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# Developing an annotation framework for word formation processes in comparative linguistics

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*Word formation plays a central role in human language. Yet computational approaches to historical linguistics often pay little attention to it. This means that the detailed findings of classical historical linguistics are often only used in qualitative studies, yet not in quantitative studies. Based on human- and machine-readable formats suggested by the CLDF-initiative, we propose a framework for the annotation of cross-linguistic etymological relations that allows for the differentiation between etymologies that involve only regular sound change and those that involve linear and non-linear processes of word formation. This paper introduces this approach by means of sample datasets and a small Python library to facilitate annotation.*

**Keywords:** language comparison, cognacy, morphology, word formation, computer-assisted approaches

## 1 Introduction

That larger levels of organization are formed as a result of the *composition* of lower levels is one of the key features of languages. Some scholars even assume that compositionality in the form of recursion is what differentiates human languages from communication systems of other species (Hauser et al. 2002). Whether one believes in recursion as an identifying criterion for human language or not (see Mukai 2019: 35), it is beyond question that we owe a large part of the productivity of human language to the fact that words are usually composed of other words (List et al. 2016a: 7f), as is reflected also in the numerous words in the lexicon of human languages.

While compositionality in the sphere of semantics (see for example Barsalou 2017) is still less well understood, compositionality at the level of the linguistic form is in most cases rather straightforward. Given that (as was early emphasized by de Saussure 1916: 103) the linguistic form is a function of time, the most straightforward way of combining two forms is to place them one after each other, as is usually done in word formation processes, such as *compounding* or *derivation* by prefixation or suffixation. Word formation processes are, of course, not limited to purely concatenative processes, as witnessed by well-observed phenomena such as *ablaut*, *umlaut*, or *template morphology* (Schwarzwald 2019), although from the perspective of their evolution, scholars often assume that nonlinear morphology has its origin in linear processes (Heine 2019: 7).

Considering the essential role that word formation plays not only for synchronic description but specifically also for diachronic investigation, it is surprising that scholars have not yet decided on a standardized way of representing the morphological relations between words inside and across related languages. Although the past has seen occasional attempts of formalization of etymological data (Crist 2005), the current practice of representing findings in historical linguistics is still in the typical form of etymological dictionaries, in which individual words are explained in prose with a minimal amount of formalization.



As an example for the current practice of etymological annotation, consider the entry for German *Frucht* ‘fruit’ in the online version (<http://dwds.de>) of the etymological dictionary of German by Pfeifer (1993), given in Figure 1A. Trained linguists can learn a lot from entries like this, specifically, that the form itself was borrowed from Latin *fructus* ‘profit, fruit’ which itself was derived from *fruī* ‘to enjoy, to profit from’. By following a cross-reference to a different entry (Figure 1B) they can see that it is cognate with German *brauchen* ‘to use’, going back to Indo-European *\*bhrūg-* ‘to use’. For laypeople or scholars not familiar with the typical conventions of etymological prose, however, the two paragraphs are very hard to read and understand, specifically when comparing it with the illustration in Figure 1C where the major processes are displayed in form of a derivation graph.

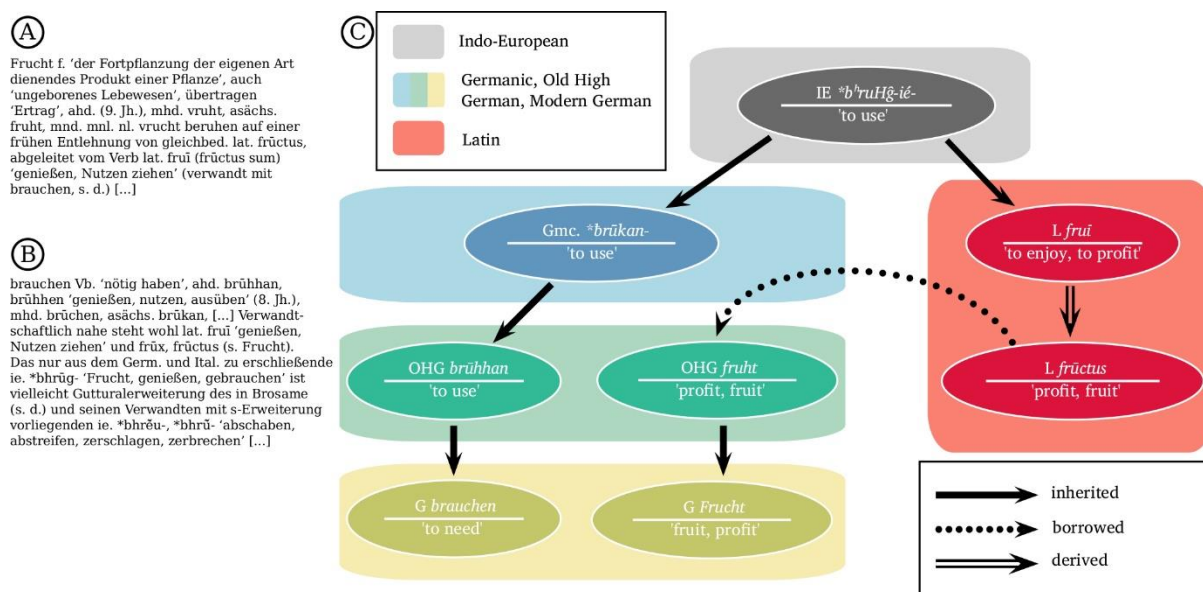


Figure 1: German *Frucht* and *brauchen* in Pfeifer (1993, also online at <http://dwds.de>) and in a derivation graph (inspired by a graphic on the same word family from Hans Geisler)

While a certain knowledge of specific practices of displaying information is required by all scientific disciplines, the current representation format of etymologies in historical linguistics has the serious disadvantage of limiting the application range of etymological dictionaries to purely qualitative studies. In order to draw a derivation graph of the words deriving from Indo-European *\*bhrūg* from the two entries in Pfeifer’s dictionary, one needs to attentively sift through the dictionary and collect the essential information from the text. Given that etymological dictionaries often differ in the way in which the information is shared with the readers, there is no automatic method that could parse the information consistently. This is a pity, given the wealth of knowledge underlying the large amount of etymological dictionaries which have been produced for many languages and language families of the world.

If it were possible to process this information consistently with the help of standard programming tools, we could harvest an abundant amount of information on attested and inferred patterns of word formation that could be used to test and improve morphological theory in general and assist scholars in producing etymologies for so far underinvestigated language families. If scholars adopted unified frameworks for the linguistic annotation of word formation processes and etymological relations, it would furthermore be much easier to check their individual proposals for overall consistency and plausibility.



In this paper, we present a new framework for the consistent annotation of word formation processes in etymological datasets in historical linguistics. We are thereby drawing from the wide-spread practice of *interlinear morphemic glossing* (Lehmann 2004). However, we shift the focus from the annotation of individual forms to the annotation of *etymological relations* between forms, while at the same time trying to guarantee that our annotations are both human- and machine-readable. Building on initial ideas for the annotation of morphological relations presented by Hill & List (2017), we expand their framework by (1) proposing more rigorous standards to distinguish grammatical from lexical morphemes, (2) allowing for a strict distinction between different etymological relations, and (3), as an outlook, introducing new ways to model word families in form of *derivation graphs*. Our framework comes along with annotation guidelines, usage examples presented in form of sample datasets, web-based tools assisting in data creation and curation, and a selection of scripts that assist users in checking their data for consistency. We hope this will support future cross-linguistic studies that utilize word list data or other forms of word annotations like interlinear glossing.

In the following, we will first discuss the role that word formation plays in historical language comparison (Chapter 2), and present some obvious problems of handling word formation consistently in historical linguistics (Chapter 3). We will then present our framework for a consistent handling of word formation in historical linguistics (Chapter 4) by introducing our basic ideas for data management in historical linguistics (§4.1), presenting how etymological word relations can be consistently annotated within our framework (§4.2), and showing how they can be checked for consistency with our Python library (§4.3). We conclude with pointing to open question which we could not resolve so far (§4.4) and presenting further applications of our framework in quantitative and computer-assisted frameworks (Chapter 5).

## 2 Word formation in historical language comparison

### 2.1 Historical relations between words

In order to handle morphological relations (be they still synchronically transparent or only detectable through linguistic reconstruction) with the help of a consistent framework for etymological annotation, it is important to be clear about the etymological relations which should be modeled by such a framework. Following Gévaudan (2007), and further elaborated in List (2016a), a straightforward model for etymological relations starts from the linguistic sign in the sense of de Saussure (1916) with *form* and *meaning* as its major constituents, which are realized in the system of a given *language*. With etymological relations being defined as those relations which reflect a shared history between two or more linguistic signs (List 2014: 56f), we can characterize individual etymological relations with respect to the different dimensions along which lexical change can proceed. Here, Gévaudan (2007) distinguishes the *morphological dimension*, affecting the *form* of a sign, the *semantic dimension*, affecting the *meaning* of a sign, and the *stratic dimension*, affecting the *language* in which a sign is being used. While the first two dimensions are straightforward and do not need further explanation, the third dimension was introduced by Gévaudan (2007) in order to allow for a proper handling of cases of lexical borrowing, a dimension usually excluded in the classical models of lexical change proposed in lexicostatistics (Swadesh 1952; Lees 1953).



Note that lexical change in this notion deliberately excludes questions of sound change (Gévaudan 2007: 14). Assuming that sound change is a regular process that usually does not have an impact on the abstract relations between the lexemes of a given language, this seems reasonable at first sight. However, as sound change impacts the phoneme system of a given language and because the lexemes themselves are built from phonemes, it can easily disrupt the lexical structure of a language, for example by forcing the replacement of a word in a specific meaning in order to avoid homophony. A prominent example where the impact of sound change on morphological structure is vividly discussed in historical linguistics is the development of Mandarin Chinese (and Sinitic languages in general), which apparently underwent a shift from a language with a rather complex syllable structure to a very simplified syllable model, accompanied by a rise in disyllabic compounds (Behr 2015; Sampson 2015).

In addition, we should also keep in mind that morphological processes can change the form of a word in a way that is quite different from regular sound change. Since these processes (such as *ablaut*, *umlaut*, *vowel harmony*, or *analogy* in its various forms) change the form of a sign in a fundamentally different way than regular sound change, we think it is worthwhile to include this information in a rigorous description of etymological relations.

We thus explicitly include both the information on regular sound change and on additional morphological processes that would change a given sign form more than it would have changed when only assuming sound change in a general model of etymological relations.

Summarizing the dimensions of lexical variation mentioned above, we thus find the *regularity dimension*, which deals with changes to a word's form that go beyond regular sound change, the *morphological dimension*, which deals with whether a sign and its cognate go back to the same word or to words formed from each other via a morphological process, the *semantic dimension*, which deals with the meaning of the sign, and the *stratic dimension*, which reflects whether a sign has been transferred from one "language stratum" to another.

All together we can combine types of variation along these dimensions in multiple ways. As shown in List (2016a), the typical terms for etymological relations, which at times also find direct counterparts in biology, result from controlling variation along one dimension. Since we add one more dimension in our review of etymological variations, there are 81 (3x3x3x3) possible combinations of the four dimensions, since we can control each dimension positively by requesting continuity or negatively by requesting change, or we can leave it uncontrolled. By adding the regularity dimension to our model of etymological relations, we can now also control for the continuous identity of word forms, which are thought to have only been affected by strictly regular sound change. List (2018b) proposes the term *regular cognates* for words showing continuity in this relation. However, we prefer the term *strict cognates* instead. Since any claims regarding the regularity of sound change processes depend on the analysis of the respective researchers, the term *strict cognacy* seems more appropriate, as it reflects that we are dealing with scholars' (potentially) individual assessments, as opposed to indisputable truths.

In Table 1, we present a revised schema of different *shades of cognacy*, following the representation proposed by List (2016a) along with our additional dimension. In contrast to the table by List, we add *strict cognacy* as an additional type of cognacy, and we also refuse to equate *orthology* with direct cognacy, as defined in List (2014), since it seems obvious that word formation as a linguistic process is far too specific to be fruitfully compared with any form of *homology* in biology.



