

# GRAMMAR: A COMPLEX STRUCTURE. A LINGUISTIC DESCRIPTION OF ESPERANTO IN FUNCTIONAL DISCOURSE GRAMMAR

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## ABSTRACT

Functional Discourse-Grammar or FDG is the latest development in the functional grammar that was initiated by the Dutch linguist Simon Dik (1940-1995). In this paper, the FDG architecture proper is described, including the role of the extra-grammatical conceptual and contextual components. A simple interrogative clause in Esperanto is used to illustrate how a linguistic expression is built up from the formulation of its (pragmatic) intention to its articulation. Attention is paid to linguistic transparencies and opacities, defined here as the absence or presence of discontinuities between the descriptive levels in the grammar. Opacities are held accountable, among other factors, for making languages more or less easy to learn. The grammar of every human language is a complex system. This is clearly demonstrable precisely in Esperanto, in which the relatively few difficulties, identified by the opacities in the system, form such a sharp contrast to the general background of freedom, regularity and lack of exceptions.

## KEY WORDS

Esperanto, functional grammar, linguistic transparency

## CLASSIFICATION

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## INTRODUCTION<sup>1</sup>

In the authoritative monolingual dictionary *Plena Ilustrita Vortaro de Esperanto* (PIV) [1], under the headword *gramatiko* ('grammar') we find several definitions. The first is 'study of language rules' (*scienco pri la lingvaj reguloj*); under this definition, *ĝenerala gramatiko* ('general grammar') is described as the 'study of rules common to all languages' (*scienco pri la reguloj komunaj al ĉiuj lingvoj*). In second place in PIV we find the following definition: 'the sum of the rules that must be observed in order to speak or write a given language correctly' (*tuto de la reguloj kiujn oni devas observi por ĝuste paroli aŭ skribi difinitan lingvon*). We are most familiar with this definition in direct combination with the third definition: 'a book explaining these rules' (*libro klariganta tiujn regulojn*). In the present article I will limit myself to the first definition; in other words, I will address the structure of Esperanto in the context of a modern general grammar, Functional Discourse Grammar.

The study is structured as follows. First, I will provide a brief overview of Functional Discourse Grammar (FDG), which forms the theoretical framework I have chosen for my analysis. In the following section I will address the auxiliary components surrounding the study of grammar, i.e. in its first subsection the conceptual and in its second the contextual component, both of which are indispensable accompaniments of grammar itself. Then I will move on to grammar proper, addressing the entire layered structure with its four levels (interpersonal, representational, morphosyntactic, and phonological), and doing so by tracing an exemplary sentence in Esperanto through all four levels. In the following section I will look more deeply into the phenomena of transparency (in the first subsection) and opacity (second subsection), offering a few concrete examples from Esperanto grammar. At the end, I will offer some conclusions from the study and will be more illustrative and representative than exhaustive, with some inevitable simplifications.

## FUNCTIONAL DISCOURSE GRAMMAR

Functional Discourse Grammar (FDG) – the direct successor of the Functional Grammar created by the Dutch linguist Simon Dik (1940-1995) – is the 'general grammar' described in the first PIV definition<sup>2</sup>. FDG is *functional* in the sense that it begins from the assumption that the properties of linguistic expressions are derived from the communicative goals that the speaker attempts to realize in interaction with other users. In its most extreme form, functionalism even goes so far as to deny the cognitive reality of linguistic structures and considers all linguistic forms as ephemeral manifestations intended to achieve a particular communicative goal.

In linguistics, functionalism contrasts with *formalism*, which is firmly linked to the hypothesis that there exists in all people an inherited mental structure directing human language whose underlying properties cannot be explained through directly observed linguistic phenomena. In its most radical expression, formalism is concerned only with this underlying linguistic structure, without reference to its usage in practice.

