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Articles

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8 Valaoritou Str., Kolonaki, 10671 Athens, Greece.
Tel.: 210-36.34.210 Fax: 210-36.34.209
Email: info@atiner.gr URL: www.atiner.gr
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President
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- Abstract Submission: **22 June 2019**
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- Submission of Paper: **8 June 2020**

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Comparing Brazilian Sign Language and Ancient Greek: Middle voice, Pausanias and Computer Linguistics

By Caio Vieira Reis de Camargo[*]

This paper aims to show a description both syntactically and semantically of the Ancient Greek middle verbs an its equivalences in translation to the Brazilian Sign Language (BLS). Based on i) how subject affectedness, fundamental feature of the Greek middle voice, can be identified in BLS?; ii) how do the semantic roles of the middle voice verbs organize themselves in BLS linguistic system?; and iii) what are the syntactic features of these verbs in BLS?; this work starts from an Ancient Greek corpus, book I of Pausanias, "Description of Greece, from the selection of the middle verbs forms found within the text and the organization of the allocated terms and the active voice form, to solve issues about syntax and semantics of the middle verbs in Greek. By using computational tools, we explore AntConc and the Computer Linguistics methods to collect and analyze the Greek verbs in order to compare to the BLS occurrences. This research is part of a bigger work involving a trilingual translation, Greek – Portuguese – BLS, of Pausanias, presented on the online platform Ugarit. The main reason is to fulfill an existent blank on the descriptive and comparative linguistic works in BLS, expand the research in Greek and computation, bring the Greek culture to the Brazilian deaf people community as well as covering the absence of a Portuguese translation of Pausanias.

Keywords: *Brazilian Sign Language; Ancient Greek: Middle Voice: Description; Pausanias.*

Introduction

The importance and contributions from the Greek world are unquestionable and recognized by the scientific community. Philosophy, Linguistics, Literature, Archeology, Pedagogy, among other areas, are heirs of a huge amount of materials that were discussed and studied by scientific works all over the world, specially the Western world. Likewise, Brazilian academic groups agree that studying the ancient cultures means to us our cultural genesis, in other words, it's somehow a way to find and understand more about ourselves.

In Brazil, we usually consider all works in Classics as a contribution due the lack of courses in this area, which are restricted to few public universities. Even graduate students often deal with few professional opportunities for a Greek or Latin professor, for example. Within such scenario, few Greek texts have a Portuguese translation, like Pausanias's *Description of Greece,* which is an extensive work that presents us a narrative that blends the empirical observation of the author as well as historical and mythological discussions about the story of

[*]Professor and Postdoc Researcher, Sao Paulo State University, Brazil.

Ancient Greece. Such material cannot be accessed in Portuguese, leaving the major and monolingual population unable to access its content.

In this way, working with Ancient Greek nowadays frequently demands building up interdisciplinary studies, like comparative approaches and the usage of new digital and technological computer upcoming tools. Based on that, what are the scientific chances to unite Ancient Greek and Brazilian Sign Language into a comparative work using technology? That was the main motivational question that started the researches that will be discussed in this paper.

Over the past few years, the Brazilian Sign Language, LIBRAS, in Portuguese, and from now on in this paper, BLS, became an official language of the country in 2002 and it has been widely and socially projected among citizens about its importance. Nevertheless, the BLS is not a reality at Brazilian schools or universities, despite the over 10 million deaf people leaving in the country and once it is not a reality among the so-called listener population, few cultural materials, like Greek texts, are accessible to deaf people. Besides, the academic works on BLS are still focused on bilingual and literacy of deaf individuals, few of them dedicate to linguistic aspects or comparison between other languages. All this considered, to bring a comparative linguistic analysis on Greek and BLS using Pausanias as corpus is a first step to open the doors for deaf people to meet this content.

In the meanwhile, the digital technological evolutions come up to us in such speed that to follow them reflects not only something claimed by professional environments but also as new important paths to find new results within scientific researches. Even though it is considered a recent science compared to others, Linguistics consolidated itself as a scientific field, starting hundreds of years ago from Ferdinand Saussure's work, and the profusion of research works developed so far offered different strands of knowledge. Whether it's lexicography, sociolinguistics, phonetics, phonology or semantics, the digital inclusion within these areas allowed a huge advance and the possibility of the researcher to visualize new work horizons. Based on that, to ally the use of technological tools for a linguistic study that goes deep into an ancient language and a sign language purposes a social, productive and innovative research strand that can be helpful in order to fulfill research blanks so far not fulfilled by previous works.

The Ancient Greek Middle Voice – Brief Linguistic Review

The middle voice is a particular feature of the Ancient Greek language, common to other old languages, but not morphologically marked in most of modern ones. In Portuguese, for example, the middle voice was replaced by the reflexive voice and its original meaning can only be semantically discussed or identified. In this section, considering the scope of this paper, we will present a few historical perspectives about the middle voice, but we will prioritize the definition of the middle in ancient Greek that we use to classify its occurrences in Pausanias as well as to compare to its equivalences in the Brazilian Sign Language.

Firstly, the studies about the middle voice show different approaches throughout the years and authors. There are works using a modern language as corpus, others that compare middle and reflexive systems among different languages and some of them bring new linguistic concepts to review the middle voice previous researches. This particular mechanism of the verb can be found in passive constructions, reflexive meanings and both transitive and intransitive verbs. Considering that, the middle voice fomented the curiosity of many researches that tried to establish its prototypic use and meaning. One of the first studies about this subject comes from Kühner and Gerth (1898: 100), who affirm that:

> "The medial form designates a speech of act which departs from the subject and returns to himself. This speech activity can be limited to the subject, like in βουλεύομαι, *I advise myself*, λούομαι, *I wash myself*, or to an object on its sphere (…) like in ἐκοψάμεν τήν κεφαλήν, *I hit my head*, κατεστρεψάμην τήν γῆν, *I subjugate the territory(…)*." (Kühner and Gerth 1898: 100).

This definition differs a lot specially from later authors. However, there are similarities to contemporary theories about the middle voice like the Starting point/Initiator (*ausgeth*, in the original) and Endpoint (*zurückgeth*) in the action chain. The authors deal with the middle voice in its restricted sense, in other words, they exclude the so-called middle-passive category, which occurs in Ancient Greek. Many studies utilize the middle construction to designate an alternative pair in which one derived member designates a generic situation like a *patient* subject and *implicit* agent. Among the linguistic studies from the 21st Century about verb voices, some formulations are listed below:

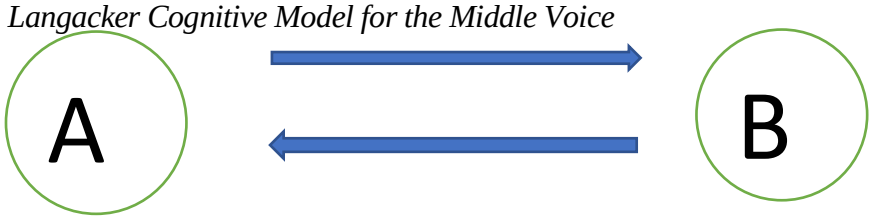
a. “The middle voice denotates that the subject is, somehow, involved or interested in the verb action.” (Gildersleeve 1911: 64);
b. "Verbs (...) that have the position in the sphere of the subject in which the subject appears to be participant or implied." (Brugmann 1903: 104)
c. "In the active voice, the verbs denote a process that is accomplished from a subject and without it; in the middle, which is the *diathesis,* the verb indicates a process in which the subject is the focus; the subject is inside the process.” (Benveniste 1966: 172)
d. “In Indo-European and in Greek, the middle endings indicate that the subject is interested in the process in a personal way.” (Meillet 1937: 244).
e. “The implications of the middle (when opposed to the active) are that the action or state affects the verb subject or its interests.” (Lyons 1969: 373)

Based on those definitions, it is clear that Gildersleeve (1911: 64) and Meillet (1937: 244) focus on the interest of the subject within a sentence; in the meanwhile, Brugmann (1903: 104) and Benveniste (1966: 172) refer to the notion

that the subject participates and it is internal to the process. The definition of Lyons (1996: 373) uses the verb affectedness in a broader sense, broad enough to be applied to all the meaning of the middle voice and it's the closest definition to the more recent ones, once it deals with the passive and the reflexive meanings. On the other hand, Meillet (1937: 244) is more commonly used by the grammar and learning methods, evidencing the subject affectedness, which is a feature of the middle voice but not the only one and sometimes not a very clear one. This is the same thought that Humbert (1964: 65) shows us when saying that within the middle voice "the action accomplished has to the subject eyes a personal signification, which means that the action refers to the subject itself or to what constitutes his own sphere".

The main theoretical pillar of our research is based on the functional-cognitive theory, based on Langacker (1987, 2000: 120) cognitive model, according to which the middle voice can be defined as the usage of the verb where the subject somehow suffers the effect of the event. This effect can be of physical nature, mental, direct or indirect. This is what is represented by the Figure 1.

Figure 1. *Langacker Cognitive Model for the Middle Voice*



The narrows indicate the process expressed by the verb and, in this case, it shows the *subject affectedness,* main feature of the middle voice. The action that departs from A somehow had effect in itself; in other words, A was affected by the process and it's this affectedness that distinguishes it from the other verb voices: active and passive. Except from the middle-passive, all middle constructions can be represented by this model, thus we call it the prototypical model. Another important study and definition came from Kemmer (1993: 211) who affirms that even though the middle uses can be diverse, it's the relative distinction of the participants the main semantic property.

> "Relative distinction of the events can be though as the degree in whish different schematical aspects of a situation are separted and seen as distinct by the speaker, who can choose emphasize or not the resolution that a particular event is seen, in order to emphasize its internal structure (syntax) to a bigger or smaller extension" (Kemmer 1993: 211).

This property, according to the author, englobes the notion of subject affectedness and hence the middle voice can be displayed in a gradual scale of two extremes, between two participants event and events of one participant. For Kemmer, the fundamental notions to interpret the semantics of the middle voice are *Initiator* and *Endpoint*, whereas the transitive sentence is the basic conceptual model to understand these notions that are general semantic roles and incorporate many others more specific. *Initiator* brings the roles that involve a conception of

"starting point", just like *agent, experiencer and mental source. Endpoint* brings more concrete semantic roles, grammatically speaking.

As mentioned before, the ancient Greek grammars point out the existence of three verbal voices within the language, all morphologically marked: active, passive and middle. Compared to modern languages, specially to the Romance languages, the first two operate with similar mechanisms, while the middle is still restricted to the classic ones. It's frequent that an ancient Greek student, in the beginning of the course, associates the middle voice to the reflexive voice, especially if his is Brazilian. Nevertheless, when he starts to meet the Greek texts and all the middle voice variation and usages, he finds himself dealing with the blanks of the equivalences in his native language.

The Greek middle voice is characterized by the subject affectedness. In other words, in a sentence the subject is somehow affected by the action or process expressed by the verb. Based on this definition, one of the most complete works on the Middle voice belongs to J. Allan (2003), which is based on cognitive and semantic concepts, a corpus-based approach, and the thesis that the middle voice is a complex network category. He considers the types of the middle voice involved in a semantic and polysemic relation with similarities and differences. His eleven classifications are listed below:

Passive Middle
Mental Process Middle
Collective Motion Middle
Direct Reflexive Middle
Mental Activity Middle
Indirect Reflexive Middle
Spontaneous Process Middle
Body Motion Middle
Reciprocal Middle
Perceptive Middle
Speech Act Middle

In our previous research work about the Middle voice in Pseudo-Apollodorus' *Library,* we narrowed down these groups to seven categories and they are the ones we consider in this paper for our analysis, which are:

Processes
Reflexive Middle
Reciprocal Middle
Speech Act
Mental Process Middle
Displacement Middle
Perceptive Middle

Two considerations have to be made. Firstly, the reduction of Allan's categories is a way to facilitate the classification of the Greek middle verbs from our corpus, once some groups hosts features from minor ones. Still, Allan's work shall remain as a reference within the linguistic studies about the Greek Middle voice. Secondly, all the categories we exposed must be evaluated from the semantic role of the sentence subject, which are *agent*, *experiencer*, *recipient, patient and beneficiary.* As mentioned before, once the middle voice is morphologically marked, it's possible to list its occurrences on a text, but this task comes with a few obstacles. After the recognition of the endings of the verbs, there is an ambiguity problem; sometimes a Greek verb form can belong to more than one time, mode or voice. For instance, middle and passive share the same endings for present, imperfect, perfect and plus perfect and are distinguished only in future

and aorist forms. Consequently, when we face one verb ending, the first step is to verify if we are dealing with a passive or middle form. Besides, active and middle can share the same forms, i.e, εὐστοχῆσαι; it can correspond to the third person of the optative active aorist; to the infinitive active aorist or the second singular person of the middle imperative aorist. Once this problem is set, it's necessary to analyze the context in which the sentence is, in order to solve the ambiguity problem. After identified it's a middle form, the context analysis is made classifying it in one of the groups we defined. Our first example brings the verb ἠμφιέσατο, *to dress yourself*, which has no ambiguity form, in other words, it cannot be thought as an active form instead of middle.

> "Ex.1) [...] καὶ χειρωσάμενος τὸν λέοντα τὴν μὲν δορὰν **ἠμφιέσατο** [...] - (Apol. *Biblio.* 2.4.10) - After defeating the lion, he **dressed himself** with the skin [...] "

After we understood the context and once it's an action that the subject performs on himself, it's a Reflexive Middle. With all content all the middle voice presented, we shall talk about the Brazilian Sing Language structure in order to compare to the Greek verbs.

LIBRAS - Brazilian Sign Language (BLS)

It was during 1960 when the Sign Language conquered language status, but still nowadays many people think about it as a code or a universal system of communication or even an amount of gestures that try to imitate an oral language. Among researches and the scientific community, it is proved that the Sign Languages can be normally compared in complexity and expressivity to any oral language and everything, like literature, linguistics, philosophy or psychology can be discussed. A sign language is so defined because it is composed by linguistic levels: phonological, morphological, syntactic and semantic; for example, what we call *word* or *lexical item* in a oral language is called *sign* in a sign language.

Just like every language in the word, a sign language suffers variation; in Brazil, once it's a huge country, same meanings have different signs all over the national territory. Moreover, the sing language increases its vocabulary with new signs introduced according to the cultural and technological changes; in other words, the deaf people community will come up with news signs as long they are needed. However, just like we mentioned, once the BLS is not taught at schools or known by the majority of the listener population, deaf individuals are restricted to small social and cultural bubbles, leaving them far away from the academic community and different areas of knowledge, such as Ancient Greek.

LIBRAS, Brazilian Sing Language, or BLS, is the mother language of Brazilian deaf people. Its signs are formed from the combination of the movement of the hands with a certain format and place, which can be part of the body or in front of it. These hand articulations can be compared to phonemes, sometimes to morphemes, and are called parameters, which are five in BLS. These parameters

will be used to check if the Greek middle voice semantic feature, subject affectedness, can be found in BLS. In order to understand it, we shall present them briefly.

Hand Configuration

We call hand configuration the form of the hands when performing a sign. In BLS, they represent 64 possibilities and are made by the dominant hand (right or left, depending on the person) or by both when demanded by a sign. They represent the graphemes in Portuguese and some words have the same hand configuration, like, in Portuguese, *to learn, Saturday and spray deodorant,* from left to right, respectively, on Figure 3.

Figure 3. *Hand configuration in BLS*

Point or Articulation

We call point of articulation the place where the dominant hand is set, which can be touching a part of the body or in a neutral and vertical space (from the middle of the body to the head). In Figure 4, first line, from left to right, *to work, to play* and *to flert*; second line, from left to right, *to forget, to learn* and *to memorize*.

Figure 4. *Point or Articulation in BLS*

Movement

The signs may have movement or not and it can also vary in intensity, depending on the meaning the emitter wants to express. For example, *to laugh, to cry* and *to meet*, first line of Figure 5, from left to right. Signs that have no movement can be *to knee, to seat* or *to stand*, second line from left to right in Figure 5. Finally, when the movement intensity changes the meaning, we can cite *beautiful* and *very beautiful*, just as in Figure 6.

Figure 5. *Movement in BLS*

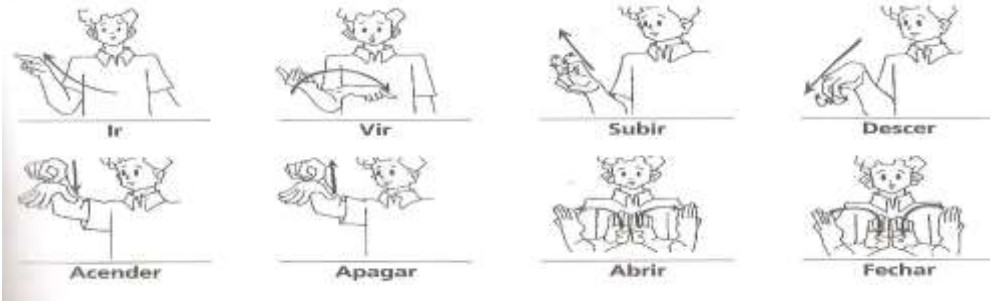
Figure 6. *Beautiful in BLS*

Note that in the last one, the emitter has to repeat the move in order to show the emphasis of the adjective. This intensity is one of the possibilities that the middle voice semantics will appear in the BLS, but we shall discuss it later.

Orientation/Direction

All signs performed with any of the previous parameters have a direction. For example, *to go* and *to come; to go up* and *to go down* (all first line from left to right in Figure 7); *to ascend* and *to erase; to open the door* and *to close the door* (second line, from left to right in Figure 7). The direction is also one possibility for the subject affectedness, once in can indicate the emitter is affected by a verb that he/she expresses.