Table 1: Revised table of etymological relations along with their counterparts in biology

Relation	Biological term	Regularity	Morphological continuity	Semantic	Stratic
traditional notion of cognacy	-	+/-	+/-	+/-	+
cognacy à la Swadesh	-	+/-	+/-	+	+
direct cognacy	orthology	+/-	+	+/-	+
oblique cognacy	-	+/-	-	+/-	+
etymological relation	homology	+/-	+/-	+/-	+/-
oblique etymological relation	xenology	+/-	+/-	+/-	-
<b>strict cognacy</b>	-	+	+/-	+/-	+/-

## 2.2 Patterns of word formation

With our multi-dimensional model of lexical variation, we can characterize etymological relations with a rather high degree of sophistication. Characterizing a set of etymologically related words by this model alone, however, won't solve the transparency problems of etymological dictionaries, which we have noted in the introduction, since it would still not allow us to annotate explicitly *where* words are cognate. While cognacy is often treated as a strictly binary concept, according to which two word forms in different languages are either cognate or not, we know well that word formation processes can easily alter the general shape of forms, thereby drastically reducing those parts in related words which actually share a common history.

As an example for the problem, consider word comparisons like Italian *sole* and French *soleil*, the former going back to Latin *sōl*, and the latter going back to Vulgar Latin *\*sōlīculus* 'sunny, small sun' (Meyer-Lübke 1911, sec. 8067). While it is obvious that both words are related, given that *\*sōlīculus* is a derivation of *sōl*, it is also clear that we cannot say that the word forms are *completely* cognate. The picture becomes even more complicated when adding words like German *Sonne* and Swedish *sol* to the comparison. While all four words go back to the Proto-Indo-European root *\*séh<sub>2</sub>uel-* 'sun', the German word is a continuation of the oblique case of the root (*\*sh<sub>2</sub>uén-*), which scholars consider to have been irregular already in Proto-Indo-European times. Given that it is rather the norm than the exception that etymologies show this degree of complexity in historical linguistics, it is evident that a clear-cut framework for a consistent annotation of etymological relations needs to be able to handle these cases as well. As a result, our framework should not only be capable of labeling etymological relations, but it should also allow for a transparent indication of the subtleties involving change along the formal and the morphological dimension of lexical variation.

In order to handle word formation consistently, it is useful to start from the patterns of word formation which are usually described in the literature. An overview can be found in Table 2. As a first example for a popular dichotomy, Haspelmath (2002) distinguishes *syntagmatic* and *paradigmatic* aspects of word formation (pp. 165–167). The syntagmatic perspective on word formation concentrates on *linear processes*, by which two or more morphemes are concatenated in order to form larger units. The most prominent types of



concatenative word formation are affixation (Trask 2000, s.v. *affixation*) and compounding. The paradigmatic perspective on word formation, on the other hand, concentrates on changes concerning the form of a whole word, including changes *within* morphemes, leading to allomorphs. The most prominent example for a word formation process that can be described not syntagmatically but paradigmatically is *ablaut* in Indo-European languages, reflected in vowel variation in the root of words, usually marking grammatical differences (Trask 2000: 2f), but other forms of morpheme alternations, such as, for example, *voicing alternation* in Sino-Tibetan languages (Hill 2014; Lai 2016), are also well-attested in the languages of the world.

Table 2: Types of word formation (terms and some examples from Trask (2000) and Haspelmath (2002))

Basic type	Process	Example
concatenative	compounding	<i>fish + tank</i> → <i>fish tank</i>
	affixation	<i>fish + er</i> → <i>fisher</i>
	full reduplication	Mandarin: <i>rén</i> ('person') → <i>rénrén</i> ('everyone')
	conversion	<i>fish</i> (noun) → <i>fish</i> (verb)
	...	
allomorphic	pattern-based	Sanskrit: <i>kulam</i> ('family') → <i>kaulam</i> ('belonging to a family')
	blending	<i>breakfast + lunch</i> → <i>brunch</i>
	infixation	Tagalog: <i>basag</i> ('to write') → <i>bumasag</i> ('wrote')
	reanalysis	<i>burglar</i> → <i>burgle</i>
	...	
subtractive	acronym	<i>radio detection and ranging</i> → <i>radar</i>
	clipping	<i>discoteque</i> → <i>disco</i>
	...	

It is clear that word formation processes are rarely strictly concatenative or allomorphic, especially because even a concatenative change directly alters the phonetic environment in which a morpheme occurs, which may then have an impact on the regular sound change processes by which the morpheme is further changed. Furthermore, there are cases in which it is difficult to distinguish concatenative from allomorphic processes. Consider the example of voicing alternation in Sino-Tibetan languages mentioned before. This process could either be seen as an allomorphic process by which the initial of a given morpheme is voiced or devoiced or as a concatenative process in which the initials are morphemes of their own which get prefixed to the remainder of the word. In many analyses by historical linguists, this alternation is interpreted historically in syntagmatic terms, by proposing some kind of prefix, whose form may be unknown, which either devoices (Mei 2012) or voices (Baxter & Sagart 1998) the initial of a given word as the result of a regular sound change process, but synchronically it seems more straightforward to describe it as a form of allomorphy. Another case is the suffix {-on} in Hebrew, which is used both on its own and in combination with pattern-based word formation processes. Yet also the derivations in which it seems to be used on its own could be analyzed as involving allomorphic processes, depending on whether one considers them derived from a specific other word form or from an abstract root (Schwarzwald 2019).



### 3 Problems of handling word formation in historical linguistics

Problems identified for the handling of word formation in historical linguistics can be characterized by assigning them to three different categories important for historical research, namely *modeling*, *inference*, and *analysis*. This triad, inspired by Dehmer et al. (2011, XVII) follows the general idea that scientific research in the historical disciplines usually starts from some kind of idea we have about our research object (the *modeling* stage), and based on which we then apply methods to infer the phenomena in our data (the *inference* stage). Having inferred enough examples for the phenomenon, we can then analyze it qualitatively or quantitatively (the *analysis* stage) and use this information to update our model. In the following, we will quickly discuss the major problems resulting from an insufficient handling of word formation in historical linguistics with respect to each of the three stages.

#### 3.1 Problems of representing word formation

Problems of *modeling* word formation in historical linguistics are tightly connected to problems of *representing* word formation processes. The major problem here is, as we have already shown in the introduction, that scholars dispose over a very detailed knowledge of the complexity of word formation processes, but that they usually do not share this knowledge explicitly when proposing theories on cognacy. Word formation in this form is represented in linguistic prose describing the explanation for specific reconstruction proposals in detailed articles (for instance Cohen 2004; Mees 2014), or in form of summaries that do usually not have the ambition of being exhaustive, which are then published in larger collections such as etymological dictionaries.

The major problem of this way of handling word formation (detailed, but in prose, or by coarse annotation in etymological dictionaries), is a lack of *standardization* that decreases the comparability of etymological analyses. Furthermore, since word formation is a process that may counteract regular sound change, the failure to represent word formation consistently will also directly impact the way in which regular sound change is modeled in our analyses.

If we ignore the possibility of word formation and only consider words cognate that show fully regular sound correspondences, we will miss out on many potential cognate pairs. If we however, as is currently the norm, treat all cognate proposals the same in the way we represent them, independent of whether the words are strict cognates or not, we have a hard time assessing the overall regularity of a given analysis. While this may seem less important for those language families where scholars tend to know all sound laws including all disputed examples by heart, this is definitely not the case for less well studied language families where the number of experts is very small.

#### 3.2 Problems of inferring word formation processes

Even more difficult than representing the etymological relations that hold for a set of etymologically related words is *inferring* them. This applies to classical, “qualitative” historical linguistics, but even more to computational approaches to historical language comparison. In computational tasks, like *automatic cognate detection*, for example, most available datasets for the testing and training of the algorithms do not provide the data in morphologically segmented form. As a result, algorithms which have been designed to identify cognates in multi-lingual



wordlists often fail when it comes to detecting deep etymological relations that are masked by word formation processes.

But this problem does not only apply to automatic approaches. In language families like for instance Sino-Tibetan, productive word formation processes which acted at different stages in the history of the language family have successively led to a situation where regular sound correspondences are extremely hard to infer.

Compounding is a major process of word formation in the Sino-Tibetan family (Matisoff 2003: 153f). If compounds are reduced due to contraction (Trask 2000, s.v. *contraction*; List 2016b), they obscure regular sound correspondences, and this may explain the large-scale inconsistencies in sound correspondences among Sino-Tibetan languages (Handel 2008: 425f).

Similar processes can be found in Indo-European languages as with the German word *Messer* (/mɛsɐ/, ‘knife’), which goes back to the Old High German compound *mezzi-sahs*, literally ‘food-knife’, whose structure has become completely opaque due to regular sound changes that only applied to the compound form but not to the simplex words (Watkins 1990: 295). If the original compound and later forms of it would not be attested in historical documents, it would be very difficult to demonstrate this etymology.

### *3.3 Problems of analyzing etymological findings*

Currently, etymological reconstructions tend to often be treated as the end goal of our endeavor as historical linguists. If they are utilized in follow-up studies, then most commonly in order to support or argue against another reconstruction. If they are used for other kinds of research questions, then those are typically interdisciplinary ones, e.g. using reconstructed words in order to reconstruct the culture and natural environment of the speakers, often in collaboration with anthropologists, biologists, and archaeologists. But they can lead to many more insights into language beyond that, also within linguistics proper.

For instance, developing statistics on the frequency of specific sound correspondences can help us determine how likely it is that a given sound turns into a given other sound, an important aspect of reconstruction that so far is based on the experience-based intuition of experts. The only existing large-scale project for aggregating sound changes (Index Diachronica, a version of it can be found under <https://chridn.nfshost.com/diachronica/>, last accessed on April 7, 2020) is undertaken by laypeople and makes use of non-scientific sources like Wikipedia because the scientific sources are less easily available.

Similarly, also studies on word family size, on the development of word formation patterns through time, or possibly even on semantic change could be undertaken easily and with much more detail and reliability provided accurately annotated data.

Such analyses could inform us about cross-linguistic typological tendencies of language change and possibly also point us to aspects of our model we need to further refine. But because of the way etymological reconstructions are presented thus far it is not easily possible to aggregate them for use in quantitative studies. We hope our framework will contribute to the solution of this issue.



## 4 Modeling and inferring word formation in historical linguistics

Our starting point are *wordlists* as they are now commonly used in computer-based and computer-assisted approaches to historical language comparison (List 2018c; List et al. 2020). While linguists tend to think of wordlists as tables in which concepts are listed in the first column, and translations of these concepts are then placed into the consecutive columns, reserving one column per language (see List 2014: 22–24), we make strict use of *long table formats* (Forkel et al. 2018), in which wordlists are represented by a table in which the first row contains a header, with an identifier in the first column, and each consecutive row represents one (and only one) *word form*, based on the content information provided in the header (List et al. 2018). We will discuss this format in more detail below.

### 4.1 Preliminary considerations

Before we provide a closer overview of our concrete suggestions for the handling of word formation, we need to discuss two important aspects of etymologically oriented investigation of word formation processes: *alignability* and *transparency*. Alignability is important for the annotation of regular sound correspondences with the help of alignments, while transparency is a more general requirement for annotation frameworks.

#### 4.1.1 Alignability and strict cognacy

In the previous sections, we have tried to show that word formation is currently only insufficiently handled in etymological datasets, including etymological dictionaries (as the most prominent representative) but also etymological databases, or the now popular lexicostatistical wordlists, in which information on cognate words is coded in such a way that it can be analyzed with the help of software packages originally developed for applications in evolutionary biology. With our extended model of etymological word relations, in which we emphasize the importance of distinguishing between *strict* and *loose* cases of cognacy, with the former reflecting regular sound change processes and the latter reflecting those cases where morphological processes or sporadic sound change processes led to a further modification of the form part of the linguistics sign, we have introduced a first way to label different degrees of etymological relatedness. By distinguishing *concatenative*, *allomorphic*, and *subtractive* processes as the major processes of word formation, we can furthermore allow for a more fine-grained classification of these etymological relations which involve the formation of new words. What we need for our initial framework is a set of techniques by which we can annotate both (1) the specific *relations* among words, and (2) the *processes* by which words have been formed.

