

DEPARTMENT OF ENGLISH AND GERMAN STUDIES



**Natural and Constructed Languages in Contrast: A
Morphological Analysis of English and Esperanto**

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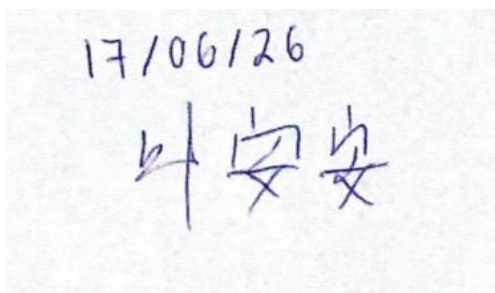
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Abstract

Questions surrounding natural and constructed languages have attracted linguistic interest for decades, particularly regarding regularity and language learnability. This dissertation presents a qualitative comparative analysis of the morphology of English and Esperanto. English is examined as a natural language, whereas Esperanto is analysed as a constructed one. The project focuses on both inflectional and derivational morphology, examining how the two languages express categories such as word class, tense, aspect, mood, voice, agreement, plurality and case marking. The findings indicate that English morphology combines productive grammatical patterns with numerous irregular forms that reflect historical linguistic development whereas Esperanto shows a highly regular and transparent morphological system characterised by systematic affixation, along with invariant grammatical endings. The comparison suggests that Esperanto's planned design contributes significantly to its morphological consistency and facilitates grammar analysis, while English morphology reflects the cumulative effects of historical evolution. At the same time, the comparison shows that morphology alone cannot fully account for language complexity and learnability.

Key terminology: *Esperanto, English, natural languages, constructed languages, morphology.*

1. Introduction

Language has long been studied not only as a means of communication but also as a reflection of history, culture and also how people interact with it. Among the many areas of linguistic study, the distinction between natural and constructed languages has generated interest because it raises fundamental questions about how languages emerge, then evolve and how grammatical meaning is encoded. Natural languages are generally understood as systems that have developed organically through historical and social processes whereas constructed ones are those that are consciously designed, by either an individual or a group, for a specific purpose. This distinction has been of interest not only to linguists but also anthropologists, philosophers and language planners, especially when the debate on whether a consciously created language can eventually function in ways similar to naturally evolved ones arises.

Natural languages, according to Roberts (2023), are objects that are natural and can be studied scientifically while also being inherently capable of fulfilling a complete range of communicative functions. They are characterised for having an unknown origin and for having a development that is closely connected to social interaction, cultural transmission and general historical evolution. English represents one of the clearest examples of a natural language as it “holds the status of the most influential and widely spoken language across the globe” (Chin, 2023, p. 77). Constructed languages, by contrast, are what Christine Schreyer (2021) describes as “people-produced phenomena”. Among the various types of constructed languages, Esperanto is considered by many to be the most successful. It is an international auxiliary language created for practical communication and with the aim of grouping people together under a shared language. Garvía (2016) even describes Esperanto as a unique and

paradoxical social phenomenon because it is one of the few constructed languages to have survived and developed into a living language used by real communities.

The relationship between natural and constructed languages has been approached from many linguistic perspectives. The present dissertation will focus especially on morphology because “proposers and supporters of planned languages often claim that morphological regularity is a decisive factor for language learnability, speeding up the whole process.” (Gobbo, 2017, p. 37) Esperanto is particularly relevant in this aspect because its grammatical system was deliberately designed to minimise irregularity and maximise transparency and productivity. By contrast, English reflects centuries of historical development and linguistic contact that created linguistic changes thus causing irregular variants and forms. Comparing these two languages morphologically will therefore provide an opportunity to observe how conscious design and natural evolution shape morphological systems in different ways.

The main objective of the present dissertation is to compare the morphology of English and Esperanto in order to examine how a natural language and a constructed one encode grammatical meaning. More specifically, the project seeks to find how both languages express word class, tense, aspect, mood, voice, agreement, plurality, and case marking while also paying attention to the extent to which Esperanto’s regularity may be connected to its planned origin. As Adger (2019) expresses, “thinking about inventing languages can give us good insight into how natural languages work.” (Adger, 2019, p. 95) Moreover, this dissertation also aims to explore broader questions concerning language naturalness, morphological regularity and linguistic design, including whether irregularity is necessarily

associated with natural languages and whether a constructed one may gradually develop characteristics commonly associated with naturally evolved systems.

The present project follows a qualitative comparative methodology based on morphological analysis using examples extracted from grammar books, linguistic studies and dictionaries of both languages. Works such as those by Rochelle Lieber, Andrew Carstairs-McCarthy and Christopher Gledhill are used throughout in order to compare the inflectional and derivational systems of the two languages. In addition to that, an extract from *Le Petit Prince* by Antoine de Saint-Exupéry is compared and analysed in both Esperanto and English in order to observe morphological processes within a text rather than just through isolated examples.

The structure of the project is divided into seven main sections. It begins with an introduction presenting the topic, objectives, methodology and structure of the project. This is followed by a section defining natural and constructed languages and another introducing morphology and its main branches, inflectional and derivational morphology. The following section is dedicated to Esperanto, presenting its historical background and its linguistic properties at a general scale. The central part of the dissertation then consists of a comparative morphological analysis of English and Esperanto, focusing on both inflectional and derivational processes through examples from linguistic sources and literary texts. Finally, there is a discussion of the findings and a conclusion reflecting on what these morphological differences reveal about the relationship between natural linguistic evolution and conscious language design.

2. Natural vs. Constructed Languages

2.1 Natural Languages

Natural languages are generally understood as languages that arise naturally within human communities rather than being consciously designed by an individual or a group of them. According to Roberts (2023), “natural languages are natural objects [...], and so they can be the object of scientific study.” (p. 4) He further explains that natural languages are typically spoken as native languages and are “intrinsically capable of fulfilling a full range of communicative functions” (p. 4), including asking questions, making statements, expressing emotions or giving orders. One of their defining characteristics is that their origins are essentially unknown as it is impossible to determine an exact moment nor place in which they first appeared, they rather develop gradually through social interaction and cultural transmission across generations.

Natural languages are those that have arisen naturally in human communities and evolved through continuous processes of language change over time. English, Mandarin Chinese or Spanish are examples of this type of language. Their development is therefore closely connected to human history and social interaction and because they evolve organically through use and culture rather than deliberate design, natural languages tend to be fluid and dynamic systems. Changes in pronunciation, grammar, vocabulary and meaning accumulate naturally over time, often resulting in irregular structures, ambiguities, slang expressions and idiomatic forms that become part of the language itself. Words may also acquire multiple meanings depending on context, tone or cultural use. These irregularities and changes are frequently the result of long-term historical evolution, language contact and cultural exchange.

Another important characteristic of natural languages is their communicative and cognitive function. “Natural languages express meanings that relate to the physical and social worlds” (Malik-Moraleda et al., 2025, p. 2), meaning that they allow speakers to describe objects, actions, emotions and thoughts while also making it possible to share knowledge, beliefs and experiences with others, thus functioning not only as a communication system but also as a tool through which communities construct and transmit cultural and social identity.

Despite their diversity, natural languages also share a number of underlying structural properties. Nordquist (2025) discusses Chomsky’s theory of Universal Grammar, according to which all natural languages possess certain underlying rules that shape their grammatical systems. Although languages may differ considerably on the surface, they all contain organised systems of phonology, morphology, syntax, semantics and lexicon. At the same time, they are conventional and arbitrary, meaning that there is no inherent reason why a specific word should refer to a particular concept or object.

2.2 Constructed Languages

Constructed or artificial languages are linguistic systems that differ from natural languages in the way that they are consciously planned rather than naturally developed through long-term social interaction. They are “deliberately designed for a purpose by one person or a small group of people over a relatively short period of time” (Brown & Ogilvie , 2008, p.75). Unlike natural languages, whose origins are often impossible to trace precisely, constructed languages usually have identifiable creators, dates of creation and explicit objectives.

As Roberts (2023) explains, “artificial languages are languages designed for some specific purpose and restricted in terms of their functions” (p, 5) and, for this reason, they are not considered natural objects. However, the term “artificial language” is rather broad and may also refer to programming languages, logical systems or formal symbolic languages that are not necessarily intended nor commonly used in everyday human communication. In other words, although all constructed languages can be considered artificial languages, not all artificial languages are constructed languages.