Figure 7. *Orientation in BLS*



Face or Body Expression

It's very common for someone who does not know BLS to ask about the expressions, or face masks, performed by the deaf person or interpreter. Many signs have as a distinctive feature in the face or body expression, just like in the words *happy* and *sad.* Some signs are made only with the cheek, like *to have sex* or *thief* (all first line of Figure 8, from left to right). At last, in some signs the face expressions complement the manual traces, like in *helicopter* or *motorcycle,* second line of Figure 8 from left to right.

Figure 8. *Face or Expression in BLS*

After this brief exposition of how the BLS parameters build up the meaning of the signs, the main question of this paper shall be brought back: can the subject affectedness of the Greek middle voice be identified, in any level, in one of these parameters? That will be discussed after a brief presentation of the methodology we used.

Antconc, Corpus Linguistics and Computer Tools for Linguistic Researches

Corpus linguistics, as a methodological resource, has tools that allow the description of several linguistic aspects and, therefore, it permits us to expand the scientific horizons of the researches. As Berber-Sardinha (2000: 3) points out:

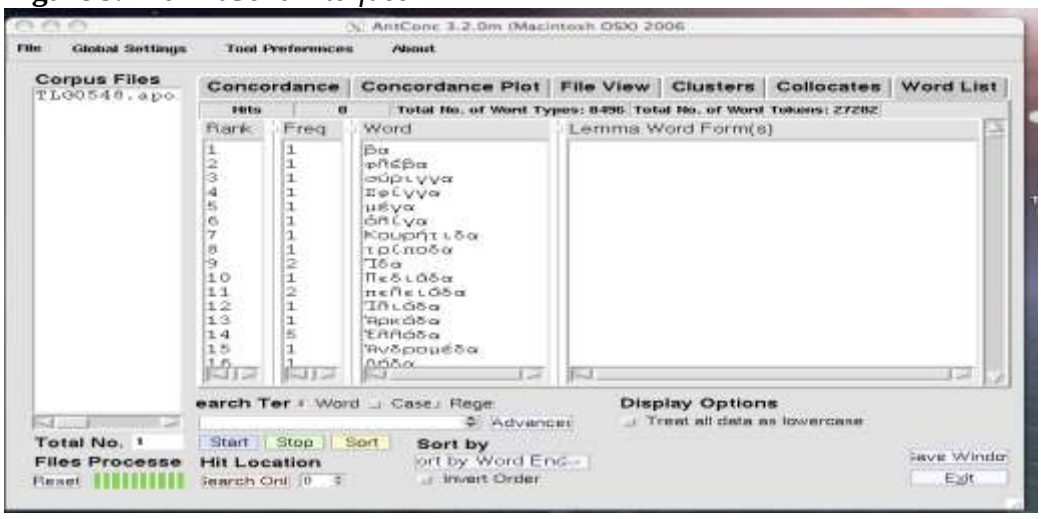
> "Corpus Linguistics deals with the collection and exploitation of corpora or set of textual linguistic data that have been carefully collected for the purpose of searching for a language or linguistic variety. As such, it engages in the exploration of language through empirical evidence, extracted through a computer" (Berber-Sardinha 2000: 3).

The author thinks about language as a probabilistic system that must be studied in an empirical approach, based on the assumption that the theoretical possibilities, such as the categories used in the classification of linguistic traits, do not coincide with the frequency of occurrences. In this descriptive research, corpus linguistics seems to fit the objectives we propose. Through the resources associated with corpus linguistics, such as automatic listing of lexical items in

alphabetical, frequency and final order, it was possible to carry out the following steps: a) to identify and map the occurrences of middle-passive in the proposed corpus, selected by the chosen computational programs; b) to make the concordances, analyze the co-text, the collocations and clusters of the forms found and to compare them with the theoretically defined classifications as the average voice, observing the semantic field of the medial in the corpus; c) to raise the phrasal patterns, or syntagmatic units using the verbs in the form and in the sense of the average voice, based on the frequency of their occurrence.

Regarding the use of computational tools, we made a word list in order to find the middle voice verbs in our corpus. The software selected for the task was Antconc, in version 3.2.0, available for free on the web. First, we used the file in *txt* format; with the file opened, we selected the option to create a word list, still activating the criterion of separating all the words by its termination (Sort by word end). That is shown in Figure 9.

Figure 9. *The AntConc Interface*



Since the middle voice in Greek is morphologically marked, it becomes possible, from this list with word endings, to find its occurrences in the selected text, but this leads to the ambiguity problem we mentioned previously. Therefore, it was important to list all the possible verb forms as below:

MIDDLE PRESENT
-ομαι -σει -εται -όμεθα -εσθε -ονται

MIDDLE AORIST
-σαμην -σω -σατο -σαμεθα -σασθε -σαντο

MIDDLE FUTURE
-σομαι -σει -σεται -σόμεθα -σεσθε -σονται

MIDDLE IMPERFECT
-ομην -ου -ετο -ομεθα -εσθε -οντο

After we checked the context and the middle forms were identified, the comparative analysis could be started.

Comparing BLS and Ancient Greek – The Subject Affectedness

After discussing the theoretical approach of the middle voice and some linguistic issues about the BLS, it is time to bring them together in order to recognize the semantic aspect of the middle voice in BLS. The comparative process of the Greek Middle voice and its translation to the Brazilian Sign Language followed these steps: a) gathering the amount of middle occurrences in Pausanias Book 1 and its classification; b) checking how many tokens/types exist among those occurrences; c) checking in how many BLS translations of these types subject affectedness could be identified.

Table 1. *Comparison of the Greek Middle Voice and its Translation to the Brazilian Sign Language*

Middle Group	**Tokens**	**Types**	**Results**
Process	398	71	32%
Mental Process	83	24	7%
Displacement	228	54	19%
Reciprocal	43	11	3,5%
Perceptive	36	07	3%
Act of speech	65	43	5,2%
Reflexive	399	84	32%

It's important to mention that we have considered the deponent verbs in Greek, i.e., verbs that only occur in a middle form. Besides, even thought we have analyzed every occurrence, here we will demonstrate a few examples of each category.

Process

The middle process points out a subject that is patient or experiencer of the verb process. In this group we find verbs like γίγνομαι *to become*; τρέφομαι *to grow up*; ἀπόλλυμι *to die*. In BLS translations, the emitter marks the subject affectedness in two moments: marking that he is involved in the process and showing that the process comes from someone else to him.

> "Κλεομένει δὲ παῖδες **γίνονται** πρεσβύτερος μὲν Ἀκρότατος, νεώτερος δὲ Κλεώνυμος – Cleomenes had two sons, the elder being Acrotatus and the younger Cleonymus […]" (Paus. *At*. 1.13.5)

One thing is important: the subject of the sentence is παῖδες, but in the translation it changes to the dative word κλεομένει, due to syntax equivalences. But note that in BLS, there is a difference when *I give birth to a child* and someone else does. In the first example, the emitter will point out, repeatedly, that he is the responsible for that and because of that the affectedness can be identified.

Mental Process

In the mental process middle, the subject experiences a mental affectedness and, therefore, he is an experiencer of the verb. The mental process group also shows subject affectedness specially in the face or body expression in BLS. In this case, once the mental process is directly involved to him, he shows his involvement, which does not happen when he talks about someone else.

> "τοῦ δὲ τρίτου τῶν τοίχων ἡ γραφὴ μὴ **πυθομένοις** ἃ λέγουσιν οὐσαφής ἐστι [...] (Paus. *At.* 1.17.3) - The painting on the third wall is not intelligible to those unfamiliar with the traditions […]"

In this case, showing the mental process verb is common in BLS through the face expression. The emitter will mark that he does not really know anything about that.

Displacement

In the displacement middle, the subject moves from a place to another, individually or collectively. The only group of no subject affectedness identification is the displacement middle. The displacement indication in BLS is more concerned about orientation, position from where to where, than pointing out an affectedness.

> "ὁ δέ οἱ παῖς Ἀγαθοκλῆς **συστρατευόμενος** τότε πρῶτον ὑπὸ τῶν ετῶν ἑάλω (Pau. *At.* 1.6.6) - […] but his son Agathocles, who was serving with him then for the first time, was taken prisoner by the Getae […]"

Subject affectedness cannot be clearly identified in this example and among others.

Reciprocal

The reciprocal middle shows a subject that is responsible for the verb process which somehow comes back to him. The reciprocal middle is marked in all cases in BLS by the movement of the hands. The signs show that these processes involve both participants in a reciprocal act.

> "ἐπανήκων δὲ Λακεδαιμονίους ὑπερβαλέσθαι φαίη τὴν ἔξοδον, εἶναι γὰρ δὴ νόμον αὐτοῖς μὴ πρότερον **μαχουμένους** ἐξιέναι πρὶν ἢ πλήρη τὸν κύκλον τῆς σελήνης γενέσθαι [...] (Paus. *At.* 1.28.4) - On his return, he said that the Lacedacmonians had postponed their departure because it was their custom not to go out to fight before the moon was full."

Note that in BLS, the emitter will repeatedly point out the verb process is related to him and a second person. If the verb is *to fight*, the emitter will check that this fight is between him and someone else all the time.

Perceptive

The perceptive middle is a kind of verb voice where the subjects perceives something by the senses. The perceptive middle is the least marked group of all middle forms. It is only marked by the subject point out he is the one smelling or seeing, for example.

> **"[...] θεασάμενος** δὲ ἢ πεπυσμένος ἐμνημόνευσεν ἂν πολύ γε πρότερον ἐμοὶ δοκεῖν ἢ Πυγμαίων τε ἀνδρῶν καὶ γεράνων μάχης. (Pau. *At.* 1.12.4) - but if he had seen or heard about it, he would, in my opinion, have been much more likely to speak of it than of the battle between the dwarf-men and cranes."

It's important to mention that when the perception is totally related to the emitter, in BLS the face or body expression will be intensely marked and that is evident when compared to a sentence in which he talks about someone else being affected by the sense and the face expression is neutral.

Act of Speech

The Act of Speech middle is a construction where the subject is involved in the act of speech. It is totally marked by the face or body expression. Mourning or accusing in Greek, for example, when translated to BLS will be surely marked by an emitter using his expressions of anger or sadness.

> "ἐσελθοῦσι δέ εἰσι βωμοί, Ποσειδῶνος, ἐφ' οὗ καὶ Ἐρεχθεῖ θύουσιν ἔκ του **μαντεύματος** [...] (Pau. At. 1.26.5) - Inside the entrance are altars, one to Poseidon, on which in obedience to an oracle they sacrifice also to Erechtheus […]"

The act of speech verbs will be used by the emitter in BLS with the face or body expression marking his relation to the verb process. For example, when accusing someone, the face expression will automatically join the sign of *to accuse* in order to check the emitter involvement in the process.

Reflexive

The middle reflexive is the biggest group of middle classes in our corpus and it shows a subject that can be experiencer, beneficiary or, less frequent, recipient. It has the subject affectedness constantly marked in BLS. It is showed by two forms: firstly, the sign direction will point out the verb process is being performed on the

subject; secondly, the speaker will constantly show that he is responsible for the process and is directed involved in it.

> "τὰς μὲν δὴ πολλὰς Φίλιππος τῶν πόλεων εἶλεν, Ἀθηναίοις δὲ λόγῳ **συνθέμενος** ἔργῳ σφᾶς μάλιστα ἐκάκωσε [...] (Pau. *At.* 1.25.3) - Most of their cities Philip captured; with Athens he nominally came to terms, but really imposed the severest penalties upon her […]"

The reflexive is a very common occurrence in BLS and it can also be seen, for example, during religious texts. If the blessing is over the emitter, his hand will turn to himself. Otherwise, it points out to another person. It the reflexive construction is marked by an expression; it follows the paradigms of other middle groups.

To sum up, over our analysis, we can get to three situations:

a. the semantic feature subject affectedness is also marked in BLS translated verbs by face expression, over 80% of the cases, showing the emitter is affected by the verb process, just like in the perceptive or the reflexive;
b. the subject affectedness is marked in BLS by the orientation, repeating movement to show the emitter is affected and this represents the second most probable case;
c. the BLS verb translation shows no middle semantic feature over its parameters, which only happened in the displacement Greek group and they are the minority.

Conclusion

In this paper, we discussed about the possibility of the Greek middle voice semantic feature, subject affectedness, be recognized or identified in its translation to the Brazilian Sign Language. After settling a theoretical path throughout the linguistic studies about the middle voice and pointing out how the Brazilian Sign Language build up the signs and meanings based on four aspects: hand configuration, point of articulation, orientation and face or body expression. Once showed our methodological tool, the AntConc software, to collect the examples, we compared both languages and reached the results that subject affectedness can be identified in, at least, one of the elements of meanings in BLS, the expression of face or body was the most recurrent, followed by the orientation of the signs. Finally, only in one case of middle verbs the subject affectedness is not clearly marked, the Greek displacement one.

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The Effect of Etymological Instruction on Receptive and Productive Vocabulary Learning of Adult EFL Learners in Turkey[1]

By Taher Mahmoudi[*] & Meryem Mirioğlu[±]

This mixed-method study assesses and evaluates the effect of etymological and morphological vocabulary instruction on the adult EFL learners' receptive/ productive vocabulary knowledge. Indeed, the primary purpose of this study is to observe the impact of etymological and morphological instruction on adult B1 level (CEFR) EFL learners in Turkey. Forty-eight adult EFL learners were selected and randomly assigned to two groups (24 participants in each), one as the experimental and the other as the control group. Two tests were prepared by using Wesche and Paribakht's (1996) Vocabulary Knowledge Scale (VKS) to test receptive and productive vocabulary knowledge. The tests were administered to both groups before and after the study. While the experimental group's participants received etymological and morphological instruction for two months, the participants in the control group were taught through conventional school instruction. Statistical results and the interviews revealed a significant and positive effect of etymological and morphological instruction on the experimental group members' receptive and productive vocabulary learning.

Keywords: *Etymology, Morphology, Affixation, Receptive vocabulary, Productive vocabulary, Teaching English*

Introduction

It is impossible to communicate in a language without vocabulary knowledge, and it is postulated that the first step in learning language is the learning and retention of thousands of words. For learning words quickly, teachers and learners use many strategies. One of the most critical and negotiable strategies for vocabulary building is etymological and morphological instruction. Etymology is the study of the origin, historical development of words and the history of a linguistic form (as a word) by tracing its development since its earliest occurrence in the language, transmission from one language to another, analysing words' components, its cognates in other languages or its cognates to a common ancestral form in an old language, and it is the study of the morphology or affixation analysis of a language to separate roots (The New Oxford Dictionary of English 1998). It is believed that etymological and morphological instruction facilitates vocabulary learning (Pierson 1989, Matthews 2001, Weber 2007, Chatzisavvas 2015). This study seeks to answer the effects of etymological and morphological instruction on Turkish EFL learners' receptive and productive vocabulary development.

[*]Researcher, Cukurova University, Turkey.
[±]Lecturer, Cukurova University, Turkey.
[1]This paper constitutes the main part of the PhD study supervised by Dr Meryem Mirioglu.

Review of Literature

As early as 1924, researchers note that the growth in reading power relies on continuous growth in word knowledge: Meaning/Oral Vocabulary, Receptive Vocabulary, and Literate Vocabulary (Pikulski and Templeton 2004: 1). Combining morphological elements including affixes, i.e. suffixes and prefixes along with word roots and base words, that are also known as derivational and lexical morphemes, has been one of the most common methods of creating new words in the English language. The way this process works could be regarded as one of the most useful understandings required to grow vocabulary. In case it is learned by students, they are equipped with a very powerful prerequisite in this regard (Anderson and Freebody 1981, Pikulski and Templeton 2004). Understanding these structures in language learning comprises knowledge about etymology and morphology of a language.

Some studies have been done by researchers like Pierson in 1989 about the importance of using etymology in teaching English through qualitative review research and Hutcheon et al. argued the importance of written spelling instruction through etymology in 2012 and Chatzisavvas argued the profits of etymology in vocabulary development of Greek ESL students in 2015. After learning phonics, phonology-orthography relationships and understanding onset/rhyme awareness and syllable, it is required that students realize the essence of morphological structure, which is a subset of etymology, and historical linguistics because it is this structure that secures the connection among vocabulary, spelling, words, sentences and reading comprehension (Rothstein and Rothstein 2008). It is also known to all that the students equipped with the proper morphological foundation are better readers and writers (Weber 2007).

In some studies, the importance of morphology is emphasized, and it is claimed that in case students lack morphological instruction, the learning process might be impeded when they face a text in which they may find permutations and word combinations with quite the same meaning. Regarding students who lack morphological foundation, it could be said that they might not be able to get hold of the history, which enables them to collect words in order to convey the same concepts or to realize what makes English, English (Matthews 2001).

Rothstein and Rothstein (2008) in their book include a chapter for clarifying and showing the interrelation among five significant aspects of language (phonology, morphology, etymology, semantics, and syntax) which is necessary to supply useful instructional models in order to improve language learner literacy.

Regarding native English speakers, if we have an overview on studies which are related to native students, being cognizant about, morphemic structure is of paramount importance in reading and understanding texts of academic nature especially over the years of high school as Nagy et al. (1989) concluded that almost sixty per cent of unknown words that native English students face in the middle school years and beyond are complex in terms of morphology and transparent enough in terms of meaning and structure; therefore, students might be incapable of reading and inferring the meaning of words in context. As it might be expected, "morphological awareness and reading derived words are significantly

related to reading comprehension by the upper elementary years" (Carlisle and Stone 2005: 433).

