

## Simplicity Examined

### The Morphology of Esperanto

*I have organized the language in such a way as to permit the analysis of ideas into independent words, so that the entire language rather than being made of words in different grammatical forms is made only of non-variable words.*

—L. L. Zamenhof, 1903

In these words Zamenhof explains a critical feature of Esperanto morphology, which is that the language's word roots are not locked so firmly into their parts of speech, but are free to roam from one lexical category to another, with the aid of appropriate suffixes. While this phenomenon is by no means unique to Esperanto, it is an extremely common occurrence there, compared to its only occasional appearance in other languages. This characteristic is certainly one of Esperanto's most recognizable features, and is central to its morphology.

### Introduction

Esperanto was devised by Ludwik Lejzer Zamenhof “to build a bridge between nations, to allow speakers of different languages to communicate on equal terms in a neutral, user-friendly second language.”<sup>1</sup> Through a series of projects starting in 1878, Zamenhof crafted the new tongue, drawing from his knowledge of or familiarity with such languages as English, Latin, Hebrew and his native Polish<sup>2</sup>, and in 1887 he made his first publication of its grammar in the form of sixteen rules that provide a skeleton for the language. In 1905, after years of discussion, Zamenhof more or less finalized Esperanto in a convention known as the *Fundamento*.<sup>3</sup>

Esperanto's morphology, like the rest of the language in general, is by design very regular—there is roughly one morpheme per meaning. This helps to make the language simpler for the

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<sup>1</sup> Gledhill, 2000.

<sup>2</sup> Golden, 1992.

<sup>3</sup> Gledhill, 2000.

learner, and it makes the morphologist's life easier to boot. The goal of this project is to explore the bound morphology of the language. Esperanto has a single paradigm for each part of speech, simplifying the process considerably. Discussion of Esperanto's typological classification will also be included.

### Typological Classification

“The traditional point of view of Esperantologists is that the morphology of Esperanto qualifies the language for inclusion in the category of agglutinative languages.”<sup>4</sup> This view is not universally accepted among linguists, however—some point to prominent non-agglutinative traits in the language as evidence calling for its reclassification; indeed, “Esperanto's morphological system does not behave in quite the same way as typical agglutinating languages.”<sup>5</sup>

So what is it? Analyzing a word in an agglutinative language reveals a well-defined internal structure that allows for morpheme-by-morpheme segmentation. To the root are applied optional bound affixes.<sup>6</sup> Here we divide the Esperanto word *malsanulejo*, meaning “hospital”, into

<i>mal-</i>	— “opposite”
<i>san</i>	— adjective root—“healthy”
<i>-ul</i>	— “person”
<i>-ej</i>	— “place”
<i>-o</i>	— noun marker

While this analysis clearly demonstrates the sort of “piling on” of morphemes for which agglutination is named, Esperanto does not strictly abide by the second part of the above characterization of agglutinating languages—Esperanto prefixes and suffixes can be used independently.<sup>7</sup> While it is true that most of them must still take a word class suffix (*-o*, *-a*, *-i*, etc.), they are still generally considered free.

According to Sherwood (1981), “with the exception of the grammatical endings there are

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<sup>4</sup> Golden, 1992.

<sup>5</sup> Gledhill, 2000.

<sup>6</sup> Golden, 1992.

<sup>7</sup> Robertson, 2004.

almost no bound morphemes in Esperanto.”<sup>8</sup> Under this view, *malsanulejo* would translate best as the English compound “unhealthy people place.” Still, the overwhelming abundance of agglutinative traits<sup>9</sup> seems to justify the language’s classification as such.

### Lexical Stems

By the above reasoning, lexical stems themselves are free, as are the vast majority of the morphemes that may be affixed to them. However, there are a number of bound morphemes that occur with them, the most common of which is the desinence, or word class marker. The desinence is required despite the fact that, even without it, Esperanto stems already fall into the categories of nouns, adjectives and verbs.<sup>10</sup> However, any stem may take any desinence to produce a valid Esperanto word.<sup>11</sup> The fact that the stem’s inherent word class and the category imposed by the desinence do not have to agree can lead to some interesting phenomena.