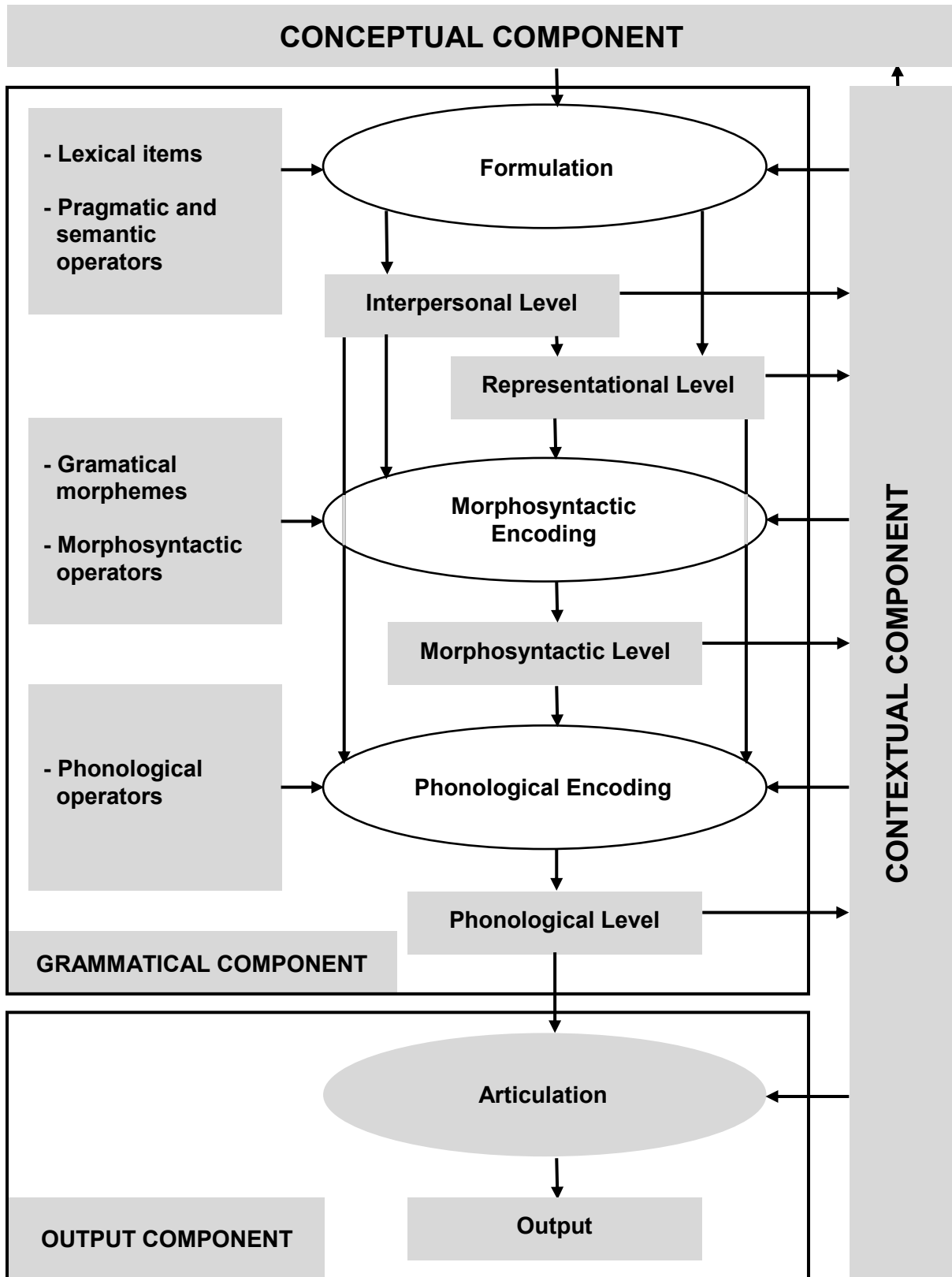
FDG, which proclaims itself as functional yet form-oriented, lies between the extremes of functionalism and formalism. It does indeed attempt to provide an explicit and formal description of the knowledge that is a prerequisite of the potential for linguistic communication possessed by humans. It attributes to the user of language a knowledge of the elements of language (lexical, syntactic, phonological, etc.) and of their applicability (to create discourse acts, sentences, intonation patterns, etc.). According to FDG, we can observe a relative stability of this knowledge across languages, such as will justify comparative study. Proponents of FDG believe that this knowledge results from long-term historical

development, which has retained appropriate forms in the repertoire of succeeding generations of language users over the centuries and eliminated less successful forms. The structures that users in a given period choose to encode their functional desires may vary from one language to another, but their variability is not unlimited. Limiting these structures is, above all, the variety of the functional desires themselves (extensive, but not unlimited) and the limitations of the human cognitive system. By way of illustration: across languages we display a strong preference for discourse acts with a single focus. This is true also of Esperanto: only in specific circumstances, for example in questions introduced by the correlative *kiu* ‘who’ in ***Kiu** diris tion **al** kiu?* ‘Who said that to whom?’, does one have two foci (in bold in this example). The details of this licence vary from language to language, and there are some languages which completely lack this possibility, even though a multiple focus might seem attractively economical. To study such differences and similarities, typological studies play an important role in FDG. Their aim is to uncover and describe, systematically and across languages, the limits of variability – an activity better known as the study of language universals and of universally valid implicational hierarchies.