As this study was carried out with Turkish speakers of English as a foreign language, it is better to know that the Turkish language is categorized as an agglutinative language. So, any agglutinated morpheme maintains its positional, semantic, and phonological property in the word in which it is employed. The Turkish language originates from the Turkic family. All languages belonging to this family resemble each other concerning linguistic structure. Verb-final word-order, vowel harmony, and agglutinative morphology are among the typological resemblances (Carki et al. 2000). According to a study, Turkish children are capable of accurate decoding of complex pseudo-words very early (Oney and Durugunoğlu 1997) and learning to take notice of the ends of the words. They, therefore, become very cognizant of any word-end grapheme-phoneme manipulations (Durgunoglu et al. 2002). Mu (2019) emphasizes the mastery of analysing words focusing on their core meaning which helps to understand other forms combined with various affixations. Once the learners are explicitly trained about such word analysis, they can then easily apply it to other words making vocabulary learning more meaningful, enabling them to retain the newly learned words.

Reading comprehension occurs after understanding the vocabulary in the context, and it is impossible to understand a text without vocabulary knowledge. There are many recommendations, strategies, and teaching methods proposed by teachers and researchers for vocabulary building which have their base in logician and cognitive approaches because it is related to brain, memory, and overall in cognition. In the process of learning, the most important factors are the memory and cognitive activities of the brain.

Knowledge sources employed in lexical inference have been categorized by Haastrup (1991). He categorized them into contextual, intra-lingual, and inter-lingual ones. The intra-lingual knowledge includes knowledge about the syntax of the target language and the target word orthography/ phonology, lexis, morphology, collocations, word class, and semantics. Inter-lingual knowledge includes knowledge about the first language and other languages. Contextual knowledge could be attributed to the knowledge about the content of the text, i.e. co-text, and knowledge of the world. Analytic processing and holistic inferencing have also been differentiated by Haasturp. While holistic inferencing includes foreseeing in accordance with the context, i.e. relying on the knowledge of the world in terms of conceptual or schematic knowledge (p.124), analytical processing is the investigation of the linguistic elements of the target word. All knowledge about language is clustered in the brain, and the most crucial case of the noticed theory is schemata theory. In 1932, schema theory was proposed by Frederic Bartlett during working on constructive memory (Psybox Ltd 2002). He regarded schema as a part of top-down processing and declared schemas to be structures of knowledge stored in the long-term memory (Psybox Ltd 2002).

Moreover, Rumelhart (1980) has illustrated schemata as "building blocks of cognition" that are used in the process of understanding sensory data, in repossessing information from memory, in managing goals and sub-goals, in

allocating resources, and in leading the flow of the processing system. Widdowson (1983) has redefined schema theory from an applied linguistics view. He proposed two levels for language, including a schematic and a systemic level. He explained that the first one relates to our background knowledge, while the latter includes morphological, phonological, and syntactic elements of language. Rumelhart claimed that if our schemata are unfinished and do not offer an understanding of the incoming information from the text, we will have trouble in processing and understanding the text (Psybox Ltd 2002).

It is believed that etymological and morphological instruction facilitates vocabulary learning (Pierson 1989, Matthews 2001, Weber 2007, Chatzisavvas 2015). Moreover, Pierson (1989) discussed the importance of using etymology in teaching English through qualitative review research and some researchers such as Chatzisavvas (2015) argued the profits of etymology in vocabulary development.

Ausubel et al. (1968) believe that being informed about the historical outlook and changes in the forms of words in the English language might result in better understanding of the true spirit of learning the English language, and it may make the vocabulary process more meaningful. Cognitivism looks at learning as mental and information processing, where the learner uses three different types of memory while learning, which are the sensory store, working memory (short-term memory) and permanent memory (long-term memory) respectively (Carroll 2000). Sensations are received via the senses into the sensory store before processing. "The information persists in the sensory store for less than one second. The duration in short-term memory is almost 20 seconds. If the information in short-term memory is not processed efficiently, it is not transferred to long-term memory for storage" (Ally 2013). The transferred data to long-term memory depends on the depth and quality of processing in short-term memory. The deeper the processing, the more associations happen and the acquired new information shapes in memory. The information which is transferred from short-term memory is assimilated and accommodated in long-term memory. During assimilation, the information is modified to fit into existing cognitive structures. Accommodation occurs when an existing cognitive structure is modified to unite the new information (Anderson 2008). It seems that etymological and morphological instruction deepens the processing of new words and helps them to transfer in the language learners' long-term memory. Moreover, Pierson (1989) claims that etymology and its instruction can provide students with purposeful linguistic principles and information for the learners.

Likewise, Zolfagharkhani and Moghadam (2011) studied The Effect of Etymology Instruction on Vocabulary Learning of Upper-Intermediate EFL Persian Learners and findings show that Persian learners received positive results from etymological instruction. These studies illustrate that etymological instruction does have a practical benefit in learning vocabulary in the English language. Moreover, Stockwell and Minkova (2001) declared that etymology could be helpful for students to enlarge their vocabulary size.

Bowers and Cooke (2012) believe that Morphological Instruction could be understood both through morphology and etymology since learners not only are required to realize word change, but also the word meaning. On the one hand,

etymology provides them with a meaning, and it establishes a link to word acquisition, cognates, and history and in a research, Eğecioğlu (1996) carried out a study with junior students of English language of a public university in Turkey. The results revealed that teaching morphology to language learners is a useful tool for learning vocabulary. Integrating a semester-long morphological instruction into the specially designed reading writing a course for three hours a week, showed that, if the learners know the Greco-Latin word parts, they not only remember the words and terms better but also guess the word meanings more accurately. Besides, Bellomo (2005, 2009) in his study with a college preparatory reading class, students at a school in the United States revealed this fact that both native and foreign English speaking students lack vocabulary knowledge level necessary for higher education. His findings indicated that language learners recorded paramount progress by getting explicit instruction in Latinate word parts and vocabulary.

Similarly, Golaghaei and Kakolian (2015) studied the effect of visual and etymological treatments on learning idioms among intermediate English language learners. From among 116 learners they have selected seventy-nine students of an English school based on their performances on the Longman complete course for the TOEFL test. They then assigned the students into three experimental groups. At first, a pre-test of idiomatic expressions, including 48 idiomatic items, was administered to the participants in all groups. During the instructional period, the groups were taught a group of abnormally decomposable idioms through different treatments, namely, visual, etymological, and a combination of visual-etymological elaboration. At the end of the instructional period, a post-test, which was the same as a pre-test, was given to all students. The results of their data analysis revealed that the etymological treatment was more effective than visual aids on learning idioms and the visual-etymological treatment was the most effective one.

Moreover, Saeidi and Mirzapour (2013) examined the relationship between morphological awareness and listening comprehension ability of Iranian EFL learners. Forty students (25 females and 15 males) majoring in ELT participated in their study and were randomly divided into control and experimental groups with 20 participants in each group. Four little listening passages were used as the pre-test, which included 30 tokens of words with morphemic structures. The results of the pre-test revealed no significant difference between the two groups. Then, four one-hour sessions were held for the experimental group as the treatment sessions. Finally, four short listening passages were used as the post-test. The results showed a significant difference between the two groups and revealed a significant relationship between morphological awareness and their listening comprehension ability.

Interestingly, Soleimani and Mohammadi (2015) studied the effect of the etymology of an additional language on EFL learners' vocabulary retention and found significant relationships and effects of an additional language (Arabic Literature) on vocabulary retention of 60 EFL learners.

Meaningful learning that is sought by educational psychologists could be offered by etymology, i.e. investigation of the origin of words. This is a kind of

learning associated with prior learning and could be more generalized and maintained that makes it superior compared to the uncomplicated rote learning of vocabulary.

Research Questions

The present study aimed at exploring the effect of etymological and morphological instruction on receptive and productive vocabulary learning of adult EFL learners in Turkey. Specifically, the study set out to provide answers to the following research questions:

RQ1. Is there any significant difference between the pre-test and post-test scores of receptive vocabulary of the control and experimental groups?
RQ2. Is there any significant difference between the pre-test ant post-test scores of productive vocabulary of the control and experimental groups?
RQ4. What are the general opinions of experimental group members about etymological ant morphological teaching?
RQ5. What are the reasons that experimental group members support or do not support this strategy?

Methodology

Experimental Design

This study utilized an experimental design. Two groups were randomly assigned to as an experimental group and a control group. Both groups took two pre-tests and two post-tests. However, only the experimental group received an etymological and morphological treatment and a semi-formal interview to gather their opinions about the vocabulary training.

Participants

48 English-preparatory year students studying at Adana Science and Technology University were selected randomly for the study.

In each group, 14 students were males and 10 students were females. Both groups were given two pre-tests in the beginning of the study and the same tests were administered at the end of the study, as well.

Procedure

First, to assess the type of vocabualry teaching strategies (VTSs) already employed in the English classes, five instructors and five participants from the control and experimental groups were interviewed via audio recording and the recordings were then transcribed. From these interviews, we found out that

etymological and morphological vocabulary instruction was not among the strategies used by the instructors. When the instructors were asked what kind of VTSs they generally use in vocabulary instruction, none of them mentioned etymological or morphological instruction as their applied strategy in their classes. Students from both groups also reported similar views concerning vocabulary teaching strategies to which they were exposed in their reading classes.

Also, to have a more definite overall picture about the way unknown vocabulary is taught, particularly among control group members, classroom observations were held for six sessions in the Reading Classes offered by two different instructors. Based on these observations, the classroom instructors tended not to really engage with etymological and morphological vocabulary instruction while teaching unfamiliar words. In most of the cases they limited the way they teach new words, to simply by providing synonyms, antonyms, or by using the new words in sentences. Moreover, in some cases it was observed that the instructors used gestures to try to explain the meanings of the unknown vocabulary or sometimes they gave the Turkish equivalents of these words especially when the learners had difficulty in understanding a vocabulary item.

Second, before the etymological and morphological intervention, participants in both groups were evaluated via Wesche and Paribakht`s Vocabulary Knowledge Scale VKS (1996), which measures receptive and productive vocabulary knowledge, (see Appendix). The same VKS was administered to both control and experimental groups as a post-test following the completion of experimental groups' treatment of etymological and morphological vocabulary instruction which lasted for eight weeks. At the initial stage of the treatment, the participants in the experimental group were familiarized about etymology and its components, as well as the importance of the study, and the possible benefits they would gain were explained in order to increase their intrinsic motivation (Richard et al. 2000) for cooperation. The training on etymological and morphological vocabulary instruction of the experimental group was delivered in the Reading classes in the form of a three 45- minute sessions per week. The course book used in the reading classes was one of the National Geographic Life series books level B1 according to CEFR (by Helen Stephenson et al. 2013). At each instructional session, approximately 5-7 vocabulary items were covered from unit 3 to unit 12 in the course book. Additionally, handouts were prepared beforehand regarding the etymology and morphology of the words planned to be instructed at each of the training sessions.

Treatment

For the purpose of etymological and morphological vocabulary intervention, a lesson plan was designed for each teaching session; the overall design remained the same except for the vocabulary items taught at each session. The first session of etymological and morphological vocabulary instruction of the experimental group included some explanation about the etymology and its subsets like morphology and affixation. They were taught how to divide a word into its

morphemes, which at this phase, meant to learn terms such as root, prefix, and suffix. Once they experimented with affixation processes, derivational and inflectional, and learned their functions in word formation, the participants have shown an increased interest in vocabulary learning. Furthermore, they developed an explicit awareness as to how many words they could learn easily. In short, having been exposed to more examples boosted their confidence to learn more about words.

Also, during the instruction period, it was often emphasised that etymology can reveal whether the meaning of a word or phrase has remained the same during centuries of usage or not. To get the learners more familiarized with the etymological vocabulary instruction, some more explanations and examples were provided as follows:

> *Curfew: The Origins of "curfew" is French. The word translates to, "cover the fire." This refers to the practice in homes that used open fires for cooking to make sure the fire had extinguished for the night and would not spread around. The curfew was, "the signal or bell to cover or extinguish fires." This signal was conducted by the, "..town crier..".*

Then the etymology of "curfew" was checked from online etymological dictionary (www.etymonline.com). The participants were observed to be fully involved as they were able to learn how words gained various meanings over time and hence a growing attention was easily noticeable. Thus, to maintain this interest they were encouraged to use online etymological and morphological dictionaries such as www.etymonline.com, www.beta.merriam-webster.co and morphological dictionaries (e.g. The Concise Oxford Dictionary of English etymology), and its application for smartphones. In other words, we motivated the learners to use online etymology dictionaries and to install the 2005 Merriam Webster Etymology Dictionary on their smartphones, PCs, or laptops in order to look up the meaning of words whenever they needed, leading them into becoming more independent learners. Knowledge about the origin of words can help connect new words to the schema (Piaget 1920 as cited in Fleming 2004) of the learner and their learning would not be rote learning. From the second to the final session, the procedure was as follows:

Vocabularies were written on a white board and searched for on the internet using an interactive smart board for looking up their etymology, which was mostly about the first application of the word through history and the background story of the word. Words roots from other languages were discovered and learners followed the lesson using the visual screen and listening. As a subset of etymology, the morphology of the word was discussed and searched on the web pages, too. The words were divided into small parts and the parts' meanings were discussed and scrutinized, and prefixes and suffixes were clarified as well. Another step was studying other forms of vocabulary using affixation and how the meanings were affected by affixation was discussed. To sum up, the steps in etymological and morphological instruction were as follows;

1. Reviewing/recycling vocabularies taught previously;
2. Handing out worksheets with new vocabulary items to be used after instruction sessions. Participants had permission to write an additional explanation on the handout;
3. After writing vocabularies including their morphemes and affixations on the whiteboard by the instructor, their etymology was searched on the internet using online etymology and morphology dictionaries on the smart board and the learners were able to see and write down the necessary and additional explanations on their handouts;
4. Discussing briefly about similar words with the same roots (in the case of Greek or Latin roots) to haunt known words and their background;
5. Providing answers and explanations to learners' questions about words.

Pre and Post Tests

Receptive and Productive Vocabulary Knowledge Scale (VKS) aimed at measuring the effectiveness of various vocabulary instructional techniques was utilized in this study. Wesche and Paribakht`s VKS (1996) is a format that enables learners to mark the stage that indicates their knowledge of each vocabulary item through recognition, recall, and production of the word (cited in Kwon 2006). According to Wesche and Paribakht (1996) and Read (2000), VKS is a generic instrument that can be applied to measure any set of words. It includes five scales to capture certain levels in the core knowledge initial development of given words. The VKS merges self-report and performance items in order to elicit the self-perceived and demonstrated knowledge of particular words in a written form. This scale was used because it can assess both receptive and productive knowledge (Schmitt 2000). The validity and the reliability of the VKS have been established in some research studies by Wesche and Paribakht (1996 as cited in Kwon 2006) and Joe (1995, 1998). To examine its reliability, Wesche and Paribakht administered the VKS to groups of students. They found a strong relationship (with correlations of 0.92 to 0.97) between the students' self-ratings on the elicitation scale and their output scores suggesting that the students reported their level of knowledge of the target words accurately. For measuring Receptive Vocabulary Knowledge, the fourth section on the scale (*D-I can use this word in a sentence*) intended to measure the productive vocabulary knowledge was eliminated because this feature is measured by the Productive Vocabulary Knowledge Test.

In other words, VKS was designed to capture initial stages in word learning that are amenable to accurate self-report or demonstration through the use of a five-category Elicitation Scale that provides information for scoring using a five-scoring scale. Lack of "unidimensional representation" in terms of lexical knowledge could be, however, considered among VKS flaws (Schmitt 2010: 222, 224). However, Schmitt admits that "no current scale gives a full account of the incremental path of mastery of a lexical item, and perhaps acquisition is too complex to be so described." Scoring criteria of Receptive Vocabulary Knowledge

Test is 1 point for unknown words, 2 points for just simple answers and incorrect responses (translation or synonym) and 3 points for correctly answered items (as cited in Kwon 2006). The total score of an individual participant is obtained by adding up the given scores for each item on the Receptive Vocabulary Knowledge Test.

The control and experimental groups' receptive vocabulary knowledge, before and after the treatment (etymological and morphological vocabulary instruction) by using the Vocabulary Knowledge Scale of Wesche and Paribakht`s (1996). It is confirmed by tests that when compared to active (productive) vocabulary, the passive (receptive) one is more substantial and that there exists a difficulty hierarchy between them: "if active knowledge is more difficult to achieve than passive knowledge, and if recall is more difficult than recognition, then the most advanced degree of knowledge is reflected in active recall, and the least advanced knowledge is passive recognition" (Laufer and Goldstein 2004: 408).

In vocabulary tests, Nation (2001) recommends a minimum of 30 items for a reliable vocabulary test. We prepared the Receptive Vocabulary Knowledge Test, which included 35 vocabulary items. The allocated time for answering the questions was 35 minutes. The vocabulary items of the test were selected from the participants' coursebook and workbook (Life, by Helen Stephenson et al. 2013). The books come in series including three books based on Common European Framework of Reference for Languages (CEFR). The vocabulary items taught through etymological and morphological instruction were selected from the final book, B1 level of Life series. The words, excluding most commonly used ones, were randomly selected from the reading texts in the coursebook and the accompanying workbook. Expert opinion was also sought in determining the vocabulary selection. We have tried not to prejudice over the selection of the words (just Latin or Greek) and their suitability for etymological or morphological properties because “Every word has its own history” (Bloomfield 1963: 328). The receptive vocabulary knowledge was assessed by asking learners to provide translations or synonyms of the word tested (as cited in Kwon 2006).