As a first and fundamental distinction for our annotation framework, we propose to distinguish *alignable* from *non-alignable* etymologically related word forms. This distinction accounts for the relation of *strict* as opposed to *loose* cognates and embraces the fact that only word forms which are strictly cognate can be aligned in a meaningful way. An alignment is hereby understood as one of the most general ways to compare sequences (with applications in many fields), in which sequences are compared by placing them in a matrix, one sequence per row, in such a way that corresponding segments appear in the same column, while those segments that do not have a counterpart in another sequence are represented by gap symbols in the other sequence (List 2014: 66–69; List et al. 2018). Strict cognates can be aligned with each



other in this manner by lining up those phonemes which correspond to each other across different sound sequences. Alignment analyses can also be carried out for partial cognates, provided that the partial cognacy itself is readily annotated (see List et al. 2016 for details on the representation of partial cognates in aligned form). An example for the use of alignments to annotate strict cognates in partial cognate sets can be seen in Figure 2.

DOCULECT	CONCEPT	TOKENS	ID-52 =	ID-51 =	ID-49 =	ID-50 =	ID-2 =
Old High German	SIMILAR	a n a <sup>52</sup> g i <sup>51</sup> l i: x <sup>49</sup>	a n a	g i	l i: x		
Gothic	SIMILAR	g a <sup>51</sup> l i: k <sup>49</sup> s <sup>50</sup>		g a	l i: k	s	
Old Norse	SIMILAR	l i: k <sup>49</sup> r <sup>50</sup>			l i: k	r	

Figure 2: Partially cognate words for ‘similar’ in Old High German, Gothic and Old Norse. The cognate parts (e.g. *li:x* and *li:k*) are aligned using the EDICTOR tool (List 2017). Data from the Intercontinental Dictionary Series (Key & Comrie 2015)

With this approach, regular sound correspondences are presented in a transparent fashion. Since etymological analyses rely on the identification of regular sound changes, which are usually contrasted with the less systematic processes of word formation or analogy, it is essential for any etymological annotation framework to account for the regularity (or alignability) of etymologically related word forms. The advantage of this approach is that it allows us to both annotate linear word formation processes and to illustrate where we think that sound correspondences are regular. This would not be possible when using the typical cognate judgments in which cognate judgments relate to full words. We hereby follow a similar line of reasoning as proposed in Haspelmath (2002, 176f): morphemes may only exist as some kind of abstraction with respect to the relation between words, but they nevertheless are a helpful concept.

Yet if phonemes differ due to morphological processes, alignment analyses are useless since they can – per definition – only display which segments of related words correspond. But since correspondence may be severely hampered by processes beyond sound change, alignments are not apt to display word formation beyond the level of concatenation that does not leave traces on the pronunciation of the original morphemes of which the words were formed. Further details on how we suggest to handle those cases will be given in §4.2.3.

The problem of alignability can also occur in cases of transparent concatenation: if a regular sound change is involved in the relationship between two partially cognate forms, yet the cause for the sound change lies in the non-cognate part, the forms again cannot be aligned with each other. This can lead to the strange situation that – when comparing two cognate morphemes, one of which has been affected by a sound change whose source was in another morpheme – these morphemes are not strictly cognate, while they may be strictly cognate when comparing the whole words. An example for this can be found in Figure 3: The Gothic and Old High German words meaning ‘poison’ are strict cognates. However, in Old High German, the /b/ was geminated due to the /i/ (West Germanic /j/) following it (Braune 2004: 98), which constitutes the inflectional ending and thereby a different morpheme by our analysis. When comparing the whole words (on the top), these forms are fully alignable. However, when only comparing the stems (on the bottom), they are not alignable, as the cause for their difference lies in another part of the words, which can only be found in their combination. Assuming that these cases are rather rare, we will treat them in our annotation framework as examples of irregular sound change. Later research will have to show how we can consistently handle cases where alignability exceeds the level of the morphemes.



DOCULECT	CONCEPT	TOKENS	ID-114 =	ID-2 =
Gothic	POISON	l u b i <sup>114</sup>	l u b i	
Old High German	POISON	l u b: i <sup>114</sup>	l u b: i	

DOCULECT	CONCEPT	TOKENS	ID-114 =	ID-115 =	ID-2 =	ID-6 =
Gothic	POISON	l u b <sup>114</sup> i <sup>115</sup>	l u b	i		
Old High German	POISON	l u b: <sup>114</sup> i <sup>2</sup>	l u b:		i	

Figure 3: Cognate words for ‘poison’ in Gothic and Old High German, aligned using the EDICTOR tool (List 2017). Data from the Intercontinental Dictionary Series (Key & Comrie 2015)

As a second aspect of the framework we envision, we need to be able to represent the processes of word formation, including how words are composed of smaller parts. This relates to our concept of strict cognacy in so far as allomorphic and allophonic word formation disrupt alignability as a matter of principle. If the underlying phonology of the languages under investigation is well-known, problems of allomorphy can be handled by changing the original sound sequences that are used as the basis for a given comparison. Thus, instead of representing the German infinitive ending as a syllabic [ŋ], when preceded by a consonant in the stem, one can choose a phonemic transcription, in which all infinitive endings are represented as /ən/ (e.g., /fɪʃən/ instead of [fɪʃŋ] for *fischen* ‘to fish’). Concatenative word formation on the other hand does not necessarily interfere with alignability and can therefore be annotated in a much easier way that we will present in §4.2.2.

#### 4.1.2 Transparent and standardized annotation

In our annotation framework we handle word formation processes by breaking them down into several steps based on our inference methods. These methods are based on epistemological grounds. They represent what we assume we can know or deem probable at a given stage.

The main problem in this endeavor is that each step in reconstruction is based on assumptions gained from previous steps and it is not uncommon to change the result of an earlier step in a later step of the analysis. This *iterative* (not *circular*) procedure is nothing new for historical linguists working in the framework of the comparative method. The problem of this *iterative lifting of insights*, however, is, that it is hard to model it in a transparent way also accessible to machines. Although we know well that iterative reasoning is at the core of all comparative endeavors in historical linguistics, we try to reduce the number of times one has to go back and forth when annotating etymological word relations in our framework.

In our workflow, we first infer linear word formation processes by identifying morpheme boundaries based on the synchronic system of a given language. In the next step we infer regular sound correspondences by comparing morphemes of different languages. Here, we first only compare morphemes of words denoting the same concept (“Swadesh-style cognates”) in order to get a reliable baseline for sound correspondences. Cognates across words denoting different concepts (“cross-semantic cognates”) are only identified and annotated in a second step. With the knowledge on sound correspondences for strict cognate relations accumulated in the first stage (for which one may use recently proposed algorithms for sound correspondence pattern detection, e.g. List (2019)), it is easier to assess the regularity of cognates which differ in basic meaning. In the final step covered here, etymological relations further obscured by word formation get marked as such.



While the annotation framework we propose here may seem utterly simple, it is important to emphasize that current etymological frameworks usually do not distinguish the different levels of annotation we propose here. Cognacy is still largely treated as a binary concept: two words are either cognate, or not. That cognacy comes along in many different *shades* is what our framework tries to embrace. Although we know that we can barely address all complexities involving in the word formation processes that can be observed for the languages of the world, we are confident that the additional steps of annotation depths we propose here are important for future endeavors.

In the design of our framework we took inspiration from the standards proposed by the CLDF-initiative (Forkel et al. 2018). This means that we use a very straightforward data format based on comma- or tab-separated text files that can be edited with any text editor. The advantage of text formats is that they facilitate both the sharing and storing of data, while making it easy, on the other hand, to access the data with the help of common scripting languages. CLDF essentially gives two major recommendations with respect to data handling in historical and typological language comparison: on the one hand, CLDF propagates long table formats (discussed in the next section), on the other hand, CLDF recommends to *anticipate the need for more than one table*. We follow both suggestions by using long table formats throughout our whole annotation process, while at the same time using additional tables to represent those morphological relations we cannot represent in one table alone.

## 4.2 Annotation of word relations

### 4.2.1 Basic format

There are two basic types of annotation in common usage: Either the annotation is added into the data itself (inline annotation) or it is distinct from the data (stand-off annotation) (Eckart 2012: 31). We use a combination of both approaches, but mostly utilize stand-off annotation as this further facilitates keeping the data and our step-wise interpretation thereof distinct. This means that each of the columns mentioned will contain either the data itself, or an annotated version thereof, or pure stand-off annotation, depending on what we deemed most reasonable for representing our judgments.

The central part of our annotation framework consists of a table in which each row is reserved for a specific word (or word form), whereas different columns are used for different levels of annotation, leading to a very straightforward and flexible file structure. The header row specifies the content of each column. It thereby follows the standard input formats of LingPy (List et al. 2019a), a Python library for standard tasks in historical linguistics, and EDICTOR, an interface for analyzing and editing wordlists of cognate languages, which have been described in greater detail in the past (List 2017).

The most basic columns of our format comprise a *unique identifier* for each entry (an integer greater than zero, ID), the *name* of the language variety of the word form (usually in alphanumeric form, without brackets, commas, or other information, DOCULECT), and an elicitation gloss for the concept it denotes (CONCEPT). Including semantic information in a strictly onomasiological, or meaning-based, perspective, has two main advantages. First, it increases the comparability of data and results, since word forms denoting identical or similar concepts can be easily retrieved, specifically when the data is additionally linked to the Concepticon, a large collection of elicitation glosses and concept definitions which recur frequently in cross-linguistic datasets (List 2018c; List et al. 2020;



<https://concepticon.clld.org>), by adding a column specifying the Concepticon ID (CONCEPTICON\_ID). Second, it provides practical help when working on less well investigated language families, since it is well known that initial search for cognates can be most reliably carried out for words denoting identical meanings. However, since the minimal requirement of our formats is only that both meaning and form are provided to form what Gévaudan calls a “lexical unit” (*lexikalische Einheit*; Gévaudan 2007: 28), the format can also be used for “traditional”, semasiological (or form-based) annotation that centers around cognate word forms. An example for this basic format can be seen in Table 3. The annotated data underlying the figure is provided within the supplemental material and described in Appendix §2.3.

Table 3: Usage example of the basic format with Panoan data from the Intercontinental Dictionary Series (Key & Comrie 2015)

ID	DOCULECT	CONCEPT	FORM
193	Shipibo-Conibo	one	wistiora
194	Tacana	dust	epamo
195	Tacana	fire	ti

Additional columns contain the original data entry for the given word (VALUE), a corrected version of the original entry (FORM), in which specifically multiple variants of the same form are removed or other obvious errors are corrected, and a phoneme-segmented version of the word form (TOKENS), which ideally reflects a standardized transcription system, such as the B(road) IPA defined by the Cross-Linguistic Transcription Systems initiative (List et al. 2019; <https://clts.clld.org>; see Anderson et al. 2018 for details). While the choice of transcription system is not mandatory (and merely a suggestion to increase the general comparability of the data), our format standardizes the segmented version of word forms by requiring that those symbol sequences representing one sound unit in the transcription are separated by a space and by allowing (for the time being) only for one marker for morpheme boundaries (+) applied to distinguish morpheme boundaries at all levels (including phrases, compounds, clitics, or affixes). While it may seem useful to allow for a more fine-grained distinction of boundary markers (e.g., distinguishing word boundaries from morpheme boundaries) within the TOKENS column of our annotation format, practical annotation has shown that this increases the complexity for computational testing of consistency, while at the same time increasing the rate of errors introduced within the annotation process. If one wants to trace morphological information explicitly, we recommend to annotate it in an additional column, devoted only to this purpose.

Having assembled the data in this form, the core annotation of etymological relations can be done in different steps. To indicate partial cognate relations inside a given language and across multiple languages, we use integer identifiers for each part of a word form, which can be stored in two additional columns, one devoted to cross-semantic alignable cognate sets (called CROSSIDS, from *cross-semantic cognate identifiers*), and one devoted to non-alignable word forms (ROOTIDS). The cross-semantic alignable cognate sets are themselves linked to a column storing the phonetic alignment of each word part (ALIGNMENT), which is identical with the phoneme-segmented transcription (TOKENS), with the exception that gaps are introduced, represented by a dash (-) as gap symbol.