In 2014, the Oxford English Dictionary officially added the term “conlang”, a shortened version of “constructed language”, thus reflecting the growing public interest in these linguistic systems and in the practice of “conlanging” itself. Terms such as constructed languages, conlangs, artificial languages, invented languages or planned languages are often used interchangeably, although different authors may favour one over another. In the present dissertation, the languages that are not natural are going to be referred to as constructed languages or conlangs.

One of the most common ways of classifying constructed languages is according to how they are created. Schreyer (2021) explains that they are often divided into *a priori* and *a posteriori* languages. The former are those created largely from scratch without relying heavily on existing natural languages, whereas the latter type incorporate vocabulary, structures or grammatical features inspired by already existing linguistic systems. Esperanto, for instance, belongs to the second type. These categories are also referred to as *schematic* and *naturalistic* languages, respectively. Since most conlang creators are already proficient speakers of natural languages, many constructed languages inevitably reflect features found in existing systems. Malik-Moraleda et al. (2025) point out that conlangers, conlang creators,

often combine and adapt elements from multiple languages in creative ways, which explains why many constructed languages share phonological, morphological and syntactic characteristics with natural languages despite their planned origins. As Adger (2019) states, “languages do not vary randomly. They have a design, a structure, a pattern, in common.” (p. 98)

Each constructed language is deliberately created with a unique purpose in mind, meaning that they are intentionally designed to fulfill specific communicative, artistic, philosophical or experimental goals. Different authors propose different classifications. For instance, Schreyer (2021) distinguishes between *auxlangs*, *artlangs* and *engelangs* while Kirkham (2017) adds *ficlangs*, *playlangs* and *privlangs* to the classification. Then, there are other authors who divide constructed languages according to fields such as society, literature, confidential communication, science or audiovisual media. Artistic languages, *artlangs* or *ficlangs* are mainly created for fictional, aesthetic or creative settings. Their design may prioritise expressive potential or internal coherence rather than ease of learning. Examples of this type are Klingon or Dothraki. Engineered languages or *engelangs* are more of an experimental type, often seeking to eliminate the ambiguities found in natural languages, developed to test linguistic theories or explore whether a language can be made more logical or efficient. An example of this type is Láadan, an engineered language developed to explore linguistic theories concerning the relationship between language and thought. Then, private languages or *privlangs* are those intended for private communication and play languages or *playlangs* are created primarily for enjoyment or linguistic experimentation. Lastly, auxiliary languages, international auxiliary languages (IALs) or *auxlangs* are those designed to facilitate communication between speakers of different native languages, they “aspire to facilitate cross-linguistic communication” (Kirkham, 2017, p.13) and are often presented as

easier to learn than naturally evolved languages. Esperanto is the quintessential example of this last type and was explicitly created to serve as a neutral and accessible means of international communication. Therefore, for the purposes of the present dissertation, Esperanto will be considered an auxiliary language or *auxlang* within the broader category of constructed languages.

Despite being consciously planned, constructed languages still may resemble natural languages in many significant ways. Malik-Moraleda et al (2025) explain that conlangs are capable of expressing both the external worlds and internal human experiences, including emotions, thoughts and attitudes. Goodall (2023) also points out that most constructed languages “are intended to be used (or give the appearance of being used) in ways that resemble naturally occurring languages as well.” (p. 420) Due to this, they can also be studied linguistically in terms of structure, acquisition and use. Goodall further argues that the development of linguistics as a scientific discipline has itself contributed to the creation of constructed languages since designing a language requires knowledge of how languages function. This is also why some linguists have historically participated in language creation projects.

The distinction between natural and constructed languages is not always clear-cut. While they share similarities, there are clear differences such as the fact that they are designed according to explicit principles such as regularity, simplicity or logical organisation. Some argue that constructed languages have not been historically changed in the same spontaneous way as natural systems. There are several opinions regarding conlangs, Roberts (2023), for instance, suggests that Esperanto, an international *auxlang*, may arguably function as a natural language despite its planned origin, since it has developed a real speech

community and has evolved through sustained use by its speakers. All in all, constructed languages occupy a unique position within linguistic studies, standing between conscious linguistic design and natural communicative practice.

3. Morphology

3.1 General Issues

The study of word formation is how Harmer (2007) and Lieber (2009) define morphology. Similarly, Bauer (2003) defines it as “the study of words and their structure” (Bauer, 2003, p. 3). Although there are several definitions of the term, they all agree that morphology is the field of linguistics that investigates the basic elements of a language by looking at the internal architecture and formation of its words. Its etymology comes from Greek, as the word is formed by the combination of *morph-*, meaning “shape” or “form”, and *-ology*, meaning “the study of something”

The term's coining with that meaning is attributed to Johann Wolfgang von Goethe, a well-known German poet and philosopher. However, he did not use the term in relation to language but rather biology and botany and the study of the physical form and structure of plants and animals. It was the German linguist August Schleicher who later took the word and applied it to linguistics in 1859. The linguist was heavily influenced by evolutionary science and viewed languages like living organisms. “What Darwin lays down of the animal creation in general, can equally be said of the organisms of speech” (Schleicher, 1869, p.15) since for him, languages were natural organisms. Hence, morphology in linguistics became the systematic study of the internal structure and formation of words.

In order to understand how words are formed, it is necessary to introduce the concept of the *morpheme*, which is generally considered the smallest unit in a word that has a lexical or grammatical meaning. They are the smallest meaning-bearing units and cannot be divided further. The term was originally coined by Jan Baudouin de Courtenay at the end of the 19th century to refer to the smallest structural unit of language. Later, the concept was further developed by Leonard Bloomfield (1926), who defined morphemes as “a recurrent (meaningful) form which cannot in turn be analyzed into smaller recurrent (meaningful) forms” (as cited in Saldana & Herce, 2024, p.2). Morphology studies how these units combine to create words and express grammatical relationships. Morphemes may function independently as complete words or appear attached to other elements in order to modify meaning or indicate grammatical information. Therefore, the study of morphemes plays a central role in understanding the internal structure and organisation of language.

Morphemes are commonly divided into two main categories: *free or lexical morphemes* and *bound morphemes*. While the former are capable of standing alone as independent words, the latter are dependent elements that must be attached to another form. According to Booij (2012), “morphology might be seen as morpheme syntax, as the set of principles that tell you how to combine free and bound morphemes into well-formed words.” (p. 9) An example that he provides to illustrate the difference between the two types of morphemes is with the noun *buyer*, which consists of two morphemes: *buy*, the free or lexical morpheme that can stand on its own, and *-er*, an affix that cannot function as a word by itself.

Apart from the free and bound classification, morphemes can also be categorised by function within a word. *Roots*, *stems* and *affixes* are considered to be the main building blocks of a word, not meaning that they are the only components. The root is generally the

core piece and most important part as it holds the main lexical meaning and cannot be broken down into anything smaller. Consider the word in (1):

(1) [[re][buy][er][s]]

In (1), the root is *buy*. The stem is, according to Aronoff (2012), “the form of the lexeme on/from which the rule/function performs its realization” (p. 3) or, in other words, the part of the word where grammar endings such as plural or tense indicators are attached. According to Nordquist (2020), stems may consist of a single root, a compound one or a root combined with one or more affixes. In (1), *rebuyer* constitutes the stem as it includes the root and the affixes while excluding the plural ending -s. Lastly, the affix is the component that attaches to a root or stem to create a new word or alter its grammatical form since they carry meaning but cannot stand alone as independent words. They may appear as prefixes, before the root, or as suffixes, after it. As shown in (1), *re-* is the prefix and *-er* is the suffix. All three components combined together contribute to the systematic formation and modification of words, which results in processes such as inflection and derivation.

Another concept relevant to morphological analysis is *allomorphy*. Allomorphs are the different formal realisations of the same morpheme. In English, for instance, the plural morpheme -s may be realised as [s], [z] or [ɪz] and the past tense morpheme -ed also has three allomorphic realisations, which are [t], [d] and [ɪd]. Allomorphy shows that a single morpheme can take different forms while preserving the same grammatical function and these variations may be phonologically, morphologically or lexically conditioned.