For comparing receptive vocabulary knowledge of the experimental and control group, their pre-test results were analysed through t-t est. Table 1 displays One-Sample Kolmogorov-Smirnov Test and the resulted output which indicates that all sigs are more significant than 0.05. which shows the normality of data and applicability of paired samples t-test.

Table 1. *One-Sample Kolmogorov-Smirnov Test of pre-test scores of experimental and control groups (Receptive Vocabulary Knowledge)*

One-Sample Kolmogorov-Smirnov Test		
	Pre-test Experimental group	*Pre-test Control group*
N	24	24
MEAN	42.5000	42.6250
Std. Deviation	6.27625	9.17375
Kolmogorov-Smirnov Z	.758	.939
Sig.	.613	.341

Independent-samples t-test was conducted to compare the receptive vocabulary knowledge of the experimental and control group, as shown in Table 2.

Table 2. *Productive Vocabulary Knowledge, Pre-Tests Results of the Experimental and Control Group, Analysed via Independent-Samples T-Test*

Group	N	MEAN	St.d	t	df	p
Experiment	24	42.500	6.276	-.055	46	.956
Control	24	42.625	9.173			

The results show that while the mean and standard deviation of the experimental group is (M=42.500, SD=6.27625) and the mean and standard deviation of the control group is (M=42.625, SD=9.17375). Conditions; t (46)= -.055, p = . .956.. So, Sig. (2-Tailed) Value in the outcome is 0. 956. This value is bigger than .05. So, it can be concluded that there is no significant difference between the pre-test means of the experimental and control groups in terms of their receptive vocabulary knowledge.

The vocabulary selection procedure for the Productive Vocabulary Knowledge Test was precisely the same as the Receptive Vocabulary Knowledge Test regarding number of items which was 32. As mentioned earlier, in vocabulary tests, Nation (2001) recommends a minimum of 30 items for a reliable vocabulary test. In this phase of the study, productive vocabulary knowledge of the experimental and control groups was measured quantitatively.

Language learners' vocabulary knowledge includes receptive and productive vocabulary knowledge. Receptive vocabulary knowledge refers to the ability to understand a word after it is heard or seen while productive vocabulary knowledge is the knowledge to produce a word when one tries to write or speak. It is believed that words are known receptively at first and only after intentional or incidental learning become productive and it is generally believed that learners' receptive vocabulary size is much larger than their productive vocabulary size. Then, in our study, we wanted to assess the possible effect of etymology on productive vocabulary knowledge of experimental group's participants in comparison with the control group's participants. As productive vocabulary knowledge is the knowledge to produce a word when one tries to write or speak (Zhou 2010: 2).

Participants had 32 minutes for filling in the blanks. Wesche and Paribakht's (1996) VKS enables learners to mark the stage that indicates their knowledge of each vocabulary item through recognition, recall, and production of the word on the test (as cited in Kwon 2006). VKS can assess both receptive and productive knowledge (Schmitt 2000). The validity and the reliability of the VKS have been established in some research studies by Wesche & Paribakht (1996, cited in Kwon 2006). As can be seen, the only difference between the receptive and productive VKS is in the final part (Forming sentence) where the participants are required to produce a sentence with the given vocabulary item.

As for the scoring criteria of the Productive Vocabulary Test, for unknown words, the score given is 1. For just simple answers and incorrect response (translations or synonyms), the given score is 2. For Correct response, the given score is 3. If the word is used in a semantically inappropriate manner with

grammatical inaccuracy in a sentence, the given score is 3. If the word is used either in a semantically inappropriate manner or with grammatical inaccuracy in a sentence, the given score is 4. If the word is used in a semantically appropriate manner and with grammatical accuracy, the given score is 5 (as cited in Mukarto 2005: 154). The total score of an individual participant is obtained by adding the given scores for each item on the Productive Vocabulary Knowledge Test.

To compare productive vocabulary knowledge of the experimental and control groups, their pre-test results were analysed through independent t-test. It can be observed in Table 4 that all sigs are more significant than 0.05 which shows the normality of data and applicability of paired samples t-test.

Table 3. *One-Sample Kolmogorov-Smirnov Test of Pre-test Scores of Experimental and Control Groups (productive vocabulary knowledge test)*

One-Sample Kolmogorov-Smirnov Test		
	Pre-test exp	*Pre-test cont*
N	24	24
MEAN	40.4167	41.7500
Std. Deviation	6.28951	10.83172
Kolmogorov-Smirnov Z	.476	.902
Sig.	.977	.391

The Productive Vocabulary Knowledge pre-tests results of both groups were compared through independent t-test to see if there is any significant difference between the pre-tests scores of both groups and the results are displayed in Table 5 below.

Table 4. *Productive Vocabulary Knowledge, Pre-Tests Results of the Experimental and Control Group, Analyzed via Independent-Samples T-Test*

Group	**N**	**MEAN**	**St.d**	**t**	**df**	**p**
Experiment	24	40.416	6.289	-.522	46	.605
Control	24	41.750	10.831			

The results show that the mean and standard deviation of the experimental group is (M=40.416, SD=6.289) and the mean and standard deviation of the control group is (M=41.750, SD=10.831). Conditions; t (46)= -.522, p = .605. So, Sig. (2-Tailed) Value in the outcome is 0.605. This value is bigger than .05. So, we can conclude that there is no statistically significant difference between the pre-test means of the experimental and control groups in terms of their productive vocabulary knowledge level.

Results and Findings

To begin with, any difference between receptive vocabulary learning pre/post-test scores of the experimental and control groups were scrutinised. T-test results showed, as discussed earlier in the methodology section that there was no

significant difference between the pre-test results of the experimental and control groups.

While the pre-test mean of the receptive vocabulary knowledge test of the participants in the experimental group was 42.50, it increased to 79.79 in the post-test results. Moreover, the pre-test mean of the control group was 42.5, which increased to 46.65 in the post-test results.

To find out if there were any significant differences between the scores of the post-test results of the experimental and control groups' receptive vocabulary knowledge, a mixed ANOVA test was applied and the results are shown in Table 6 below.

Table 5. *Results of Pre-Test and Post-Test of Receptive Vocabulary Knowledge of the Experimental and Control Groups*

			Pre-test		**Post-test**		**Group X Factor**	
		N	**Mean**	**St.d**	**Mean**	**St.d**	F	p
Groups	Experimental	24	42.50	6.27	79.79	9.06	378.83	.000
	Control	24	42.62	9.17	46.625	11.06		

According to the results depicted in above, the pre-test mean of the experimental group was 42.50 which increased up to 79.79 after post-test. However, the control group's pre-test means the score was 42.62, which had a slight increase in the mean of the post-test score up to 46.625.

Since the post-test Mean of the experimental group (M=79.79, SD= 9.06) is bigger than the post-test mean of the control group (M=46.62, SD= 11.06) and (F= 378.83, $p < 0.05$), there is a significant difference between the post-test scores of the experimental and control groups. In other words, the experimental group outperformed the control group in receptive vocabulary knowledge, and this outperformance shows significant growth of etymological and morphological instruction on the experimental group's participants.

Table 6 below illustrates the analysis of the pre/post-test results of the productive vocabulary knowledge of experimental and control groups.

Table 6. *Pre-Test and Post-Test Scores of Productive Vocabulary Knowledge of the Experimental and Control Groups*

		N	**Pre-test**		**Post-test**		**Group X Factor**	
			Mean	**St.d**	**Mean**	**St.d**	F	p
Groups	Experimental	24	40.41	6.28	86.41	8.35	659.4	.000
	Control	24	41.75	10.83	44.83	11.18		

The pre-test means the score of the experimental group (40.41) shows an increase (86.41) in the post-test, and the control group's pre-test mean score (41.75) increased in the post-test results (44.83) as well.

Since the post-test mean of the experimental group (M=86.41, SD=8.35) is bigger than the post-test mean of the control group (M=44.83, SD= 11.18) and (F= 659.4, $p < 0.05$), there is a significant difference between the post-test scores

of the experimental and control group. In other words, the experimental group outperformed the control group in productive vocabulary knowledge, and this outperformance shows the positive effect of etymological and morphological instruction on the experimental group after receiving etymological and morphological instruction.

Fourteen members of the experimental group participated voluntarily in the semi-formal interview after the treatment. The interview included two questions; one asked the participants' opinions about the etymological and morphological vocabulary learning strategy used in their classes, and the other one asked the participants to exemplify words learned through this vocabulary strategy instruction. The answers gathered were categorized, content analysed, and explained.

According to the responses to the first question in the semi-formal interview, regarding the popularity of etymological and morphological instruction, ten interviewees "liked this strategy" while the remaining four "liked it to some extent." Other categorized data is related to the features of the etymological and morphological instruction. The interviewees reflected in their comments as "interesting," "it requires teachers' effort", "It was efficient" and "enjoyable" for them. The other categorized part was about the benefits of etymological and morphological instruction in general. Three participants commented that this strategy was "helpful for memorizing new words," two other participants claimed that etymologically learned words helped them retain the words more "permanently" in their mental lexicon. Five participants stated that "roots and suffixation" were helpful in their vocabulary learning. Moreover, one comment was about the benefit of this strategy in his plan for vocabulary learning. All participants' responses after being considered together, the utility of etymological and morphological vocabulary instruction could be regarded as a commonly accepted beneficial strategy of vocabulary learning.

Moreover, to the second question in the interview, ten interviewees gave some examples about the learned words through etymological and morphological instruction. However, four interviewees were not able to provide examples, "I do not remember", "I cannot remember." It seems that they had no presence of mind at that moment. Moreover, from among these four participants with no presence of mind two students stated that "If I see the word, I can remember the meaning of it." Active factors in learning words through etymological and morphological instruction were clarified by some participants. Eleven interviewees clarified the reasons why they would prefer using etymology as a strategy for learning. They discussed the "origin of words" and "the effectiveness of knowing the root of the words." One participant claims that "knowing other forms of the word helped him to learn the new words he encountered. Three times the importance of knowledge of "*word root"* in learning new words were emphasized by the participants. The importance of "roots and affixation" was indicated by the learners for four times to boost their vocabulary learning. Moreover, for four times "familiarity with one part of the word" as an active factor in learning new vocabulary was emphasized by the participants. One participant reported that this strategy is good, but he prefers other strategies, as well. As a whole, the responses show that the

interviewees believe that etymological and morphological vocabulary instruction is a reasonable and logical strategy for learning words and expanding the vocabulary.

Discussion

By studying the etymology of words, it is believed that learners would be more successful in learning words. For example, some studies have been done by researchers like Pierson (1989) about the importance of using etymology in teaching in the classroom through qualitative review research, and Hutcheon et al. (2012) also discuss the importance of instruction through etymology. Similarly, Chatzisavvas (2015) argues the benefits of etymology in vocabulary development of Greek ESL students.

The results of the study show that there are significant differences between pre-test and post-test results (scores) of the experimental and control groups in three of the domains tested. The findings indicate the outperformance of the experimental group members and the positive effects of etymological and morphological approaches in vocabulary learning of adult EFL learners. During the two-month etymological and morphological instruction, the experimental group members learned new vocabulary through the etymology of words. The control group members followed the school conventional method, and students probably had their own strategies for learning words. Moreover, it was observed that the etymological and morphological instruction strategy was quite helpful in the experimental group participants' vocabulary learning. According to the results, it is revealed that the control group members had slight progress, as the mean of the receptive vocabulary pre-test score of the control group members increased from 42.65 to 46.65 in their post-test. The same pre-test mean of the experimental group was 42.5, which increased to 79.79 in their post-test results. The superficial improvement of the control group might be attributed to their conventional school instruction or their own effort for vocabulary learning. Moreover, the more substantial increase in the mean of the post-test result of the experimental group could be the effect of etymological and morphological instruction.

Although there was no significant difference between pre-test scores of the experimental and control group through t-test in regards to their productive vocabulary knowledge, a significant morphological awareness between the post-test scores of the experimental and control group through mixed ANOVA test, the productive vocabulary of the control group showed a slight increase and this increase might be attributed to their conventional school instruction. However, the results of the experimental group showed dramatic improvement as the mean of their productive vocabulary score increased from 42.500 to 79.79, which indicates that the experimental group outperformed the control group. The outcome results from this part of the study prove that a more extensive receptive vocabulary shows more productive vocabulary size (Webb 2008).

According to the results gathered from the semi-formal interview with 14 volunteering participants, it was revealed that they were in favour of the

etymological and morphological approach and that they liked "it to some extent" (28.5 %) and "liked it" (71.5%) by claiming that it was "interesting," a "great strategy" and "very good." The popularity of this strategy is evident in the given answer to this semi-formal interview question. The participants, who liked the etymological and morphological instruction as a good strategy, have supported this strategy in general and believed that "roots and suffixation," "meaning of word parts" and "other forms of the same word" have helped them in learning new words.

Conclusion

We can conclude that according to the theoretical framework, meaningful learning has helped the learners in the learning of words and according to the schema theory, every new word is stabilized and learned through connecting data with previously stored data in the brain practically. According to the results, it seems that the learners who were exposed to the etymological and morphological instruction spent less effort to learn and memorize the words.

Moreover, the responses of the semi-formal interview revealed that the majority of the interviewees were in favour of learning vocabulary through etymological and morphological instruction. Most of them developed an awareness of the morphological analysis of words for learning or remembering vocabularies.

As one participant claimed that when they encountered a new unknown word, “suspicion” for example, his background knowledge about the word “suspect” helped him in learning the new vocabulary as “suspicion” as it shares the same root as “suspect.” We may, therefore, conclude that the learners’ schema helps them in learning new vocabularies. Overall obtained qualitative and quantitative data supported that etymological and morphological instruction of vocabulary was beneficial. It seems that meaningful learning is useful and interesting for learners.

To sum up, the experimental group participants highly benefited from the explicitly taught etymological as well as morphological vocabulary instruction, and it seems that they were able to rematch the new data in Turkish EFL learners. Although the mother tongue of the majority of the participants was Turkish, there were 2 participants with Arabic, 1 participant with Kurdish and 1 participant with Azerbaijani-Turkish language as their mother tongue. However, all these participants with various language backgrounds had already received formal Turkish language instruction. Therefore, the linguistic knowledge of participants about the Turkish language, which is an agglutinated language and whose speakers are naturally familiar with the suffixation and roots of words, may have positively affected the participants’ receptive and productive vocabulary development.

Non-native adult English language learners whose mother tongues are not English confront a great difficulty in learning and memorizing the vast number of English words. The English language has borrowed thousands of words from other languages and linguistically has many words which can be traced etymologically and can be morphologically scrutinized and analysed. The difficulty of learning

vocabulary, to some extent, emerges from negligence or lack of familiarity with the etymological or morphological units as well. Therefore, vocabulary instruction through etymology and morphology should have continuity, and greater emphasis should be put on it.

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Appendix Wesche and Paribakht`s Vocabulary Knowledge Scale VKS

Part I Receptive Vocabulary Test

Your name and surname:

Please answer these questions sincerely.