If a verb ending is used with a stem that is not a “verb”, then the meaning inferred is something like “behaves like [root]” or “functions in a [root]-ish manner”.<sup>12</sup> Take for example the noun *biciklo* and the adjective *blua*, meaning “bicycle” and “blue”, respectively. Swapping their desinences for the infinitive verb marker *-i* produces the verbs *bicikli* “to function in a bicyclish manner,” i.e. to bicycle, and *blui* “to behave like blue,” i.e. to be blue in color. This sort of thing occurs when any desinence is applied to a stem of a contrary category—according to Harlow (2002), “most affixes are strong enough to twist the root to which they are attached to the meaning they want.”<sup>13</sup>

When a “verb” stem is used as a noun, it forms a gerund, and means “an instance of [root]”. Thus, as *flugi* means “to fly,” *flugo* means “flying” or “flight”. So what happens when a speaker wants to use the gerund form of the verb derived from a noun? One cannot do this by changing *bicikli* to

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<sup>8</sup> Sherwood, 1981.

<sup>9</sup> Gledhill, 2000; Golden, 1992; Sherwood, 1982.

<sup>10</sup> Harlow, 2002.

<sup>11</sup> Robertson, 2004.

<sup>12</sup> Harlow, 2007.

<sup>13</sup> Harlow, 2002.

*biciklo*, as the latter already means “bicycle,” the object. Thus, one must use the affix *-ad* “action” to achieve the desired result, in this case *biciklado* “bicycling”. The same phenomenon occurs when deriving abstract nouns from adjectives which are in turn derived from nouns, or more generally, any derivation of a word from one part of speech into the part of speech from which it was initially derived, and is known as the *morpheme effect*.<sup>14</sup>

Early in Esperanto’s life, a movement arose to reform the language to fix what were seen as defects, such as the morpheme effect. The movement, known as Ido (Esperanto for “offspring”), required among other things affixation as seen here, as opposed to simple desinence swapping, to change words from one part of speech to another. Even after Ido had disappeared, some Esperantists were unsure of which approach to take in matters such as deriving words across parts of speech. This prompted noted linguist and Esperanto speaker René de Saussure to propose what became known as the principle of necessity and sufficiency: essentially, when constructing a word, use all and only the morphemes needed to express the desired meaning; if the meaning is clear without some affix, then it should be discarded.<sup>15</sup>

Stems are furthermore almost completely invariable. In many languages, stems may change with certain inflections, for instance the Spanish word *querer* “to want” changing its stem *quer-* to *quier-* in the present tense first- and second-person singular forms and third-person singular and plural, or the English word *mouse* changing to *mice* when plural. This is very rare in Esperanto, where morpheme change only occurs when *-ĉj* and *-nj*, respectively the bound male and female endearment suffixes, are applied, clipping the stem: *patro* “father” becomes *paĉjo* “dad”, *onklino* “aunt” becomes *onjo* “auntie”.<sup>16</sup>

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<sup>14</sup> Robertson, 2004.

<sup>15</sup> Robertson, 2004.

<sup>16</sup> Sherwood, 1982.

## Compounding and Derivation

Compounding and derivation have an interesting relationship in Esperanto. On the one hand, “The morphemes traditionally called prefixes and suffixes are actually content morphemes, and what is often called derivation ... is actually compounding”<sup>17</sup>, and, according to Robertson (2004), “In Esperanto there is not a rigid dividing line between compounding and derivation.”<sup>18</sup> Combining stems in Esperanto is thus quite similar to combining whole words to form compounds in English. Further supporting this idea is the fact that, for the most part, multiple desinences are allowed, as in *kanto* “song” + *birdo* “bird” = *kantobirdo* “songbird” which may optionally be realized as *kantbirdo*. The decision to use an internal desinence or not generally stems from phonotactics—if it’s hard to pronounce one way, then it’s said the other. This kind of word building, where affixes are actually roots, is reminiscent of isolating languages like Chinese.<sup>19</sup>