Functionalism is a good candidate for locating the linguistic study of Esperanto within the framework of a general theory of human language. Its point of departure is human beings as observable and authoritative language users, inheritors of a historically developed awareness of linguistic elements and their application, and demonstrably capable of intercommunicating through language. If speakers of Esperanto fulfill their communicative desires through the language that they use, it follows that this language merits study and comparison with other languages. The submission of Esperanto to FDG in some sense signifies the submission of FDG to Esperanto, which in this role serves as a test bed for the theory itself. And precisely Esperanto, with its unique structure, could have something to contribute to the further development of the FDG apparatus.

In name, FDG is a grammar, but it would be more accurate to call it the grammatical component of a broader theory of human communication through language. FDG (see Figure 1) is a layered structure in which, level by level, all linguistic messages are formed. These sequentially ordered levels are the interpersonal, representational, morphosyntactic and phonological level. Above the grammatical levels lies a conceptual component; they are supported by a contextual component, and at the end we find the so-called output component. Before addressing the grammatical base itself, I will say a word about the two auxiliary components (the conceptual and the contextual). For purely practical reasons, however, I want to deal first with the output component, because in the context of the present article I will limit myself to this brief mention. The output component is the technical means of converting an already grammatically complete linguistic expression into an actual perceptible reality, i.e. as a phonetically perceptible sequence of sounds, or a visibly perceptible sequence of signs, or a visible and palpable sequence of writing. In the present text I will not be concerned with the articulation of phonological structures and accordingly will not address the output component in any greater detail.

Although the processes examined in FDG finish in the output component and although we customarily regard the spoken utterance or its written version as the final product that we wish to study further, it is important to emphasize that FDG aims to model not the speaker but the grammatical structure of human language. FDG is based on the assumption that a grammatical model is made the more effective to the degree that it resembles the processing that actually takes place in the human mind. In this area, Levelt’s work [2] in psycholinguistics clearly shows that this mental processing originates in intention and ends in the articulatory production of language utterances.



**Figure 1.** Overall structure of FDG<sup>3</sup>. Inside the grammatical component: ovals are processes, flat rectangular boxes are levels of analysis or description and square boxes are pools of primitives (simple and complex stems, grammatical morphemes and words, operators).

## THE AUXILIARY COMPONENTS

### THE CONCEPTUAL COMPONENT

The communicative intent of the speaker originates not in the grammar itself but in the conceptual component, which provides the strategic design that the speaker plans to use to realize that intent. The conceptual component (at the top of Figure 1) consists of those elements that are indispensable for the intended linguistic intercommunication and which belong to our knowledge of the world around us. As part of the human system of cognition, this knowledge is universal and beyond language, so that the expressibility or lack of expressibility of given communicative intentions may depend on each individual language as it is learned by each individual in his or her own linguistic context setting. It is the conceptual component that activates a language-specific grammar, allowing this grammar to elaborate the linguistic message with its anticipated communicative intent.

Let us take an example. All human relations are characterized by some level of formality: hierarchical relationships among individuals exist throughout the world. They exist outside language, and they occupy a scale that ranges from complete informality, friendship or intimacy, to rigid formality or distancing. In Esperanto, this aspect plays no role in the choice of second-person pronoun, which remains *vi* in all circumstances, much as ‘you’ remains ‘you’ in English. Esperanto simply has no alternative (we will ignore the existence of the rarely used experimental form *ci*). But in Dutch we must choose between the informal *jij* and the formal *u*, in French between *tu* and *vous*, and so on. Even if we imagine the scale of formality as reduced only to this two-stage choice *jij-u*, *tu-vous*, the boundaries between the fields of usage of formal and informal forms do not need to coincide among Dutch, French and other languages and must be learned separately for each language in its own social context. If I wanted to intentionally offend someone whose authority or social status was much higher than mine, I could speak to that person in Dutch with the familiar *jij*; and, by the same token, if I wanted to address my eight-year-old grandson ironically or reproachfully, I could use the formal *u*. These are strategic decisions intended to direct communicative intent along a particular line that I have chosen; but Esperanto does not offer that option in a pronominal form.

### THE CONTEXTUAL COMPONENT

The other auxiliary component, the contextual component (the righthand column in Figure 1), contains a number of more or less long-term items of information drawn from the communicative situation that concern those distinctions that *of necessity* or *as required by the grammar* are expressed in the language used. Examples of such information are the number and gender of the participants, and their social relations. In Esperanto one addresses one person or more than one person by the use of a single personal pronoun *vi* ‘you’, but in many languages two different forms of the singular and plural are required (in Dutch SG *jij* – PL *jullie*). A further example: to say to a boy that he is handsome (*bela*) or a girl that she is beautiful (*bela*) is possible through the use of a single adjective, but, again, in many languages two different forms are required, depending on the person’s sex (in French: M *beau* but F *belle*, Italian: M *bello* but F *bella*, and so on). In such cases, we are not dealing with a strategic choice but with a requirement. Finally, the contextual component plays host to grammatical data about the just completed discourse that may be relevant to the discourse that immediately follows.

