

The limits of language planning^{*}

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The case of Esperanto shows that language planning understood as the creation of a new communication tool for international use can indeed produce a workable result. As long as the language is used and sheltered by a community of practice of moderate dimensions, it will preserve a high degree of stability. Nevertheless, changes do occur. They are slow, but noticeable, and occur in different areas of the grammar. They are addressed in two of the case studies in this paper and concern shifts in the language's parts-of-speech system, and differences in interpretation of the valency of verbs. A third case study addresses the issue of epenthesis in compounds, which reveals an unresolved area of arbitrary choices made by the speaker. In the former two areas the stability of a fundamental design principle of Esperanto may be at stake, i.e. its relatively transparent and exceptionless rule-based system, which is claimed to be the cornerstone of its easy learnability. It is predictable that such a process of deregulation would be greatly accelerated if the language were to be adopted on a much larger scale beyond the limits of its present community.

1 Introduction

In Valter Tauli's seminal work *Introduction to a theory of language planning* (Tauli 1968: 27) language planning is defined as "the methodical activity of regulating and improving existing languages or creating new common regional, national or international languages". For Tauli, language planning is an engineering-like activity applied to a language structure. This is the planning activity this paper and its title refer to. In more recent times, other forms of language planning have become the subject of serious research, with more emphasis on aspects of sociolinguistics (status planning), language policy (identity planning) and language teaching (acquisition planning). This is not meant to be an exhaustive listing and only serves the purpose of putting Tauli's original 'language planning' in the much broader perspective of contemporary

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studies of language policy and planning. Tauli's original term is now captured by the more restrictive term 'corpus planning', and his "regulating and improving" aspects now cover such areas as:

- The choice of an appropriate alphabet for a language, and the establishment of basic spelling rules.
- The definition of a standardized pronunciation.
- The elaboration of rules for the incorporation of loan words.
- The compilation of a reference grammar, dictionaries and pedagogical grammars for teaching the language.

In theory, the activities described above may concern all existing languages, but "creating new common regional, national or international languages" from Tauli's definition is clearly a much more ambitious activity. At a regional level, the creation of Unified Basque (*Euskara batua*), initiated during the period 1964–1968, as a supradialectal variety for common use among all speakers of Basque in Spain and France, is a continuing success story in terms of most aspects of language planning in the wider sense of the word.¹ The most radical example of a product of corpus planning which was created with the ambition to achieve global acceptance is Esperanto. Its project was published in 1887, and its grammatical and lexical foundations were baselined in 1905. Even though Esperanto has not acquired the position its initiator had in mind, and which many of its supporters strove or continue to strive for, it is beyond doubt that in the course of almost 130 years the initial project has developed into a versatile community language which appears to satisfy the communicative needs of its users. Is this the answer to the question whether corpus planning can indeed produce a workable language? In other words, can a so-called constructed language have the potential to function more or less the same way an ethnic language transmitted through history functions?

The Esperanto experience seems to tell us the answer is 'yes', but the question raised above is not the most interesting one to ask. Esperanto was designed in compliance with an all-encompassing corpus-related requirement, i.e. it should be regular and easy to learn. This, in combination with its ethnic independence, was, and still is, considered the language's major point of attraction. Now, one thing is to state that the original product of 1887 has become the living language of a worldwide community of practice thanks to its growth and free evolution through community use.² It is, however, common

¹ Villasante (1970) offers a good description of the initial phase of Basque language planning.

² See Jansen (2007: Section 5.2) for a detailed definition of the Esperanto movement as a community of practice in sociological terms.

knowledge that living languages change with time, not only in their vocabularies, but also in their grammars, and if Esperanto lives, to what extent has this affected its properties, and, in the worst case, the regularity of its rule-based grammar and word-building system to which the language owes its easy learnability? Whereas the lexical development of Esperanto has always been a topic of study, the language's sensitivity to grammatical changes has not. The more interesting research question is therefore: can the original structure of a constructed language, once it has established itself as a community language, be kept under control to such an extent that the language maintains its attractiveness as an easily learnable communication tool for global use beyond the limits of its original community of practice? Though admittedly, purely linguistic features constitute one aspect only of the great variety in difficulties language learners are confronted with, the present paper deals exclusively with factors related to the language structure of Esperanto.

I will present three small case studies in a search for partial answers to this question. In Section 2, I discuss a few aspects related to the parts-of-speech system of Esperanto, in particular the formation of verbs built on Entity-based stems. In Section 3, I will deal with the issue of (in)transitivity markers in complex stems for verbal use and their interference with the causativity marker. Section 4 addresses the question of epenthesis in compounds. My conclusions are summarized in Section 5.