On the other hand, Gledhill (2000) differentiates compounding and derivation by dividing the lexicon into “lexical items” and “lexical morphemes”, the former comprising all lexical stems which may occur minimally in a pair with a desinence or as the nucleus of a word with a theoretically unlimited number of attached morphemes, and the latter being what most commonly are known as affixes, and most commonly are used as such. A further distinction arises when it comes to desinence application: desinences may not appear in words between lexical items and lexical morphemes. Thus, while *kantobirdo* as seen above is just fine, the additional desinence in *\*ĉokoladoujo* vs. *ĉokoladujo* “box of chocolates” is prohibited, as it would come between the lexical stem *ĉokolad* “chocolate” and the lexical morpheme *-uj* “container”. Finally, words formed by compounding with multiple lexical items have multiple possible meanings, but “lexical morphemes can be seen to form very specific words, with more or less fixed conventional meanings.” So while the compound *ĉokoladoskatolo* from

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<sup>17</sup> Sherwood, 1982.

<sup>18</sup> Robertson, 2004.

<sup>19</sup> Sherwood, 1981.

*ĉokolado* and *skatolo* “box” could mean “box of chocolates” or perhaps “box made out of chocolate”, *ĉokoladujo* can only mean “box of chocolates”.<sup>20</sup>

Robertson (2004) maintains an alternate view of lexical morphemes such as *-ujo*, suggesting that the prohibition of a desinence before them is based on phonotactics, as with lexical stems, and cites examples of words that do indeed have such internal desinences, like *posteulo* “successor” from *poste* “afterward” and *-ul* “person”, and *unuaeco* “first-ness” from *unua* “first” and *-ec* “-ness”.

In any case, word formation in Esperanto is defined as being headword last<sup>21</sup>, so that a *kantobirdo* is a kind of *birdo* and a *ĉokoladujo* is a kind of *ujo*. In an example used earlier, a *malsanulejo* is the kind of *ejo* for the kind of *ulo* that is *sana*’s opposite. *Mal-* and other prefixes apply their meanings before the suffixes; that is, a *malsanulejo*, as seen above, is not *mal(sanulejo)*, “the opposite of a place for healthy people”, but *(malsan)ulejo*, “a place for people who are the opposite of healthy”. The suffixes then apply from the inside out, so that the word is maximally analyzed as *((mal(san))ul)ejo*.<sup>22</sup>

Sometimes, when a word could be made with compounding or derivation, a loanword is coined instead.<sup>23</sup> These loanwords are typically borrowed from the mother tongue of the speaker or Latin, in the case of many Europeans: for instance, *simultana* “simultaneous” instead of *samtempa* “same-time”. Piron (1977) points out that this sort of prolific use of Latin neologisms causes difficulty for non-European learners (or European learners who aren’t particularly language-savvy).<sup>24</sup>

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<sup>20</sup> Gledhill, 2000.

<sup>21</sup> There are a few exceptions to this rule, as noted in Robertson (2004): *-eg*, the equivalent to the Italian *-issimo*; the diminutive *-et*; and the pejorative *-aĉ* are called diaphanous or “see-through”, because they don’t change what the headword is.

<sup>22</sup> Robertson, 2004.

<sup>23</sup> Robertson, 2004.

<sup>24</sup> Sherwood, 1982.

## Nouns

The nominal desinence is *-o* and the plural marker is *-j*. Nominative and accusative are the only two grammatical cases in Esperanto. The nominative case is unmarked, and the accusative ending is *-n*, which is also used on nouns in prepositional phrases in certain cases where the preposition is omitted: direction (but not location—*Mi marŝis trans la straton* “I walked across the street”, but *Mi loĝis trans la stratō* “I lived across the street”<sup>25</sup>), duration (*Atendu nur unu momenton* “Wait just one moment”) and measurement (*Ĝi pezas tridek gramojn* “It weighs thirty grams”). When a preposition is present, case is unmarked, as in *Mi faros kukon pro ŝia naskotago* “I will make a cake for her birthday”.<sup>26</sup> There are the endearment suffixes *-ĉj* and *-nj* as mentioned earlier, and there is also the suffix *-i* which is used in country names (*Francio, Japanio*).<sup>27</sup>