While the cognate set identifiers for alignable and non-alignable word parts along with the alignments allow already for a great deal of flexibility in etymological annotation that largely exceeds the formats that have been used in the past with respect to transparency and explicitness, allowing for an explicit annotation of both internal and external cognates, the identifiers and alignments alone do not provide any semantic or morphosyntactic information. In order to account for this, we use another column that stores morphological information in form of a morphological gloss building on the proposal by Hill & List (2017) (MORPHEMES). All columns of our annotation will be introduced in more detail in the following sections.

#### 4.2.2 Annotation of alignable word relations

As mentioned in §4.1, a central notion of our annotation framework concerns the question whether a given morpheme is *alignable* with cognates in related languages, i.e. only differing from them via regular sound changes, or not. In our framework this would entail marking all morpheme boundaries in the data that have not been obscured by paradigmatic processes of word formation or by later sound changes. Determining the alignability of morphemes, however, depends on the detailed knowledge of sound correspondences, while the detailed knowledge of sound correspondences themselves requires to know the morpheme boundaries of the languages one investigates. When working with less well studied languages, the only way out of this circle is therefore to accept a certain degree of error in early stages of the analysis and to analyze the data in an iterative fashion in which both the annotation of cognates across and inside languages, as well as the analysis of sound correspondences by means of phonetic alignment analyses are repeated several times, reflecting the general iterative workflow of the comparative method (Ross & Durie 1996).

In practice, it has turned out useful to start by annotating all synchronically transparent morpheme boundaries. What counts as *transparent* in this context is of course difficult to determine. In the example annotations which we prepared for this study, we usually started from clear-cut examples of segments which occur both alone and in combination with other elements and thus give concrete hints on the semantics of a morpheme. A second class of transparent morphemes are those that occur in semantically similar words with a clear-cut semantic difference (e.g., *gender*, as in German *Schwiegermutter* ‘mother-in-law’ vs. *Schwiegervater* ‘father-in-law’). In addition, cross-linguistic evidence can be consulted, for example, when encountering regular sound correspondences across parts of words, as those then point to cases of partial cognacy. Consider the following case in Tucanoan languages as reflected in Huber & Reed (1992). In Carijona, the word for ‘seed’ is *eheru*, but from our sample data of Carijona it is not clear whether this word is morphologically complex. Yet our dataset does contain the Macuna word for ‘seed’ as well, which is *ahe*, from which with certain confidence it can be assumed that the first part of *eheru* is cognate with *ahe* and that it is therefore segmentable as *ehe* + *ru*. Table 4 shows how these examples are reflected in our annotation format, see Appendix §2.6 for information on the whole dataset with examples on Tucanoan languages.

Table 4: Annotation of Tucanoan data from Huber & Reed (1992)

ID	DOCULECT	CONCEPT	FORM	TOKENS	CROSSIDS
3467	Carijona	seed	Eheru	e h e + r u	154 159
13571	Macuna	seed	Ahu	a h u	154



In a similar fashion, the knowledge of patterns of *semantic motivation* which are transparent in one language can be used to search for similar, less transparent patterns in another language. In order to maximize the amount of morphemes that can be found in this manner, we recommend that the data be provided in a phonemic transcription, not in a phonetic one, in order to avoid purely phonologically conditioned allomorphy. This same distinction is recommended by Lehmann (2004: 7) for morphophonemic representation of data.

As mentioned above, we annotate morpheme boundaries by adding a plus symbol (+) surrounded by spaces between the segmented representation of our word forms (as given in the column we call TOKENS). This procedure can be facilitated by using computer-assisted methods. If frequent morphemes are known to the researcher, a very simple (but in our experience also efficient) approach for marking at least a larger part of the morphemes semi-automatically is to use search and replace functionalities (in combination with regular expressions if needed). In this way, all instances of, for example, the Gothic infinitive suffix {-n} can be easily annotated by searching for the string n\$ (i.e., the n occurring in the end of all words) and replacing it with + n. Our rudimentary collection of scripts for the curation and analysis of morphologically annotated wordlist data contains a script that automatizes this task (which should, of course, be double-checked manually in a second step). See Appendix §1.2.2 for details on this.

Once the morphological segmentation has been done for a considerable amount of words in a given language, *morphological glosses* can be added (in the column MORPHEMES). Here, we follow an idea proposed by Hill & List (2017), which allows for a quick but straightforward annotation of language-internal etymological word relations. In the original proposal, each morpheme in a morphologically segmented word-form was glossed by a short gloss representing either the basic meaning of the morpheme or its grammatical function. In practice, this is done by writing the morpheme glosses in free form, using a space as the character for segmentation. As a result, spaces are not allowed inside a morpheme gloss and need to be represented by dashes or underscores or other techniques. This results in “a language-internal word family analysis, as it allows us to identify cognates within the same language” (Hill & List 2017: 63, emphasis removed).

To ease the annotation procedure, it turned out to be straightforward to automatically generate the glosses from the elicitation glosses used for the concepts in a given wordlist in a first instance, and then to manually correct the cases where this very simple procedure fails (see Appendix §1.2.3 for more information). Additionally, one may want to distinguish between *content morphemes* and *grammatical morphemes*. We annotate the latter by adding an underscore at the beginning of their gloss. This is especially helpful if one wants to exclude, for example, infinitive suffixes from word family analyses, since they would otherwise strongly distort the results. In each row, there should be the same amount of morphemes in the segmented word form (column TOKENS) as morpheme glosses (in the column MORPHEMES). Our collection of scripts for data curation provides a small script that performs sanity tests to check for consistency in this regard (see Appendix §1.3 for details).

The glossing style is left to the annotator. There are two styles we can recommend: Either one uses the morphemes’ forms themselves as their own glosses, or one glosses content morphemes with their basic meaning, and grammatical morphemes with their general function or with a combination of their form and their function. These glosses need to be unique only within the same language variety.



While the morpheme glosses serve only to annotate language-internal relations, cross-linguistic cognacy that crosses semantic boundaries needs to be annotated with the help of numeric cognate identifiers (column CROSSIDS). While tools for cognate and alignment annotation, such as EDICTOR, provide help to carry out this part of the analysis, it may be useful to pre-process the data automatically, using state-of-the-art software for phonetic alignments, sound correspondence pattern detection, and cross-semantic cognate detection (as offered, e.g., in the LingRex package, see List 2018a, 2019).

Table 5 provides a usage example illustrating how morpheme boundaries, glosses, and cognate identifiers can be added in our annotation framework (see Appendix §2.2 for information on the whole dataset with examples on Germanic languages). More examples are provided in the supplementary material, which is described in detail in Chapter 2 of the appendix accompanying this paper.

Table 5: Usage example of adding morpheme boundaries and glosses in our annotation framework with Germanic data from the World Loanword Database (Haspelmath & Tadmor 2009) and the Intercontinental Dictionary Series (Key & Comrie 2015)

ID	CONCEPT	DOCULECT	FORM	TOKENS	MORPHEMES	CROSSIDS
36	BOW	Old High German	bogo	b o g + o	bow _o-nom	51 37
40	ELBOW	Old High German	elinbogo	e l i n + b o g + o	ell bow _o-nom	53 51 37
41	RAINBOW	Old High German	reganbogo	r e g a n + b o g + o	rain bow _o-nom	54 51 37
44	ELBOW	Old Norse	qlnbogi	o l n + b o g + i	ell bow _i-nom	53 51 37
45	BOW	Old Norse	bogi	b o g + i	bow _i-nom	51 37

Morpheme boundaries are an abstraction based on a specific language in time and may change through time due to becoming opaque or being created anew by reanalysis. Therefore, at later stages in annotation, morpheme boundaries might be found by language comparison or other evidence that were not transparent for the researcher before, and suspected morpheme boundaries might turn out to be the result of reanalysis. To avoid getting lost in annotation, it is important to make clear to oneself that any analysis is preliminary, and that – ideally – an analysis should always have a clear-cut and transparent reference point. When deciding to compare Germanic languages like Old High German and Gothic, for example, it would not make sense to annotate morpheme boundaries which were not perceived as such by the speakers of the common ancestor language Germanic.

#### 4.2.3 Annotation of non-alignable word relations

While one could stop with the consistent annotation of alignable etymological relations between words, a typical etymological analysis has the ambition of listing all etymological relations that can be inferred, including those where etymological relationship has been obscured by paradigmatic processes of word formation or by sound changes which were triggered by conditioning contexts that cross morpheme boundaries (for the latter, compare the case of German *Messer*, discussed in §3.2).

In practice, it may be hard to distinguish the two processes. In Middle High German, for example, an *i* triggered the fronting of a back vowel in the syllable before, across morpheme boundaries, including the *i* in the diminutive-suffix {-lîn} (Modern German {-lein}). In Modern German, {-lein} still triggers basically the same *phonetic change*, but today this happens purely as the result of a productive *morphological pattern*. As a result, when dealing with Modern



German diminutives whose roots contain an original back vowel that underwent the process of *umlaut*, the vowel change may either be attributed to the synchronic morphological pattern or due to the diminutive having been lexicalized already in Middle High German (and simply retained its phonologically caused vowel alternation). Given these difficulties, our annotation does not strictly distinguish between these processes at this stage.

Concretely, the annotation targets again all morphemes in the segmented representation of the word forms, but this time, we introduce a deeper level of cognate identifiers (which we place in a column called ROOTIDS, i.e., *root cognate identifiers*), in which we first annotate all cases of cognates (language-internally and language-externally) which have been ignored in the previous step, since they turned out to be not alignable.

By combining the deeper etymological annotations with the shallower ones provided in form of cross-semantic, strict cognates, we can automatically create a multi-layered, directed word family graph, which starts from a given root identifier as the source and links to the strict cognate sets, which themselves link to the extant word forms. While the graph in this form lacks a hierarchy among the non-alignable cognates of a word family, this information can (if it is known to the researcher) be annotated with the help of an additional table that represents the etymological data in form of a directed derivation graph, with source and target nodes. We provide a script that creates the shallow network from a given dataset by listing all words sharing at least one identifier in a specified column in tabular form (see Appendix 1.4.1 for a usage example describing how to use this script). In Schweikhard & List (forthcoming) we describe a more exhaustive approach to representing both alignable and non-alignable etymological relations in such word family graphs.

Figure 4 provides an example of our tabular annotation of non-alignable word relations (A), the corresponding word family graph (B), the tabular annotation of a given hierarchy (C), and the corresponding word family graph derived from this hierarchy (D). The annotated data underlying the figure is provided within the supplemental material and described in Appendix 2.2.

### 4.3 Annotation examples and code

The supplementary material accompanying this paper offers extended annotation examples for six different language families: Burmish languages (Sino-Tibetan family, based on Hill & List 2017, Appendix 2.1), Germanic languages (Indo-European family, based on Key & Comrie 2015, Appendix 2.2), Panoan languages (Pano-Tacanan family, based on Key & Comrie 2015, Appendix 2.3), Polynesian languages (Austronesian family, based on Walworth 2018, Appendix 2.4), Sanzhi Dargwa (Nakh-Daghestanian family, based on Forker 2019), and Tucanoan languages (Tucanoan family, based on Huber & Reed 1992). The examples were selected in such a way that they illustrate the general applicability of our annotation framework and the advantages of trying to follow a given set of guidelines consistently.