2 Parts of speech

Lexical words in Esperanto consist of a stem, which contains the semantic information, and a suffix, marking which of the four basic syntactic slots the word occupies in a larger expression, i.e., that of a verb, a noun, an adjective or an adverb.³ Stems can be combined with each of the four word class markers, and for this reason it is essential to clearly distinguish between the language's parts-of-speech or PoS system at the (semantic) stem level (stems, derived stems, compound stems) and at the (syntactic) word level. Table 1 shows how the stem *parol* 'speak' is realized at the word level.⁴

³ The terminology used is that of Hengeveld & Mackenzie (2008: xvi–xxiii).

⁴ In this article, the following abbreviations are used: A = Actor, Adj = Adjective, Adv = Adverb, C = Causee, CAUS = Causative, DTR = Detransitivizer, FDG = Functional Discourse Grammar, INF = Infinitive, N = Noun, NTR = Intransitive, PoS = Part of Speech, PRS = Present tense, PST = Past tense, TR = Transitive, transitivizer, V = Verb.

Table 1: The Esperanto stem *parol* in its four syntactic applications.

V	N	Adj	Adv	Typical clause
<i>parol-as</i>				<i>La studento parolas.</i> The student speaks. ⁵
	<i>parol-o</i>			<i>Parolo estas arĝento.</i> Speech is silver.
		<i>parol-a</i>		<i>Tio estas parola ekzameno.</i> That is (an) oral examination.
			<i>parol-e</i>	<i>Ni interkonsentas parole.</i> We agree verbally.

To be operable in the different syntactic slots, the stem *parol* only requires the addition of the applicable inflection. In the given verbal application of Table 1 it carries the tense marker *-as* which encodes it as the conjugated verb form *parolas* in the present tense. It carries the marker *-o* in the noun *parolo* ‘(the) speaking, speech’ and *-a* in the adjective *parola* ‘speaking, spoken, oral’ in number and case agreement with the head noun *ekzameno* ‘exam’. Finally, it carries *-e* in the invariant adverb *parole* ‘by speaking, verbally’. In Jansen (2013) it was demonstrated that the versatile behavior of *parol* is an instantiation of a systematic pattern across the lexicon of the language.

In Jansen (2013), it is argued that content words in Esperanto can be described as being built on stems in an originally flexible system of parts of speech.⁶ These stems are associated with lexemes designating one of the following semantic categories: Individual (x), State-of-Affairs (e), Propositional content (p), Location (l), Time (t), Manner (m), Quantity (q), Reason (r), Instrument (ins) and Dependent Property (f). In order to keep the background information to the minimum required for understanding the dynamics of Esperanto, which is the central topic of this paper, I propose to reduce this description here to a basic distinction between Entities and Non-Entities, whereby the latter group is comprised of Situational Properties, earmarked for verbal application, and Qualifying Properties, earmarked for adjectival and adverbial application, both originally identified by (f). My Entities comprise not only the original (x), (e) and (p), but also many (l), (t) and (ins), which, as lexical heads, tend to be interchangeable with (x), (e) and (p), and produce nouns as primary words. In this simplified scheme, the majority of (m) and (q) can probably be represented by (f), with which they are often interchangeable. The occurrence of (r) in lexical heads is so rare that we can afford to neglect it in the proposed scheme.

⁵ All translations from Esperanto in this paper are mine.

⁶ In Jansen (2013) the reader will find my detailed argumentation why this approach fits the linguistic reality of Esperanto better than the theory supported by the Esperanto Academy.

2.1 Contentive stems and their rule-based interrelation

The distribution of the thus defined three semantic category groups over four syntactic slots (nominal, verbal, adjectival and adverbial) results in twelve possible stem-marker combinations. Grouping together Entity-based nouns, Situational Property-based verbs and Qualifying Property-based adjectives and adverbs reduces this to the nine rules presented below.