Thanks to the language’s designed simplicity, there is but one declension of nouns (with the exception of the names of countries, which are the only nouns to use the aforementioned country name suffix and thus are not considered a separate declension), to which only a handful of bound morphemes may be applied. They are demonstrated here with the Esperanto stem for “father”:

<i>patro</i> father	<i>patroj</i> fathers	<i>patron</i> father (acc.)	<i>patrojn</i> fathers (acc.)
<i>paĉjo</i> dad	<i>paĉjoj</i> dads	<i>paĉjon</i> dad (acc.)	<i>paĉjojn</i> dads (acc.)
<i>panjo</i> mom	<i>panjoj</i> moms	<i>panjon</i> mom (acc.)	<i>panjojn</i> moms (acc.)

## Pronouns

Esperanto pronouns may take the accusative marker *-n* where appropriate. Possessive pronouns are formed by adding the adjectival desinence *-a*, which then agree with their complements in number and case.<sup>28</sup> They are demonstrated here by the first-person plural pronoun:

<i>ni</i> we	<i>nin</i> us		
<i>nia</i> our, ours	<i>niaj</i> our, ours (pl.)	<i>nian</i> our, ours (acc.)	<i>niajn</i> our, ours (pl. acc.)

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<sup>25</sup> Sherwood, 1981.

<sup>26</sup> Gledhill, 2000.

<sup>27</sup> Sherwood, 1981.

<sup>28</sup> Gledhill, 2000.

## Adjectives

As stated above, the adjectival desinence is *-a*. Adjectives agree with their nouns in number and case (*Mi amas flavajn birdojn* “I love yellow birds”).<sup>29</sup> As with nouns, they have only one declension, demonstrated here by the stem for “large”:

*granda* large      *grandaj* large (pl.)      *grandan* large (acc.)      *grandajn* large (pl. acc.)

## Adverbs

No word in Esperanto is inherently an adverb; rather, words of other categories, mostly lexical but sometimes not, take on the desinence for lexical adverbs, *-e*. The accusative *-n* may be applied to indicate direction or location of an action, as in *Hieraux verpere mi dormis eksteren* “Last night I slept outside” or *Mi iras hejmen* “I’m going home.”<sup>30</sup> There are thus two classes of lexical adverbs: those that can indicate direction and those that cannot, here demonstrated (quite simply) by the Esperanto stems for “North” and “happy”:

*norde* in a Northern manner      *norden* Northward      *feliĉe* happily

Grammatical adverbs are typically monosyllabic and are not required to take any particular morpheme, though they may use the adverbial desinence to create a new, slightly different adverb, and, where semantically appropriate, some may take a verbal ending to become a verb with a similar meaning, such as *jesi* “to agree”.<sup>31</sup>

## Verbs

Verbs naturally have the most complex bound morphology of all, but it is still quite simple compared to most natural languages that have any bound morphology at all. Infinitive verbs are marked with *-i*, which can be replaced with mood markers *-u* (imperative) or *-us* (conditional), tense markers *-is* (past), *-as* (present) or *-os* (future),<sup>32</sup> or aspect markers either active *-int* (past), *-ant*

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<sup>29</sup> Gledhill, 2000.

<sup>30</sup> Gledhill, 2000.

<sup>31</sup> Gledhill, 2000.

<sup>32</sup> Sherwood, 1981.

