental, adverbial and vocative.

3.2 Adpositions

Georgian does not have prepositions but rather postpositions. Most of them are added to the ends of nouns. They might be written separately or together with the noun. Each postposition requires a specific case of the noun.

Only one postposition governs the nominative case (-vit - "like"), and there are no postpositions that govern the ergative or the vocative cases.

3.3 Verbal system

The Georgian verbal system is extremely complex, especially when compared to those of most Indo-European languages. Rather than using the terms "tense", "aspect", "mood", etc. separately, linguists prefer to use the term "screeve" to distinguish between different time frames and moods of the verbal system. A screeve is a set of six verb forms inflected for person and number. Verbs are traditionally divided into four classes: transitive verbs, intransitive verbs, verbs with no transitive counterparts (medial verbs) and indirect verbs. There are numerous irregular verbs in Georgian, but they all belong to one of these classes. Each class uses different strategies to build the verb complex, irregular verbs employing somewhat different formations. Georgian is an agglutinating language. Agglutination means that affixes each express a single meaning, and they usually do not merge with each other or affect each other phonologically. Each verb screeve is formed by adding a number of prefixes and suffixes to the verb stem. Certain affix categories are limited to certain screeves. In a given screeve, not all possible markers are obligatory. The components of a Georgian verb form occur in the following order:

Preverbs can add either directionality or an arbitrary meaning to the verb. To this extent they resemble the derivational prefixes of Slavic verbs. One, two or three grammatical persons can be indicated in the Georgian verb. The performer of an action is called the subject or the agent, and affected persons are patients or objects (indirect or direct). The category of number (singular or plural) is also indicated. To indicate subjects and objects the special markers are used.

3.4 Georgian syntax and verb agreement

Georgian syntax and verb agreement are largely those of a nominative–accusative language. That is, the subject of an intransitive verb and the subject of a transitive verb are treated alike when it comes to word order within the sentence, and agreement marks on verbs complex. Nominative–accusative alignment is one of the two major morpho-syntactic alignments, along with ergative-absolutive.

However, Georgian case morphology does not always coincide with verbal alignment. Georgian has often been said to exhibit split ergativity; morphologically speaking, it is said that it mostly behaves like an ergative–absolute language in the Series II ("aorist") screeves. That means that the subject of an intransitive verb will take the same case markings as the direct object of a transitive verb. However, this is not a fully accurate representation. This is because Georgian has yet another level of split ergativity. In the aorist series, intransitive verbs behave differently. Second conjugation verbs behave as would normally be expected in an ergative language: the subject is declined in the least-marked case, the nominative case (terminologically equivalent in this instance to absolutive cases in other languages). Third conjugation verbs behave as if they belonged to an accusative system: the most-marked case (the ergative) marks the subject. The division between second and third conjugations is a convenient way to remember the difference, but in fact they both contain intransitive verbs, and as a whole the behavior of these verbs follows an active alignment. In an active language, intransitive verbs are subdivided into two classes. The division is usually based on semantic criteria regarding the nature of the subject and the verb; for example, if the subject identifies an agent (an active or intentional performer of the action of the verb), then it might be marked with one case (e.g. the ergative), while if the subject identifies one who does not actively initiate it, then it might be marked with another case (e.g. the absolutive or nominative). What might be called the "most active" case, then, marks the subject of a transitive verb, while the "least active" or "most patientive" case is that used to mark a direct object. This is precisely what happens in Georgian, in the restricted environment of the second or third conjugation verbs in the aorist series. In Georgian, the classification of verbs according to the agentive or patientive nature of their subject has to do with performing an action, regardless of whether the subject is in control or not. (There are some exceptions to this: weather verbs and verbs of emission of light and sound are usually zero-place predicates, and thus have no agent at all.) The division between classes is conventional and rigid; each verb receives the class that typically corresponds to it. Where the subject is typically an active performer, it is marked as ergative, even if in some specific instances the action might be outside the control of the subject. Therefore, Georgian active alignment is said to be of the "split-S" type.