Morphology also examines the broader patterns through which languages organise and combine morphemes. The study of these patterns falls within the domain of language typology. According to Katamba (1993), linguists generally distinguish five broad morphological types: *analytic* or *isolating languages*, *agglutinative languages*, *inflecting* or *fusional languages*, *incorporating* or *polysynthetic languages* and *infixing languages*.

However, these categories should not be understood as absolute as most languages display characteristics associated with more than one type. Among these types, the distinction between *isolating* and *agglutinative languages* is particularly relevant to this dissertation. In isolating languages, grammatical meanings tend to be expressed through separate words and word order rather than extensive morphological marking. By contrast, agglutinative languages typically combine several morphemes within a single word with each morpheme contributing a different grammatical meaning. According to Mathews (1991), Chinese and Turkish would be the quintessential examples of each type, respectively. According to Katamba (1993), in 1954, Greenberg proposed a quantitative method for morphological typology in which “he suggested that the number of morphemes in a representative sample of sentences should be divided by the number of words to work out the ratio of morphemes to words in a language.” (Katamba, 1993, p. 60). Following these definitions and classification, English is then generally regarded as predominantly isolating whereas Esperanto displays strong agglutinative tendencies due to its regular and systematic use of affixation. These differences become relevant when analysing inflectional and derivational morphology.

3.2 Inflectional Processes

As previously mentioned, morphology is commonly divided into inflectional and derivational processes. “Inflectional morphology is when a word occurs in many forms with distinct grammatical properties.” (Mansfield, 2024, p. 3) Standard inflectional categories such as person, tense, gender and number usually just modify the existing form of a word, thus ensuring they align with different grammatical contexts, rather than turning it into a new word.

(2) [[walk]s]

(3) [[walk]ed]

Mansfield provides the example of the lexeme *walk* and other wordforms from the same family, illustrated in (2) and (3), to show that although they express different grammatical meaning, they all belong to the same lexeme.

One of the most distinctive aspects of inflectional morphology is the coexistence of regular and irregular patterns. While languages generally follow regular rules, there are some irregular exceptions that cannot always be explained through contemporary grammatical rules alone. As Nordquist (2025) mentions, irregular inflections such as (4) and (5) are historical remnants. The patterns shown in (4) and (5) reflect the Old English strong verb system in which past tense and past participle forms were expressed through changes in the root vowel rather than by the addition of a suffix. Although weak verb forms eventually became the dominant pattern in Modern English, verbs such as *sing* and *drive*, which were used with more frequency, retained their original vowel alternations. In other words, these language irregularities are often linked to historical linguistic development and language evolution over time.

(4) *sing/sang/sung*

(5) *drive/drove/driven*

English, for instance, apart from having irregular verb forms such as those shown in (4) and (5), it also contains irregular plurals such as these illustrated in (6), (7) and (8).

(6) *child – children*

(7) *mouse – mice*

(8) *ox – oxen*

Such forms coexist alongside with other more regular constructions, thus creating a system that combines predictability with historical complexity.

Another important characteristic of inflectional morphology is the use of periphrastic constructions. Rather than expressing grammatical meaning through a single inflected word,

periphrastic constructions rely on two or more free morphemes, typically on an auxiliary verb with a main verb. They function to encode grammatical categories such as tense, aspect or mood. English, for instance, makes use of this type of construction in the formation of the future tense, as illustrated in (9), the progressive and the perfect aspects, as shown in (10) and (11), respectively.

(9) *I will sing*

(10) *I am singing*

(11) *I have sung*

As Lieber states, “languages have wildly differing amounts of inflection.” (Lieber, 2009, p. 7) While some languages such as Latin, Russian or German rely more heavily on inflectional morphology, there are others that do not. Hence, the study of inflectional processes is crucial when comparing naturally evolved languages with consciously constructed ones while also having a valuable insight into the way different languages encode grammatical meaning.

3.3 Derivational Processes

Derivational morphology is the process of forming new words by creating “distinct lexemes that are related to one another in their morphological structure.” (Mansfield, 2024, p. 3) As Booij (2012) expresses, “the basic function of derivational processes is to enable the language user to make new lexemes” (p. 51) Through this type of morphological processes, words may acquire new meanings or even change their grammatical category.

(13) [believe]

(14) [believ[able]]

(15) [[un]believ[able]]

Mansfield (2024) illustrates this process through examples shown in (13), (14) and (15). Unlike the base verb in (13), the forms in (14) and (15) function as adjectives. Prefixes are attached before the root and usually modify meaning whereas suffixes may change both meaning and grammatical category of a word. In this sense, “all derivational suffixes appear to determine the lexical category of the complex words that they form, and hence, they are category-determining.” (Booij, 2012, p.53) As a result, derivational forms are usually treated as separate items. As Nordquist (2025) mentions, derivational categories appear in dictionaries as separate words.

(16) [write]

(17) [writ[er]]

This can be seen in examples (16) and (17), where the noun in (17) constitutes a different lexical item from the verb in (16).

One of the most distinctive aspects of derivational morphology is productivity which is “the idea of rule-governed morphological creativity, the ability of language users to create new well-formed complex words.” (Booij, 2012, p. 67). This productivity is not general and varies depending on whether a language’s structural typology favours affixation or compounding for creating new words. For productivity to work, some other variables need to be taken into account, such as transparency, blocking and both semantic and phonological restrictions.

One factor that contributes to derivational productivity is *transparency*. According to Lieber (2009), words formed through transparent processes can be easily segmented, thus displaying a close correspondence between form and meaning, making transparency one of the factors that contribute to the productivity of word formation processes. Semantic

transparency refers to the degree to which the meaning of a word can be inferred from its constituent morphemes and although the concept primarily concerns meaning and therefore belongs to the domain of semantics, it is also closely related to morphology since it depends on how words are structurally composed.

(18) [teach[er]]

(19) [joy[ful]]

(20) [[under][stand]]

The meanings of the forms in (18) and (19) can be derived from their constituent parts and are therefore semantically transparent. By contrast, the meaning of the form in (20) cannot be directly inferred from the meanings of its individual morphemes, making it semantically opaque. Transparency is particularly relevant when comparing English and Esperanto since the latter is often characterised by a high degree of regularity and semantic transparency in word formation.

Another factor that, in this case, may restrict derivational productivity is *blocking*. Aronoff (1976) argues that a potential word formation may fail to occur because another established word already expresses the same meaning. In other words, the existence of one lexical item may prevent the creation of another that would otherwise be morphologically possible.

(21) *thief*

(22) **stealer*

(23) *arrival*

(24) **arrivement*

While (22) is a partial blocking of (21) since the word does exist but it is generally not used as much as the established lexical item, (24) is a total blocking of (23) because although *-ment* is a highly productive suffix in English, there is already an existing form that expresses the meaning. As Katamba (1993) explains, blocking constitutes one of the factors that limit the productivity of word-formation rules since the application of an existing form may prevent the creation of a new one. Therefore it shows that derivational morphology can not only be influenced by formal rules but also by lexical convention and language use.

Derivational morphology helps in the understanding of how languages are built and how new words are created. For some languages, this process is clear and regular while for others it is more complicated, which, alongside inflectional morphology, is also especially interesting when used to compare natural languages, which grow over time, with constructed ones, which are consciously planned.

4. Esperanto: A Constructed Language

4.1 Historical and Linguistic Background

Ludwik Lejzer Zamenhof or Ludwig Lazarus Zamenhof or Ludoviko Lazaro Zamenhofo (1859-1917), the creator of Esperanto, developed his language in response to the linguistic and social divisions he observed in his native city of Bialystok. Interestingly, the different versions of his name found in biographies or historical works about his life already illustrate the multilingual and culturally divided environment in which he grew up. His family's environment was equally multilingual as Markus Zamenhof, his father, spoke Russian to Ludoviko but, working as a schoolteacher, taught both German and French; Rozalia Zamenhof, his mother, spoke in Yiddish to him; and, in the streets, he would hear a wide

variety of languages. This multicultural environment exposed him from a young age to communication barriers that would often lead to social tensions between ethnic groups. As described in many biographies, Zamenhof's birthplace was "65-75% Jewish with the remainder made up of Polish, Russian, German and Belarusian minorities." (Korzhenkov, 2010, p. 2) These experiences shaped his lifelong ambition to create a neutral means of communication.