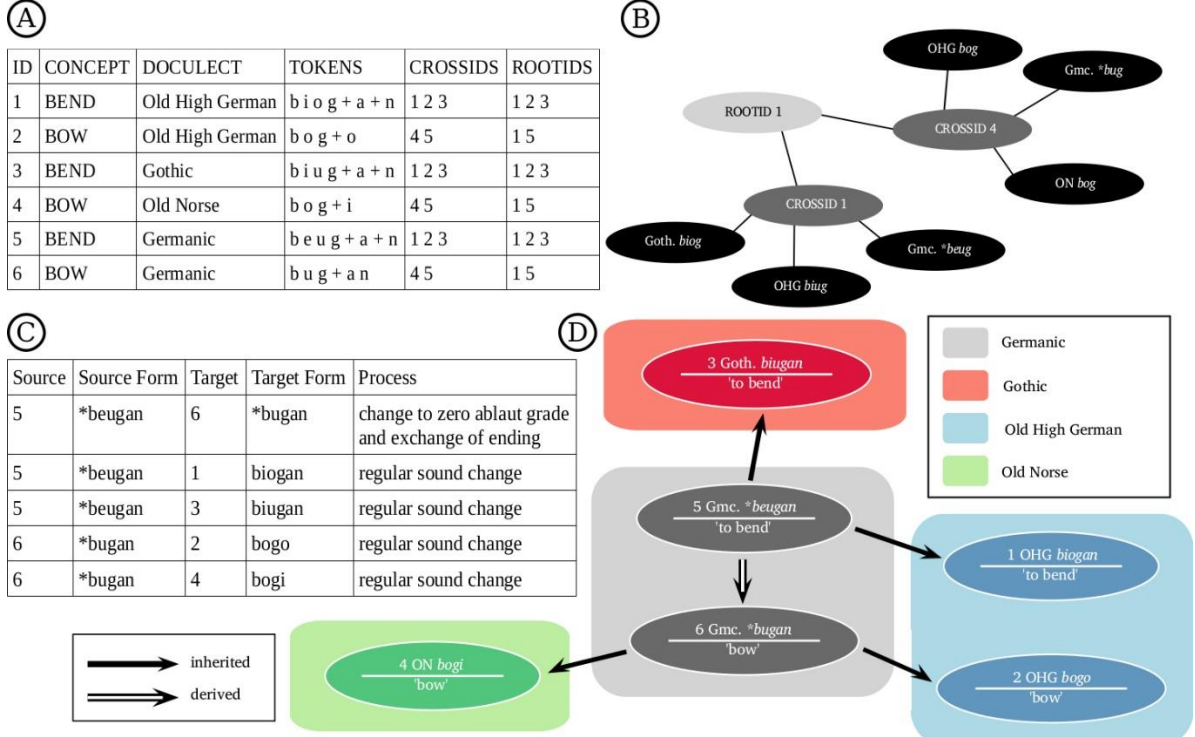


Figure 4: Annotating cognacy between full words. Data from the World Loanword Database (Haspelmath & Tadmor 2009) and the Intercontinental Dictionary Series (Key & Comrie 2015), reconstruction based on Kroonen & Lubotsky (2013, s.vv. *\*beugan-* and *\*bugan-*)

In addition, we provide a set of scripts, which are distributed in form of a small Python package, called *worforpy*, which can be used to ease the task of annotation by offering methods to (a) preprocess the data before starting with a given annotation, as well as methods to (b) validate the data, in order to make sure that the annotation has been done correctly. The usage of these scripts and routines, which were also mentioned throughout this paper, are described in detail in Chapter 1 of the Appendix in the supplementary information accompanying this paper.

Parts of the suggestions described here have already been implemented in other software packages, specifically *LingPy* (List et al. 2019a) and *EDICTOR* (List et al. 2017), as mentioned before. In the future, we hope that the new ideas which we have introduced here can find a broader support.

#### 4.4 Caveats

While we are confident that our annotation framework is capable of handling a large section of etymological relations, there are some scenarios which are beyond our current scope. For one, we cannot easily describe in which way, by which exact combination of processes, the morphemes are related to each other which differ due to non-concatenative word formation processes. Additionally, in those cases in which morpheme boundaries have disappeared or were created anew, and also in the case of analogy where the morphological pattern applied can be traced back to a specific word (or small group of words) serving as a role-model, it is not possible to provide this information in this manner.

Furthermore, if no morpheme boundary is annotated between two originally distinct morphemes since they have merged by processes of word formation or sound change or since



the morpheme boundary has become opaque by other means, cognates of either morpheme would need to be annotated as cognate by receiving the same ID in the ROOTIDS-column. For these cases, we recommend linking the result of the merged morphemes to only one of the cognate sets its morphemes are related to. For example, both Old High German *būr* (‘dwelling’, ‘cage’) and *hār* (‘hair’) contain a morpheme that goes back to the Indo-European suffix {-ro} (Kroonen & Lubotsky 2013, s.vv. *būra-* and *hēra-*) but which cannot be considered synchronically transparent. It would be possible to give both of them the same ROOTID in order to mark their partial cognacy, yet this would be misleading as it would also give Old Norse *hār* the same ROOTID as *būi* (‘dweller’) since that word shares the same root with *būr* (Kroonen & Lubotsky 2013, s.v. *bōan* ~ *būan*). More generally, it seems advisable to focus on linking content morphemes and neglect grammatical morphemes, especially when the latter include a phonetic merger, but it is difficult to define a boundary what to include in the annotation and what not.

One situation in which the annotation of cognacy is possible but can be problematic affects inflectional grammatical morphemes as those may be easily replaced by a word switching into a different inflectional class. For instance, consider the Old Norse infinitive ending *-a*, which may go back to several different Germanic suffixes, depending on the verb in question (Ringe 2006: 235f). In order to determine with at least some level of certainty which of the stem-forming suffixes of other Germanic languages the infinitive suffix of a given Old Norse verb is cognate with, one needs to know the reflex of that verb in a Germanic language that has retained the differentiation between the suffixes, e.g. Gothic, where it however may not be attested, and adopt the assumption that the verb did not switch to a different inflection class in either of the languages involved. If the verb in question was only formed in Old Norse, then it is almost a philosophical question which Germanic suffix its infinitive is cognate with – it would be all and none simultaneously. We recommend to annotate it as being cognate to which seems most reasonable given the data, but to feel free to not posit cognacy with any in cases of doubt. In such cases, the ID 0 can be given.

The opposite situation can be seen in the reflexes of the thematic vowel of verbs in Old Norse in comparison to Gothic, in infinitives and past participles. In Old Norse, it is attested as *a* in the aforementioned infinitive ending (e.g. *drikka*), but as *i* in the past participle (e.g. *drukinn*). In Gothic on the other hand, we find an *a* in both instances, in *drigkan* and in *drugkans*. The most likely explanation seems to be a context-dependent sound change, but some analogical process cannot easily be excluded. Since we assigned the same ID to all instances of the verbal thematic vowel in Gothic, but different ones to the different reflexes in Old Norse, we would annotate only one of the Old Norse reflexes as cognate with the Gothic reflexes – yet even this comparatively simple scenario begs the question of how we could decide which one to choose. An arbitrary decision is necessary here.

Similarly, reanalysis can lead to a shift in the morpheme boundary. Consider the English word *alone*. From internal evidence like the word *lonely*, among others, we can posit a synchronic morpheme boundary {a}{lone}. Cross-linguistic evidence on the other hand leads to the conclusion that the word is cognate with German *allein*, in which case the morpheme boundary is less obscured than in the English cognate, leading to a historical morpheme boundary of {al}{one} and partial cognacy with *all* and *one* (Pfeifer 1993, s.v. *allein*).

All this hopefully makes clear why we consider this linear form of annotation merely a helpful tool for finding regularities in sound correspondences between languages and a useful workflow for determining the most reliable cases of cognacy, but not a detailed way of



presenting all relationships between words. We are still working on a more exhaustive framework to fully annotate etymological relations which will also allow us to handle non-linear word formation processes, as we have hinted at at the end of §4.2.

## **5 Conclusion**

In this paper we have proposed an annotation framework that is supposed to ease the investigation of word formation processes from a cross-linguistic perspective. Although we are aware of the complexity of the task, we see multiple use cases for this framework. For scholars working on etymologies, the framework along with the tools we propose and describe can be very helpful to increase the explicitness of their research, by allowing them to define concretely where and how they suggest words to be related. For scholars working in the field of semantic or lexical typology (Koptjevskaja-Tamm & Liljegren 2017), the framework can provide great help in the collection of examples that can be easily compared cross-linguistically. For scholars working on computational approaches in historical linguistics and linguistic typology, the framework can serve as the basis in which the software they create should read and write its findings. Scholars creating dictionaries and working in language description, furthermore, could annotate at least parts of their data more explicitly, using morpheme glosses, as described here, in order to make it easier for colleagues to inspect and digest original data they might want to use in their research.

We are well aware of potential limitations of the framework proposed here, and emphasize that it is best treated as work in progress. Nevertheless, we feel the importance to share the framework already in this initial stage, as we hope that more people could test it and thereby help to improve upon it. That there is a definite need for more standardization and more transparency in the field of diversity linguistics seems to be out of question. But how it can be satisfied is, of course, another question, for which we have tried to provide an initial answer with our framework.

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## **Appendix and supplementary material**

The appendix submitted along with this paper contains detailed instructions to apply the code and further information on our sample annotations. Together with the annotation examples and the code, it has been curated on GitHub (<https://github.com/digling/word-formation-paper>) and archived on Zenodo (<https://zenodo.org/record/3889970>).



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# Conceptual onomasiology as blending in Ancient Greek. The sense of COMPLETION as generic space in the polysemic network of *plērōō*.

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*This is a theoretical and methodological exploration into the phenomenon of diachronic polysemy from a conceptual onomasiological perspective, where the notion of 'bridging context' is reinterpreted as an integration process between two situations. The use of a term for expressing some aspect of a conceptually negotiated situational context is analysed as an ad hoc choice. In this light, the work operationally maps the notion of 'generic space' in conceptual blending with the diachronic emergence of featural configurations on a multiple correspondence analysis visualisation, enriched with the confidence ellipses around the centroids of the various senses for the polysemous term. These ellipses appear to partially overlap with two distinct senses, at the same time being immanent to the gestalts of both. The data come from the diachronic development of the verb *plērōō* in Ancient Greek, between the 6th and 3rd c. BCE, for 833 instances of the term, encountered for this period.*

**Keywords:** *Conceptual integration, polysemy, conceptual onomasiology, Ancient Greek, behavioural profile, multiple correspondence analysis.*

## 1. Introduction

For any scientific inquiry, a felicitous pairing of theory and method represents a challenge. Similarly, the choice on the methods implemented for addressing a given phenomenon has repercussions on the theoretical conception of the object of inquiry itself. Cognitive Linguistics, as a usage-based theory (Langacker 2008), follows an inductive methodology (Schmid & Handl 2010). This bottom-up way of proceeding in the analysis tries to avoid the circularity following a self-confirmatory intuition. By this assumption, hypothesis testing must follow generalisations over real and large-scale data. This theoretical approach naturally links linguistic inquiry with corpus-based studies. The connection between linguistic theorising and data has long been assumed possibly as the only way for linguistics to proceed as a science. Fillmore (1985), Talmy (1985) and Lakoff (1987) are some examples of this turn towards empiricism and usage-based analysis (Langacker 1987, 1988). Nevertheless, data analysis kept being based on introspection long after cognitive linguistics has been characterised as data-driven (Glynn 2010a, 2014a, 2014b). In this context, the present work tries to draw a connection between more intuitively implemented methods of analysis such as radial polysemic sets (cf. Lakoff 1987) and conceptual integration networks (Fauconnier and Turner 2002, 2003), on the one hand, and inductive statistical methodology applied on large-scale data (cf. Glynn, op. cit.), on the other. It does so on the basis of visualisation of multiple correspondence analysis for an Ancient Greek term, *plērōō*, for successive periods of the term's development.

Some aspect of linguistic inquiry that links to the concern of relating theory and method is a reliable representation of meaning itself. A central point of debate here is the deconstruction of the intuitively grasped notion of lexical sense as an atomic unit. This deconstruction has two facets that along the history of the field took place as a series of subsequent and consequential phases. The first facet concerns the relevance of the phrasal context of a lexical unit, captured in the long-standing aphorism that “you shall know a word by the company it keeps” (Firth 1957; also Mackin 1978; Gries 2013). The second facet is the extension of Firth's idea that



collocations are a reliable indicator of a word's meaning, towards a more radical notion of *co-occurrence*. The latter has evolved so that it encompasses – beyond the more familiar idea of phrasal “context” at the level of words- the set of features constituting the matrix of a sense as well as the features constituting the item's environment. This move extends the usage-based analysis into a usage-feature analysis (Geeraerts et. al. 1994; Gries 2003; Glynn 2009, 2010b), otherwise known as “behavioural-profile approach” (Gries 2010).