Q 1	What do you know about this word? "**augmented ".**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 2	What do you know about this word? "**sophisticated".**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 3	What do you know about this word? **"ventilation** ".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 4	What do you know about this word? **"entrepreneur "**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 5	What do you know about this word? **"sculpture ".**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 6	What do you know about this word? "**complemented** ".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 7	What do you know about this word? **"readjust** ".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 8	What do you know about this word**? "intersection**"
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 9	What do you know about this word? "**mutinous** ".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 10	What do you know about this word? **"prospectors** "
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 11	What do you know about this word? "**elegant ".**

A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 12	What do you know about this word? "**deforestation ".**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 13	What do you know about this word? "**conservationist ".**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 14	What do you know about this word? "**relic ".**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 15	What do you know about this word? **"hardship** ".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 16	What do you know about this word? " **confrontation** ".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 17	What do you know about this word? **"hieroglyph** ".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 18	What do you know about this word? "**infuriate ".**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 19	What do you know about this word? "**advocate".**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 20	What do you know about this word? **"revolt** ".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 21	What do you know about this word? "**indigenous"**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 22	What do you know about this word? "**deliberately".**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)

C	Surely; it means …… (Synonym or Translation)

Q 23	What do you know about this word? **"infrastructure** ".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 24	What do you know about this word? **"squander**".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 25	What do you know about this word? **"dwindle**".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 26	What do you know about this word? **"reputation**".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 27	What do you know about this word? **"suburbia**".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 28	What do you know about this word? **"consultancy**"
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 29	What do you know about this word? **"desalination "**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 30	What do you know about this word? **"deplore "**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 31	What do you know about this word? **"orator"**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 32	What do you know about this word? **"predictability "**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q 33	What do you know about this word? **"attribute"**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Q	What do you know about this word? **"articulate**"

34	
A	I don't know
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)

Part II Productive Vocabulary Test

Q 1	What do you know about this word? **"illustration"**
A	I don't know
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 2	What do you know about this word? **"interface"**
A	I don't know
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 3	What do you know about this word? **"ventilation**".
A	I don't know
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 4	What do you know about this word? **"entrepreneur"**
A	I don't know
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 5	What do you know about this word? **"injustice"**
A	I don't know
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 6	What do you know about this word? **"scratch"**
A	I don't know
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 7	What do you know about this word? **"exhausted**"
A	I don't know
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 8	What do you know about this word? **"downstream "**
A	I don't know
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 9	What do you know about this word? **"inconvenient"**
A	I don't know

B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 10	What do you know about this word? **"compensation**"
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 11	What do you know about this word? **"rejoiced"**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 12	What do you know about this word? **"cyclones"**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 13	What do you know about this word? **"contaminant**"
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 14	What do you know about this word? **"incompetent"**
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 15	What do you know about this word? **"accommodate**"
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 16	What do you know about this word? **"descendant**"
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 17	What do you know about this word? **"distort** "
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 18	What do you know about this word? **"outstretch**".
A	I don't know ☐
B	I am not sure, but I think it means …….... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 19		What do you know about this word? **"distract"**
	A	I don't know ☐
	B	I am not sure, but I think it means …….... (write Synonym or Translation)
	C	Surely; it means …….…… (Synonym or Translation)
	D	I can use this word in a sentence…….……

Q 20		What do you know about this word? **"fascination**"
	A	I don't know ☐
	B	I am not sure, but I think it means …….... (write Synonym or Translation)
	C	Surely; it means …….…… (Synonym or Translation)
	D	I can use this word in a sentence…….……

Q 21		What do you know about this word? **"troublesome"**
	A	I don't know ☐
	B	I am not sure, but I think it means …….... (write Synonym or Translation)
	C	Surely; it means …….…… (Synonym or Translation)
	D	I can use this word in a sentence…….……

Q 22		What do you know about this word? **"thrive "**
		I don't know ☐
	B	I am not sure, but I think it means …….... (write Synonym or Translation)
	C	Surely; it means …….…… (Synonym or Translation)
	D	I can use this word in a sentence…….……

Q 23		What do you know about this word? **"promptness**"
	A	I don't know ☐
	B	I am not sure, but I think it means …….... (write Synonym or Translation)
	C	Surely; it means …….…… (Synonym or Translation)
	D	I can use this word in a sentence…….……

Q 24		What do you know about this word? **"sculpture "**
	A	I don't know ☐
	B	I am not sure, but I think it means …….... (write Synonym or Translation)
	C	Surely; it means …….…… (Synonym or Translation)
	D	I can use this word in a sentence…….……

Q 25		What do you know about this word? **"regulation** "
	A	I don't know ☐
	B	I am not sure, but I think it means …….... (write Synonym or Translation)
	C	Surely; it means …….…… (Synonym or Translation)
	D	I can use this word in a sentence…….……

Q 26	What do you know about this word ? **"prescriptive** "
A	I don't know ☐
B	I am not sure, but I think it means ……... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 27	What do you know about this word? **"plummet"**
A	I don't know ☐
B	I am not sure, but I think it means ……... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 28	What do you know about this word **"impartial"**
A	I don't know ☐
B	I am not sure, but I think it means ……... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 29	What do you know about this word? **"determination**"
A	I don't know ☐
B	I am not sure, but I think it means ……... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 30	What do you know about this word? **"daunting "**
A	I don't know ☐
B	I am not sure, but I think it means ……... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 31	What do you know about this word? **"commodities"**
A	I don't know ☐
B	I am not sure, but I think it means ……... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

Q 32	What do you know about this word? **"traumatic"**
A	I don't know ☐
B	I am not sure, but I think it means ……... (write Synonym or Translation)
C	Surely; it means …… (Synonym or Translation)
D	I can use this word in a sentence……

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The Language Errors of a Swiss German Speaker of Greek as an L2: A Case Study

By Georgios Georgiou[*]

The present study aims to identify the most important language errors in the speech of a second language (L2) Greek speaker, and explain these errors on the basis of the speaker's first language (L1) interference, the speakers' sociolinguistic background, and the effect of language mechanisms. The study employs the data of a semi-structured interview from a Swiss German speaker who permanently lives in Cyprus for 13 years and speaks Greek as an L2. The recordings of the interview were transcripted to identify possible errors in the phonetic/phonological, morphological, syntactical, and semantic level. The results showed errors in every language level indicating a clear interference of the speaker's L1 in the L2, an overgeneralization of grammatical rules, and an interference of the local dialect in the L2 productions.

Keywords: *Greek, language acquisition; language errors; second language.*

Introduction

The acquisition of first language (L1) begins from infancy and does not require any effort to be achieved (O'Grady and Cho 2011). It provides the opportunity to the infant to become a native speaker of a language at a later developmental stage. Children are able to form grammatically correct sentences from the age of 3-4 having received only few speech stimuli in their native language. In that way, they construct their own rules, which as they grow up will be refuting before reaching an adequate level of L1 knowledge (Fromkin et al. 2008). On the other hand, the knowledge of a second (L2)/foreign language does not take place naturally, but it requires readiness, effort, significant study and memorization of rules and vocabulary (Fromkin et al. 2008, Lightbown and Spada 2006). It is argued that L1 acquisition might be similar to some extent with L2 acquisition since in both modes there are stages of language development as well as development of grammars by the speakers (Fromkin et al. 2008). Nevertheless, this assumption is not widely supported. Some researchers argue that the acquisition of the L1 requires the use of different skills in comparison to the acquisition of the L2. Also, the transfer of structures from one language to another is feasible only from the L1 to the L2 and not vice versa, while there is a stagnation during the learning of the L1, which is not the case for the L2 (Mohamad-Nor and Rashid 2018). All L1 speakers reach the same level of acquisition, while proficiency level in the L2 differs from learner to learner.

The purpose of the present study is the identification, presentation, and interpretation of the language errors of an L2 Greek speaker as emerge from a qualitative analysis of his productions. This investigation will take into

[*]Postdoctoral Researcher, People's Friendship University of Russia (RUDN University), Russia.

consideration four levels of linguistic analysis. The study will provide evidence for the existence of specific errors, which are indicated by the literature and relate to the learning of Greek as an L2, showing as well the manner in which the speaker's L1 interferes in the L2 productions.

The study aims to answer the following research questions:

1. Which are the errors of the L2 Greek speaker with respect to the levels of phonetics/phonology, morphology, syntax, and semantics?
2. To the basis of which theories can these errors be explained?
3. How the L2 speaker's sociolinguistic characteristics affect his L2 production patterns?

Literature Review

With respect to the level of phonetics/phonology, it is predicted a difficulty of L2 speakers, and especially those who do not have much experience in the L2, with the production of some L2 sounds. According to Best and Tyler (2007) and Flege (2005), there is a common phonological system for both the L1 and the L2 phones, and thus, linguistic experience in the native language might shape the acquisition of the L2 sounds. If an L2 sound or a pair of L2 sounds is similar to an L1 sound, then learners might face difficulties in both perceiving and producing correctly the L2 sounds. There are few studies in regard to the phonological patterns of Greek speakers who learn a nonnative language (e.g., Georgiou 2019a, 2019b), and similarly few studies related with L2 errors of foreign learners of Greek. For example, Anastiasiadi-Simeonidi et al. (2010) recorded the phonetic/ phonological errors of Russian speakers who learn Greek as an L2, identifying problems with the production of sounds that are not present in their L1. Nicolaides et al. (2011) after comparing the Greek phonological system with the systems of another 11 languages, created a table with possible difficulties in the production of the Greek sounds by foreign learners of these languages. Finally, Georgiou (2018) found that Egyptian Arabic learners of Greek as an L2 were merging the Greek vowels /i/-/e/ and /o/-/u/ due to the effect of their L1.

In regard to the level of morphology, Babiniotis (1996) pointed out that Greek consists of a wide morphological system of which the learning is relatively difficult for foreign speakers. According to Theodoropoulou and Papanastasiou (2001), most of the errors that have to do with morphology are affected by the mechanism of analogy. Speakers tend to replace, for example, the inflectional ending of a word with another as a consequence of the effect of analogy, e.g., *tu ðieθní* and not *tu ðieθnús* ("of the international" MAS.GEN.SING.). Furthermore, errors are found as well in the use of verbal aspect. Verbal aspect in Greek determines if the action of the verb was or will be continuous or non-continuous. The majority of foreign learners uses incorrectly the continuous and non-continuous aspect that refer to the past and the future, and sentences with *na* + *supplement*, e.g, *θa klápsi* polí sixná* 's/he will cry very often' (use of the non-continuous verbal aspect instead of the continuous) (Mattheoudaki et al. 2011).

With respect to the syntactic level, Tantos (2011) studied the use of clitic doubling by German learners of Greek to observe the existence of difficulties in the use of this structure since it is not found in the learners' L1. The author concluded that learners try to 'filter' the L2 structures through their L1 system. Therefore, if the same structure is found in both the L1 and the L2, then a positive transfer to the L2 might take place without any difficulty for the learners. But, if an L1 structure is different from an L2 structure, then a negative transfer might take place, which will probably create problems for the learners.

Finally, at the semantic level, there are many cases in which foreign speakers use words that do not exist or words that do not fit to the semantic context of the sentence (Anastasiadi-Simeonidi et al. 2008). Bakakou-Orfanou (1996) pointed out the need of instruction of the Greek synonyms to foreign learners in order for the words to be understandable in linguistic and extra-linguistic context, and not to be confused with other words. The same should be done, according to Pita (1998), with children who learn their L1 and who should understand the words corellationally by recognizing synonymies and contradictions. Other strategies suggested for vocabulary learning is the linking of a word with an image, the use of dictionaries, the use of crosswords, the mimics, and others (Zerdeli and Sarafidou 2011).

The learning of an L2 is affected by a variety of biological factors. For example, many researchers support the existence of a "critical period". When learners pass this period, they lose the ability to acquire holistically an L2 (Scovel 2000, Birdsong 2004). However, in the last few years, such a hypothesis could be explained in a different way since there are examples in which older learners acquired fully the L2 accent (Flege et al. 1995). The L2 learning is affected by several sociolinguistic factors such as age of living in an L2-speaking country, the L1-L2 use, the quality and quantity of L2 input, etc. (Piske et al. 2002). For instance, if a foreigner lives for many years in an L2 country, uses the L2 very often, and receives qualitative and quantitative L2 input, they will be able to learn more easily the L2. However, L2 learning is different in adults vs. children since the latter population can learn the L2 more easily, more rapidly, and with less effort than adults (Snow 1987, Tsukada et al. 2005).

Finally, it has to be noted that in Cyprus there is a special linguistic context with the coexistence of two linguistic varieties; a situation of diglossia. Specifically, Standard Modern Greek is the "official" variety and Cypriot Greek the "unofficial" variety (Pavlou and Christodoulou 1996). Standard Greek is used in the Medias and in the educational context, while Cypriot Greek is used mainly through the speakers' oral discussions. Yiakoumetti (2003) studied the oral and written productions of Cypriot Greek students, concluding that they were transferring structures from Cypriot Greek to Standard Modern Greek. It is expected that diglossia will affect as well foreign learners of Greek who learn Greek in controlled environments in Cyprus since there is a remarkable difference between what they hear into the classroom and what they hear outside the classroom.

Methodology

The sample of the study consisted of a foreign male speaker with Swiss German L1 background who speaks Greek as an L2. The speaker lives permanently for 13 years in Cyprus, he is 49 years old, and he is married with a Cypriot Greek speaker. He speaks Greek many hours per day, and has a lot of friends who are Cypriot Greek speakers. He started learning Greek when he arrived in Cyprus; at the beginning through oral conversations with friends and relatives.

A semi-structured interview was used for the analysis of the productions of the speaker. The interview included questions of general interest (e.g., why he came to Cyprus, what are his favorite hobbies, etc.). The interview took place in a quiet room at the University of Cyprus and lasted approximately 40 minutes. The interview was recorded and then transcripted to facilitate the analysis of the speaker's L2 productions. The analysis focused on four linguistic levels: phonetics/ phonology, morphology, syntax, and semantics.

Results

Phonetics/Phonology

The production of some sounds differed compared to the corresponding productions of native speakers. The main problem was found in the production of velar and dental consonants. For example, the velar stop phoneme /γ/ was substituted in many cases with the velar fricative /g/, while the alveolar stop /d/ was used instead of the dental fricative /ð/. Furthermore, the velar fricative /x/ was substituted with the uvular fricative /χ/. However, in many cases, these sounds could be produced correctly:

(1) *pu vriskómaste to lab pu éxume 20 ipolo/g/*istés* (132) "we are at the lab where we have 20 computers"
(2) *íne káti pu /d/*en* (125-126) "it is something that is not"
(3) *íne ótan pas sti /χ/*óra ke* (148) "it is like going to the country and"

Morphology

At least in two cases, the interviewee used incorrectly the past-tense stem instead of the present-tense stem for the formation of subjunctive (*na + verb*), declaring in that way non-continuous instead of continuous aspect:

(1) *ðen émaθe akóma na γrápsi** (317) "she did not learn to write yet"
(2) *ksekínise na milísi* polí norís γia éna moró* (386) "she started speaking very early for a child"

One other error was the use of the inflectional ending *–(i)és* (FEM. PRU.) *(-(ι)ες)* instead of *–ís* (-εις) to the stem *(Latino)γen-* ("Romance")

(1) *Latinoγen-iés** (374) ("Romance (languages)")

Apart from the aforementioned errors, in general, the interviewee was using correctly the morphemes; including inflectional endings.

Syntax

Only few errors were observed at the level of syntax. It was observed the continuous use of the personal pronoun *εγό* ("I") in contexts where it is often avoided by native speakers:

(1) *ke εγό stin arxí íða óti to próvlima* (75-76) "and at the beginning I saw that the problem"
(2) *εγό ðúlepsa mia forá se éna sxolío ekí* (179) "I worked once in a school there"
(3) *aspúme εγό ðíðaska γalliká ekí* (180) "for example I was teaching French there"

In addition, it was observed the use of *(itan) na* (would) + *verb* in the position of *θα* (would) + *past continuous*; the latter is a common structure in Standard Modern Greek, while the former is mostly used in Cypriot Greek:

(1) *ke metá ítan na páme na fáme* (81-82), "and then we would go to eat"
(2) *éxume éna spíti pu ðen kséro ti ítan na to kánume* (250) "we have a house that I don't know what we would do with it"

In very few cases he was using the *θα + past continuous*:

(1) *θa borúsame na púme óti ta Katalánika* (411) "we could say that Catalan"

In general the syntax of the interviewee was correct and followed the rules of Greek language.

Semantics

Regarding the semantic level, the interviewee in some cases used words that did not have the appropriate semantic meaning in order for the sentence to make sense.

(1) *to leksikó** *ítane polí mikró* (388-389) "the dictionary (instead of the 'vocabulary') was very small"
(2) *epikinonúse xorís kanéna próvlima me morá ágnosta** *ke γnostá** *stin Ispanikí* (390) "she was communicating without any problem with known (instead of 'children who know') and unknown (instead of 'children who do not know') children in Spanish"

In addition, while he was using Standard Modern Greek during the interview, in a few cases he was using words or phrases of Cypriot Greek:

(1) *edáksi, ektós pu spíti* (56) "ok, except from home"

(2) *kápu allú prépi na piásis éna aeropláno* « (214) "somewhere else you have to take an airplane"

Discussion

The aim of the study was to identify, present, and interpret the most important language errors of an L2 Greek speaker with Swiss German L1 background. It focused on four linguistic levels, that is, phonetics/phonology, morphology, syntax, and semantics. The results revealed errors in all four levels under investigation.

The production of some sounds with a nonnative manner took place due to the differences between the phonological system of the speaker's L1, that is Swiss German, and the phonological system of the speaker's L2, that is Greek. The fact that the consonants /ð/ και /γ/ do not exist in the speakers' L1 forces him to use the most acoustically similar sounds that are found in his L1, that is /d/ and /g/ respectively. So, the speaker did not perceive much acoustic dissimilarity between these L2 sounds and the aforementioned similar L1 sounds, and therefore, his productions were not native-like. However, in many cases, the speaker produced correctly these sounds due to his experience in the L2.

The errors in verbal aspects (non-continuous instead of continuous) during the formation of the subjunctive mood can be interpreted as a confusion by the foreign speaker due to the complexity of this phenomenon in Greek. Similarly, in the study of Mattheoudaki et al. (2011) it is shown a difficulty in the discrimination of the non-continuous and continuous aspect in Greek *na + supplement* structure even by high proficient learners of Greek as an L2. Most of the errors were observed in the use of non-continuous verbal aspect instead of the continuous one. In a similar way, this structure seems to be difficult for the interviewee of this study who tends to overgeneralize the rule for the use of the non-continuous aspect, and therefore, use it in continuous contexts. In contrast, he did not use the continuous aspect in the position of the non-continuous aspect.

The incorrect use of the ending *–iés* (-(ι)ές) instead of *–ís* (-είς) to the stem (*Latino)γεn-*, can be explained as an overgeneralization of the rule, which posits that most of the feminine adjectives in plural are formed with the addition of the ending *–(i)es*. This is also evident in children who learn their L1, and who tend to regularize the irregular nouns or verbs (Fromkin et al. 2008). In our case, the interviewee considered as correct the use of the ending *–(i)és*, because it constitutes a usual addition in Modern Greek. The ending *–is* is an addition that comes from Ancient Greek, and therefore is more difficult for a foreigner to learn.

With respect to the syntactic level, the interviewee used the pronoun *εγό* ("I") even in linguistic contexts where it is not required. Greek usually omits personal pronouns in the position of subject, while Greek speakers usually use them when they want to emphasize on the subject. This pattern can be explained as an L1 transfer since the use of personal pronouns in German is compulsory, and therefore, this structure was transferred to the L2. Furthermore, the use of *na + verb* in the position of *θα + past continuous* can be interpreted as an interference

from the Cypriot Greek variety since the *na (or enná)* + *verb* structure usually substitutes the *θα* + *past continuous* structure in Cypriot Greek. This interference took place since the interviewee lives for many years in Cyprus where Cypriot Greek is the dominant variety in the oral speech, and furthermore, his wife and friends are all native speakers of Cypriot Greek.