Zamenhof's personal background played a crucial role in shaping his ideas as he consistently emphasised the importance of his Jewish identity in the development of his thinking. As he expressed, all his ideals and both internal and external conflicts were closely connected to his Jewishness. He believed that there was one mission in human history, which was the unity of humankind, an idea that he also closely connected to his experience being a Jewish from the ghetto. He clearly stated that had he not belonged to that community, he would have never had these ideals as "no one can feel more strongly than a ghetto Jew the sadness of dissension among peoples." (Korzhenkov, 2010, p. 3) Zamenhof believed that a shared and single language would help achieve his dream of uniting all humanity together. These experiences motivated him to search for a solution that could facilitate communication and reduce conflict.

The idea of creating an international language emerged from this context. Zamenhof did not simply aim to design a new linguistic system but rather providing a tool that could promote equality and mutual understanding. He believed that the lack of a common tongue was a fundamental barrier to peace and social order and having a shared international language would be highly beneficial in multiethnic groups by having a shared medium for administration and social interaction while also keeping local practices and not being a threat

to home-based language practices. Esperanto was therefore conceived as part of a broader ethical vision, in which language would serve as a bridge rather than a barrier between people.

Zamenhof knew from the beginning that in order to create a language that could potentially be used internationally, it would have to be “neutral, belonging to no nation or ethnic group that might be privileged by its use over others who would have to learn and use it as a foreign language” (Korzhenkov, 2010, p. 7). He wanted a language that was neutral and easy to learn, taking inspiration from existing languages such as English, a language that he was introduced to while being a Gymnasium student and whose grammar he found was much simpler than languages like Greek or Latin. Once he started working on his language project, he knew that little-used forms, irregular verbs and other non-simplistic exceptions would be excluded from his creation as he sought to create a language that would be accessible to as many people as possible. “The idea was that a person with knowledge of a great Indo-European family could understand intuitively.” (Alcalde, 2021, my translation). In 1878, while Zamenhof was still a teenager, he completed “Lingwe Uniwersala”, his linguistic project aimed at becoming the international language he wanted to create. That version did not gain sufficient popularity nor reached the public, and it is rumoured that Markus, his father, burnt that book for the sake of his son so he could focus on his medical studies. Zamenhof would later realise that his first project was flawed and impractical, hence, he started working on another project since, despite studying medicine, he did not give up his dream of uniting people under the same language. In 1887, the *Lingwo Internacia* was presented to the public, but people would address it as Esperanto, after the author’s pseudonym. This time, the project Esperanto appealed to many people as it was clear that it was not intended to replace national languages but to function as a shared second language that would place all speakers on equal footing. Zamenhof rejected the complexity and

irregularity found in many natural languages and aimed instead for simplicity and regularity, thus resulting in a system that could be learned efficiently. This emphasis on simplicity was not only practical but also ideological as it aimed to remove linguistic privilege and make communication more equitable for all humans. As for today, Esperanto remains closely associated with the idea of a transnational community where communication is based on mutual respect rather than linguistic dominance.

4.2 Linguistic Properties

Since Zamenhof wanted Esperanto to be used by as many people as possible, the language needed to be both easy to learn and accessible. One of the most distinctive features of Esperanto is its high degree of regularity. Since this language was consciously planned to minimise grammatical irregularities and try to maintain consistent linguistic rules, it is different to naturally evolved languages. Zamenhof designed the language for it to have a small and stable set of rules that emphasise regularity and simplicity. This emphasis on making it regular was intended to reduce the difficulties commonly associated with learning natural languages and make communication more accessible between speakers of different linguistic backgrounds.

The Esperanto spelling system is strictly phonemic, meaning that each letter corresponds exactly one sound, and there are no silent letters. The language uses a variant of the Latin alphabet consisting of twenty eight letters. As Korzhenkov explains, Esperanto “uses 22 letters of the Latin alphabet, dropping the letters q, w, x and y and adding six additional letters: ĉ [ch], ĝ [dj], ĥ [guttural ch, as in “loch”], ĵ [zh, as in “measure”], ŝ [sh], ŭ [w].” (Korzhenkov, 2010, p. 10) This system was designed this way so a speaker could always determine the spelling of a word by how it sounds and viceversa. Moreover, the stress

pattern of the language is also fixed as the accent consistently falls on the penultimate syllable in a word.

From a morphological perspective, Esperanto is defined by its agglutinating character, meaning that words are built from stable morphemes. Esperanto's morphology relies heavily on the combination of roots and affixes, morphemes generally preserve stable meanings regardless of the context. Gledhill (1998) explains that "the core principle of agglutinating word formation (juxtaposition of morphemes and words) is that each word may be broken into minimal units of meaning which are stable and unchanging." (p. 60) Through this process, speakers are able to form a large number of words from a limited set of roots. As Korzhenkov (2010) noted, "thanks to this agglutinative principle, a mere three thousand root words can create a vocabulary of more than twenty thousand words." (p. 10), meaning that it contributes to the transparency and predictability of the language.

A central characteristic of Esperanto is therefore the productivity of its derivational system. Through the regular use of prefixes and suffixes, speakers are able to create new lexical items in systematic and transparent ways. The language uses regular word endings, thus making grammatical categories immediately recognisable. "-o for the singular noun, -a for the singular adjective. -i for the infinitive, -e for adverbs derived from a root word." (Korzhenkov, 2010, p.10) The same principle applies to prefixes like *mal-*, which provides the opposite meaning of a word. Alcalde (2021) provides examples shown in (25) and (26) to illustrate this.

(25) *mal-* + *granda* (big) = *malgranda* (small)

(27) *mal-* + *alta* (tall) = *malalta* (short)

The examples show the high degree of semantic transparency characteristic of Esperanto morphology as the meaning of the derived forms can be directly inferred from the meaning of the base word and the function of the prefix *mal-*.

In this sense, people liked Esperanto and found it attractive because its words follow a predictable pattern and learners do not need a massive and varied vocabulary to understand nor create new sentences. As Gledhill (1998) explains, the sixteen rules of Esperanto grammar were considered “alluringly simple” (p. 5). In the same way, verbs are also entirely regular, meaning that irregular instances such as English irregular verbs do not exist in Esperanto. Every verb follows the same conjugational patterns: *-as* for present tense, *-is* for the past and *-os* for future.

Although Esperanto originated as a consciously designed language and, as Wells states, “Ĝi estas lingvo unika eĉ laŭ la historia vidpunkto, ĉar lanĉita per la iniciato de unu homo” (It is a unique language even from a historical viewpoint, because it was launched through the initiative of one man)” (Wells, 1989, p. 11) its continued use by international speakers has contributed to its process of linguistic development so that it may resemble the process of development of natural languages. Over time and due to use, speakers have introduced stylistic preferences, innovations and variations, which is something that Zamenhof anticipated, as he understood that once a language begins to be used within communities, it is not longer of exclusive property of one man and in the second page of the *Unua Libro*, he states that “an international language, just like a national language, is public property, and the author hereby renounces forever all personal rights to it” (Zamenhof, 1887, p.2)

5. Morphological Comparison of English and Esperanto

5.1. Inflectional Processes

5.1.1 Verb Morphology

Inflectional morphology, specifically within the verbal system, differs in English and Esperanto in terms of regularity, transparency and grammatical complexity although both languages use verbal inflection to express grammatical categories such as tense. According to Lieber (2009), “inflectional word formation is word formation that expresses grammatical distinctions like number (singular vs. plural); tense (present vs. past); person (first, second, or third); and case (subject, object, possessive), among others.” (p. 7) While the forms of a lexeme are being modified, non new lexical items are being created, meaning that the list of lexical items in (28) and (29) are different grammatical realisations of the same lexeme or verbal root.

(28) English: *walk, walks, walked, walking*

(29) Esperanto: *parolas, parolis, parolos*

1. Verbal regularity and irregularity

One of the clearest differences between the two languages is the degree of regularity in the verbal systems. While Esperanto has a systematic and transparent morphology in where tense is the only aspect verbs conjugate, having *-is* for past tense marker, *-as* for present and *-os* for future (29) (30), English combines both regular and irregular inflectional patterns. The former type generally form the past tense through the suffix *-ed* while the latter type undergo other

processes such as internal vowel alternation (31), addition of other kind of suffixes (32) or vowel change combined with consonant addition (33).