1. Entity-based nouns, Situational Property-based verbs and Qualifying Property-based adjectives (and some adverbs) are so-called primary words. All other combinations of stems and word class markers are called secondary. All primary words have a meaning which is given by the original translations in the five reference languages of Zamenhof (1963[1905]), e.g., *tabl-o* ‘table’, *parol-i* ‘to speak’, *bon-a* ‘good’, *oft-e* ‘often’.
2. Many secondary verbs built on Entity-based stems represent the ascription of the stem’s Entity. Their meaning can be paraphrased by ‘to be N’, in which N is the noun back-translated from the original translation in the reference languages, e.g., *direktor-i* ‘to be the director’.⁷ Deviations from this rule are addressed in detail in Section 2.2.
3. Secondary verbs built on Qualifying Property-based stems represent the ascription of the stem’s Property. Their meaning can be paraphrased by ‘to be Adj’, in which Adj is the adjective back-translated from the original translation in the reference languages, e.g., *bon-i* ‘to be good’.
4. Secondary nouns built on an Situational Property are underspecified with respect to their (x), (e) or (p) interpretation, e.g., *konstru-o* ‘building’ (activity or result?), *viv-o* ‘life’ (lifetime or animacy?).
5. Secondary nouns built on a Qualifying Property have no independent existence and remain dependent on contextual support, e.g., *bon-o* (whose?) ‘goodness’.
6. Secondary adjectives built on an Entity are underspecified in that they may be interpreted as modifiers linked to their head by an Associative function, typically reflecting all sorts of instances of alienable possession, locational, temporal or other relations (e.g., *lok-a* ‘local’, *jar-a* ‘annual’), or as dependents linked to their nucleus by a Reference function, expressing inalienable possession (e.g., *patr-a* ‘father’s’).
7. Secondary adjectives built on an Situational Property are adjectival participles, underspecified with respect to their voice and/or aspectual interpretation, e.g., *parol-a* ‘speaking, spoken’.

⁷ In Jansen (2013) I made an allowance for a more approximative or figurative ‘to be like N’, but more recent research made me decide to restrict the definition to literal ascription.

8. Secondary adverbs built on an Entity usually reflect their semantic background (e.g., *lok-e* ‘locally’, *jar-e* ‘yearly’), but may also be interpreted as (m): *vir-e* ‘like a man’.
9. Secondary adverbs built on an Situational Property are adverbial participles or gerunds, underspecified with respect to their voice and/or aspectual interpretation, e.g., *parol-e* ‘while speaking, being spoken’.

This closed set of rules for meaning assignment to each possible stem-marker combination could have been a basis for proposing that the most economical way to describe the PoS system of Esperanto at the semantic level is indeed that of the fully flexible type 1 (in accordance with Hengeveld & Mackenzie 2008: 228). However, the restriction “Many secondary verbs” I made in rule 2 reflects more than a statistical disturbance.

2.2 Secondary verbs

A type 1 hypothesis works in general terms but not when verified against the use of verbs built on stems pertaining to an Entity (Jansen 2013: Section 5.3.6). The gradual loosening of the applicability of rule 2 in Section 2.1, not really observable until 1918, signals an increasingly large-scale deregulation process affecting stems belonging to all kinds of Entities.⁸ The examples listed in Table 2 should be self-explanatory. The verb *akv-i* (built on the [x] stem *akv* ‘water’) is not described in Waringhien (2002: 65) as ‘to be water’, but as ‘to water plants’, suggesting a verbally specialized lexeme *akv_{V,TR}* as the semantic base, with a restriction to plants as its direct object, none of this being deduceable from the Entity *akv*. In addition, *akv-i* does not provide a generalizable model for other liquids: *lakt-i* (built on *lakt* ‘milk’) appears to be neither ‘to be milk’, nor ‘to pour milk’, but ‘to undergo the secretion of milk’ (Waringhien 2002: 653), suggesting as its base *lakt_{V,NTR}*. It is left to the reader’s intuition or imagination how to interpret *vin-i* (built on *vin* ‘wine’), *bier-i* (from *bier* ‘beer’) or *benzin-i* (from *benzin* ‘petrol’), should one wish to use these verbs. Table 2 contains a few Entity-based verbs in the left-hand column, representing different, randomly chosen, semantic fields. It shows to what extent interpretations can differ between the meanings of such verbs in Esperanto and Dutch (Jansen 2015a: 104).

⁸ Specifically, it was Antoni Grabowski’s translation of the Polish epic *Pan Tadeusz* (1918) whose “most liberal and courageous verbal application of nouns and of adjectives” elicited the poet Kálmán Kalocsay’s praise and admiration (See for more details Jansen 2013: 643–644).

Table 2: Some deregulated secondary verbs in Esperanto.