The use of words that did not have the appropriate semantic meaning did not cause any surprise since it can take place even for native speakers of a language due to the lack of vocabulary or misconceptions. In any case, the vocabulary continues to enrich to a great extent during the lifespan of speakers. Furthermore, the extended use of the Cypriot Greek variety in Cyprus, "impels" the foreign speaker to use words or phrases of that variety when speaking Greek. However, during the interview, the speaker had only very few syntactic and morphological errors. This can be explained on the basis of similarities between Greek and German in the structural level. In both languages, there are three grammatical articles (one for each gender: masculine, feminine and neutral), and four grammatical cases for nouns (nominative, accusative, genitive, dative) (Manika 2006); the dative case was abolished from Modern Greek, however, it can be expressed through prepositions. In addition, just like Greek verbs, the verbs of German are composed with objects in the accusative case (and more rarely with the dative case).

Several sociolinguistic factors affect the learning of an L2. The speaker of this study has been living in Cyprus for 13 years, and since then, he has been receiving Greek input mainly through conversations with relatives and friends who are Cypriot Greek native speakers. The speaker pointed out that he speaks Greek very often; this would justify his enhanced proficiency in the target-language. Furthermore, we have to consider that he has been living for a long time in the L2-speaking country receiving much speech input in the L2. Furthermore, the speaker's age was not restrictive for the acquisition of the L2. Despite the fact that he began learning Greek from the age of 36, his errors in the four linguistic levels under investigation were minimal and were not preventing the communication with native speakers. The most significant errors were found in the phonetic/ phonological level since the speaker could not pronounce correctly several Greek consonants. In general, this level is difficult for foreign learners to acquire if they do not receive phonetic training or if they do not come in contact with the L2 before puberty. Finally, the speaker's L1 played a significant role because the study showed that it interfered in the L2 productions.

Conclusions

In sum, the errors emerged from the productions of the L2 Greek speaker are challenging for many L2 Greek speakers as reported by several studies in the literature, and they are driven by language mechanisms such as overgenelization. Also, it was evident that there was an interference of the speaker's L1 in the L2 since structures from his native language were transferred to the L2. Furthermore, there was an interference of the Cypriot Greek variety in his productions since

Cypriot Greek constitutes the dominant spoken variety in the country where the foreign speaker lives. In general, his experience in the L2 helped him conduct only few mistakes at all linguistic levels and produce correct L2 forms; helping him communicate adequately with native speakers.

The study focused on a case study; however, to generalize the results, a future study should involve many participants, and a qualitative and quantitative analysis of the speakers' errors should be employed.

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On the Raison D'être of the Present Perfect, with Special Reference to the English Grammeme

By Krasimir Kabakciev[*]

The present perfect is a mystery and most linguists agree that its definitions are inadequate. The paper deals with two major issues: (i) what is its second meaning, beside the temporal one; (ii) what is its raison d'être? Is it the expression of notions such as current relevance or resultativeness? The analysis is based on recent findings that the present perfect performs a grammaticalizing function with certain sentences belonging to a semantico-syntactic schema in two languages, Bulgarian and Montenegrin. It shows that, as regards (i), the present perfect is a form that can be termed non-witnessed in itself in Bulgarian and English. However, while in English and Montenegrin it is not grammatically marked as non-witnessed (in Bulgarian it is), in English and Bulgarian it signals this value – but not by default. Conversely, the indefinite past in English, to which the present perfect is invariably contrasted, is a witnessed form by default, hence its witnessed value can be canceled in a sentence/context. In other words, the English indefinite past is not grammatically marked as witnessed and does not signify this value – but signals it by default. As regards (ii), the raison d'être of the English present perfect is argued to be the signaling (not by default) of the value non-witnessed to counterbalance the default value witnessed in the indefinite past. Bottom line: the raison d'être of the present perfect across languages appears to be found not in its "meaning" but in certain functions related to language structure that it performs.

Keywords: *present perfect; indefinite past; (non-)witnessed; (non-)cancelable; residual function.*

Introduction

The analysis in this paper rests on a recent finding that the present perfect in Bulgarian exercises the function of "grammaticalizing" certain types of sentences – ill- formed and belonging to a particular semantico-syntactic schema (Kabakčiev 2018). The present perfect and perfects in general are found in many European and other languages but there are also languages without perfects (Comrie 1985, Bybee et al. 1994: 54, 61, Dahl 1985: 129ff, Aikhenvald 2004: 28); the above-mentioned schema, represented by clauses such as *X said that* and adverbials such as *according to*, *probably*, etc., is widely found across languages (Aikhenvald 2008, Spronck and Nikitina 2019)[1] and prevalent in all modern ones, including English. To demonstrate the grammaticalizing function, compare Bulgarian (1a-b)

[*]Independent Researcher, Bulgaria.

[1]Aikhenvald (2008: 384): "every language has some way of reporting what someone has said".

– incorrect sentences with witnessed forms, and their grammatical correspondences (2a-b) with present perfect forms, non-witnessed:

(1) a. *Petar kaza, che Maria pristigna$_{WITN}$
'Peter said that Maria arrived'
b. *Spored Petar Maria pristigna$_{WITN}$
'According to Peter, Maria arrived'

(2) a. Petar kaza, che Maria e pristignala$_{PERFECT}$
(lit.) 'Peter said that Maria has arrived'
b. Spored Petar Maria e pristignala$_{PERFECT}$
'According to Peter, Maria has arrived'

The non-grammaticality is due to the incompatibility between witnessed and non-cancelable forms, on the one hand, and phrases/clauses such as *according to, X said that*, etc., on the other.[2] The latter require all expressions associated with them to be cancelable[3] (***either*** true or not true, such that ***either*** materialized or not, etc.), and if the associated expressions are non-cancelable, and witnessed in particular like those in (1), they are incompatible. Obviously, non-grammaticality cannot be "tolerated", so present perfect forms (that are non-witnessed) are used in (2) to obtain grammaticality.[4] The perfect in (2) has renarrative or inferrential meaning, or both, it is non-witnessed (always) and cancelable in the schema.

This elimination of non-grammaticality is a very important finding because it provides irrefutable proof of an existence of a function exercised by the present perfect related to language structure – something never previously established in linguistics.[5] Most probably it is a step in the right direction for determining the reason(s) why the perfect exists in certain languages and not in others. What is more, the finding has been shown to be valid for another language – the Montenegrin present perfect also "grammaticalizes" incorrect sentences with witnessed forms (aorist or imperfect), see Bulatović (2018):

(3) a. *Džon reče$_{Aor/Pf/Dož}$ da stiže$_{Aor/Pf/Dož}$
'John said that he arrived'
b. Džon reče$_{Aor/Pf/Dož}$ da je stigao$_{Perf/Pf}$
(lit.) 'John said that he has arrived'[6]

Note, however, that the Montenegrin present perfect is, in essence, a preterite. Yet this preterite is formed as a perfect – from the past active participle of the main

[2]In this paper, the standard understanding of grammaticality/non-grammaticality (correctness/ incorrectness of language expressions) is followed, as known since the beginning of modern linguistics: the fundamental aim of linguistic analysis is to separate grammatical sequences from ungrammatical ones (Chomsky 1957: 13). In the sentences analyzed here the task is easy: non-grammaticality (incorrectness) is not subject to doubt.
[3]Cancelable and non-cancelable are well-established concepts after Grice's (1975) pioneering work.
[4]Grammaticalization can also be achieved by renarrative mood forms (*pristignala* 'arrived').
[5]To the author's knowledge.
[6]Instead of Serbo-Croatian, today Serbian, Croatian, Montenegrin and Bosnian are officially recognized languages, so the regularity is actually valid for four languages, not just one.

verb plus the present tense of the auxiliary *be*, in contrast to the preterite in other Slavic languages (Czech, Polish, Russian), where it is a single verb.

The grammaticalizing function of the present perfect in Bulgarian and Montenegrin ought to be accompanied by an explanation of the essence of the perfect, its raison d'être. But actually this is the main aim of this work – and it is a difficult one. The present perfect has never been given a convincing explanation and is regularly described as a puzzle (Klein 1992, Pancheva and von Stechow 2004, Higginbotham 2009: 160). The circumstance that in English it excludes adverbials of past time only adds to its mystery; most other languages do not manifest this feature. Furthermore, many errors have been made in the description of tense and aspect in studies of the English tense system (see Kabakčiev 2000: 1, 157) and especially in English grammars (see Bulatović 2013, 2020). Tense has almost invariably been defined as "locating a situation in time"[7] (Comrie 1985: 9, Huddleston and Pullum 2002: 116, Declerck 2006: 22, 43, 93). But when a tense grammeme contains some feature(s) in addition to its tense (temporal) feature (past, present, etc.), e.g. (non-)boundedness as with the aorist-imperfect contrast in some languages,[8] it is said to be of a mixed tense-aspect nature. This duality of meaning raises questions: how should such grammemes be differentiated from purely tense grammemes (preterite, present, future)?[9] In the case of the present perfect the problem is especially bothersome because of its elusive essence outside the temporal domain. There is a general consensus in linguistics on the "second nature" of the aorist-imperfect contrast: it is aspectual, the "first nature" being temporal. But what is the "second nature" of the present perfect?

The "second nature" of the English present perfect has been sought mainly in three directions. The ***first***, according to which the perfect is an aspect together with the indefinite tenses and the progressive (standard in 20th century grammars, see Quirk et al. 1980) is outdated.[10] Today's understanding is that the progressive is an aspect, while the perfect and the indefinite tenses are not. The ***second*** direction for defining the present perfect has no name and covers its general meaning, most frequently understood as "current relevance" (Comrie 1985: 24ff; Bybee et al 1994: 61ff; Huddleston and Pullum 2002: 143ff; Downing and Locke 2002: 361ff), but various other definitions and corresponding terms are also in use: resultativeness, indefinite past, embedded/continuative past, extended/expanded now, etc. (Lindstedt 1985: 96ff, McCoard 1978, Fenn 1987, McCawley 1988: 226, Elsness 1997: 67-68, Holton et al. 1997: 300ff, Musan 2002, Androutsopoulos 2002: 36, Aikhenvald 2004:112, Eul 2008: 99, 106). As Moens (1987: 94) rightly observes: "The descriptive accounts of the perfect are vague, they make unprincipled distinctions between different uses of the perfect, without explaining

[7]In the past, present, future or future-in-the-past. By a situation, any of the members in Vendler's (1957) classification (state, activity, accomplishment, achievement) is understood.

[8]Languages featuring an aorist-imperfect contrast are, e.g., Spanish, Greek, Bulgarian – these three belonging to different groups of the Indo-European family.

[9]Cf. Klein's (1994: 123) reasoning about the so-called present historical "tense".

[10]Issues related to the tendency for perfect forms to impart completion to Vendlerian states and activities are here disregarded. See the point formulated in Verkuyl (2008: 43): "the presence of the perfect auxiliary contributes substantially to the sense of completion together with the meaning of the Past participle".

why the perfect should fulfil such an arbitrary looking collection of functions." The ***third*** direction for revealing the "second nature" of the present perfect is in the domain of modality, but this has usually been applied to languages other than English. Aikhenvald's (2004) extensive cross-language data shows that the perfect systematically manifests what the author calls non-firsthand (i.e., non-witnessed), a modal value.[11] In this paper, the "second nature" of the English present perfect will be sought in this direction. In any case, the perfect – as an abstraction from the plusquamperfect, the present perfect, etc., is not a tense, hence the practice of calling it a tense ought to be abandoned.

What is Tense?

According to the understanding here, the main problem in this linguistic field is that grammatical categories and grammemes are, as a rule, characterized in terms of what ***is expressed*** by them, not in terms of what is ***not expressed***, and this approach hampers the identification of the essence of certain grammemes. To start correcting the status quo, a different understanding of tense will now be proposed, according to which tense does ***not*** solely serve to locate situations in time. It also serves to deploy another two entities: the participants and the speaker. As a generalization (previously formulated in Kabakčiev 2017: 351ff),

> ***tense is a vehicle for the deployment onto the time axis of: (i) situations; (ii) participants in situations; (iii) the speaker.***

It can be exemplified by the following two sentences:

(4) a. John repaired the car
b. John has repaired the car

In (4a), a sentence with an indefinite past form, the speaker is located in the past, and so are the situation and the participants *John* and *the car*. In (4b), a sentence with a present perfect, the situation is again located in the past, as in the definition of the present perfect as a past situation with current relevance, but the speaker and the participants are now located in the present. The difference is discussed in more detail below. As regards the thesis that the participants *John* and *the car* are located in the past in (4a), it also follows from certain tenets in compositional aspect theory, where the participants are temporal entities (Kabakčiev 2000; 2019), see again below.

Sentences straightforwardly demonstrating the deployment in time of participants are very rare. Here are two. Suppose you are driving a car. Another car, with a barking dog in it, overtakes you. Seconds later, while the other car is

[11]Cf. the following statements: "perfect in Scandinavian languages also has a distinct non-firsthand nuance" (Aikhenvald 2004: 112); in La Paz Spanish the preterite is employed to refer to something witnessed (Aikhenvald 2004: 114).

still in view, the dog is no longer seen and a passenger in your car makes the following observations, otherwise mundane:

(5) a. A dog was barking in that car
b. There was a dog in that car

In (5a) the observer/speaker is reporting ***not*** what the dog is doing ***now*** but what the dog ***was*** doing a fraction of a second earlier, despite the high probability for the dog to be still barking. Sentence (5b) is even stranger. It reports the "past existence" of a dog in the car in front – implicating its non-existence now, a split second later.

Why do people say *there **was** a dog* in sentences such as (5b) instead of *there **is** a dog*? The dog is still in the car in front, and obviously, in our understanding of this world, it has not died or evaporated into thin air. Do people use a past tense here because the dog is no longer in their vision?[12] If this is the case, it is in full support of the definition above: the indefinite past places the participant *a dog* onto a past-time segment. Thus it also registers it in the brain as existing not in the present but in the past (see Kabakčiev 2000: 91ff). Furthermore, the indefinite past obviously places ***the speaker*** too (the passenger in the car) onto a past segment of the time axis. By saying *There **was** a dog in that car*, the speaker indicates s/he ***was*** on a past-time segment a split second before the dog disappeared from view. Meanwhile note that *that car* is also a participant in the situation, hence it is also deployed on a past-time segment, along with *a dog* and the speaker. Thus, the meaning of (5b) must be taken to include a situation with a duration of some seconds and two participants in it, *a dog* and *that car*; each participant also having a duration of some seconds.

What is the conclusion to make from this analysis of (5)? It is that what is communicated by language reflects the speaker's experience of situations not as static pictures but together with the participants "in progress" – that is, the speaker's experience approximates ***a video*** (film/TV representation/moving picture), not a photograph/photographs of stationary objects (Kabakčiev 2000: 99-100, 117-118). But despite this, the conviction of the receiver/hearer of (5b) and similar sentences is that the participants are stationary entities as in photographs, not moving as in videos. Read the sentence again: *There was a dog in that car*. What do we normally conceive of the participants *a dog* and *that car*? Do we interpret them as entities in motion, lasting several seconds and belonging to the past (before the dog disappears from view)? No. We normally think of them as physical objects stable in time, existing now as well as in the near or distant past, and we also project their existence into the future, i.e., we picture them mentally as in a photograph, not as in a video. But the careful analysis of the data suggests that in the brain they are registered otherwise, as if in a video (Kabakčiev 2000: 99-100, 117-118; 2019).

[12]A preterite is used in many languages: *There **was** a dog in that car* (English), *In diesem Auto **war** ein Hund* (German), *В этой машине **была** собака* (Russian); *В тази кола **имаше** куче* (Bulgarian), *Στο αμαξι **είχε** σκυλι* (Greek).

Obviously, the current and past presence of physical objects (their existence now and prior to a situation depicted) conceals the circumstance that in sentences such as (5a-b), products of the human brain,[13] *a dog* and *that car* are not so much physical entities but pictures in the brain moving in space and time (Kabakčiev 2000: 99-100; 2019). The dog is stationary in the car but moving in space with the car, and, more importantly, in time. Summing up, in these two short "videos" in the speaker's brain (5a-b) *a dog* is an entity with some seconds of duration: a temporal entity in the mind of both speaker and hearer. It is a problem for cognitive theory why the human brain registers *a dog* in (5a-b) as a temporal entity but then subsumes it under the general notion of "dog" with its physical nature – which is "permanent", not temporary/temporal. From a common-sense point of view, a dog is something physical. But in (5a-b) "the nature of *a dog*" is not physical, it is temporal. It is a moving picture with a short duration in the speaker's mind, and this moving picture is then transferred into the mind of the hearer. The hearer, too, obviously registers *a dog* as a temporal entity first and then subsumes it under the general notion of "dog" with its "physical nature". Put otherwise, the minds of both speaker and hearer hide the temporal nature of the participants from the "normal awareness" of speaker and hearer.[14]

It can easily be conjectured now that if speaker and hearer would have to register in language all situations permanently occurring around with all the participants in them as temporal entities, not subsumed under a physical structure, the memory of both speaker and hearer would soon clog and stop working (Kabakčiev 2000: 117ff; 2019: 211). It is also indicative that the illogicality in (5b) and the temporal feature (seconds of past existence) of the participants remain unnoticed or ignored by the native speaker. Asked "Why do we say things like *There **was** a dog in that car* instead of *There **is** a dog in that car*?", respondents admit that the former is, indeed, illogical – but it is "a specific way of saying things" as in hyperboles, metaphors and other figures of speech. People dismiss the illogicality of (5b) because they are interested in the pragmatic impact of language, not in its structural organization.