(30) *kantis/kantas/kantos*

(31) *sing/sang/sung*

(32) *write/wrote/written*

(33) *keep/kept/kept*

English irregular verbs then preserve several inflectional patterns that do not follow just one rule in specific and, consequently, would require a higher degree of memorisation. By contrast, Esperanto prioritises predictability and clarity through invariant morphemes. An example that Gledhill (1998) provides in his grammar book is *mi kantadis* = I was signing habitually. Each part can be divided and segmented into: *mi* (first person pronoun), *kant* (lexical root meaning “sing”), *-ad-* (habitual or progressive aspect) and *-is* (past tense marker).

2. Allomorphy and phonological variation

“Another very common suffix with phonologically determined allomorphs is the one spelled *-ed*, used in the past tense form of most verbs” (Carstairs-McCarthy, 2002, p.22) referring to the different pronunciation changes in the regular past tense marker in English, which varies depending on the last sound of the verb in its original form. If the verb ends in *t* or *d*, then the pronunciation is [ɪd] (36); *-ed* is pronounced as [t] (34) if the verb ends in a voiceless sound and [d], if ended in a voiced one (35).

(34) *walked, laughed* [t]

(35) *played, robbed* [d]

(36) *needed, wanted* [ɪd]

Esperanto does not possess this degree of allomorphic complexity since, as mentioned before, each letter has an attributed sound and tense markers *-is*, *-as*, *-os* maintain both stable forms and pronunciations when added to any verbal root.

3. Person and number agreement

English verbs still inflect for person and number in limited ways, specifically in the third person singular tense. Lieber textually mentions that “number is only marked in the third person present tense, where *-s* signals singular subject” (2009, p. 99). Thus, English distinguishes between *I walk* and *he/she/it walks*. On the other hand, Esperanto verbs do not conjugate according to person nor number. Meaning that the same verbal form is used regardless of the subject as shown in (37). This contrast highlights that modern English preserves isolated remnants of a much richer historical system of subject-verb agreement. As Lieber (2009) points out, languages like Old English possessed a far greater amount of inflectional morphology in comparison to Modern English. For instance, while the modern version of English only retains the third-person singular marker *-s*, Old English had different suffixes to express person, as illustrated in (38). Over centuries of linguistic simplification, most of these endings were lost. Esperanto, by contrast, completely bypasses this historical loss and reduces verbal variation through invariant and fixed endings.

(37) *Mi kantas*

I sing-PRES

“I sing”

Li kantas
He sings-PRES
“He sings”

Ili kantas
They sing-PRES
“They sing”

(38) First person singular: *drīfe* (drive)

Second person singular: *drīf(e)st* (drive)

Third person singular: *drīf(e)ĉ* (drives)

(Example from Lieber (2009, p. 102))

4. Tense, aspect and participial morphology

Although English uses inflectional morphology for some grammatical categories, the use of periphrastic constructions are also frequent in order to express tense and aspects. By contrast, Esperanto uses regular morphological markers. English commonly uses auxiliary verbs to express tense and aspect. The language relies frequently on periphrastic constructions involving auxiliary verbs, adverbs and prepositions to express the different grammatical categories that affect the verb, such as tense, aspect, mood or voice, as illustrated in examples from (39) to (42).

(39) Tense: *I will write an essay tomorrow.*

(40) Aspect: *I am writing an essay.*

(41) Mood: *I may write an essay this afternoon.*

(42) Voice: *This essay was written by me.*

Esperanto, by contrast, uses transparent morphological tense markers, suffixes, attached directly to the verb stem. Although Esperanto also allows certain periphrastic verbal constructions, these are considerably less frequent and play a less central role in the grammatical system than in English. The passive voice, for instance, does rely on periphrastic constructions in Esperanto. Even though passive participles have fixed markers, their formation need the auxiliary verb *esti* (to be). Active participles are marked by the suffixes *-ant-*, *-int-* and *-ont-*, expressing ongoing, completed and prospective meanings respectively. In passive constructions, the markers change to *-at-*, *-it-* and *-ot-*, as illustrated in (43). Tense markers (*-as* present, *-is* past, *-os* future) are obligatory and fixed in position, thus making English a less systematic language since tense, aspect, mood and voice are often distributed across several auxiliary elements. Esperanto also includes verbal endings such as *-us* for conditionals, *-u* for imperatives or volitives and *-i* to mark the infinitive. English, by contrast, is less systematic and frequently combines participles with auxiliary verbs to express grammatical categories such as aspect and voice, as shown in (44).

(43) *la pordo estis malfermata*
 the door be-PST open-PASS-PROG
 “the door was being opened”

la pordo estis malfermita
 the door be-PST open-PASS-PERF
 “the door was opened”

la pordo estis malfermota
 the door be-PST open-PASS-PROS
 “the door was about to be opened”

(Example extracted from Gledhill (1998, p. 55))

(44) *She is walking.*

She has walked.

The letter was written.

5. Morphological simplicity and learnability

There are authors that mention that the past tense of novel verbs in English can be created automatically, thus showing that verbal inflection operates through productive grammatical rules rather than simple memorisation. As Pinker and Ullman (2002) explain, regular inflection in English follows productive grammatical rule rather than relying solely on memorisation. “Regular inflection, as in walk-walked and play-played, applies predictably to thousands of verbs and is productively generalized to neologisms such as spam-spammed and mosh-moshed, even by preschool children.” (Pinker and Ullman, 2002, p. 456) This shows that speakers can automatically apply the past tense suffix *-ed* even to newly created or novel verbs. Nonetheless, English irregular verbs do require so as they do not follow a strict and invariant pattern. Forms such as sing/sang/sung or go/went/gone cannot be derived through a productive rule or pattern and must then be retrieved from memory. As Van der Lely and Pinker (2014, p. 589) observe, irregular past tense forms such as ate and bought are stored in memory whereas regular forms such as jumped and agreed can be formed through the addition of *-ed*. Thus, English verbal morphology combines both rule-based grammatical behaviour with irregular forms that are shaped by time and historical development.

Esperanto, on the other hand, minimises the need for individual memorisation because its verbal system is entirely rule-based and free from irregularities and variant exceptions and, as Gredhill (1998) mentions, “Esperanto’s consistent morphology was attractive to learners because it reduced the number of words needed to understand and produce a new text” (p. 5). All in all, both Esperanto and English employ inflectional morphology to encode

grammatical meaning, but just in different ways. While the former is known for its regularity and transparency, the latter shows historical development that has led to distinct variations and irregular forms.

5.1.2 Noun Morphology

1. Plural formation and regularity

One of the most significant differences between English and Esperanto noun morphology lays in the degree of regularity in noun inflection. Esperanto possesses a highly systematic and predictable morphology system also in its nominal system. “The morpheme -o- shows that the word is a ‘noun’, and -j- shows that it is plural” [“la morfemo -o- montras, ke la vorto apartenas al la vortkategorio 'substantivo', j- ke laŭ nombro ĝi estas plurala”] (Wells, 1989, p. 28). This rule is applied to all nouns in a consistent way and without exception. Gledhill (1998) provides the examples shown in (45) to (47) to illustrate this.

(45) *ŝuldi* (v.) = to owe , *ŝuld*o (n.) = a debt

(46) *jen radikala decid*o = here's a radical decision

(47) *transformi la demokrati*ajn principojn = to transform democratic principles

English morphology, by contrast, combines both regular plural formation and irregular patterns. While the majority of English nouns form the plural through the addition of -s, such as those shown in (48), the language still preserves numerous irregular plurals that were inherited from older stages and must be memorised individually. These historical remnants include mutation plurals that change the internal root vowel, as illustrated in (49), as well as Old Germanic weak plural suffixes, as shown in (50).