The contextual component can interact with all grammatical levels. I will give two examples of long-term information and two of anaphoric references to an immediately previous discourse. An example of long-term interpersonal information is the sex of participants in a communicative situation or their belonging to the inanimate sub-category: *patro* ‘father’ must

be referenced by the masculine *li*, *patrino* ‘mother’ by the feminine *ŝi*, and *libro* ‘book’ by the neuter *ĝi*. An example from the field of semantics is the following. In a coordination of the type ‘A and B’ in which one element is judged positive and the other negative, it is preferable to choose for A the positive (or the more beautiful, or the higher ranked) element, and so on. This (apparently universal) preference is clearly demonstrated in Esperanto [3]; its apparent systematization throughout the language would constitute an example of long-term semantic information in the contextual component, which in turn determines the syntax.

The other two examples concern anaphoric references. If someone says to me *Mi manĝis njokki hieraŭ vespere* ‘Yesterday I had gnocchi (dumplings) for dinner’ and I reply with *Ĉu tion vi manĝis?* ‘Is that what you had?’, I am referring to the (syntactic) direct object of the statement that I have heard. But when that same person says to me *Mi manĝis nokki hieraŭ vespere* ‘Yesterday I had gnocchi for dinner’ and I reply with *Ĉu tio ne devus esti njokki?* ‘Shouldn’t that be *njokki?*’, I am referring to the phonologically questionable word.

Thus we preserve in the contextual component information also from the preceding discourse, and thus it plays a key role in the use of anaphoric references and in reflexives, to which I will return in the second subsection of section *Transparencies and Opacities*.

## THE GRAMMATICAL STRUCTURE

We are now in the midst of grammar itself, which in FDG consists of three sequential processes (the ovals in the grammatical component, Figure 1). In the first process, known as formulation, we first create the interpersonal or pragmatic description level of the intended linguistic communication. On this level the speaker, guided by the conceptual component, expresses his/her intention to realize (for example) some statement, some question, or some order; gives structure to that intention, for example through focusing or backgrounding; and establishes the basis on which to create a predicate.

A significant problem in the treatment of the interpersonal level (IL) is the fact that, in order to make it clear I must use a comprehensible utterance, which on this level has still to come into being. For example, if I want to produce, without any specific emphasis, the question *Ĉu Esperanto estas lingvo?* ‘Is Esperanto a language?’, I can describe the pragmatic beginning of the three processes which finally lead me to this utterance through the discourse act in (1), which I have divided into an interrogative instruction and two subacts (abbreviations and symbols are explained in Table 1 in the Appendix):

(1) **IL:** INTER / subact of reference / subact of ascription

In (1), INTER is the interrogative instruction by means of which the speaker provokes a response from the person addressed. It is one of the illocutions that exist in Esperanto. Some other illocutions are the declarative (in: *ĝi estas lingvo* ‘it is a language’), and the optative (in: *ĝi estu lingvo* ‘let it be a language’). The remainder of the discourse act is its communicated content, which consists of a subact of reference that evokes an entity (something the speaker wants to refer to; eventually, this will be *Esperanto*) and a subact of ascription that evokes a property (something the speaker wants to ascribe to the referent; eventually filled in by *lingvo*). The reader will immediately agree with me that without my previously revealing the intended final result (*Ĉu Esperanto estas lingvo?* ‘Is Esperanto a language?’) it would be difficult to accept that, beginning with IL in (1), after two further processes followed by the correct articulation we will reach precisely that result. The description in (1) is a reconstruction of a known result, which uses those instruments that FDG declares functional on IL and whose validity is confirmed by the internal coherence in IL, as that with the other levels of description, RL (2), ML (3) and PL (4). FDG, like any other grammatical theory, is a *model* of human language; the validity of the model depends on the validity of its constituent

elements as well as their sum. Thanks to the easier testability and validation of the other levels of description (2)-(4), the most abstract IL, introduced in (1), is indirectly confirmed and validated. To avoid distracting us from our main trajectory through the processes and levels of FDG, I will not attempt to examine the theory behind (1) in greater detail.