4. Alignment Strategy

After this I want to discuss several strategies used in alignment process. The alignment of the Plato's Theaetetus was done through an online tool for manual text alignment Ugarit.

The source text was imported from Perseus repository and for Georgian translation I used my own text. Ugarit serves also as a reading environment for parallel texts, it visualizes the aligned texts in very simple and meaningful way showing parallel translation pairs and their frequencies with the ability to export the alignment as XML files or the translation pairs as CSV files.

My strategy was as following:

- The start point of alignment was to read through both the source sentence and translated sentences before aligning a sentence;
- First focus was on aligning all the content morphemes;
- After all the content-morphemes were aligned it was possible to shift to align function morphemes;
- No morphemes were left unattended.

Here are some methods that I adjusted to this process:

1. Georgian translation contains a few omissions and additions to source text.
2. The large majority of aligned pairs are 1:1;
3. There are many cases when aligned pairs are “one to many” or “many to one” or “many to many”. Very often Greek verb is translated into Georgian with two or three words to express the whole meaning and vice versa. See examples in Figures (1, 2, 3, 4, 5, 6).
4. Greek Participle in Georgian is translated with finite form. For example see Figure 7.
5. There are no articles in Georgian so they are paired together with a noun. For example see Figures (8, 9, 10).
6. The same is for particles which very often function to underline several parts of speech or strengthen their meaning. They are always paired with the word they refer. For example see Figure 11.
7. The different forms of the verb “to be” (“einai”) are not separately used in Georgian and they are paired with the word which comprises “einai” in itself. For example see Figure 12.
8. In translation process very often specific meaning of phrases need some additional words to express the precise meaning in Georgian. So there are some extensions in Georgian texts which always are in square brackets. The words in square brackets are always aligned with Greek corresponding words. For example see Figure 13.
9. I also preferred to pair punctuation, but as far as it has different rules in Georgian the punctuation is paired considering its context and actual meaning.

The following research is funded by Shota Rustaveli National Science Foundation

5. Conclusion

As a conclusion of my first attempt of alignment Georgian translation with Greek source text it must be said that word alignment is the task of identifying translational relations between words in parallel texts with the aim of re-using them in natural language processing. The one-to-one word aligning approach seems to be very limited. Alignment process is very useful and interesting from the perspective of translating theory. First of all translation alignment process gives to translator opportunity to check the translation once again. Besides, it's a very useful tool for text annotation perspective as far as translating a text can be seen as a linguistic annotation task. After translation, formal annotations can be automatically derived from aligned translated texts. Translated texts are rich sources of information about language differences and translation. A fundamental step in extracting translation information from parallel text is to perform word alignment and determine which words and phrases are translations of each other in the source and translated texts.

Figure 4.