Entity-based verb		Meaning (described in English)	
Esperanto	Dutch	Esperanto	Dutch
<i>akv-i</i>	water-en	to water plants	to pee
<i>lakt-i</i>	melk-en	to secrete milk	to milk
<i>lini-i</i>	lijn-en	to draw a line	to slim down
<i>okul-i</i>	(o)og-en	to inoculate	to look/appear
<i>plank-i</i>	vloer-en	to lay a floor	to throw to the floor

Based on historical evidence, I developed an argumentation in favor of a type 1+2 system, i.e., a mixture of contentive lexemes complemented by a growing number of lexemes that acquired a distinct verbal specialization. This type 1+2 assumption includes the evolutionary hypothesis that Esperanto took off as type 1 and developed type 2 elements in the course of time. Resuming the case of ‘water’, I hypothesize that initially the language offered a contentive stem *akv* and, in compliance with my rules 1, 6, 8 and 2, the *possible* words *akvo*, *akva*, *akve* and *akvi*, of which perhaps not all were actually formed and used. *Akv* being a first-order Entity or (x), the marker sequence *o-a-e-i* is one of a steeply decreasing probability of occurrence. Only the noun *akv-o* ‘water’ is attested in the 1887–1888 timeframe (Neves 2011: 10). The adjective *akv-a* appears in Kabe (1911:5), where it is defined in accordance with rule 6 in Section 2.1, i.e., as ‘water’ in a modifier position. In the authoritative Grosjean-Maupin (1933: 26) we notice for the first time a definition of the verb *akv-i* which, as we saw earlier, *cannot* be derived from *akv* applying rule 2. The given meaning of *akv-i* ‘to water plants’ cannot be deduced by logic or intuition outside a context. But, if *akv-i* is indeed cemented in the day-by-day language use with the meaning it has acquired, we can maintain the relevance of the distinction between stems and words by assuming that *akv-i* is built on its own verbally specialized stem *akv_{V,TR}*.⁹ What remains, after subtracting *akv_{V,TR}* from the original *akv*, is a non-verbal stem *akv_{NV}*, because in Grosjean-Maupin’s examples the registered nouns and adjectives are still built in conformity with the FDG-based rules I put on them in Section 2.1 (the adverbial application *akv-e* is not mentioned, but this does not disqualify it as a possible word). This diachronic picture of Esperanto supports the implicational hierarchy found synchronically among PoS systems in natural languages around the world, i.e. if lexeme specialization occurs, verbal specialization precedes all others. It is beyond doubt that the natural development of the language in this field has a deregulating effect on its original

⁹ *Akvi* experiences competition from the derived *akvumi* which includes the root *-um*; both are recorded in Waringhien (2002), but Wennergren (2005: 588) recommends the use of *akvi*.

system, and it may well have an adverse effect on its learnability: the meaning of all new verbally specialized stems must be learned separately, and special care must be taken in distinguishing between the two heterosemous elements of each pair.

3 Transitivity/causativity

In Esperanto, each Situational Property stem earmarked for verbal application is inherently transitive or intransitive. For this reason, a transitive stem used in a one-place predicate is marked by an obligatory detransitivizer, and an intransitive stem used in a two- or three-place predicate is marked by a transitivizer (also used as a causative marker on both transitive and intransitive stems). These markers are the transitivizer *-ig* and the detransitivizer *-iĝ*, which are both homonymous variants of suffixable roots for word building (Jansen 2016a). It is argued in the quoted paper that (de)transitivization by *-ig/-iĝ* is lexicalized during the learning process of Esperanto, so that experienced speakers have at any time pairs of stems ready: intransitive or detransitivized for use in a one-place predicate, and transitive, transitivized or causativized for use in a higher-place predicate.

The Finnish linguist Jouko Lindstedt does not question the unique valency assignment to each stem earmarked for verbal use. Nor does he question the great difficulty the system presents to Esperanto speakers in general. Based on observations of the language usage, he even argues in favor of an additional, hidden, rule in the Esperanto grammar. He develops his analysis on the basis of two text fragments of which I will use only one (Lindstedt 2015: 1 from William Auld's Esperanto translation of *The Lord of the Rings*):¹⁰

- (1) Subita vento mov-ig-is iliajn mantelojn.
 (A) sudden wind move_{TR}-CAUS-PST their coats¹¹

It should be noted that the Situational Property-based stem *mov* 'move' is inherently transitive. Lindstedt describes how (1) triggered him to ask his daughters, who are native speakers of Esperanto, whether one says *movas monton* (just 'move_{TR}-PRS') or *movigas monton* (with 'move_{TR}-TR/CAUS-PRS'). In the former case, the transitive verb form *movas* is embedded in a two-place

¹⁰ The second text fragment is not discussed here for reasons of conciseness. See for a more detailed discussion Jansen (2016b).