The second level of description attained in the process of formulation is the representational or semantic level (RL), which nonetheless comes after the interpersonal because semantics can be enriched by pragmatics but not the reverse. Here things begin to get somewhat clearer. Meaning content is given to the intended message, designating those semantic categories that are valid in the language in which I wish to express my intention (in this case Esperanto) and selecting simple and complex stems from the lexical pool (the upper pool in Figure 1). In order to designate the head of the subact of reference to which I wish to ascribe some property in (1), I select from the lexical pool the complex (derived) stem *esperant-* which I had formerly combined in the mental lexicon out of the stem *esper-* and the suffix *ant-*. In order to designate the head of the subact of ascription I select from the same pool the stem *lingv-*. The ascription of the property *lingv-* at the IL, is none other than what we realize on the RL through the predicate (to state something about something else, i.e. to state ‘languagehood’ about Esperanto). The representational description level therefore looks like the predication in (2):

(2) **RL:** ↓ / on *esperant-U* / act-PRS the predicate built on *lingv-*

The arrow pointing downwards at the opening of (2) means that the interrogative illocution INTER is simply handed on, because it was already prepared on the interpersonal level. Its form will reappear in (3). The derivation *esperant-* and the stem *lingv-* still lack their endings, which correspond to their syntactic roles in the sentence. Further, the expression ‘act-PRS the predicate,’ in which I use the gloss PRS (present tense), has still to be developed, because it is on this level that we define the tense of the predicate which, in line with my intent, must be the present (*Ĉu Esperanto estas lingvo?*). The subscript ‘U’ attached to *esperant-* signifies that the derivation in question functions in a one-place predicate in which *esperant-* acts as undergoer.

The representational level is a lot more transparent than the interpersonal, but it still is an unfinished linguistic expression. To get close to such expression, we need a second process, namely morphosyntactic encoding. It leads us to the morphosyntactic level (ML), which is already very similar to the final result that we hear or read. The interrogative illocution INTER reappears here as the grammatical word *ĉu*, which always introduces a direct question. Because the derived form *esperant-* plays the principal role in a reference group (in fact, it plays the only role), it is given the ending *-o* and becomes the noun *esperanto*. In Esperanto, the predicate is a verb, which causes the verbalization *lingvas*, from *lingv-*, with the addition of the already anticipated present-tense ending *-as*, whose form comes from the pool of grammatical words and morphemes feeding the morphosyntactic encoding and from which *ĉu* is also retrieved (the second pool from above in Fig. 1). Because the predicate is a one-place predicate, the single argument (subject) *esperanto* does not receive the ending *-n*. The description in (3) shows the completion of our intended expression as far as the morphosyntactic level of description:

(3) **ML:** *ĉu* / *esper-ant-o* / *lingv-as*

In (3) I have used dashes to show the morphemic division. It may surprise us, since the form *lingvas* (‘language’ as a verb) does not correspond to the majority of mother-tongue customs among speakers of Esperanto. However, these customs are not the deciding factor in the grammaticality or lack of grammaticality of the word *lingvas*, which is as good as the word *reĝas* ‘is the king’ in the sentence *Vilhelmo reĝas* ‘William is the king’ and is fully congruent with the hypothesis of the originally non-categorical nature of Esperanto stems (see the discussion in [4]). It is true that the word usage of stems is strongly influenced by the

semantic category to which they belong. *Lingv-* defines an entity, not touchable or palpable but nevertheless existing, locatable in space and audible or visible. *Lingv-* therefore defines *something*, and this *something* tends to manifest itself in its substantival form *lingvo*, less frequently in the adjectival form *lingva* or the adverbial *lingve* and rarely in some verbal form like *lingvi*, *lingvas*, and so on. speakers of Esperanto prefer to replace the regular expression *Esperanto lingvas* with *Esperanto estas lingvo*, undoubtedly because the use of the copula *esti* ‘to be’ accompanied by a predicative noun is the norm for speakers of such influential languages as for instance English, French and German.

Through the third process, phonological encoding, we reach the fourth level of grammar, the phonological level (PL). Here the morphosyntactic product receives a phonological form that is ready to be spoken or written. Words appear in it in the form of linked syllables which the grammar draws from the third pool from above in Fig. 1, which contains the inventory of producible syllables in Esperanto. Further, individual words here receive their accent, determined by a very simple rule in Esperanto: the accent falls without exception on the second to last syllable of each word. Having reached this point, I am now able to add the fourth level in (4):

(4) **PL:** ĉu / es-pe-'ran-to / 'lin-gvas

Note the different arrangement of dashes within the phonological words compared with the morphosyntactic words and also the addition of prime symbols ‘’’, conventionally immediately before a stressed syllable. With that one difference, I use the the same symbols as on the morphosyntactic level. The use of special phonological symbols is not needed because each written sign in Esperanto responds to a single distinctive sound unit (phoneme) and vice versa.