It is crucial to note though that a feature-based analysis goes much beyond what would be understood either as a structuralist or, within a semantic structuralist framework, as a componential analysis (Geeraerts 2010, chpt.2). The reason is that the latter would see featural composition as based on binary oppositions, such as in Hjelmslev's analysis of meaning (1953, 1958) or Pottier's (1964, 1965) and Coseriu's (1962, 1964, 1966, 1967) semantic field analysis. The turning point in semantic theory is precisely the abandonment of the idea that semantic categories are rigidly defined in binary terms of necessary and sufficient conditions (Geeraerts 1987, 1993), susceptible to the notion of ‘truth’ (Davidson 1967). Work on prototype-based categorisation (see Rosch 1973, 1975; Rosch & Mervis 1975; Rosch et al. 1976) seems to have once and for all resolved theoretically the paradoxes stemmed from considerations of “necessity”. The notion of “prototype”, a more general notion concerning categorisation, has its linguistic semantic equivalent (Taylor 2003; Geeraerts 1997). Prototypicality in linguistic categorisation holds that meaning is not a matter of clear-cut segmentation of realities into linguistic denotations. In contrast, it is to be understood as a dynamic and extensible configuration of features, either the latter are semantic, formal/constructional or pragmatic/encyclopaedic.

Nevertheless, the decomposition of senses into clusters of prototypical features raises a representational problem (Geeraerts 1995). How is the intuitively grasped notion of sense to be represented in the theory? The question actually specifies the more general problem of the contrast between inductive usage-based methodology and top-down intuitive analysis. On the one hand, under the strong version of the thesis on prototypical organisation of meaning, senses are not but an illusion, and for that matter potentially dispensable as objects of analysis. On the other hand, people do speak with words understood as psychological realities, which renders words a natural boundary between sub-sense and supra-sense level of conceptualisation. Additionally, the demolition of the notion of sense seems to be at odds with a core assumption within cognitive semantics. This assumption holds that meaning is greatly organised through gestaltist units, such as image-schemas, semantic frames and ICMs (Fillmore 1985; Lakoff 1987). Denying the psychological reality of senses would also put in question the representational value of those gestalts in the theory.

Older analyses used to represent prototypical organisation of meaning either through the architecture of a radial network or that of overlapping sets (Brugman & Lakoff 1988; Lakoff 1987; Geeraerts 1995). The overlapping-set representation is based on set membership, with category members presenting commonness of shared features. These sets may or may not overlap, to a greater or lesser extent. The representation is given schematically in Figure 1, for the concept BIRD (Geeraerts 1995: 25; also Cuyckens 1991; Schmid 1993):



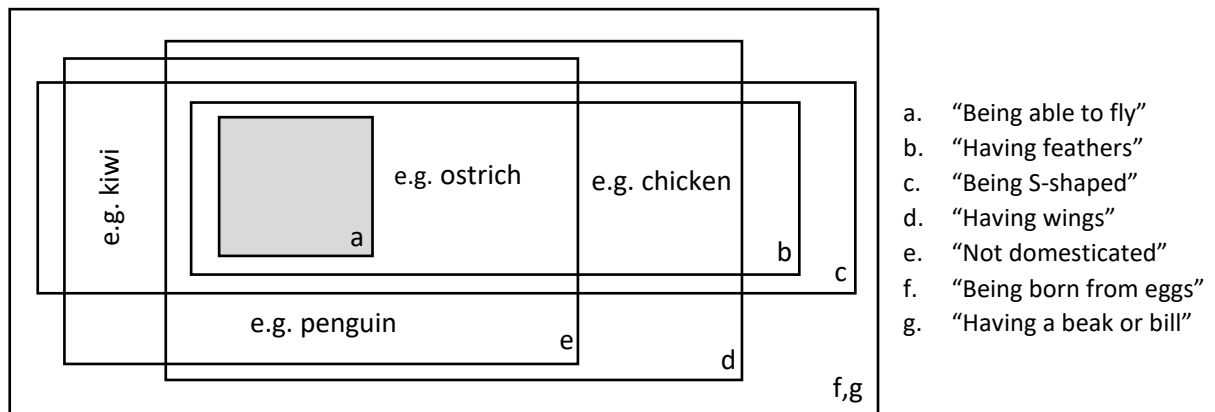


Figure 1. *overlapping-set representation of meaning for the concept BIRD*

In a representation such as that in Figure 1, prototypicality corresponds to the area with the maximal overlapping among sets (Lewandowska-Tomaszczyk 2010, chpt. 6).

The radial set model, introduced in Lakoff (1987; see also Brugman 1981; Janda 1990; Nikiforidou 1991; Goldberg 1992), has as its basic element the meanings of the senses of a category, themselves. Among these senses there are links that represent extensions from one sense to another. Taking again the example of the category of BIRD and its representation through a radial model in Figure 2, we see that all peripheral senses stem from a so-to-say central one that corresponds to the chronologically prior biological reading. The peripheral senses in this case are motivated through metaphorical similarity:

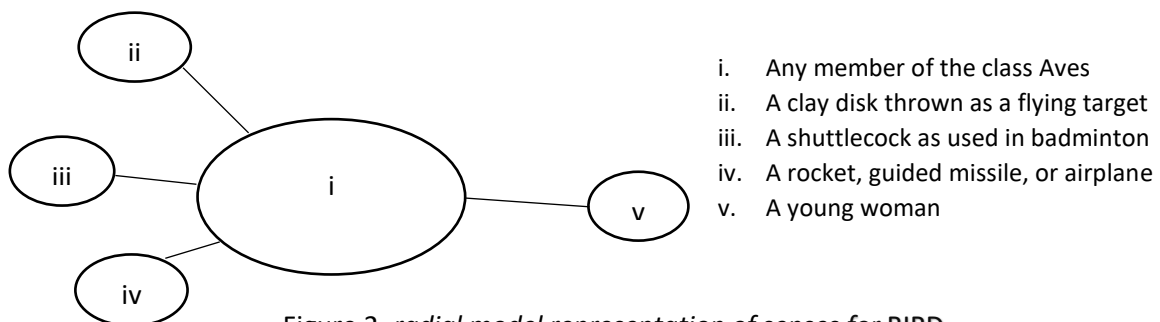


Figure 2. *radial model representation of senses for BIRD*

The two representations are not incompatible but rather focus on different structural aspects of the semantic network. The former, for example, can be understood as an elaboration of category (i) in Figure 2. The peripheral elements in Figure 2, on the other hand, are extensions of (i). The difference between elaboration and extension as understood by Langacker (2008) lies in the degree at which a category sanctions its elaboration. In Figure 1, at a level of schematicity represented by (i) in Figure 2, all categories are sanctioned holistically. In Figure 2, though, senses (ii-v) are only partially sanctioned by (i). This makes them extensions of the latter rather than elaborations of it.

The problem of representational compatibility between the two models lies precisely in integrating these two aspects: elaboration and extension as related to two different theoretical conceptions of the notion of prototypicality. The first represents a vertical dimension and the second a horizontal one, as depicted in works such as Langacker (2008) and Tuggy (2010):



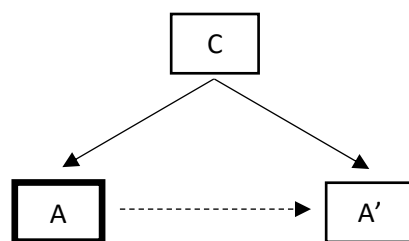


Figure 3. *integrated model of sense representation*

The network in Figure 3 combines the overlapping-sets representation and the radial network representation. If [A] is a category such as RING understood as a CIRCULAR PIECE OF JEWELRY, then its conceptual link to an extension [A'] such as CIRCULAR ARENA must pass through the re-categorisation of both under a single schematisation, such as CIRCULAR OBJECT (Langacker 2008: 37). The figure accommodates both models, encompassing the extension from a category central within a network on the one hand, and the categorisation of both through a more schematic entity that as a gestalt underlies both.

At the same time, Figure 3 captures in a single representation two types of prototypicality. The one is prototypicality based on centrality, whereas the second prototypicality based on schematicity. [A] as PIECE OF JEWELRY has a central and prior correspondence to the use of the term, in other words it is prototypical in terms of being central in a context of use. On the other hand, [A'] as an extension of [A] forces [C] to categorise both at a more schematic level. Although more encompassing a category now, [C] is less specific and for this reason less associated with a concrete instantiation. The dashed and continuous lines in Figure 3 between the categories are links of extension and links of schematisation, respectively. The latter represents the relationship between a subordinate category and a superordinate one in a hierarchical taxonomy. Extension [A'], on the other hand, represents partial capacity of the extended category to be schematised by the prototype of [A] (Lewandowska-Tomaszczyk 2010, op. cit.).

Nevertheless, if [A] is [A']'s extension and not a distinct category altogether, then the relation between the two is one of partial overlapping, much similar to that of Figure 2. This assumption, beyond being a matter of representation, has ramifications regarding the very ontology of the category [C]. Is the schematicity-based prototypicality real or just a theoretical artefact? The two problems can be labelled as follows: the non-discreteness of lexical senses and the non-independent existence of prototypes, respectively. Hence, two empirical questions that beg for an answer are the following: First, can the [C]-type schematic prototypes be empirically traced, perhaps as independent instances of emerging lexical senses? Second, in the context of a behavioural-profile approach to determining meaning, how can a schematic prototype be represented, not as an introspectively traced intuitive reality but as an inductively emerging entity?

The remainder of the paper is organised as follows: Section 2 shows how an onomasiological perspective on semantic extension gives rise to the possibility of representing a schematic prototype as a generic space in a process of sense-blending. Section 3 shows how this assumption can be methodologically and representationally translated into a multiple correspondence analysis, in the context of a feature-based behavioural-profile approach. Section 4 looks at the data, taken from the development of the ancient Greek verb *plērōō*, originally meaning FILL, for a period of 4 centuries, between 6<sup>th</sup> and 3<sup>rd</sup> c. BCE. Section 5 summarises and presents the conclusions and some perspectives for future research.



## 2. Semantic extension as ad hoc integration in an onomasiological framework.

### 2.1 Polysemy vs. blending

Last section hinted at the desirability of an identification between mental processes and meaning representation. This identification seems to have more chances if it follows an inductive route, thus avoiding the a priori postulation of entities. Categorisation is principally a bottom-up process, as must be the emergence of prototypes. In the light of this assumption, the present section will try to see how the status of the schematic prototype in polysemy can be theoretically accommodated, so that it is eventually mapped into an appropriate operationalisation.

Semantic extension, either metonymically, metaphorically or otherwise driven, is inextricably linked to the notion of polysemy (Riemer 2005; Langacker 2008; Evans 2015). Nonetheless, although metonymy and metaphor have been formalised in terms of blending (Fauconnier & Turner 2003; Coulson & Oakley 2003) it is a generally held view that polysemy and synonymy research are rather irrelevant to it (Glynn 2014a). The basic reason is that conceptual integration has been widely formulated as a discourse-driven process of ad hoc extension which, although it makes use of entrenched gestaltist units of knowledge, serves purposes of ongoing discourse (Fauconnier & Turner 2002). The implication is twofold: first, there is a purposeful discursive/pragmatic intention escaping the gradual and greatly unconscious nature of the constitution of polysemic networks. Second, it does not get entrenched but dissolves upon the integration being externalised and processed.

Nevertheless, I want to argue that in polysemy there is always an ad hoc component, which in turn may get lexically entrenched. As we will see immediately below, this assumption implies that a further dissociation of the notion of ad hoc construal from conceptual integration as a *deliberate speech act* must be drawn.