¹¹ I refrain from adding a translation in current English because it is precisely the relation between the morphology of the verb form and the meaning of the expression which is the topic under discussion. By glossing only the verb, the gross meaning of (1) should be clear to the reader.

predicate, which is its natural environment. In the latter option it is the causative *movigas*, which allows three arguments, and which is used in the same environment. At this point I think a brief intermezzo is in order.

First of all, we should be careful about the authority of native speakers of Esperanto in general. Even though their first learned family language may be Esperanto, the language they use in their broader social contacts, even at a very young age, is usually a different one. Beyond any doubt, this community language strongly interferes with Esperanto and becomes increasingly dominant. The effect of this dominance is likely to be more pronounced, the more complex the grammatical structures are. It is a documented fact that the valency of verbs is one of the most difficult hurdles to take in Esperanto (Manders 1947: 165–167; Jansen 2012a: 28–29), and young native speakers of Esperanto are likely to be exposed to regular instances of wrong usage of the *-ig* and *-iĝ* markers in the Esperanto spoken around them. Nevertheless, I do not rate the experiment Lindstedt describes as being of no value. It aims at throwing light on the interpretation of the semantics of ‘someone moving something’ as a function of who the agent is, and what the object is, following the intuition of two youngsters who never studied a textbook of Esperanto (Lindstedt 2015: 2). And this is certainly not without interest. Back to the experiment itself.

Lindstedt writes that the answer to his question was: *giganto movas monton* ‘a giant *movas* a mountain’, but *sorĉisto movigas monton* ‘a wizard *movigas* a mountain’. It remains unclear in his description if both girls gave the same answer independently of each other, and if the added explanation, involving the causative auxiliary *igas*, that *sorĉisto igas ĝin moviĝi* ‘a wizard makes it *moviĝi*’ (*moviĝi* being the detransitivized form of *movi*) comes from the test subjects or from the conductor of the experiment, Lindstedt himself. Finally, it is not clear to what extent the valency system and the distribution of transitivity and intransitivity in the girls’ community language interacted with their intuition when applied to Esperanto. What remains is the interesting result that they do differentiate between the agents *giganto* ‘giant’ and *sorĉisto* ‘wizard’, and that in the former case they propose the twice transitivized *movigas*, exactly as in (1). The explanation *igas ĝin moviĝi* ‘makes it move’ is appealing in itself, but as an equivalent of *movigas* it is unsatisfying. The occurrence of the double transitive stem *movigas*, which can only be interpreted as a causative, requires a three-place predicate, which we do not have here, at least not overtly. The question is whether, in their preference for *movigas*, Lindstedt’s daughters presumed the presence of a tacitly understood third argument. In the case of (1) there is no such third party imaginable that could take over the action *mov* from the wind.

The striking similarity between (1) and the preference for *sorĉisto movigas la monton* suggests that neither the wind nor the wizard are conceived

as Actors who perform a translatory move of a coat or a mountain from one point to another. The picture is rather that of a coat, flirting in the wind, and a mountain, trembling and shaking, each one performing a non-volitional act or autonomous motion, made possible not by an Actor, but by a Causee who did no more than creating the initial conditions for the motion to take place. In contrast with this, it is easier to conceive a *giganto* ‘giant’ as being capable of moving a mountain the way I shovel a heap of sand on the beach.

The phenomenon as I describe it above would indeed be conveniently worded by the expression *igi mov-ig-i* ‘make move_{TR}-DTR-INF’, but this is the analytical alternative of *mov-ig-ig-i* ‘move_{TR}-DTR-CAUS-INF’, and not of *movigi* ‘move_{TR}-CAUS-INF’. Lindstedt claims that “there is something that seems to block *-ig-ig*”, and I agree with that. The sequence *-ig-ig* is not inexistent, but, though it occurs very rarely, it is possible.¹² The only meaning it can represent is that of the operational sequence -DTR-CAUS, because -DTR-TR would simply make no sense. This, however, does not justify the assumption of a hidden rule in the grammar that equates *movigi* to *igi movigi*.¹³ Such a rule would violate the fundamental distinction between inherently transitive and intransitive stems. Hence, my proposal is that (1) should not be classified as an expression revealing a hidden rule, but, for the time being, as a mistake.