Phrases and larger units here receive their intonation, that is their characteristic melody within the phrase or sentence. Little research has been done on this phenomenon in Esperanto<sup>4</sup>, and in the context of this article I will ignore the existence of a specific melodic curve which nonetheless accompanies the phonological expression of (4). As I have already stated, I will also ignore the question of the final articulation or individual pronunciation of the phonological expression, which falls outside the framework of the grammatical system, but whose written expression *Ĉu Esperanto estas lingvo?* appeared right before (1). Note that it reveals several extragrammatical rules: a sentence is begun with a capital letter and ends with a special sign known as a question mark to indicate that it is interrogative. Furthermore, for many writers the proper name *Esperanto* begins with a capital.

I have attempted to explain that in FDG the pragmatics at the IL, together with the semantics at the RL define the morphosyntactics at the ML, and that the three of them together define the phonology at the PL. The path is unidirectional: within a discourse act we move continuously downwards, and a linguistic element at any given level is preferably the continuation of some element at a higher level, which serves to justify it. If not, there would be gaps in the structure. The direct transition from one level to another, without losses and without additions, is called the *projection* from one level to another, and a perfect projection contributes to the transparency of a language. There are indications that transparencies in the grammar favor the learnability of a language (both L1 and L2) and that opacities (discontinuities) retard it.

## TRANSPARENCIES AND OPACITIES

### SOME TRANSPARENCIES

At the interface between the representational and morphosyntactic level I like to point to two important features which make the learning of Esperanto easy. In a fully transparent



language, only pragmatic and semantic information should determine the choice of formal units. Under such circumstances, all semantic units should be usable to form predicates, no matter whether they concern events, individuals or properties. This does indeed happen in Esperanto. Although stems indicating actions or states can be considered ‘natural’ candidates for the formation of predicates (*mi **far**-is* ‘I do-PST’, *mi **sid**-as* ‘I sit-PRS’), also individuals (*mi **tajlor**-as* ‘I tailor-PRS’, i.e. ‘I am a tailor’), events (***pluv**-os* ‘it rain-FUT’, i.e. ‘it will be raining’), abstractions (*mi **koncept**-as* ‘I concept-PRS’, i.e. ‘I conceive’), locations (*mi **hejm**-as* ‘I home-PRS’, i.e. ‘I am at home’), etc. can function in that role. (All stems are printed in bold).

The second example concerns word-building. Since all compounding, affixing and inflection in Esperanto is realized by a concatenation of invariable lexemes and morphemes, fusing of boundaries between items does not occur. Each affix and inflection expresses one single function only and is realized either as a prefix or as a suffix. There are no discontinuities in the word-building processes or inflectional processes in Esperanto, and the language may be called fully transparent from this point of view. I will not give separate examples but would refer the reader to the paragraph above, which shows the tense operators PRS, PST, and FUT, which are realized morphosyntactically as *as*, *is* or *os* without exception, regardless of, for example, the person, number, or sex of the subject.

A minor example of transparency can be found within the morphosyntactic level, where Esperanto does not use dummy elements in positions for which there is no interpersonal or representational material. See the example above, *pluvos* ‘it will be raining’, which does not require an empty subject like English ‘it’.

## SOME OPACITIES

The first opacity might well surprise the reader because in reality it does not have to do with a link that is objectively lacking (discontinuity), namely the link between the contextual component and the grammar, but with the neglect of that link. The following example serves to underline the (underestimated) importance of this link.

In a reflexive structure the anaphoric reference and referenced refer back to the same participant in the communicative situation. We call this co-referencing. Typical textbook examples in Esperanto are *mi lavas min* ‘I wash (myself)’ and *vi lavas vin* ‘You wash (yourself)’, in which *mi[n]* and *vi[n]* are defined unambiguously. There is no doubt as to who washes whom since the washer and the washed are the same person. Quite different is a situation in which *ŝi lavas ŝin* ‘She washes (her[self])’, because this could indicate the presence of more than one female participant in the communicative situation. How, then, do we distinguish between a co-referencing *ŝi* and referencing to two *ŝi*-s, if we lack a means of marking the distinction? The response is well-known: *ŝi lavas ŝin* implies two different *ŝi*-s, because Zamenhof introduced the special form *si* for co-referencing (to the subject): *ŝi lavas sin*. And we find a similar distinction between *ŝi lavas ŝian bebon* (not her own baby) and *ŝi lavas sian bebon* (her own baby).

Use of the reflexive pronoun *si* undoubtedly has greater distinguishing value than the possessive *sia*. *Si* points directly to one among many selectable participants (in the broadest sense) in the communicative situation, and excludes the others. If S is the subject, V the verbal predicate and (O/A) an object or adjunct with a selectable *sin*, *pri si*, *por si*, and so on, the use of the form with *si* instead of a form with *li* ‘he’, *ŝi* ‘she’ or *ĝi* ‘it’ contributes to the disambiguation of (5) and (6), although (6) would remain formally ambiguous in the presence of more than two *ŝi*-s:

- (5) S V (O/A)≠S, for example:     *Ŝi lavas ŝin.*                   *Ŝi parolas pri ŝi.*  
  She washes her.                She speaks about her.