As has been early noted in literature (Sweetser 1990), no historical semantic shift can take place if a polysemic state does not first intervene. The context of this state has been characterised as *bridging context* (Evans and Wilkins 2000; Geeraerts 2017). Bridging context between two polysemically related meanings [A] and [A'] (see Figure 1) leads to a contextually enriched and inferentially identified [A], before this gets independently identified and lexicalised as [B]. For example, this is the case of the term *emotion*. The latter, with the initial literal meaning of MOVEMENT, the [A] meaning in our formulation, passed through a usage context where the understanding of moving fluids in the body were metonymically related to the generation of feelings such as sadness, melancholia, happiness, rage, etc:

- (1) *The king...in this emotion or rage of iealousie hardly contained he himselfe from killing his wife (T. Lodge tr. Josephus Wks. xv. iv. 388, 1602 AD).*

This contextual interpretation, [A'] in our case, finally got entrenched to what today *emotion* means. Figure 4 depicts this intermediate state between *emotion* meaning MOVEMENT and *emotion* meaning FEELING, which is the interpretation of feeling as the result of a specialisation of actual motion, that of fluids in the human body, as shown in Geeraerts (2017):



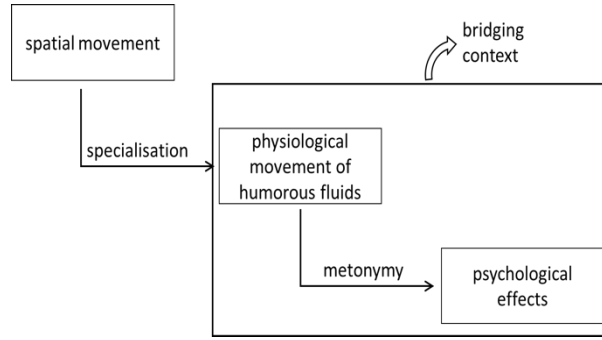


Figure 4. *bridging context for FEELING is MOTION*

Here, what constitutes the bridging context is a situation where fluid motion as a physiological event and feelings as psychological effect co-exist. Interestingly though, even for such examples where a bridging context seems to be concrete and physically detectable, a comprehensive “theory” on emotions as fluids *precedes*, does not follow (Geeraerts 2017). In a relevant sense, the bridging context would not have arisen in the absence of the theory. In other words, the bridging context emerges only as a secondary “theory” that gets situated, as the result of the perspectivisation of emotions as motion of fluids. In this light, it is not deterministically present in principle.

The point can be made clear through a great number of examples. I will choose the term whose analysis follows, namely *plērōō* in Ancient Greek. The term, originally meaning FILL in 6<sup>th</sup> c. BCE, evolved into that of SATISFY, entrenched to meaning PAY around 2<sup>nd</sup> c. CE (see Ioannou 2017, 2018). In the last stage of its evolution towards a sense meaning PAY, *plērōō* was used to depict situations of paying as the fulfilment of a duty. The term gradually substituted for the periphrastic term *apodidōmi timēn*, which literally means GIVE OFF THE DUE PRICE. Compare the two expressions in (2) and (3):

- (2) *Kàn chrēmata dômen toîs deoménois,*  
 And if money.ACC give.1PRS.SUBJ det need.PART.DAT  
*ofeilēn plēroûmen* (John. Chris. Scr. Ecc. In epist. ad Rom. hom 1-32)  
 debt. ACC pay.1PRS  
 ‘Even if we give money to the needy ones, it is a debt we pay’

- (3) *tês timês te apodidótō*  
 det price.GEN PTC give.3PRS.IMP  
*tôi priaménōi triplásion* (Plato, *Leges* 916d1).  
 det buy.PART.DAT triple.ACC  
 ‘...and give the buyer the triple of the price’

Nevertheless, the term’s sense of SATISFY does not pre-determine the context of commercial transaction as the bridging context between the senses of SATISFY and that of PAY. It is rather the conceptualisation of a given situation that *inserts* the concept of SATISFACTION in the context of transaction as relevant to the latter. This is also evident by the fact that *plērōō*, until its entrenchment into the sense of PAY, the sense that has eventually retained in Modern Greek (MG), selected a rather wide range of possible direct objects, such as DESIRE, HONOR, OBLIGATION, etc.:



- (4) Pôs oûn kai tèn epithumían eplérōse  
how then CONN det desire.ACC satisfy.3PRS.AOR  
(John. Chr. Scr. Eccl. In fac. ei rest.)  
*How then did he satisfy his desire?*
- (5) I Shakira plírose 20.000.000 evró  
det Shakira.NOM pay.3PRS.AOR 20.000.000 euro.ACC  
(Google Search, 2018)  
*Shakira paid 20.000.000 euro.*

## 2.2 Conceptual onomasiology and polysemy as blending

Given that bridging context does not drive polysemy but actually is generated through the insertion of a term appropriate to construe linguistically a situation, I argue that the use of a term in a new context is primarily a matter of “concept designation” (Baldinger 1980). This is important because it has a plausible consequence: polysemy understood as semasiological extension (Glynn 2014a) may actually always involve an ad hoc choice of a term among a range of possible candidates, a matter of onomasiology. This in turn opens the possibility for treating diachronic polysemy as conceptual integration.

Here, it would be useful to make a more concrete reference to the notion of *onomasiology* in diachronic semantic research, which is usually contrasted to that of *semasiology* within the broader field of inquiry into the relation between words and their meanings. The two terms signal mostly a difference of perspective within the study of semantic change. Baldinger (op. cit) has early defined semasiology as the study of the meanings through which a given term is manifested. On the other hand, he defines onomasiology as the considerations of the ‘designations’ of a particular concept, in other words, the cluster of potential expressions to label a given meaning. This distinction would automatically identify the study of polysemy as a semasiological concern, whereas synonymy as an onomasiological one.

Geeraerts (1993, 1999, 2002, 2006, 2017) has drawn a similar distinction between the domain of semasiology and onomasiology, identifying them roughly as being about *meaning* and *naming*, respectively. Nevertheless, Geeraerts carefully differentiates that early conception of onomasiology from its cognitive linguistic equivalent. Earlier onomasiology was directly linked to the traditional, structuralist conception of formal semantic relations such as hyponymical, antonymical, synonymous, etc. Additionally, concerns of “designations of a particular concept” is more relevant to the investigation of the pragmatic factors that push towards an actual choice of a term as a designation of a particular concept or referent (Geeraerts 1999).

This conception of onomasiology leads to binary distinctions as that between *langue* and *parole*. The resolution of the binary contrast comes from a qualification of onomasiology into *formal* and *conceptual*. The former refers to the competition between equivalent terms on the basis of sociolinguistic and more generally external/contextual factors such as register, education, gender, etc. An example would be the relative preference of groups of speakers for a certain taxonomical level (Grondelaers & Geeraerts 2003). Concretely, an expert in a field is more likely to use subordinate and very specific terms such as detailed technical terms pertaining to their field of expertise than a layman. Conceptual onomasiology, on the other hand, extrapolates semasiological notions into the workings of onomasiology. The choice of a name has a conceptual weight that gives an import into a situation where it is used. Conceptual onomasiology in this light is a kind of “cognitive preference” on the part of a speaker for one term over the other as a designating name for a given referent. In this sense, there is no real



synonymy and the difference between terms such as *emotion* and *feeling* have an impact on the way the referents are conceived. Subsequent entrenchment through frequent use of this preference may convert a name to the only choice for a referent.

In the light of the above, it can be argued that, from an onomasiological perspective, polysemy has a relevant onomasiological facet that consists in “choosing” a given name in the context of a competition among alternatives that impose a distinct construal over a situation. For any given context, where the necessity of denoting aspects of the latter arise, the relevant choice is done on the basis of the conceptualisation symbolically linked to a chosen term.

For instance, in the example of *plērōō* mentioned above and in the context of commercial transaction, an onomasiological choice is made over what term is most suitable to designate the action of PAY. This competition and subsequent choice is not supposed to be conscious, but possibly part of the processes that have been called “backstage cognition” (Turner 2003). It pertains to the more general human capacity of linguistic construal (cf. Langacker 2008), where profiling “selects” specific aspects of a given conceptual base to bring into fore and onto stage.

Thus, in any communicative event, designation of some entity brought in focus within a given context, say  $C_1$ , typically takes place. This context may be a CULINARY context, a COMMERCIAL TRANSACTION context, or a context containing more evaluative or affective nuances such as MOTHERHOOD. We may want to call  $C_1$  a *situational ontology*, typically expressed through its frame-semantic linguistic coding (cf. Fillmore 1977, 1982, 1985). These designated entities constitute the range of possibilities for profiling parts of this ontology. Some of the linguistic choices may come from terms entrenched within the frame-like conceptualisation of  $C_1$ . Thus, for a COMMERCIAL TRANSACTION FRAME terms such as *buy*, *sell*, *cost*, etc. are used. Nevertheless, others may not have been used before for the specific context. This was, for instance, the use of the term PAY when it was first used in the context of commercial transaction. In this case,  $C_1$  picks up a term whose sense  $S_1$ , in our example PACIFY, entrenched for  $C_2$ , brings along the conceptualisation of the ontology of  $C_2$ . This way,  $S_1$ , still not entrenched as extension of  $S_1$ , annotated here as  $S_{1e}$ , is able to perspectivise aspects of the context under conceptual negotiation, namely  $C_1$  – the COMMERCIAL TRANSACTION context – in our case. The process is shown schematically in Figure 5:

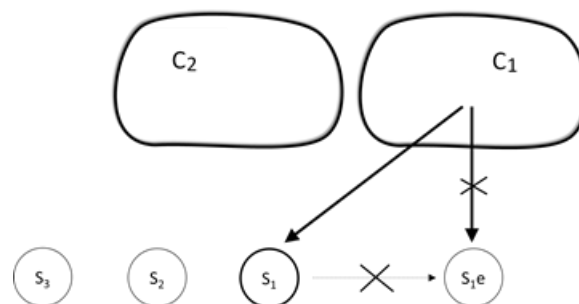


Figure 5. *perspectivisation of  $C_1$  through use of  $S_1$*

Hence, the usage of a given sense into a new context of use is a perspectivisation of its situational ontology in terms of that sense, a matter of conceptual onomasiology. Nonetheless, how is the notion of ‘bridging context’ to be understood under a conceptual onomasiological perspective? Earlier on, we saw that the main obstacle for polysemy to be inserted in a framework of conceptual integration is the fact that the latter concerns ad hoc conceptualisations, with  $S_1$  in Figure 5 being ad hoc for  $C_1$ . Polysemy, understood from a semasiological perspective, concerns the semantic potential of a single term. Hence, meaning extension in this sense can be accounted for mostly as a matter of lexical-internal processes



that occur, if only because a bridging context favoured the extension. Nevertheless, understanding bridging context as a consequence of an onomasiological choice renders the preference for a term – and through this for the sense that the term represents- a cognitive process of construal.

### 3. Blending representations within a multivariate analysis

#### 3.1 Operationalising blending spaces

We turn now to the question how the onomasiological perspective on polysemy as an ad hoc – albeit unconscious - process of designation opens the possibility for re-formulating polysemy in terms of conceptual integration, and how this formulation can be operationalised and visualised within a behavioural-profile approach to semantic extension.

If a sense from one frame, say PASSIFY/APPEASE from STIMULATE EMOTION frame (see FrameNet 2020) is chosen in order to profile the COMMERCIAL TRANSACTION frame, it is not PAY inserted in C1 but actually APPEASE, taking a conceptual perspective over the frame. In this light, this insertion is actually an instance of integration between COMMERCIAL TRANSACTION and STIMULATE EMOTION frames, as shown in Figure 6:

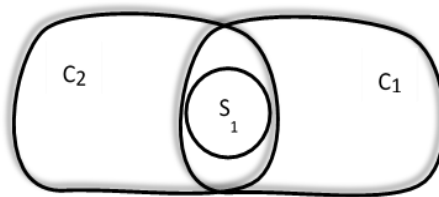


Figure 6. ad hoc choice of  $S_1$  in  $C_2$  by  $C_1$  as  $C_1$ - $C_2$  blending

The ad hoc onomasiological choice of a sense that has been entrenched as a lexical unit to a different context or semantic frame, for that matter, generates an area of overlapping between the two contexts  $C_2$  and  $C_1$ , understood as conceptualisation of the latter through elements of the former, namely COMMERCIAL TRANSACTION through STIMULATE EMOTION.

Conceiving polysemy as a process of blending raises specific theoretical, methodological and representational questions. First, conceptual integration presents two dimensions of overlapping structures: *generic space* and *emergent structure* (Fauconnier & Turner 2002). As said above, generic space consists of the elements that make up the “commonness” of the two inputs. It is a more abstract, schematic type of structure that serves as the common ground for blending to take place. It is a categorising entity, reminiscent in its role of schematising on the basis of similarities the notion of ‘family resemblances’ in Wittgenstein (1953; Kövecses 2010). Theoretically speaking then, there arises the question what kind of space the overlapping between  $C_1$  and  $C_2$  represents, question linked to the more general problem of the distinction between schematic and central prototypes. The question is also relevant to the concerns expressed above (see introduction) on the representability and real character of the generic space at large as a gestaltist object. Methodologically, a similar problem arises. This concerns the operationalisation of generic space and emergent structure as real objects, on the basis of the observable featural configurations comprising the various senses’ behavioural profiles. As said above, behavioural-profile approach to semantic research holds the idea that senses must be defined on the basis of a non-discrete probabilistic categorisation. A sense thus is defined in terms of clustered usage-based featural configurations



(Gries 2003, 2006; Glynn 2009, 2010; etc.). In this light, the following question arises: Are also generic space and emergent structure to be operationalised as featural configurations? Representationally, the question translates into the actual detectability of the configurations on a map of visualisation of the correlations holding among the features instantiating all observations.