But, more importantly, it remains beyond the attention of linguists that many other sentences in English and other languages manifest these and similar illogicalities. The illogicalities are again tense-aspect related, again remain unnoticed or ignored by the average speaker, and the temporal nature of participants is again concealed. This time, however, the sentences are not very rare. Cf. (6):

(6) a. Iniesta passed a beautiful ball to Messi
b. Iniesta passed beautiful balls to Messi
c. The judge banged a gavel

For (6a) to be really and literally true, it ought to mean that there were several balls on the football pitch, Iniesta chose one, beautiful, and passed it to Messi. This

[13]All sentences are products of the human brain.
[14]But despite this concealment, the markers of temporal boundedness in *a dog* and *that car* remain – these are the article *a* and the determiner *that* (Kabakčiev 2000, 2019).

is a possible interpretation. But we know that it is not the typical one in our knowledge of the world. In the usual reading of (6a) there is only one ball on the pitch and Iniesta ***gives a pass*** to Messi, and what is especially important is that *a ball* here does not refer to a beautiful physical object, it refers to a pass that is beautiful. Analogously, (6b) does not refer to physically beautiful balls, it refers to beautiful passes. Recall the argumentation above, according to which *a dog* in (5b) is a temporal entity with a short duration rather than one with a physical constitution. Here again, *a beautiful ball* and *beautiful balls*, that would normally have to be physical entities, are not physical but temporal. They are acts: a single one in *a beautiful ball*, non-bounded iterative ones in *beautiful balls*. The "illogicality" in (6a-b) is also present in (6c). It ought to mean that the judge had several gavels on the desk in front, grabbed one and banged the desk with it. But (6b) does not normally mean that. It means that the judge had only one gavel in front and gave a bang with it. Again, *a gavel* here does not refer so much to a physical object; it refers to *a bang with a gavel*. The "illogicality" is again unnoticed by the average speaker, as in the sentences with the dog and the beautiful ball(s), and shows that what ***appears*** in language is often ***not*** what is really meant.

What Do the Grammemes Present Perfect and Past Indefinite "Mean"?

Primarily discussed above was the indefinite past. But the aim of the paper is to analyze the present perfect. The essence of the perfect across languages is taken to be best represented by the present perfect – not by the future perfect or the plusquamperfect, and its definition usually hinges on the definition of the preterite in the relevant language. In the case of English, the present perfect is contrasted to the indefinite (simple) past. The former is usually described as "a past situation with current relevance", the latter as "a past situation with no connection to the present" (Bybee et al. 1994: 54, 61, Comrie 1985: 24-25, among others). A completely different conception is proposed here. According to it, the present perfect cannot be understood in terms of what it does, it can be understood in terms of ***what it does not do***. Following the example of the aspectological analysis of the indefinite past, the idea that a grammeme can be understood in terms of what it ***does not do*** could even be seen as a methodological principle. The indefinite past cannot be understood aspectologically in terms of what it does; it can be understood in terms of what it ***does not do***; cf. (6a-b) above, where the indefinite past ***does not and cannot*** express an aspect value. While *passed* in (6a) explicates perfectivity, in (6b) it explicates imperfectivity, in both cases through the compositional aspect mechanism (Verkuyl 1972, 1993, Kabakčiev 2000, 2019). Until the 1980s, it was universally accepted that the English indefinite past has "a second meaning", aspectual. English grammars tried very hard to define this meaning for decades and their attempts failed over and over again – but the descriptions of the indefinite past as "aspect" remain to the present day. The gross inability of English grammars to explain tense and aspect has just been meticulously demonstrated by Bulatović (2020). She analyzes ***ten*** English

grammars that fail (some dramatically) to explain that the indefinite past grammeme has no aspectual meaning at all and that its definition ought to contain negative information, not positive. The definition ought to delineate what the past indefinite does not do, not what it does – because the indefinite past is an "empty bag" capable of accommodating any aspectual meaning arising in a sentence or context (Kabakčiev 2017: 238, 349, 387).[15]

But What Are the Indefinite Past and the Present Perfect *Not* Then?

It is common knowledge that aspectologically the English present perfect is largely identical (if not precisely) to the indefinite past (Androutsopoulos 2002: 36; Verkuyl 2008). It, too, is an "empty bag" that can accommodate any aspectual meaning in the sentence/context (Kabakčiev 2017: 203). But what is its "second nature"? What is its raison d'être? Following the conception of the indefinite past as an aspectological "empty bag", the idea to be launched here is that the essence of the present perfect is similarly related to what the perfect ***is not*** rather than to what it ***is***. The raison d'être of the present perfect is to be sought in certain functional dependencies, not in "its meaning" – and through comparisons with the past indefinite again, but in a different manner.

The present perfect in Bulgarian, an Indo-European language similar to English in certain grammatical areas, notably tense, was shown above to serve an important function, "grammaticalizing" certain types of sentences. The sentences are incorrect with witnessed forms and correct with present perfect forms, the latter being non-witnessed. This grammaticalizing function is absent in English but it suggests that the present perfect might be a device to counterbalance the impact of certain grammatical entities in other languages as well – or even in all languages. In this vein, let us recall that prior to 1972 nobody in the linguistic world would dare propose that (7a, b) and similar sentences are perfective. The "canon" in those times decreed that there is, simply, no such thing as perfectivity in English. Hence, it should not even be sought (Zandvoort 1962, Dušková 1983). Today, precisely conversely, thanks to the discovery of compositional aspect (Verkuyl 1972), there is not a shadow of a doubt that (7a,b) are perfective sentences and (7c,d) are imperfective:

(7) a. Maria arrived
\- b. Maria read an article
c. Maria traveled
d. Maria read articles

Yet it must be heavily emphasized now that the perfectivity of (7a, b) and the imperfectivity of (7c, d) are only ***default values*** (Kabakčiev 2000: 59, 82, 2019: 205ff) – i.e., these are not values fixed on such sentences once and for all. If the

[15]Bulatović (2020) points to Declerck (2006) and Kabakčiev (2017) as "specialized English grammars" written by aspectologists and offering adequate descriptions of aspect in compositional terms.

sentences in (7) are used independently or in contexts that do not contradict their default aspect values, they explicate them. But if embedded in sentences/contexts rejecting the default values, these sentences start signaling different aspectological values. Observe how, due to the addition of certain elements in (7) – some types of adverbials, some direct or prepositional objects, (8a, b) explicate imperfectivity, and (8c, d) perfectivity:

(8) a. Maria arrived every day by train
b. Maria read an article for hours on end in those days
c. Maria traveled a large distance
d. Maria read articles about the Minoan civilization and was fascinated right away

Along these lines, an explanation of the meaning of the present perfect will be proposed, in which certain negative values are found in sentences with present perfect forms – such that cannot be discerned by viewing the present perfect as a past situation with current relevance or resultativeness, etc. Consider (9a-b) and follow the questions asked with respect to them – along with the answers:

(9) a. The train arrived
b. The train has arrived

Let us first ask about (9a), a sentence with an indefinite past verb form: where are the participant, the situation and the speaker? Here is the answer.

(1) The **participant** (*the train*) is **in the past**;
(2) The **situation** referred to by the verb form (*arrived*) is **in the past**.
(3) The **speaker** is **in the past**.

Why is the participant *the train* in the past? Why is the speaker in the past? Recall (5a-b), where the participant *the dog* and the speaker are in the past. By using past tense forms the speaker deploys the participant *the dog* as well as himself/herself onto a past-time segment, despite the circumstance that the speaker's location in the past may be only a fraction of a second prior to making the utterance in (5a-b) or (9a). Analogously, the speaker in (9a) is deployed in the past by the indefinite past grammeme – and likewise the participant *the train* is also deployed in the past. As for the situation referred to by *arrived*, there can hardly be any doubt that it is located in the past – as per the understanding of the past as a grammatical device to locate situations in time.

Now let us ask where the participant, the situation and the speaker are in (9b), a sentence with a present perfect verb form. Here is the answer.

(1) The **participant** (*the train*) is **in the present**.
(2) The **situation** referred to by the verb form (*has arrived*) **is in the past**.[16]
(3) The **speaker** is **in the present**.

[16]But the situation also has a pragmatic relevance for the present.

Why is the participant *the train* in the present? Why is the speaker in the present? It can be argued that in (9b) the semantics of concatenations such as *the train + has* involves a current, present status and location of *the train*, although the train may turn out to have been involved in other situations after the addition of the past participle to the sequence. In this case *arrived* adds an accomplishment (Vendlerian) to the current status of *the train* – in the present, but the accomplishment itself belongs to the past. There can hardly be any doubt that when we produce sentences such as *The train has arrived*, the train is in the present – unlike in *The train arrived*, where it is in the past. As for the speaker, in (9b) s/he is in the present because s/he cannot be in the past and ascribe a present status to the train from the past – that is, for the future, for a point not yet reached by both the train and the speaker himself/herself.[17] In other words, if we take it that in (9b) the speaker is somehow in the past, s/he would then have no way of knowing what the staus quo in the present is (including the status quo of the participants), because the present for the speaker would then actually be a future – an unknown status quo.

The important conclusion is that if in (9b) the speaker is in the present but the arrival of the train is in the past, ***the speaker was not a witness to the situation*** ("the arrival of the train"), in line with what Aikhenvald (2004: 112) calls a "semantic link between a non-firsthand evidential and a perfect". It also fully stands to reason to assert that, had the speaker witnessed the arrival of the train, s/he would have used sentence (9a) instead. Obviously, the assertion that in (9b) the speaker is not a witness to the situation should be taken to be valid for most sentences like (9b) with present perfect verb forms, and this is the negative value predicted above to hold for the "second nature" of the present perfect: ***"non-witnessing"***.

But why is the non-witnessed value of the present perfect hidden to the native speaker, and even to linguists? In all probability, the reason for this is the impossibility to contrast the English present perfect grammeme to a witnessed one, as such a grammeme is absent in English. In any case, if the assertion above about the present perfect is true, it must be re-formulated as a conclusion and a generalization.

> *The English present perfect is a non-witnessed verb form, though it does not directly signify (denote/encode) this value. It only signals/explicates it. And if the present perfect is a non-witnessed verb form, then the English indefinite past – per argumentum a contrario and per the understanding of the indefinite past as a past situation with no connection to the present, is, conversely, a witnessed verb form. But the English indefinite past is a witnessed verb form merely by default, i.e., when its value witnessed is not canceled within a sentence/context. Also, the indefinite past is <u>not</u> grammatically marked as witnessed; it signals this value, it does not signify (denote/encode) it.*

The preliminarily expected conclusion that the essence of the English present perfect is to be identified in negative terms is thus reached. The present perfect

[17]Unless a future tense form is used, but it is not the case here.

features the value non-witnessed – but does not signify it, it only signals it! Recall again the similar thesis, completely endorsed in linguistics today thanks to the compositional aspect theory, that English sentences with an indefinite past such as (7a, b) and (9a) signal perfectivity, while sentences such as (7c,d) signal imperfectivity, and that perfectivity and imperfectivity are signaled ***by default*** (Kabakčiev 2000: 59, 82; 2019: 205ff). Just like the present perfect, the indefinite past is described not in positive but in negative terms: it does not encode perfectivity or imperfectivity; it ***allows*** their signaling depending on the impact of sentences/contexts. But notice the difference that while the English indefinite past signals the value witnessed by default and can hence be coerced into signaling non-witnessed under the influence of a sentence/context, the present perfect is non-witnessed ***in itself***, as the situation it portrays is located in the past but the participants and the speaker are in the present. Hence, the non-witnessed value of the present perfect can hardly be coerced into witnessed. One cannot have a witnessed situation in the past and simultaneously have the participants and the speaker in it deployed in the present, not in the past. This thesis is supported by the observation that sentences such as English (10a) or Bulgarian (10b) do not explicate a witnessed value, despite the use of 1st pers.sg. forms strongly presupposing it:

(10) a. I have visited Westminster Abbey
b. Az sam poseshtaval$_{\text{PERF,NON-WITN,IMPFV}}$ Uestminstarskoto abatstvo[18]
'I have visited Westminster Abbey'
c. I visited Westminster Abbey

Unlike English (10c), which easily explicates the value witnessed with the indefinite past, both (10a) and (10b) seem to somehow distance the speaker from his/her own experience of visiting Westminster Abbey. It is as if the speaker in (10a, b) has entrusted somebody else with the description of his/her visit to Westminster Abbey.

If the value of a verb form is to be witnessed, it is natural for the speaker, the situation and the participants to be at the same time-axis location. Compare Bulgarian (11a), with the witnessed forms *vidya* 'saw' and *pristigna* 'arrived' and the value witnessed grammatically encoded, to its English correspondence (11b), where *saw* and *arrived* only ***signal*** the value witnessed – through the general meaning of the sentence:

(11) a. Petar vidya$_{\text{WITN}}$, che Maria pristigna$_{\text{WITN}}$
'Peter saw that Maria arrived'
b. Peter saw that Maria arrived

There can be no doubt that for the value witnessed to be directly signified, as in Bulgarian, or signaled, as in English, the speaker, the situation and the participants must be at the same time-axis location in the past. Among other

[18]There is a problem here: the present perfect tends to imperfectivize the situation in (10a,b) – in both languages (Bulgarian and English). It will not be dealt with, for lack of space. Cf. the opposite phenomenon in Footnote 10.

things, this means that it would be wrong to assert that the English present perfect is non-witnessed by default, because a default value is such that can be turned/coerced into an opposite one by the impact of some additional element(s) in the sentence/context, cf. *The train arrived*, perfective, vs *The train always arrived*, imperfective. It can be argued that the present perfect (*The train has arrived*) is "ultimately non-witnessed" and non-coercible into a witnessed value, just like *The train always arrived* is an ultimately imperfectivized expression, non-coercible into a perfective one by the addition of perfectivizing elements.

For some linguists, the definition of the indefinite past as witnessed by default and of the present perfect as non-witnessed in itself might sound strange and astonishing. Let us recall again that prior to 1972 nobody in the linguistic world would describe an English sentence such as (9a) as perfective, and nobody would describe (12b, c), (13a-b) as imperfective:

(12) a. The tourist visited the castle
b. The tourist visited castles
c. Tourists visited the castle
(13) a. The tourist hated the castle
b. Trains arrived

Conversely, today a serious linguist would not cast any doubt on the perfectivity of (12a) and the imperfectivity of (12b,c) and (13a-b). Of course, things are more complicated than in those explanations given in grammars and other linguistic publications, according to which the relevant aspectual readings in (12) and (13) must be sought in the indefinite past. No, it is not the indefinite past that triggers the perfective reading of (12a) and it is not the indefinite past that triggers the imperfective readings of (12b, c) and (13a-b). The indefinite past has a role to play in the effectuation of these two readings, but this is a different kind of role. The indefinite past ***allows*** these two opposite readings, the perfective and the imperfective one, depending on the impact of the elements in the rest of the sentence/context.

Now that the indefinite past is defined as a witnessed form by default, and the present perfect as a non-witnessed form in itself, this conception bears similarity to that of the indefinite past as an "empty bag" capable of accommodating any aspectual value arising in a sentence or context. The default witnessed value of the indefinite past depends on the absence of certain elements in the sentence. See (9a-b) above and compare with (14a-f):

(14) a. I saw that the train arrived
b. Peter said that the train arrived
c. According to CNN, the train arrived
d. Vidyah$_{WITN}$, che vlakat pristigna$_{WITN}$
'I saw that the train arrived'
e. *Petar kaza$_{WITN}$, che vlakat pristigna$_{WITN}$
'Peter said that the train arrived'
f. Petar kaza$_{WITN}$, che vlakat e pristignal$_{PERFECT}$
(lit.) 'Peter said that the train has arrived'

First, there is no doubt that an indefinite past tense form such as *the train arrived* ***can***, in principle, manifest a witnessed value: in simple isolated sentences such as (9a) and in complex sentences such as (14a) – where the context (in the latter case the previous verb) allows, supports or requires the signaling of witnessed. Elsewhere, not in isolated sentences such as (9a), it can signal non-witnessed too, due to the impact of other elements in the sentence/context. In (14b,c) the values non-witnessed and cancelable in *the train arrived* are generated by the impact of the verb *said* and the adverbial *according to*. In any case, the absence of a witnessed grammeme in English does not hamper sentences, clauses or expressions containing an indefinite past tense form to signal that the speaker witnessed the situation. Note, however, that although English (14a) and Bulgarian (14d) appear fully corresponding, semantically equivalent, the witnessed value of Bulgarian *vlakat pristigna* 'the train arrived' is grammatically encoded and hence fixed, while in English *the train arrived* is witnessed only by default and hence coercible into non-witnessed. The essence of this difference emerges when comparing the grammaticality of English (14b) with the non-grammaticality of Bulgarian (14e). At first sight the sentences are identical. However, English (14b) is correct because the phrase *the train arrived* is ***not*** grammatically witnessed in isolation. It is witnessed ***by default***, hence can be coerced into non-witnessed, as in (14b,c). Conversely, Bulgarian (14e) is non-grammatical because the value witnessed in *vlakat pristigna* 'the train arrived' is grammatically encoded, non-cancelable and non-coercible into non-witnessed or cancelable – while the preceding main clause *Petar kaza* 'Peter said' uncompromisingly requires the presence of the values non-witnessed and cancelable in the following phrase. The result: (14e) with the witnessed *pristigna* 'arrived' is non-grammatical, and the present perfect in (14f) – being a non-witnessed and cancelable form, is used to "grammaticalize" (14e).