(48) *cat - cats, pen - pens*

(49) *mouse - mice, foot - feet*

(50) *ox - oxen*

An important fact that needs to be mentioned is that even the regular plural form in English has its exceptions. As mentioned before, plural nouns are generally formed with the addition of the suffix *-s*, but the form of it varies orthographically and phonologically depending on the noun. *-s* is added to those nouns shown in (48), but those ending in sibilant sounds typically take *-es* (51). In addition to this, certain nouns undergo spelling changes during pluralisation. For instance, nouns ending in consonant + *y* in their singular form change to *-ies* once they are made plural (52), whereas nouns ending in vowel + *y* simply add *-s* (53). Similarly, many nouns ending in *-o* take *-oes* in their plural form (54), while some nouns ending in *-f* or *-fe* change to *-ves* (55). There are also cases in which the noun does not change at all when used in plural, as illustrated in (56).

(51) *house - houses, bus - buses*

(52) *baby - babies, city - cities*

(53) *boy - boys, key - keys*

(54) *potato - potatoes, tomato - tomatoes*

(55) *wolf - wolves, leaf - leaves, knife - knives, wife - wives*

(56) *deer - deer, fish - fish, sheep - sheep*

Carstairs-McCarthy (2002) also points out the presence of borrowed irregular plurals from either Latin or Greek such as (57):

(57) *cactus - cacti, phenomenon - phenomena*

Therefore, it can be said that whereas Esperanto noun morphology is fully regular and predictable, English noun inflection reflects the historical development of the language and consequently shows a number of exceptions, as shown in (49)-(57).

2. Case marking and grammatical relations

Another major difference between both languages concerns grammatical case. Modern English nouns have almost completely lost their historical case system and, according to Carstairs-McCarthy (2002), “modern English nouns have not more than two inflected word forms: singular and plural” (p. 104). The language now relies mainly on word order and prepositions to express grammatical relationships. In Esperanto, by contrast, we can see an explicit case system through the accusative marker *-n*, which is particularly important because it fulfills several grammatical functions. Gledhill (1998) explains that Esperanto nouns have “two grammatical cases: nominative (no change) and accusative (using *-n*)” (p. 50). The language’s accusative can express measurements and values (58), direction (59), direct object (60), time or duration of time (61).

(58) *Pezas 200 kilogramojn*

weigh-PRES 200 kilogram-ACC-PL

“[It] weighs 200 kilograms.”

(59) *Paŝis trans la fajretonn*

step-PST straight across the fire-ACC

“ [He/She] stepped straight across the fire.”

(Examples extracted from Gledhill (1998, p. 51))

(60) *Mi amas vin*

I love-PRES you-ACC

“I love you.”

(61) *Mi alvenos Lundon*

I arrive-FUT Monday-ACC

“I will arrive on Monday.”

English expresses these meanings through syntax and prepositions rather than through noun inflections. Hence, it can be said that Esperanto preserves a more explicit inflectional system, while modern English relies more on syntactic structures.

3. Adjectival agreement

Esperanto adjectives “agree for plural number and accusative case” (Gledhill, 1998, p. 51), which is something that differs from English as adjectives are normally rigid and do not change nor agree with nouns. In Esperanto, adjectives must carry the same plural and case markers as the nouns they modify. The phrase “the green apple” changes to “the green apples” in plural in English, with no inflectional change in the adjective itself, whereas in Esperanto, the adjectival form changes, as illustrated in (62):

(62) *La verda pomo*

the green-SG apple-SG

“the green apple”

La verdaj pomoj

the green-PL apple-PL
“the green apples”

Mi manĝas la verdan pomon
I eat-PRES the green-ACC apple-ACC
“I eat the green apple”

Mi manĝas la verdajn pomojn
I eat-PRES the green-PL-ACC apple-PL-ACC
“I eat the green apples”

4. Historical development of noun inflection

English historically possessed a much richer inflection system than modern English does. Both Carstairs-McCarthy (2002) and Lieber (2009) agree on this and explain that Old English nouns had two numbers (singular and plural), four cases (nominative, accusative, dative and genitive) and three genders (masculine, feminine and neuter).

Lieber (2009, p. 102) provides these examples, (63), to illustrate this:

(63) Old English nouns

	Masculine	Feminine	Neuter
Singular	‘stone’	‘gift’	‘ship’
Nom.	<i>stān</i>	<i>giefu</i>	<i>scip</i>
Acc.	<i>stān</i>	<i>giefe</i>	<i>scip</i>
Gen.	<i>stānes</i>	<i>giefe</i>	<i>scipes</i>
Dat.	<i>stāne</i>	<i>giefe</i>	<i>scipum</i>

Plural

Nom.	<i>stānas</i>	<i>giefa</i>	<i>scipu</i>
Acc.	<i>stānas</i>	<i>giefa</i>	<i>scipu</i>
Gen.	<i>stāna</i>	<i>giefa</i>	<i>scipe</i>
Dat.	<i>stānum</i>	<i>giefum</i>	<i>scipum</i>

Old English adjectives and articles also agreed with nouns in case, number and gender, as shown in (64)-(66). Nonetheless and over time, English has faced several processes and eventually lost this inflectional complexity and evolved toward a more analytic structure. Esperanto, by contrast, was deliberately designed with a simplified but fully regular inflectional system. It has explicit plural marking, accusative marking and agreement but avoids the irregularities that characterised older Indoeuropean languages.

(64) *sē gōdan stān*

the.MASC.NOM good.MASC.NOM stone.NOM

“the good stone”

(65) *sēo gōde giefu*

the.FEM.NOM good.FEM.NOM gift.NOM

“the good gift”

(66) *ðæt gōde scip*

the.NEUT.NOM good.NEUT.NOM ship.NOM”

“the good ship”

(Examples from Lieber (2009, p.102))

5.2. Derivational Processes

In English, derivational morphology is productive but also highly irregular and historically conditioned. In contrast to inflectional morphology, derivational systems display a wide variety of tasks and “English is at least as rich as French and German in its derivational resources” (Carstairs-McCarthy, 2002, p.56). However, its derivation is not completely predictable because many processes are restricted by phonological, semantic and historical factors.

A major feature of English productivity is the unequal productivity of different affixes, while some are highly productive and frequently used in neologisms, there are others that are much more restricted. According to Carstairs-McCarthy (2002, p. 139):

Productive affixes	Less productive affixes
- -able	- -ity
- -ful	- -ive
- -ing	- adjective-forming -ly
- -less	- -th
- adverb-forming -ly	- in-
- -ness	
- re-	
- un-	

Thus showing that English morphology does not function uniformly across the lexicon. For instance, suffixes such as *-ness* can freely generate new words such as *happiness*, while suffixes such as *-ity* are much more restricted and often limited to

historically inherited vocabulary. Moreover, productivity in English may also be limited by semantic blocking, meaning that forms such as **ungood*, **unlong*, and **unhot* do not exist because they are blocked by the already existing words *bad*, *short* and *cold*. In the same way, the theoretically regular adverb *fastly* is blocked because the word *fast* already functions as both an adjective and an adverb. Speaker intuition rather than purely formal rules play an important role in English word formation. Esperanto, however, encourages innovation through its derivational system as it productively creates new words through both derivational and compounding. This productivity can be seen in examples (67)-(69).

(67) *venonta* (next, upcoming) + *semajno* (week) = *venontsemajne* (next week)

(68) *verda* (green) + *koloro* (colour) = *verdkolora* (green-coloured)

(69) *homo* (human, person) + *sen* (without) + *hararo* (hair) = *senharulo* (bald person)

The examples above show the important role that compounding plays in Esperanto word formation. According to Gledhill (1998), “compound words are formed by a junction of roots, the head word at the end” (Gledhill, 1998, p. 15) because each morpheme retains a stable meaning, compounds are generally highly transparent. The word *senlaboreco* (unemployment) is analysed like as shown in (70):

(70) *sen* = without

labor = work

ec = quality/state

o = noun marker

Another important aspect of English productivity is the influence of historical origins. English derivation combines Germanic and Romance morphological systems, thus creating a highly mixed and irregular structure. Carstairs-McCarthy (2002) points out that Germanic affixes are generally more productive and more likely to attach to free bases whereas Romance affixes are usually less productive and often attach to bound roots.