- (6) S V (O/A)=S, for example: *Ŝi lavas sin.* *Ŝi parolas pri si.*  
 She washes (herself). She speaks about herself.

In fact, the context is essential for definitive disambiguation. If (O/A) is a nominal knowable object/adjunct, the disambiguation between (7) and (8) would have to be less pressing than that between (5) and (6), or that within (5):

- (7) S V (O/A) (*not belonging to S*), for example: *Ŝi lavas sian bebon (=ne de si).*  
 She washes her baby (not her own).  
 (8) S V (O/A) (*belonging to S*), for example: *Ŝi lavas sian bebon (=de si).*  
 She washes her (own) baby.

Compared to (6), in (8) the nominal participant *bebo[n]* ‘baby’ is added – an important further key to the disambiguation of the meaning of the complete expression in this context. In the contextual component not only the participants are directly knowable (and in (8) one more than in (6)), but also the social relations between them (more in (8) than in (6)) and the immediately preceding discourse. The communicative intent of the linguistic message cannot be found in the isolated syntactic structure of individual sentences. Every human language, therefore including Esperanto, is a complex system, and interpretation of the linguistic message requires consideration of all possible contributions from all subsystems, including those of the contextual component, as we have seen above. The morphological marking by a dedicated possessive reflexive *sia* turns out to be redundant (which is not necessarily bad), but difficult to master in syntactically complex structures.

I would like now to revisit the boundary between the representational and morphosyntactic levels where Esperanto reveals an authentic opacity in the form of a gap between the two. The word forms that can appear on the basis of the stem *lingv-* are not limited to *lingvo* ‘language’, *lingva* ‘linguistic’, *lingve* ‘linguistically’ and *lingvi* ‘to be a language’; in Esperanto circles, for example, there is much discussion about *lingvaj problemoj* ‘language problems’ with two endings on each of the two Esperanto words. The distinction between singular and plural arises in the contextual component (a distinction registered there between singularity or plurality of participants necessarily activates the operator SG or PL in the semantics, which is expressed formally in the morphosyntax (by a zero element or through the ending *-j* imported from the pool of grammatical morphemes). The abovementioned plural word *problemoj* can therefore be analyzed as in (9):

- (9) *PROBLEM* the signifying part drawn from the stem *problem-*  
*O* the ending which marks the role of *problem-* as head of a reference group  
 in *lingv-a problem-o* and in that way defines the noun *problemo*.  
*J* the ending which forms the plural noun *problemoj*.

The concept of ‘pluralness’ is expressed by the ending *-j* which in principle we can add to any noun and which we can write or pronounce, but such pluralization does not always make sense: if I take the nouns *mono* ‘money’, *oro* ‘gold’ and *glacio* ‘ice’ it is difficult to imagine what might be the meaning of the plurals *\*monoj*, *\*oroj* and *\*glacioj*<sup>5</sup>. It is therefore evident that it is not substantivity that determines the possibility of pluralization, but some element in the meaning of the noun, namely its belonging to the category of countable entities. Thus one can easily say *unu problemo – du problemoj*, but less easily *unu oro – du \*oroj*. More precisely, one could say either, but the latter would be sufficiently enigmatic – a fact that is caused by *or-* belonging to the category of non-countable entities. Accordingly:

- the countable character of the entity *problem-* allows its pluralization,
- the non-countable character of an entity such as *or-* makes it difficult,

- in theory, pluralization is prevented by a dependent (qualifying) semantic category, which is in no way concerned with the criterion of countability (for example *grand*, *grav kaj neglektind*) and which primarily manifests itself as an adjective in a modifying role (*granda, grava, neglektinda problemo*)<sup>6</sup>.

In Esperanto, modifiers in a reference group can belong to any semantic category, for example *lingv-* in *lingv-a problem-o*: in this example, *lingv-* is used ‘incongruously’ with its entity status, which would prefer substantivity, as a modifier of the entity *problem-*, with which it defines the complex entity *lingv- problem-*, which is in turn encoded as *lingv-a problem-o*. Pluralization of this complex entity is possible thanks to the countability of the head *problem-*, to which the marker *-j* is attached in *\*lingv-a problem-o-j*. However, the form *\*lingv-a problem-o-j*, despite its sufficiency, is non-grammatical in Esperanto. The required use of *lingvaj problemoj* instead of *\*lingva problemoj* is an example of a misprojection. The pluralizing *-j* added to the adjective is required by a separate rule that finds no justification in semantics, but constitutes a rule within the syntax. It is a so-called agreement rule, which abound in the languages known to Zamenhof, for example Latin, Greek, Russian, German, and French.