The more positive message I would wish to convey is that, in his paper, Lindstedt opened an interesting chapter in the grammar of Esperanto, hitherto not discussed, at least to my knowledge. Depending on the nature of the action performed by the nuclear verb in the predicate, and on the arguments that depend on it, the application of the root sequence *-ig-ig* makes it possible to sharply distinguish between an Actor A and a Causee C subject. Let me illustrate this in the examples (2)–(4), to which I have added a line in double quotes containing an explanatory paraphrase of the current English translation.

- (2) La sorĉisto mov_{TR}-as la monton.
 The wizard_A move-PRS the mountain
 ‘The wizard moves the mountain.’
 “The wizard spends energy on moving the mountain from one place to another.”

¹² The more than 800 page Esperanto translation of *Don Quijote de La Mancha* (Cervantes Saavedra 1977) shows 68 occurrences of the stem *mov* and 34 of *mov-ig*, but none of *mov-ig* and none of *mov-ig-ig* or the analytical *igi mov-ig*.

¹³ Perhaps ‘hidden’ should be replaced by ‘forgotten’, because in the editorial article Survoje al Konsilanta Gramatiko in *Lingva Kritiko* (1932: 1) the meanings of *movi*, *movigi* and *movigi* were already debated. Under the guidance of the famous Italian linguist Bruno Migliorini the editors interpret *movigi* as *igi movigi*, but, interestingly enough, they ban the very use of *-ig* as a compulsory detransitivizer, declaring it redundant under the “Principle of Sufficient Conditions” (see Section 4), and accept expressions like *la maŝino *movas*!

- (3) La sorĉisto mov_{TR}-ig-as la monton.
 The wizard_C move-CAUS-PRS the mountain
 ‘The wizard has the mountain moved.’
 “The wizard delegates the moving of the mountain to some other, not overtly mentioned, being.
- (4) La sorĉisto mov_{TR}-iĝ-ig-as la monton.
 The wizard_C move-DTR-CAUS-PRS la monton
 ‘The wizard makes the mountain move.’
 “The wizard spends energy on creating the initial conditions that enable the mountain to perform an autonomous motion.”

Clearly, the role of the verb in (3) differs fundamentally from that in (4), in full compliance with the received Esperanto grammar. Equating (3) to (4) would be as erroneous as hypothesizing the presence of a hidden rule in the grammar that explains (1) in terms of (3). There is no being conceivable in (1) to whom the action of the wind could possibly be delegated to make the coats move, which would in any case be a wrong description of what physically happens.

Rather than postulating a hidden rule, which would only make the handling of transitivity in Esperanto more complex than it is already, we should perhaps conclude that it is the sheer complexity of transitivity which facilitates the use of substandard language which, in turn, may herald a gradual loosening of the strict distinction between transitive and intransitive stems. A comparable phenomenon can be observed in the use of the reflexive in Esperanto where the difficulty associated with the use of the reflexive possessive adjective shows up in frequent instances of formally incorrect handling, even in carefully edited books (Jansen 2012b).

4 Epenthesis in compounds

“FDG is a theory about grammar, but one that tries to reflect psycholinguistic evidence in its basic architecture” (Hengeveld & Mackenzie 2008: 2). The chosen architecture represents a top-down process, which starts with intentions and ends with the articulation, a model which is suggested by psycholinguistic research (see for an overall description of FDG in an Esperanto context: Jansen 2015b). This approach also means that the plausibility of hypotheses set up by language researchers should not only meet model-internal coherence requirements, but also that consistency with language-independent psycholinguistic data can be demonstrated. In this Section I review the consequences of this requirement for a phenomenon in Esperanto compounding

that is often glossed over: the choice of an epenthetic vowel (when needed) between the elements of a compound. The following is largely based on unpublished material from a masterclass on Esperanto grammar given at the University of Liverpool in March 2016.

Given the circumstance that the formulation and shaping of a linguistic expression from its inception up to its final articulation is often completed within a timespan of seconds or less, it is assumed in FDG that a speaker cannot afford wasting any time or energy by building up provisional structures which are kept active only as long as they are needed, to be replaced or suppressed as the speaker proceeds. The scarcity of time is one factor. Another one is of a methodological nature: provisional structures may come in handy, but their very existence cannot be proven since they disappear by virtue of their provisionality and leave no trace behind (other than the desired result which was their justification, but this leads to a circular argumentation). If allowance is made for the existence of provisional structures, there is no limit to what a researcher may come up with in order to support an idea. It is for this reason that in FDG the approach is taken that linguistic phenomena should be investigated and explained without recourse to provisional structures and without making U-turns in the grammar, e.g., for the purpose of retrieving and correcting intermediate results.¹⁴ This approach contrasts with the spirit of a famous set of principles in Esperanto morphology, the so-called *Principle* (or, rather, Pair of Principles) of *Necessary and Sufficient Conditions*, proposed by the Swiss mathematician René de Saussure and approved by the Esperanto Academy in 1913 (Kalocsay & Waringhien 1985: 386):