By contrast, Esperanto was intentionally designed to maximise derivational productivity and regularity. "The derivational morphology of Esperanto is one of the most productive areas of the grammar" (Gledhill, 1998, p. 43) as it relies on a highly agglutinating system in which morphemes maintain stable meaning and fixed forms. Monofunctional morphemes is what characterises Esperanto morphology since each of the functional and lexical morphemes has a fixed form. The productivity of Esperanto is largely based on the transparency and consistency of its derivational system and Gledhill (1998) mentions that there are no limits when it comes to the application of morphemes, thus allowing speakers to create new words freely while also preserving intelligibility. A clear example is the affix *-ec-*, which derives abstract nouns from adjectives (71).

(71) *alta* - *alteco* (high - height); *granda* - *grandeco* (big - size); *amika* - *amikeco* (friendly - friendship)

"A considerable simplification of the forms derived from different historical processes in English and French" (Gledhill, 1998, p. 60), while English requires unrelated forms such as height, size and friendship, Esperanto uses the same derivational affix systematically across all adjectives.

Lastly, Esperanto demonstrates considerable flexibility in the creation of lexical items belonging to different word classes while also preserving a common lexical root. Through the use of systematic use of word-class endings and derivational affixes, a single root can

generate nouns, verbs, adjectives and adverbs with predictable meanings and forms. This is illustrated in (72).

(72) *celi - celo - celado* = to aim - target - targeting

plena - pleni - plenigi = full - to be full - to fill

jes - jese - jesi = yes - affirmatively - to agree

5.3 Summary of Differences

<i>Inflectional Morphology: Verbal Morphology</i>			
	ENGLISH	ESPERANTO	DIFFERENCE
Verbal regularity	English verb morphology combines regular and irregular forms with grammatical meanings. Verbs may change unpredictably through internal vowel changes or irregular endings.	Esperanto uses a regular and agglutinative system in which each morpheme has one fixed grammatical meaning.	English verbal morphology is partly irregular whereas Esperanto's is transparent, predictable and built from consistent morphemes.
Person and number agreement	English verbs inflect for third person singular present tense by adding -s at the end of the verbs.	Esperanto verbs never change according to person nor number.	English has limited subject agreement while Esperanto completely avoids agreement.
Tense, aspect and verb formation	English commonly expresses tense and aspect through auxiliary verbs and periphrastic constructions.	Esperanto commonly expresses tense and aspect through fixed suffixes.	While English relies heavily on auxiliary constructions, Esperanto expresses grammatical meaning morphologically through regular endings.
Mood and voice	English has limited	Esperanto has	Esperanto marks

	verbal mood inflection and usually depends on auxiliaries or syntax to express modality and voice.	morphological endings for mood and a highly regular participial voice system.	mood and voice more explicitly and through morphology than English does.
Typological characteristics	English is relatively analytic and has reduced inflectional morphology.	Esperanto is agglutinative and morphologically systematic.	English tends to express grammatical meaning with separate words and auxiliaries, while Esperanto relies on monofunctional morphemes and regular affixation.

<i>Inflectional Morphology: Noun Morphology</i>			
	ENGLISH	ESPERANTO	DIFFERENCE
Morphological transparency and typology	Contains irregular and historically fused forms. Nouns generally have no explicit noun marker/identifier.	Highly agglutinative and transparent. All nouns end in <i>-o</i> , plurals in <i>-j</i> and accusative case in <i>-n</i> . Each morpheme has a fixed grammatical function.	English morphology is less predictable and more historically irregular whereas Esperanto morphology is more systematic and transparent.
Plural formation	Plurals are usually formed with <i>-s</i> , but there are exceptions to the rule that result in variations in spelling. There are also irregular and borrowed plurals from Latin or Greek	Plurals are always formed with the addition of the suffix <i>-j</i> .	English plural morphology is irregular and variable whereas Esperanto plural formation is regular and predictable.
Case marking	Modern English nouns mainly distinguish singular and plural, relying on syntax and prepositions to	Esperanto distinguishes nominative and accusative cases through the use of <i>-n</i> , the accusative	Esperanto shows a reduced form of explicit morphological case marking whereas English expresses

	express grammatical relationships.	marker. Moreover, accusative in Esperanto can indicate direct object, direction, duration and measurement.	these functions analytically through word order and prepositions.
Agreement	Adjectives do not change according to the number nor grammatical case of the noun they modify.	Adjectives agree with nouns in number and case.	While Esperanto has grammatical agreement between nouns and adjectives, English does not.
Historical development	Old English originally had three grammatical gender and four cases (nominative, accusative, genitive and dative), but most inflectional morphology was lost over time.	Esperanto was intentionally designed with a simplified and fully regular inflectional system.	English evolved from a more complex inflectional language towards a more analytic system whereas Esperanto was deliberately created to maintain regularity and simplicity.

<i>Derivational Morphology</i>			
	ENGLISH	ESPERANTO	DIFFERENCE
Productivity, affixation and regularity	Derivational morphology is productive but irregular and restricted by historical, semantic and phonological factors. Some affixes are more productive than others.	Derivational morphology is highly productive, regular and systematic. Morphemes maintain stable meanings and can be freely combined.	English derivation is partially unpredictable and exception-based whereas Esperanto's is regular and universally applicable, with productive affixation.
Transparency	Many derived forms in English are	Derived forms remain transparent	English contains irregular and opaque

	lexicalised and semantically unpredictable due to historical development and semantic blocking.	and compositional because derivation follows regular morphological rules.	derivations while Esperanto preserves transparent meaning through predictable morphology.
Word formation and flexibility	Word formation is productive but constrained. English frequently uses conversion (zero derivation), where words change class without visible morphology.	Esperanto uses explicit and regular morphemes to derive words across grammatical categories.	English often changes word class without affixation whereas Esperanto generally marks derivation morphologically.
Compounding and morphological structure	Compounds are formally productive but meanings may become idiomatic or semantically opaque.	Compounds are systematic and morphologically transparent because morphemes retain stable meanings.	English compounds may become lexicalised and irregular while Esperanto compounds remain structurally transparent.
Innovation and neologisms	New derivations are possible but are often limited by semantic blocking and native-speaker acceptability.	Esperanto makes innovation and neologism formation possible through productive derivation and compounding.	English speakers may reject theoretically possible forms whereas Esperanto promotes creative and productive word formation.

5.4. Analysis of *Le Petit Prince*

Inflectional processes

Derivational processes

"The flowers have been growing thorns for millions of years. For millions of years the sheep have been eating them just the same. And is it not a matter of consequence to try to understand why the flowers go to so much trouble to grow thorns which are never of any use to them? Is the warfare between the sheep and the flowers not important? Is this not of more consequence than a fat red-faced gentleman's sums? And if I know--I, myself--one flower which is unique in the world, which grows nowhere but on my planet, but which one little sheep can destroy in a single bite some morning, without even noticing what he is doing-- Oh! You think that is not important!"

“Dum milionoj da jaroj la floroj fabrikadis dornojn. Dum milionoj da jaroj la ŝafoj tamen manĝis la florojn. Kaj ĉu ne estas serioze, klopodi por kompreni, kial ili tiel multe penas por fabriki por si dornojn, kiuj neniam utilas? Ĉu ne estas gravaĵo la milito inter ŝafoj kaj floroj? Ĉu tio ne pli seriozas kaj pli gravas, ol la adicioj de iu dika ruĝa sinjoro? Kaj, se mi mem konas floron unikan en la mondo, kiu ekzistas nenie krom sur mia planedo, kaj kiun ŝafeto povas iun matenon nekonscie neniigi per unusola gluto, kaj jen farite, ĉu tio ne ja gravas?”

INFLECTIONAL PROCESSES

In the Esperanto text, you can immediately identify the exact word class of every noun because they always end in the obligatory inflectional suffix *-o*, as illustrated in (73). By contrast, English nouns have no equivalent categorial marker to indicate they are nouns. They need to be recognised by context or dictionary definition rather than a specific word-class suffix.

(73) warfare = *milito*

world = *mondo*

planet = *planedo*

bite = *gluto*

gentleman = *sinjoro*

Another aspect is pluralisation, which in Esperanto is perfectly regular and uniform. Every single plural noun is marked with the suffix *-j*, as illustrated in the list (74). By contrast, English shows both regular and irregular plural forms. Regular plurals add *-s* or *-es*. Moreover, there is the word *sheep*, which has not changed its form but we know it is a plural noun since Esperanto translates it to *ŝafoj*, as shown in (75), in contrast to *the little ship*, which was translated to *ŝafeto*, instead of *ŝafetoj*.