Finally, let me mention a case at the boundary between the morphosyntactic and phonological levels, which is interesting because it could illustrate the origin of what may later become an opacity. When the alignment of items in the clause, ideally defined by interpersonal or representational criteria only, is ‘corrected’ by phonological weight criteria, we are dealing with conflicting inputs, disrupting the full transparency of the language in this respect. In Esperanto, ‘heavy’ (multisyllabic) items tend to be moved to the end of the clause, and lightweight items are so mobile that they display a tendency to abandon their designated slots to move into positions more to the left. When submitting different groups of Esperanto speakers to tests involving their preferred placement of nominal and pronominal subjects and objects with respect to the verb [4], it appeared that the expression ‘The student is reading the book’ with the nominal O ‘the book’ *la libron* was built up as in (10):

- (10) *La studento legas la libron.*

The student is reading the book. ([4]; p.194, [4]; p.203) with a 100 % SVO score, whereas ‘The student is reading it’ with the light-weight pronominal O ‘it’ *ĝin* showed a decrease to 87 % SVO, complemented by 13 % SOV<sup>7</sup> as in (11):

- (11) *La studento ĝin legas.*

The student is reading it. ([4]; p.194, [4]; p.203)

Hence, morphosyntactic placement is indeed susceptible to phonological weight, though, for the time being, (11) is just an optional stylistic variant of *La studento legas ĝin*, which is still SVO. In other words, the opacity is not grammaticalized yet.

## CONCLUSIONS

Let me summarize in a few lines what I have attempted to show. The operation of Esperanto grammar is not fully comprehensible if we isolate it from the two components that I have presented under the names conceptual and contextual components. Knowledge of the world, of one’s surroundings, of society and of all the social interrelations that surround us, knowledge of the context with its participants and of the inventory of preceding discourse – these are all indispensable in allowing linguistic contact that makes sense communicatively and is socially acceptable. The operations of grammar are also not fully explicable if we separate one grammatical level from another and do not understand or consider possible gaps or discontinuities which can arise in moving from one level to another, or within one level. I have provided a few examples of powerful transparencies in Esperanto, among them

particularly the freedom to use any and all semantic categories to form predicates, and the rigorous 1:1 relation between form and meaning. I have attempted to clarify a few examples of opacities: lack of consideration of the role of the contextual component in the case of the reflexive which derives from co-referencing to a single participant, discoverable precisely in that component; number agreement between noun and adjective, and the impact of phonological weight on the ordering of elements in the syntax.

The grammar of every human language is a complex system. This is clearly demonstrable precisely in Esperanto, in which the relatively few difficulties, identified by the opacities in the system, form such a sharp contrast to the general background of freedom, regularity and lack of exceptions.

## REMARKS

<sup>1</sup>For a list of abbreviations, see the appendix to this article.

<sup>2</sup>This introduction draws much of its inspiration from chapter 1 of [5], which is at present the most complete overview of FDG.

<sup>3</sup>Based on Hengeveld and Mackenzie [5; p.13], but simplified to the extent needed for this paper.

<sup>4</sup>Worth mentioning is [6].

<sup>5</sup>I prefer to use the term ‘difficult’ rather than ‘impossible’ because various languages offer various treatments of the plural; thus, for example, ‘rice’ and ‘meat’ can be pluralized in Italian (*riso* > *risi*, *carne* > *carni*), but not in Dutch (*rijst*, *vlees*). I am not aware of their entirely homogeneous use in Esperanto.

<sup>6</sup>This does not contradict the fact that the plural *grandoj* exists. In [4] I describe the custom among Esperantists of using, because of the lack of a separate affix, direct substantivization of roots of this type, i.e. *grando*, *belo*, etc. to create pseudo-derivations that define the semantic category of abstract entities.

<sup>7</sup>The SOV variant was by no means limited to L1 speakers of Romance languages who could be suspected of blindly copying native models like *l'étudiant le lit* in French, with the interposed clitic *le*.

## APPENDIX

**Table 1.** List of abbreviations and symbols used in this article.

A	Actor; Adjunct	PL	Phonological Level
F	Female	PL	Plural operator
FUT	Future tense operator	PRS	Present tense operator
IL	Interpersonal Level	PST	Past tense operator
INTER	Interrogative illocution	RL	Representational Level
L1	Mother tongue	S	Subject
L2	Second language	SG	Singular operator
M	Male	U	Undergoer
ML	Morphosyntactic Level	V	Verb
O	Object	*	Ungrammatical form

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