- a. Principle of Necessary Conditions: in the process of word-building one must put together all stems, roots and suffixes which are necessary to clearly and fully evoke the idea reflected by this word.
- b. Principle of Sufficient Conditions: should the idea thus expressed be properly and unmistakably understandable from the context, and without one of the roots used, this root can be eliminated as a useless and superfluous element.

The key to our discussion about provisional structures can be found in the last part of the Principle of Sufficient Conditions which, contrary to what is assumed in FDG, does make allowance for setting up provisional structures in a spontaneous process of speech production. Following De Saussure's general

¹⁴ What is meant is the spontaneous production of at least one uninterrupted Discourse Act, not the mechanism which underpins interruptions, corrections and resumptions during the processing of a Discourse Act.

description of the Esperanto morphology (e.g., De Saussure 1984 [1914]), Kalocsay & Waringhien elaborated a word-building theory which is based on putting together syntactic words.¹⁵ In other words, the compound word *man-tuk-o* ‘towel’ is justified by the word *man-o* ‘hand’ joined to the word *tuk-o* ‘cloth’, with the noun ending *o* at the interface suppressed because the resulting *man-tuk-o* is well pronounceable.¹⁶ *Man-tuk-o* is thus explained as a *tuko por (la) mano(j)* ‘cloth for (the) hand(s)’, i.e. part of the subset of cloths used for drying one’s hands. The suppression of the *o* in the middle doesn’t always work, e.g., in the compound *tabl-o-tuk-o* ‘table cloth’, its alternative **tabl-tuk-o* being difficult to pronounce. By analogy (*tuko por tablo* ‘cloth for (a) table’), the *o* is selected as the epenthetic vowel to be inserted.

Although the need for epenthesis is strictly related to the syllabification of a morphemic structure in order to make it pronounceable (*tabl-tuk-o* is morphologically immaculate and perfectly understandable in a written text), the traditional word theory in Esperanto forces the speaker to seek a morpho-syntactic justification for the vowel to be inserted, and to look for some equivalent phrase structure to suggest the appropriate choice. *Tuko por tablo* ‘cloth for (a) table’ is such a phrase. But in the case of ‘textbook’, which is *lern-o-libr-o* in Esperanto, we encounter the same *o* in the middle, although there is no rule that says that the phrase *libro por lerno* ‘book for (the) learning’ is better suited than *libro por lerni* ‘book to learn (from)’. The latter phrase would have suggested the uncommon **lern-i-libr-o*. Prepositions are usually followed by nouns, so, for this reason, *por lerni* may have been shunned as a model. The argumentation goes further and proposes to interpret the phrase *libro por lerno* as short for *libro por lern-ad-o*, from which the inserted State-of-Affairs generating root *-ad* is suppressed as being superfluous for a correct understanding of what is meant (a Saussurian U-turn), i.e., *lern-ad-o-libr-o* is reduced to *lern-o-libr-o*. This way, the loop inside the grammar to justify the epenthetic *o* is doubled: first of all, a syntactic phrase structure is selected as a model, then, a derivation involving a suitably selected root is set up inside the phrase, which is then removed to arrive at the end product, which is the compound *lern-o-libr-o*.

The epenthetic *i* that was deemed undesirable in **lern-i-libr-o* does, however, appear in compounds like *pag-i-pova* ‘able to pay (in hard currency)’ and *daŭr-i-pov-a* (‘able to last’ or ‘sustainable’), both built on two Situational Properties, for which the equivalent phrases *pov-ant-a pag-i* ‘being able to pay’

¹⁵ “The grammatical endings between the elements [WJ: of complex words] are removed, unless their pronounceability or other considerations require them to be maintained” (Kalocsay & Waringhien 1985: 393), suggesting that the elements used in word-building are initially provided with endings, which they may or may not lose in the process.