(present) or *-ont* (future), or passive *-it* (past), *-at* (present) or *-ot* (future). Verbs are not inflected for person or number.<sup>33</sup> Esperanto has only one conjugation of verbs, modeled here by the stem for “drink” (with a little help from the first-person and third-person neuter pronouns and, in the case of participles, the adjectival desinence and the verb “to be”):

<i>trinki</i> to drink	<i>Trinku!</i> Drink!	<i>mi trinkus</i> I would drink
<i>mi trinkis</i> I drank	<i>mi trinkas</i> I drink	<i>mi trinkos</i> I will drink
<i>mi estas trinkinta</i> I have drunk		<i>ĝi estas trinkita</i> it has been drunk
<i>mi estas trinkanta</i> I am drinking		<i>ĝi estas trinkata</i> it is being drunk
<i>mi estas trinkonta</i> I am about to drink		<i>ĝi estas trinkota</i> it is about to be drunk

It is worth noting that, while the participle forms here are effectively adjectives, as indicated by their use of *-a*, they needn’t necessarily be so. In particular, the active present participle form, when used with the nominal *-o*, takes on the meaning of “[root]er”, or “something or someone who [root]s”, as in Sherwood’s (1981) sentence, “*la helpa helpo helpis la helpitajn helpantojn*”<sup>34</sup> (emphasis added by the author), “the helpful help helped the helped helpers.”

### Correlatives

Esperanto features a rich and formulaic system of demonstratives, pronouns and other miscellaneous function words called *correlatives*, which Zamenhof supposedly based off of Lithuanian. Each is made by joining one of a set of prefixes, corresponding roughly to scope, with one of a set of suffixes, signifying content. What results is a table of mostly monosyllabic words that fill in for much of what’s left after one covers the Esperanto lexicon. This table follows.<sup>35</sup>

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<sup>33</sup> Gledhill, 2000.

<sup>34</sup> Sherwood, 1981.

<sup>35</sup> Sherwood, 1981.

Correlatives	i- some	ki- what	ti- that	cxi- all	neni- no
-o thing	<i>io</i> something	<i>kio</i> what	<i>tio</i> that	<i>cxio</i> everything	<i>nenio</i> nothing
-a kind of	<i>ia</i> some kind of	<i>kia</i> what kind of	<i>tia</i> that kind of	<i>cxia</i> every kind of	<i>nenia</i> no kind of
-e place	<i>ie</i> somewhere	<i>kie</i> where	<i>tie</i> there	<i>cxie</i> everywhere	<i>nenie</i> nowhere
-u one	<i>iu</i> someone	<i>kiu</i> who	<i>tiu</i> that one	<i>cxiu</i> everyone	<i>neniu</i> no one
-al reason	<i>ial</i> for some reason	<i>kial</i> why	<i>tial</i> because	<i>cxial</i> for every reason	<i>nenial</i> for no reason
-am time	<i>iam</i> sometime	<i>kiam</i> when	<i>tiam</i> then	<i>cxiam</i> always	<i>neniam</i> never
-el manner	<i>iel</i> somehow	<i>kiel</i> how	<i>tiel</i> thus	<i>cxiel</i> in every way	<i>neniel</i> in no way
-es one's	<i>ies</i> someone's	<i>kies</i> whose	<i>ties</i> that one's	<i>cxies</i> everyone's	<i>nenies</i> no one's
-om amount	<i>iom</i> some	<i>kiom</i> how much	<i>tiom</i> so much	<i>cxiom</i> all	<i>neniom</i> none

### Numerals

All that remains to be discussed of Esperanto's bound morphology lies with numerals. In their unmarked form, they indicate cardinal numbers, and they may take on the adjectival desinence *-a* to indicate ordinal numbers.<sup>36</sup> They are modeled here by the word for “eight”: *ok* eight / *oka* eighth

### Conclusion

Esperanto attracts with its simplicity, which is largely due to a sturdy and elegant morphology. Indeed, its agglutinative qualities have been invoked to entice would-be learners.<sup>37</sup> Since its inception, Esperanto has gained and lost public interest, steadily changing and growing all the while, though its morphology has been altered little over the years. Though few would argue that Zamenhof's vision of Esperanto being a universal language has been realized or is even close to being so, it does boast a small international community and represents a unique culture of its own.<sup>38</sup> That it has outlived its creator (or, as Zamenhof preferred, initiator<sup>39</sup>) is a testament to its lasting appeal.

<sup>36</sup> Gledhill, 2000.

<sup>37</sup> Golden, 1992.

<sup>38</sup> Gledhill, 2000.

<sup>39</sup> Corsetti, et al., 2004.

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