<p>Εὐκλείδης ῥηπίετο οἴκαδε : ἐπει ἔγωγ' ἐδεόμην καὶ συνεβούλευον , ἀλλ' οὐκ ἤθελεν . καὶ δῖτα προπέμψας αὐτόν , ἀπιὼν πάλιν ἀνεμνήσθη καὶ ἐθαύμασα Σωκράτους ὡς μαντικῶς ἄλλα τε δὴ εἶπε καὶ περὶ τούτου . δοκεῖ γάρ μοι ὀλίγον πρὸ τοῦ θανάτου ἐντυχεῖν αὐτῷ μειρακίῳ ὄντι , καὶ συγγενόμενός τε καὶ διαλεχθεὶς πάνυ ἀγαθῆναι αὐτοῦ τὴν φύσιν . καὶ μοι ἐλθόντι Ἀθήναζε τοὺς τε λόγους οὗς διελέχθη [142δ] αὐτῷ διηγήσατο καὶ μάλᾳ ἀξίους ἀκοῆς , εἶπε τε ὅτι πᾶσα ἀνάγκη εἶη τοῦτον ἐλλόγιμον γενέσθαι , εἶπερ εἰς ἡλικίαν ἐλθοι .</p> <p>Τερψίσων καὶ ἀληθῆ γε , ὡς ἔοικεν , εἶπεν . ἀτὰρ τίνας ἦσαν οἱ λόγοι ; ἔχοις ἂν διηγήσασθαι</p>	<p>ევკლიდესი სახლისკენ მიიქაროდა . მე კი ვთხოვე და ვურჩიე [დარჩენილიყო] , მაგრამ არ ისურვა . ცოტა გავაცინლე , უკან რომ ვბრუნდებოდი გამახსენდა და გამოვიჩინე , როგორ იზინასწარმეტყველა სოკრატემ სხვათა შორის მასზეც . ვეფიქრობ , სიკვდილამდე ცოტა ხნით ადრე შეხვდა ვერ კიდევ ჭაბუკს და მასთან ურთიერთობისა და საუბრის შემდეგ აღფრთოვანდა მისი ბუნებით . როდესაც ათენში წავიდი , [სოკრატემ] მათი საუბრების შესახებ მიამბო . [142d] ძალიან მნიშვნელოვანი იყო [მათი] მოსმენა . მან თქვა , რომ [თეეტეტოსი] აუცილებლად სახელოვანი გახდებოდა , თუკი [მონიჭულ] ასაკს მიაღწევდა .</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Figure 5.

<p>Σωκράτης μὴ τοῖνον ῥαδίως καταγιγνώσκωμεν τὸ μηδὲν εἰρηκέναι τὸν ἀποφηνάμενον ἐπιστήμην ὃ νῦν σκοποῦμεν . ἴσως γὰρ ὃ λέγων οὐ τοῦτο ἔλεγεν , ἀλλὰ τὸ ἐρωτηθέντα τί ἕκαστον δυνατὸν εἶναι τῆν ἀπόκρισιν διὰ τῶν στοιχείων [207a] ἀποδοῦναι τῷ ἐρωμένῳ .</p>	<p>თეეტეტოსი ჭეშმარიტად .</p> <p>სოკრატე ასე აღვივალ ნუ დაგვარალებთ მას , რომ არათერს ამბობს , ვინც ისე წარმოადგინა ცოდნა , როგორც ახლა განვიხილავთ . იქნებ , როცა ამბობდა , ამას კი არ გულისხმობდა , არამედ იმას , რომ ვინმეს რაიმე [საგანზე] შეკითხვა რომ დაუსვა , შეძლებს უპასუხოს საწყისების მეშვეობით . [207a]</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Figure 6.

<p>Σωκράτης τὸ μὲν πρῶτον εἶη ἂν τὸ τῆν αὐτοῦ δianoian ἐμφανῆ ποιεῖν διὰ φωνῆς μετὰ ῥημάτων τε καὶ ὀνομάτων , ὥσπερ εἰς κάτοπτρον ἢ ὕδωρ τῆν δόξαν ἐκτυπούμενον εἰς τῆν διὰ τοῦ στόματος ῥοήν . ἢ οὐ δοκεῖ σοι τὸ τοιοῦτον λόγος εἶναι ;</p> <p>Θεαίτητος ἔμοιγε . τὸν γοῦν αὐτὸ δρῶντα λέγειν φαμέν .</p>	<p>რომელი [სამიდან] ? [206d]</p> <p>სოკრატე პირველი , რომ ეს არის ვინმეს აზროვნების გასახლება ხმით მზნებისა და სახელების გამოყენებით , როგორც სარკეში ან წყალში , ისე აისახება შეხედულება პირიდან გამოსულ დინებაში . თუ შენ ამგვარ რაიმედ არ მიგაჩნია ახსნა ?</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Figure 7.