Second, (9a), *The train arrived*, with an indefinite past form, can also manifest the value non-witnessed (interpreted as renarrated or inferrential, etc.), but for this to happen it must be embedded in sentences such as (14b, c). The non-witnessed value of *the train arrived* in (14b,c) is generated by the preceding phrases *Peter said that* and *according to CNN* – which require the subsequent use of cancelable-content expressions (and the value cancelable is subsumed under non-witnessed). But if (9a) is an isolated sentence whose meaning is not influenced by neighboring sentences, its reading would rather, as a rule, be such that the speaker will be taken to have witnessed the situation – and its content will normally be read as non-cancelable. This thesis about non-cancelable was proposed in Kabakčiev (2018: 248ff), where similar isolated sentences (15a-b) were taken to manifest non-cancelable content:

(15) a. John is drinking beer
b. John was drinking beer

-However, embedded in semantico-syntactic schemata containing expressions such as *X said that* and *according to*, requiring cancelable content in the subsequent phrase/clause, these sentences start to signal cancelable content.

Why do expressions such as *X said that* and *according to* generate cancelable content in the rest of the sentence? It is because they open two opposite possibilities: for the proposition in the rest of the sentence to be ***either*** true or not true, for the situation in it to be ***either*** happening or not happening, etc. (Kabakčiev 2018). See the phrase *the train arrived* in (14b,c), where it is implicated that the train may have arrived or not – because of the impact of the preceding expressions *X said that* and *according to*, which require cancelable content in the rest of the sentence.

As already established, sentences such as (9a) above can be taken to manifest the feature witnessed by default, unless embedded in a semantico-syntactic schema containing *X said that* or *according to*, etc. It is now worth asking whether the value witnessed is necessary in language at all, drawing parallels with languages where it is grammatically represented. In Kabakčiev (2018) it is argued that the English SOT phenomenon, incorrectly termed "a rule" due to a misunderstanding of its nature, is actually a mood whose function is to prevent the loss of non-cancelable content. Just like the Bulgarian present perfect "grammaticalizes" sentences such as (1) turning them into (2), the English backshift mood "grammaticalizes" (16), containing present perfect forms, by turning them into (17), with plusquamperfect forms:

(16) a. *I saw that the train has arrived at the station
b. *John said that the train has arrived at the station
(17) a. I saw that the train had arrived at the station
b. John said that the train had arrived at the station

Why should this grammaticalization be effected? In order to eliminate the danger of losing the feature non-cancelable in sentences such as (9b) when they are in isolation (see Kabakčiev 2018). In any case, (17) shows the grammaticalizing effect of the English past perfect, strongly supporting the argument that the perfect is a necessary grammeme. However, it is necessary not because of its "meaning" but because of the structural functions it performs.

Exactly "How Witnessed" Is the Bulgarian Witnessed Form?

The concept of witnessing, found in certain grammatical entities in certain languages, as well as in English as a semantic feature, is, however, complex and controversial. Bulgarian is a language in which the equivocacy of witnessed forms can easily be demonstrated. The standard definition of witnessed contains the assertion that a speaker using this form has personally witnessed the situation described – mainly through his/her vision and/or hearing, perhaps also through the other- senses. But there is a serious problem here. In an attempt to report normally what happened, the speaker cannot, in many cases, use another verb form in Bulgarian, non-witnessed, e.g., a renarrative or an inferrential. Because if the

speaker does this, additional implications arise – running contrary either to what objectively happened or to what the speaker intends to communicate. This occurs, for example, with historical events that did take place but were not personally witnessed – not seen on TV, not heard on the radio. Furthermore, a TV or a radio may report something that was not witnessed by them. To give an example, the historical event in (18a) below could be reported by a radio station on the basis of information from another radio station – which means that it is renarrated. Yet the verb form in (18a) is witnessed, not renarrative, but despite this it is correctly used.

In 1968, I myself knew that Czechoslovakia was invaded by the Warsaw Pact, but I never personally witnessed this. What radios and TVs in my country reported was "brotherly help administered to our Czechoslovak comrades". I knew, of course, that Czechoslovakia was invaded, not helped (told in the family). All this means that, following the definition of the witnessed grammeme requiring the speaker to have personally witnessed what s/he reports, after the 1968 invasion I ought to use ***not*** (18a), with a witnessed form, but (18b,c) – with a renarrative or a perfect:

(18) a. Armii na varshavskiya pakt navlyazoha$_{WITN}$ v Chehoslovakia
'Warsaw Pact armies invaded Czechoslovakia'
b. Armii na varshavskiya pakt navlezli$_{RENARR}$ v Chehoslovakia
'Warsaw Pact armies invaded Czechoslovakia'
c. Armii na varshavskiya pakt sa navlezli$_{PERFECT}$ v Chehoslovakia
'Warsaw Pact armies have invaded Czechoslovakia'

But there is a problem. If I were to use a renarrative as in (18b), this would trigger an implication that the assertion may be untruthful – because of the uncertainty of all information supplied by third parties (Kabakčiev 2018). If I were to use a present perfect as in (18c), this would imply that I am making an inference – and an inference is dubitable by itself (an inference is either true or not). To sum up, the use of (18b,c) would cast a doubt on the truthfulness of the information, and this would contradict the fact that I ***simply knew***, whatever my source, that the Warsaw Pact had invaded Czechoslovakia. Hence, renarrative or present perfect forms would be out of place here – for being non-witnessed, renarrative and/or inferrential, hence dubitable. What verb form to use then? Only the witnessed one in (18a) remains, despite the fact that I did not witness the 1968 invasion.

Thus, despite the standard definition of witnessed, sentences in Bulgarian containing witnessed forms do not always meet the requirement for the speaker to have witnessed the situation. To provide other examples in support of this thesis, if asked why the roof of my house is damaged I can answer that a storm hit it, using a witnessed form – though I was absent during the storm (never saw or heard it). Or if a neighbor asks where my children are, I can reply that my wife took them to a concert, using a witnessed form, although I did not see or hear my wife take them to a concert (but I know she did):

(19) a. Prolivna dazhdovna burya udari$_{WITN}$ kashtata mi
'A torrential rainstorm hit my house'
b. Zhena mi zavede$_{WITN}$ detsata na kontsert

'My wife took the children to a concert'

The two alternative forms (renarrative and perfect) that could, in principle, be used here instead of the witnessed ones in (19a-b), would damage the intent of (19a-b):

(20) a. Prolivna dazhdovna burya udarila$_{RENARR}$ kashtata mi
'A torrential rainstorm hit my house'
b. Zhena mi zavela$_{RENARR}$ detsata na kontsert
'My wife took the children to a concert'
(21) a. Prolivna dazhdovna burya e udarila$_{PERFECT}$ kashtata mi
'A torrential rainstorm hit my house'
b. Zhena mi e zavela$_{PERFECT}$ detsata na kontsert
'My wife took the children to a concert'

If I answer a question why my roof is damaged using (20a) with a renarrative, this would mean that I emphasize the fact that ***I was told*** that a rainstorm hit the house. This is not the case. I simply know that a rainstorm hit my house, whatever my source. If I use (21a) as an answer, with a present perfect, this would mean that I am either re-narrating or ***making an inference***, and an inference is by virtue of its nature non-witnessed and dubitable. This is again not the case. I simply know that a rainstorm hit my house. Similarly, if I answer the neighbor's question about my children using (20b) or (21b), I will be saying that I was told that my wife took the children to a concert (20b) or that I am making an inference that my wife took the children to a concert (21b). Not true in both cases. I simply know that my wife took the children to a concert, despite the fact that I did not witness the act.[19] The definition of witnessed in Bulgarian is not a convincing one and is in need of serious revision.

The reasoning here appears to be mainly valid for Bulgarian and similar languages featuring a witnessed grammeme, on the one hand. But, on the other, it can be argued that the value witnessed, with its fuzzy nature, can be successfully applied to languages like English, and in particular to the indefinite past grammeme. It is high time for the world community of anglicists to challenge the idea that the English present perfect is something that encodes current relevance or resultativeness, discard these and similar mysterious notions and mantras and consider the proposal that ***the indefinite past is witnessed by default*** – and that ***the present perfect is a non-witnessed form by itself***, respectively.

Is it Necessary to Signify or Signal the Value Witnessed in Language?

The fact that many (probably most) languages do not feature a witnessed grammeme, yet there are languages that do, raises questions. Why are there such languages? Must the feature witnessed (grammaticalized or not) be looked for in a

[19] I know that my wife has taken the children to a concert today, 15 July, because I bought the tickets a month ago, on June 15, and I remembered the date of the concert, 15 July.

language? English grammars have never discussed the possibility for English to signify or signal witnessed.[20] As already argued, prior to Verkuyl's discovery of compositional aspect, perfectivity was thought to be absent in English, but today it is universally recognized as present – and important. Nowadays it is witnessed that is taken to be non-existent. But is it really absent and not worth looking for? Let us consider some sentences, (22a-c), in another language without a witnessed grammeme, Russian:

(22) a. Poezd pribyl
'The train arrived/has arrived'
b. Ya uvidel, shto poezd pribyl
'I saw that the train arrived'
c. Kto-to skazal, shto poezd pribyl
'Somebody said that the train arrived'
d. I saw that the train arrived at the station
e. Someobody said that the train arrived at the station

Despite the absence in Russian of a distinction between preterite and present perfect (Russian has only three tense verb forms – preterite, present, future) and between witnessed and non-witnessed forms, Russian (22a) manifests two separate meanings: one corresponding to the dependent clause in (22b), witnessed, and another one corresponding to the dependent clause in (22c), non-witnessed. Witnessed in (22b) and non-witnessed in (22c) are values generated by the semantics of the main clause: (22b) triggers witnessed in *poezd pribyl* 'the train arrived' by the main clause *ya uvidel* 'I saw'; (22c) triggers non-witnessed by the main clause *kto-to skazal* 'somebody said', the latter requiring a non-witnessed form with cancelable content in the dependent clause. If English is used as a comparison, Russian (22a) will have a meaning corresponding to English (9a) above, witnessed by default, or to (22d), witnessed due to the previous phrase (*I saw*), and another one corresponding to English (9b), non-witnessed because of the non-witnessed nature of the English present perfect, or to (22e), non-witnessed because of the impact of *somebody said*. If Bulgarian, featuring a grammatically witnessed preterite and a non-witnessed present perfect, is used as a comparison, Russian (22a) will again have two separate correspondences: (23a), with a witnessed and non-cancelable verb form, and (23b), with a present perfect form, which is non-witnessed (renarrated and/or inferrential) and with cancelable content. Note that while Russian (22a) appears to have a unified meaning at first sight, its two correspondences in Bulgarian (23a-b) manifest completely different meanings – as do the English translations:

(23) a. Vlakat pristigna$_{\text{WITN}}$
'The train arrived'
b. Vlakat e pristignal$_{\text{PERFECT}}$
'The train has arrived'

[20]To the author's knowledge.

This comparative-contrastive analysis indicates that: (i) the features witnessed and non-witnessed can be present (Bulgarian) or absent (English, Russian) as grammemes in a language; (ii) the present perfect grammeme can be present (English, Bulgarian) or absent in a language (Russian). The absence of this grammeme in a language does not hamper its meaning (semantic content) to be supplied in semantico-syntactic terms. But its presence in another language suggests that, as its meaning can also be supplied there in semantico-syntactic terms, it may in fact not exercise the functions it appears to exercise at first sight. Phrased differently, a grammeme may be thought to exercise some function(s) while actually it exercises some completely different function(s) – and in the case of the Bulgarian witnessed forms they may turn out to exist not in order to denote witnessed content but to exercise some other function(s), unexpected.

This has already been proved for articles. Languages without articles such as Russian and the majority of Slavic tongues show that the definite and the indefinite article are not at all necessary for signaling definiteness and indefiniteness, and the regular pattern of a definite and an indefinite article in English and other Germanic languages actually serves the explication of perfectivity, the explication of imperfectivity being performed by the zero article (Kabakčiev 1984, 2000, 2019). Thus the major function of the articles (definite and indefinite), their raison d'être, is not the signaling of definiteness and indefiniteness but is the signaling of temporal boundedness of nominal referents (Kabakčiev 2000, 2019). This means that the signaling of definiteness and indefiniteness is ***a residual function of the articles***, not the major one. Analogously, given that there are languages without a present perfect grammeme and without perfects in general, given that current relevance and similar definitions of the present perfect are defective, given that the meaning of the present perfect must be defined in negative terms – all this suggests that the present perfect and the perfect exercise functions that have nothing to do with the meanings (such as current relevance) standardly ascribed to them.

The thesis that the present perfect exercises a function that has nothing to do with the meanings ascribed to it by the majority of researchers is supported, and actually proved, by its "grammaticalizing function" in Bulgarian and Montenegrin. The present perfect in English does not exercise this function but the perfect there could still be a device counterbalancing the impact of other grammatical entities. This idea is supported by the grammaticalizing function of the plusquamperfect in (17) above. The case with aspect and the regular pattern of the definite and the indefinite article is similar. Wherever aspect is a grammatical category, as in the Slavic languages, its raison d'être is to denote perfectivity/imperfectivity (temporal boundedness/non-boundedness). When temporal boundedness disappears in verbs, as happened in the history of the Germanic languages, articles emerge (Leiss 2000) – to encode temporal boundedness in nominal referents (Kabakčiev 1984, 2000: 153ff, 2019). As Abraham and Leiss (2012: 326) put it, "languages develop either a category of aspect or an article system".[21] Hence, in simplified terms, the answer to the question "Why do languages not have aspect in the verbs?" is

[21]In some languages, e.g. Finnish, temporal boundedness in nouns is grammatically encoded not through articles but through the case system (Kabakčiev 2000: 157).

"Because they have articles". And the answer to the question "Why do languages not have articles?" is "Because they have aspect in the verbs".

But there is an essential difference in the meanings encoded by aspect and articles. While aspect, i.e., the expression or signaling of temporal (non)-boundedness, is pragmatically extremely important and hence necessary for every language, definiteness and indefiniteness explicated by the two articles can be defined as ***residual values***. In other words, the ultimate task of both aspect in verbs and articles in NPs is the expression or signaling of aspect, i.e., temporal (non)-boundedness, something important for human communication, but what is usually called expression of definiteness/indefiniteness by articles is a secondary function which is, first, not essential, second, it is easily performed by other means in languages without articles. Languages with no articles function flawlessly. No need is felt in them to encode grammatically definiteness and indefiniteness. When a noun is indefinite, this means (in simplified terms) that it appears for the first time in the context. When a noun is definite, this means that it is already introduced in the context – or is in some other way familiar to both speaker and hearer. Why should languages develop definite and indefinite articles then? The answer: because they need to signal aspect, not because they need to mark definiteness and indefiniteness (Kabakčiev 1984, 2000, 2019). A similar grammatical category that exists ***not*** to encode what it appears to encode – and the misrepresentation here is absolutely obvious – is gender. The raison d'être of grammatical gender is not to "mark gender" on nouns standing for people and animals. Gender is a device to facilitate reference to ***all*** nominals (not only people and animals) by breaking them down into groups (usually three, masculine, feminine, neuter) and thus ensure exact reference back to them through separate pronouns. In other words, articles and gender are categories exercising ***residual functions*** – i.e., these are ***not*** grammatical entities whose raison d'être is to denote what they seem to denote. They perform other tasks, functional, of importance for the internal mechanisms of language structure.

Conclusion

The present perfect is a grammeme that does not possess "own semantics" – indispensable, necessary to be explicated or expressed. It exercises so-called ***residual functions*** similar to those of gender and the articles.[22] Put otherwise, when a present perfect exists in a language, it is ***not*** there to express current relevance, resultativeness or similar queer notions. If the encoding of such notions were necessary and essential for human communication, all languages would feature present perfect grammemes. The fact is that there are hundreds of languages without a present perfect or a perfect in general – and their speakers understand each other perfectly. On the basis of the finding that the present perfect in two languages, Bulgarian and Montenegrin, serves to counterbalance the effect

[22]This conclusion ought to be generally valid also for the perfect (as an abstraction from the present perfect, the plusquamperfect, etc.), but no such claim is made here – for lack of space for the necessary analysis.

of witnessed verb forms and thus "grammaticalize" certain sentences, and on the basis of the understanding of the present perfect in negative terms, the conclusion is that the raison d'être of the English present perfect is similar to the present perfect in Bulgarian and Montenegrin. By signaling the value non-witnessed (not by default), the English present perfect counterbalances the value witnessed present by default in the indefinite past grammeme. Of course, the present perfect grammeme in English and in cross-language terms is an extremely intricate phenomenon that may turn out to exercise other functions as well, in addition to the ones described here.[23]

This relatively short paper with an analysis focused on a single language, English, cannot claim to have identified the raison d'être of the present perfect in universal terms, for all languages. But, on the other hand, it offers clues for a possible future accomplishment of this task – that have not been previously discussed. If the raison d'être of the present perfect is similar in three languages, Bulgarian, Montenegrin and English, future research might show this to be the case for other languages as well – or even for all.

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[23]An anonymous reviewer does not quite approve of the idea that "all languages should be considered equal in terms of the use of the present perfect" – because "this tense is inexistent in some languages". My position, supported by the data from Bulgarian, Montenegrin and partly English, is that when this grammeme exists, it is not because its "semantics" is necessary but because it counters the impact of some other grammatical category/categories. The analysis shows that the present perfect has no own semantics necessary for communication. If it had, all natural languages would feature a present perfect, and the fact that many do not provides sufficient grounds for seeking the raison d'être of the present perfect in the domain of internal grammatical organization.

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