(74) millions - *milionoj*

years - *jaroj*

flowers - *floroj*

thorns - *dornoj*

sums - *adicioj*

(75) sheep - *ŝafoj*

In Esperanto, the suffix *-n* is used to mark the accusative and in this case, to indicate the direct object and time, as shown in *dornojn* and *iun matenon*, respectively. English, by contrast, has lost case distinctions for nouns through time, hence direct objects like *thorns* are determined solely by their position after the verb.

(76) *la floroj fabrikadis dornojn*

the flower-PLUR grew thorn-PLUR-ACC

“The flowers grew thorns.”

(77) *la ŝafoj tamen manĝis la florojn*

the sheep-PLUR still eat-PAST the flower-PLUR-ACC

“the sheep have been eating them.”

In Esperanto, adjectives agree with the nouns they modify. We can see this in the phrase *floron unikan*, in where *unika* takes the accusative *-n*, the same way as *floron*, as they are the direct object of *konas*. In the case of *iun matenon*, both words take the accusative marker as well, because they indicate duration, one of the uses of the accusative *-n* in Esperanto. English adjectives are uninflected.

Lastly, while Esperanto verb endings are purely tense-based and do not inflect for person nor number, English verbs show third person present endings as in *grows*. Moreover, English requires auxiliary verbs and has irregular forms. For instance, in the Esperanto excerpt, we can identify two tenses through the two tense markers: *-as* (*utilas, gravas, ekzistas, kreskas, povas*, etc.) for present and *-is* (*fabrikadis, manĝis*) for past. By contrast, in English, in order to express perfect continuous tense, we need complex strings such as *have been growing* or *have been eating*, where *have* inflects for plural agreement. Then, for the third person singular, English has the suffix *-s*. As mentioned before, in the text we can find *grows*, which has been translated as *ekzistas* in the Esperanto version. The lexical item is different but the ending is *-as*, the only present tense form in the language. We can also find *is*, functioning alongside the adjective *important* in the English text, which has been translated as *gravas* (be important), another phenomenon in the language, which takes adjectives (*grava*-important) and makes them verbs by adding a verb ending.

DERIVATIONAL PROCESSES

In Esperanto, new concepts are created by attaching invariant suffixes to a core root. For instance, in the text, the adjective *grava* (important), turns into *gravaĵo* (an important thing) just by attaching the suffix *-aĵ-* and *-o* to make it a noun. Similarly, the diminutive suffix *-et-* turns *ŝafo* (sheep) into *ŝafeto* (little sheep). In English, by contrast, there is not a single uniform suffix that can be used to create these words. For instance, in order to express *ŝafeto*, English needs a completely different and unrelated word, *little*, as a separate modifier rather than a morphological derivation of the word *sheep* itself.

Moreover, Esperanto glues words together easily and is capable of shifting the category of a word by using its markers. For instance, *nekonscie* (unconsciously) is formed by *ne-* (not), *konsci* (conscious) and *-e* (adverb marker) to create *unconsciously*. English also has the process of compounding to create new words. For instance, *red* and *face*, two separate words, which are taken and placed together with a hyphen and an inflectional *-ed* suffix at the end to make the adjective *red-faced*, where the Esperanto translator has simplified the adjective to *ruĝa* (red).

6. Discussion

The comparative analysis carried out in this dissertation shows that the morphological differences between English and Esperanto are strongly connected to their origin and development. English, as expected from natural languages, reflects centuries of historical evolution and language contact that has led to grammatical change eventually. By contrast, Esperanto was consciously planned for it to be regular, transparent and have a high

learnability rate. The language was created more than a century ago and it continues to have the properties that Zamenhof granted to the language.

One of the clearest contrasts observed in the comparison is their regularity degree. English verbal and nominal morphology preserve many irregular forms which are mainly inherited from earlier historical stages of the language. This could be seen in both irregular verb forms as well as irregular plurals. Even the supposedly regular forms have shown variation and exceptions. Esperanto, by contrast, behaves very differently. Throughout all the analysed examples, the language consistently follows the same grammatical rules and forms. All verb endings mark tense with the same affix accordingly; adjectives, adverbs and verbs are also always seen with their respective marker; plurals are formed regularly and with the same suffix, and the accusative case applies regularly in the contexts required. This level of regularity and consistency clearly reflects Esperanto's planned origin and its intention to facilitate language learning.

In the same line, transparency is another key difference in both languages. As mentioned before, Esperanto has its grammatical categories marked explicitly in its morphology. English, however, depends on a larger scale on syntax and contextual interpretation because grammatical categories are not always morphologically visible. This is noticeable in the analysis of the *Le Petit Prince* excerpt. While in Esperanto was considerably easier to identify nouns, adjectives and grammatical functions directly from the form of the words themselves, English required interpretation through sentence structure and context. All in all, Esperanto followed the grammatical rules very consistently and without irregularities and many of the discussed morphological differences throughout the dissertation became visible in action, both in English and Esperanto.

A detail or observation that is interesting and worth mentioning is that, although both versions of the literary excerpt expressed the same ideas and narrative content, the English text was noticeably slightly longer and structurally more dependent on auxiliary constructions and syntactic organisation. By contrast, Esperanto expressed the same meaning through single morphologically structured words. This suggests that Esperanto relies more heavily on morphology itself whereas English distributes grammatical meaning across syntax and lexical combinations.

One of the most notable findings is how English derivation has proved to be productive but also heavily influenced by lexical convention, semantic blocking and historical change and although many forms are theoretically possible, they are intuitively rejected by the users of the language since English derivation does not function through entirely predictable rules. And, on the other hand, Esperanto shows to be highly productive, transparent and favoring the production of new forms through the regular and invariant rules.

Overall, it is clear that while English morphology reflects historical layering and hence irregularities and gradual linguistic change, Esperanto's transparency, productivity and regularity are clear signs of conscious planning and design. Through its morphology, it has been clear that their origins are different and shaped by them, meaning that signs of irregularities are shown due to naturalness and the regularity of a planned language comes from the fact that it was consciously thought for it to be this way. Just through morphology alone, it can be said that Esperanto's learnability can be considered easier than English.

Although through the present dissertation, the main focus has been on their differences, there are many other aspects that need to be taken into consideration when talking about languages. All in all, both are living languages that have their own community and although Esperanto has a planned or artificial origin, it is still used in the same way as natural languages are. Most importantly, Zamenhof's purpose has been achieved since the

language that he created, alongside with English, is both of public property and is used to bring people from different linguistic backgrounds together under a shared common language.

7. Conclusion

The present dissertation aimed to compare the morphology of English and Esperanto in order to observe how a natural language and a constructed one encode grammatical meaning differently. Through the comparative analysis of both languages, it became clear that each morphological system is strongly shaped by its origin and development. English reflects centuries of historical evolution that has brought variations, exceptions and many grammatical changes through time, while Esperanto demonstrates the effects of conscious and detailed planning through its regularised and predictive structure. Morphologically speaking, it became relatively clear which language developed naturally over time and which one was consciously designed with simplicity in mind.

The observations suggest that Esperanto may present a higher degree of learnability due to its transparency and simple and invariable design. However, this conclusion should only be understood from a morphological perspective since language complexity cannot be evaluated exclusively through only one aspect, as many other linguistic, social and political factors also influence language use and its acquisition and comprehension.

Questions such as whether a language can be both natural and constructed, whether a constructed language may become more natural over time or whether regularity is always beneficial for communication cannot be fully answered through morphology alone. These questions require broader research involving phonology, syntax, sociolinguistics, language acquisition and language use within real communities. As Ida Stria (2015) points out, “a feature most often required of a language to be considered natural is the existence of native

speakers” (p. 40). Hence, studying Esperanto exclusively through written morphology provides only a partial understanding of the language and its social reality.

For future research, it would be interesting to analyse Esperanto from a sociolinguistic perspective and observe how the language functions within real speech communities such as the one existing in Catalonia. Ethnographic studies, second language acquisition research or classroom applicability could also contribute to deeper understanding of how Esperanto operates in practice and whether its morphological regularity truly facilitates communication and language learning.

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