<p>Εὐκλείδης εἰς λιμένα καταβαίνων Θεαιτήτῳ ἐνέτυχον φερομένῳ ἐκ Κορίνθου ἀπὸ τοῦ στρατοπέδου Ἀθήναζε .</p> <p>Τερψίσων ζῶντι ἢ τετελευτηκότι ; [142β]</p>	<p>ევკლიდესი ნავსადგურისკენ წავიდი და თეეტეტოსს გადავიყვარე რომელიც კორინთოს სამხედრო ბანაკიდან ათენისკენ მიჰყავდათ .</p> <p>ტერფსიონი ცოცხალი [იყო] თუ მკვდარი ? [142b]</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Figure 8.

<p>Τερψίων καὶ ἀληθῆ γε , ἄς ἔοικεν , εἶπεν . ἀτὰρ τίνες ἦσαν οἱ λόγοι ; ἔχouis ἀν διηγῆσαιθαι ;</p> <p>Εὐκλείδης οὐ μὰ τὸν Δία , οὐκουν οὕτω γε ἀπὸ στόματος :</p>	<p>თეტიტოსი აუცილებელ სახელთანი გახლესოდა , თუკი მოითუელ ასაკუ მიაღწევლა .</p> <p>ტერტუსიონი როგორც ჩანს , მართალიც თქვა . მინც რა საუბრები იყო ? შეგიძლია გადმოგვცე ?</p> <p>ევკლიდესი</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Figure 9.

Reset Export as XML Export Translation Pairs Alignment Geometry

<p>Εὐκλείδης [142a] ἄρτι , ἄ Τερψίων , ἠ πάλαι ἐξ ἀγοῦ ;</p>	<p>ევკლიდესი [142a] ახლახან [დაბრუნდი] , ტერტუსიონ , სოფლიდან , თუ დიდი ხანია ?</p>
--------------------------------------------------------------------	---------------------------------------------------------------------------------------------

Figure 10.

<p>Τερψίων καὶ ἀληθῆ γε , ἄς ἔοικεν , εἶπεν . ἀτὰρ τίνες ἦσαν οἱ λόγοι ; ἔχouis ἀν διηγῆσαιθαι ;</p> <p>Εὐκλείδης οὐ μὰ τὸν Δία , οὐκουν οὕτω γε ἀπὸ στόματος :</p>	<p>თეტიტოსი აუცილებელ სახელთანი გახლესოდა , თუკი მოითუელ ასაკუ მიაღწევლა .</p> <p>ტერტუსიონი როგორც ჩანს , მართალიც თქვა . მინც რა საუბრები იყო ? შეგიძლია გადმოგვცე ?</p> <p>ევკლიდესი</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Figure 11.

<p>ἐλλόγμιον γενέσθαι , εἶπερ εἰς ἠλικίαν ἔλθαι .</p> <p>Τερψίων καὶ ἀληθῆ γε , ἄς ἔοικεν , εἶπεν . ἀτὰρ τίνες ἦσαν οἱ λόγοι ; ἔχouis ἀν διηγῆσαιθαι ;</p> <p>Εὐκλείδης οὐ μὰ τὸν Δία , οὐκουν οὕτω γε ἀπὸ στόματος :</p>	<p>142d] ძალიან მნიშვნელოვანი იყო [მათი] მოსმენა . მან თქვა , რომ [თეტიტოსი] აუცილებელ სახელთანი გახლესოდა , თუკი [მოითუელ] ასაკუ მიაღწევლა .</p> <p>ტერტუსიონი როგორც ჩანს , მართალიც თქვა . მინც რა საუბრები იყო ? შეგიძლია გადმოგვცე ?</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Figure 12.