¹⁶ Whenever helpful, I use hyphens as morpheme dividers in these examples.

and *pov-ant-a daŭr-i* ‘being able to last’ with the subsequent suppression of the imperfective active participle *-ant* is clearly given priority over *pag-o-pova* and *daŭr-o-pov-a*, which would be relatable to *pova je pag(ad)o* ‘capable of payment’ and *pova je daŭr(ad)o* ‘capable of lasting’ and indeed be reminiscent of *ĉio-pova* ‘all-mighty’, justified by *pova je ĉio* ‘capable of everything’. In the compound *art-e-farita* ‘artificial’, built on an Entity and a Qualifying Property, we find an epenthetic *e*. We may wonder what then the difference is between the adjectival phrase *arte farita* ‘artificially made’ and the one-word compound *artefarita* ‘artificial’, and why *art-o-farita* with *farita per arto* ‘made by art’ is not favored. A similar phenomenon we encounter in *mult-e-kosta* ‘much costing’, i.e. ‘expensive’, built on a Qualifying and a Situational Property, suggesting the phrase *mult-e kost-anta*, contracted into a single word although there does not seem to be a compelling need to avoid the cluster *-ltk-* in *multkosta*. Under the magnifying glass, all this looks pretty chaotic, or arbitrary, to say the least. Admittedly, there is no rule in the grammar that specifies what to do when an unfortunate cluster of consonants is created at an internal morpheme boundary. The currently favored word theory in Esperanto forces the speaker, at the point of syllabification of the compound, to revert to the morphosyntax, to hypothesize equivalent phrases, to make choices between alternative candidates based on convention and analogy rather than anything else, and to make ample use of provisional structures. The very complexity of these processes should be a warning signal that there may be something seriously wrong with the underlying argumentation. Does the application of a different theory for word-building solve the problem?

In FDG I assume that Esperanto compounding takes place in the lexicon, just like derivation (see Jansen 2016a), and that the process involves stems instead of words. Any combination of stems underlies a semantic relation of endocentricity or exocentricity, and represents an entirely new concept. The more detailed nature of this semantic relationship can be *illustrated* by a phrase, but the phrase cannot be used as an *input* or *substitute* for the compound. The complex stem *man-tuk* ‘towel’ can be described as a *tuko por la manoj* ‘piece of cloth for the hands’, but the internal bond in the lexical product *man-tuk* is much stronger than that of the grammatical construct *tuko por la manoj*, and, clearly, not every piece of cloth for the hands is a towel. Bearing in mind this, there is no internal inflection to be dispensed of. There simply is no inflection to be bothered with, either internal or at the outer compound boundary. Compounding operations take place inside the lexicon, far from the morphosyntax where inflectional suffixes are inserted. But: what may still be required at the point of syllabification is a way to overcome an occasional bad pronounceability of the compound due to an unfortunate consonant cluster at the internal stem-stem interface. To this end, languages often use epenthetic vowels, and so does

Esperanto, and here we hit the second reason why epenthesis is a problem in Esperanto. In principle, any vowel sound, selected in response to the pronunciation requirement, may do the job, but unfortunately each of the five available vowels in Esperanto is a well-defined grammatical suffix. This makes it tempting to insert a vowel whose syntactic interpretation seems to facilitate the meaning of the compound. Hence, regardless of the theory applied, there is no solution to this problem in standard Esperanto, because the language does not offer syntax-free vowels.

5 Conclusions

In Sections 2 and 3, I presented a number of spontaneous developments in Esperanto. In the field of parts of speech we notice a constant increase in the splitting of contentive stems into heterosemous pairs, of which one is verbally specialized. The semantics of these newly developed stems is not rule-based and requires an additional dedicated learning effort. With regard to the issue of transitivity, the given complexity of this area in the grammar is such that it leads to frequent mistakes which tend to blur the original strict separation between transitive and intransitive stems, with unforeseeable consequences for the homogeneity of the grammar as a whole. In Section 4 I discussed the topic of epenthesis at the internal boundary of a compound. The selection of an appropriate vowel is not rule-based and cannot be captured in a generalized rule.

The case of Esperanto shows that language planning understood as the creation of a new communication tool for international use can indeed produce a workable result. As long as the language is used and sheltered by a community of practice of moderate dimensions, it will preserve a high degree of stability. Nevertheless, changes do occur. They are slow, but noticeable, and occur in different areas of the grammar. In two areas the stability of a fundamental design principle of Esperanto may be at stake, i.e. its relatively transparent and exceptionless rule-based system, which is claimed to be the cornerstone of its easy learnability. It is predictable that such a process of deregulation would be greatly accelerated if the language were to be adopted on a much larger scale beyond the limits of its present community.

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