<p>Σακράτης μετρίως ἄρα ἡμῖν πρὸς τὸν διδάσκαλόν σου εἰρήσεται [179β] ὅτι ἀνάγκη αὐτῷ ὁμολογεῖν σφωτέρων τε ἄλλον ἄλλου εἶναι καὶ τὸν μὲν τοιοῦτον μέτρον εἶναι , ἔμοι δὲ τῷ ἀνεπιστήμονι μηδὲ ὅπωποιοῦν ἀνάγκη εἶναι μέτρω γίνεσθαι , ὡς ἄρτι με ἡνάγκαζεν ὁ ὑπὲρ ἐκείνου λόγος , εἴτ' ἐβουλόμην εἶτε μὴ , τοιοῦτον εἶναι .</p> <p>Θεόδωρος</p>	<p>სოკრატე მაშ , ზომიერია შენი მასწავლებლის მიმართ ვთქვათ , [179b] რომ აუცილებელია დაეთანხმოს იმას , რომ არსებობს ერთი მეორეზე უფრო ბრძენი და სწორედ ისაა სამომხი , მე კი უკოდინარი სულ არაა აუცილებელი , რომ სამომხი გავხდე , როგორც ახლახან მიძულეხდა მისი მსჯელობა . გინდა , თუ არ გინდა , ეს ასეა .</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Figure 13.

<p>Σακράτης πολλαχῆ , ὡς Θεόδωρε , καὶ ἄλλη ἂν τό γε τοιοῦτον ἀλοίη μὴ πᾶσαν παντός ἀληθῆ δόξαν εἶναι : περι δὲ τὸ παρὸν ἐκάστῳ πάθος , ἐξ ὧν αἱ αἰσθήσεις καὶ αἱ κατὰ ταύτας δόξαι γίνονται , χαλεπώτερον εἰεῖν ὡς οὐκ ἀληθεῖς . ἴσως δὲ οὐδὲν λέγω : ἀνάλωτοι γάρ , εἰ ἔτυχον , εἰσίν , καὶ οἱ φάσκοντες αὐτὰς ἐναργεῖς τε εἶναι καὶ ἐπιστήμας τάχα ἂν ὄντα λέγοιεν , καὶ θεαίτητος ὄδε οὐκ ἀπὸ σκοποῦ εἴρηκεν [179δ] αἰσθῆσαι καὶ ἐπιστήμην ταῦτων θέμενος . προσιτέον οὖν ἐγγυτέρω , ὡς ὁ ὑπὲρ Πρωταγόρου λόγος ἐπέταττε , καὶ σκεπτέον τὴν φερομένην ταύτην οὐσίαν διακρούοντα εἶτε ὑγιᾶς εἶτε σαθρὸν φθέγγεται : μάχη δ' οὖν περὶ αὐτῆς οὐ φαῦλη οὐδ' ὀλίγους γέγονεν .</p>	<p>სოკრატე სხვაგანაც ბევრგანა ის ნაკლები , თელოროს , რადგან ყველას ყველა შეხედულება ჭეშმარიტი არ არის . ხოლო , რასაც თითოეული განიცდის , როგორცაა შეგრძნებები და მათ შესაბამისად შეხედულებების წარმოშობა , უფრო რთულია მხილება , რომ ეს არ არის ჭეშმარიტი . თუმცა იქნებ მე არათეორი ვიცი , ისინი ხომ უხრწნელია და ვინც იტყვის , რომ ისინი ნათელია და ცოდნა , ყველაზე უფრო სწორად იტყვის , როგორც თეორეტიკოსმა დაკვირვების გარეშეც ვთქვა , [179d] რომ შეგრძნება და ცოდნა ერთი და იგივეა . რაკი პროტაგორასის მსჯელობის გაუგუნის ქვეშ ვართ , უფრო ახლოს უნდა მივიდეთ მასთან და განვიხილოთ მოძრავი არსებული და</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Sources and References

Aronson, Howard I., (1990). Georgian: a reading grammar. Corrected edition. Columbus, Ohio: Slavica Publishers.

Harris, Alice C. & Smeets, Rieks (eds.), (1996). The languages of the Caucasus : indigenous languages and their speakers. Edinburgh University Press.

Lambert, A.De Gispert, R. Banchs, and J. B. Marino., (2005). Guidelines for word alignment evaluation and manual alignment.

Véronis J., (2000). Evaluation of parallel text alignment systems: the ARCADE project. In Parallel text processing: Alignment and use of translation corpora. 369–388. Dordrecht: Kluwer Academic Publishers.