Much has been already written in the direction of refuting the cognitive faithfulness of Lakoff's radial networks and the employment of representational nodes serving to depict distinct senses (Geeraerts 1993, 1995; Kilgarriff 1997; Zlatev 2003; Glynn 2010, 2014a, 2014b). If the polysemic state of a sense and its prototypical commonness were to be represented, this would more naturally bear a resemblance to Figure 8 than to Figure 7, where some partial overlapping of the featural configuration (Geeraerts 1993, Geeraerts et al. 1994, Lehrer & Lehrer 1994) comprising the prototypicality of a sense, appears to be common in two configurations:

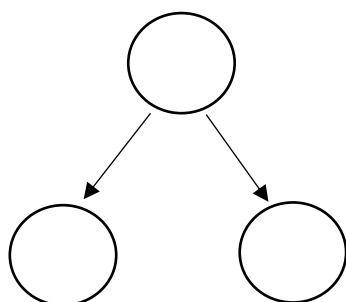


Fig.7 radial network-based polysemy

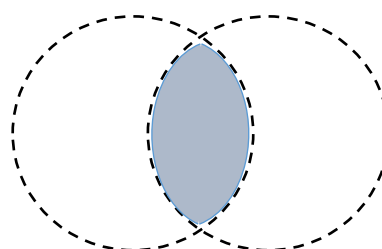


Fig.8 feature overlapping-based polysemy

Nevertheless, if the problem related to Figure 7 is the autonomy of senses taken for granted, the problem with Figure 8 is related to the notion of *immanence* (Langacker 2008: 56). Immanence is defined as the “lying within” schematicity of a categorised conceptual instance (op. cit. 174). It is not enough for a categorising schema to be a fragment of the categorised entity. It has to be, in other words, 100% present within the instance it categorises. The problem is related to the aforementioned distinction between the two types of prototypicality, namely one based on centrality, and another based on schematicity. Does a featural overlapping between two related senses represent one of the two types of prototypicality? And if yes, which one? Finally, can this overlapping coherently give us a glimpse of the emergence of a generic space as a categorising process over two or more related senses? Intuitively speaking, if the generic space is to be identified with one of the two types of prototypicality, this has more chances to be conceptual prominence. The question is if it can be detected on a visualisation map of some sort or not, especially because of its gestaltist immanence to the structures it prototypises.

To this end, the present analysis argues that the visualisation of implementation of a series of multiple correspondence analyses (MCA) for diachronic data may be able to grasp the reformulation of polysemy as conceptual blending, at the same time unifying the two representations of semantic extension given above: as a map of overlapping featural sets along a continuum of senses on the one hand, and as a radial network whose constitution is driven by processes of extension such as metaphor and metonymy.

MCA is an exploratory statistical method for analysing categorical data. The course of its implementation is the following: first, for a set of data that comprises a more or less long list of attested occurrences of the term that is under analysis, a given number of variables/factors are characterised for their instantiations into specific levels. These variables may concern either grammatical/formal or semantic/conceptual features, the former being for



example PAST, INDICATIVE, PERFECTIVE, etc., and the latter ranging from very schematic characterisations such as AGENT or INSTRUMENT to more concrete such as ANIMATE OBJECT or MACHINE, VEHICLE, etc. In turn, the frequency of co-occurring features is converted into a distance matrix among these features, representing the overall correlation among the totality of (co-occurrence of) features coded for. This distance/proximity matrix can be subsequently plotted so that proximity between points reflects similarity, both among features as well as clusters of these. Such a plot may take as reference point either the features, the variables that these features code for or the observations themselves. The bi-dimensionality<sup>1</sup> of an MCA plane that visualises the overall attraction between factors/levels collapses the multi-dimensional correspondences into a single biplot. Hence, an MCA map is a reduction from a multi-dimensional space of interactions to a lower-dimensional representation. If the MCA map is chosen to visualise the senses that act as labels for the featural configurations that are associated to them and constitute their behavioural profiles, then we expect the following: the senses that appear closer will be “more similar” regarding their constitutive featural configurations, as they display similarities in the distribution of the features across their contexts (for an analysis of the technique see e.g. Baayen 2008, Levshina 2015, Glynn 2014b; also Ioannou 2017).

### 3.2 Confidence ellipses around the centroids of senses and prototypicality

How may an MCA visualisation of senses be a useful method towards a felicitous representation of polysemy as conceptual integration? The labelling of senses across an MCA map actually depict relative distances among their featural configurations. The positioning of the senses is not a mere point, but actually has a “prototypical range” of expansion towards other configurations, roughly defined as senses. It is an ellipsis-shaped expansion of a given “centroid”, itself understood as the grand average across the average distances among the features comprising a cluster, towards the rest of the clusters. Hence, the visualisation of this structure around each centroid identified with the sense-labels, formed as ellipses around them, gives a good representation of the prototypical structure for each sense.

The technique has been implemented for synchronic research, such as the correlation of registers with grammatical features or classifications of objects on the basis of their functional features, and the degree to which there is overlapping among the former in regard with the latter (e.g. Levshina 2015), the former understood as ‘exemplar’ categories (op. cit). This analysis will implement an MCA and its concomitant visualisation for a series of period-slots in a diachronic research context, for the ancient Greek term *plērōō*, originally meaning FILL, for the period 6<sup>th</sup> c. BCE to 3<sup>rd</sup> c. BCE, for a totality of 883 coded instances. It uses the same data as Ioannou (2017) and is based on the same MCA analyses conducted there, extended here through the visualisation of the ellipses around the centroids of the senses. The reason for choosing the specific term is twofold: first, in its original meaning it sanctions an image-schema of central interest in Cognitive linguistic literature, namely the image schema of CONTAINER. Second, the evolution of the verb led to its meaning of today, namely PAY, a sense that profiles possibly the most thoroughly analysed semantic frame in linguistic literature (Fillmore & Baker 2010). The Greek term already shows the first usage as PAY in the 2<sup>nd</sup> c. CE. It got entrenched with this sense in Medieval Greek and got lexicalised under the form *pliróno*. This form contrasts with the more archaic form *pliró*, still in use in MG, that has retained the older meaning SATISFY. The totality of the extant data has been extracted from Thesaurus Linguae Graecae, a platform including all Greek literary texts.<sup>2</sup> The distribution of texts with the term

<sup>1</sup> Sometimes *tri*-dimensionality.

<sup>2</sup> TLG URL: <http://stephanus.tlg.uci.edu/>



varies greatly, from epic to poetry and historiography, to medical texts and philosophy, a fact that shows that the term has a generalised use that is not constrained dialectically or on the basis of register. The present analysis stops before the rise of Atticism (Kim 2017, De Jonge 2008) with the end of 2<sup>nd</sup> c. BCE, where a standardised rhetoric mannerism signals a retrogression not only in terms of language forms but possibly in terms of textual themes too.

The representation of centroids is labelled through the observations themselves, namely the senses coded for, with an expansion of the visualisation of the centroid as ellipses around the latter, at a 95% level of confidence. Thus, a comparison among the various MCA maps for the subsequent periods will take place, with a parallel comparison of the expansion and relative positioning of the ellipses for the centroids of the various senses. The aim of the comparison is the following: detect any coherent patterning among (a) the expansion of a sense, (b) its relative positioning and overlapping with the rest of the senses, as well as (c) the schematicity of the sense under observation. The ultimate goal is to detect distributions that make sense as representing the entities of generic space and emergent structure.

As already said, the MCA analysis will yield a global clustering of the various senses for the four-century period under investigation for the ancient Greek term *plērōō*, thus evaluating the conclusions drawn for the diachronic evolution of the term. The analysis will mainly confine itself to the visualisation of the MCA, drawn on an analysis whose quantitative data can be found in Ioannou (2017, 2019). Nevertheless, the contribution of the relevant features for each century, on which the visualisation is based, are given in the appendix of the present paper. The data comes from the manual collection of the sum of the instances of the verb *plērōō*, for the period under examination. The term has been annotated for the following formal features: VOICE (e.g. ACTIVE, PASSIVE, etc.), TENSE (e.g. PRESENT, PRETERITE, etc.), CONJUGATION (INDICATIVE, IMPERATIVE, etc.) and CONSTRUCTIONAL PATTERN: SO represents a subject and an object, in an expression such as *Diomedes filled the theatre*; SOG, represents the prototypical construction of a subject filling an object with something, met in an expression such as *Diomedes filled the cup with wine*; SG represents the construction where a subject is filled with something, as in the expression *the theatre was filled with people*; Finally, S represents a construction including just a subject, as in the expression *the theatre got full*.). The semantic features include the type of the following participants: AGENT, PATIENT and the entity that assumes the role of the filling element, tagged as FILLER. The coding is held at a rather fine-grained level, with instantiations such as PERSON, ANIMAL, VEHICLE, PLANT, LIQUID, etc. For the characterisation of the observations into senses, the Ancient Greek dictionary of Liddle-Scott has been used. The data has been divided by century, with the exception of 6<sup>th</sup> and 5<sup>th</sup> centuries BCE, which have been merged, a choice due to the relative scarcity of data for 6<sup>th</sup> century. For the correlational analysis and visualisation of data has been used the R-platform.

## 4. Visualisation and analysis

### 4.1 COMPLETION between FILLING and CULMINATION

Let us start with the visualisation of the distance matrix for 6<sup>th</sup>-5<sup>th</sup> c. BCE, represented in the form of confidence ellipses around the centroids of the senses on an MCA plot. This is given in Figure 9:



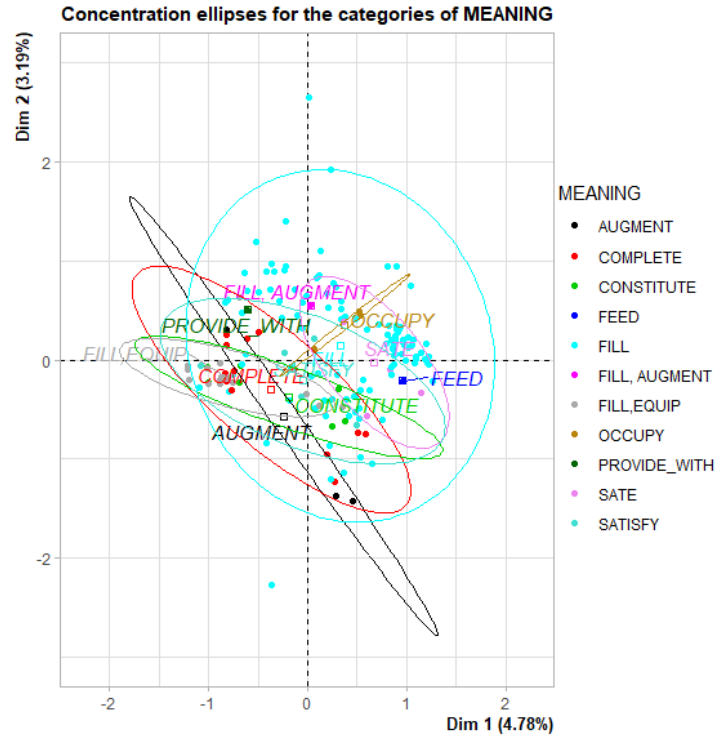


Figure 9. MCA confidence ellipses for senses, 6<sup>th</sup>-5<sup>th</sup> c. BCE

The interpretation of such a map is difficult and to a certain extent tentative. In spite of that, having in mind that that the technique is not as much about hypothesis testing as about data exploration and hypothesis forming (Glynn 2014a), we can extrapolate the following observation relevant to the analysis: this concerns the great degree of overlapping among the ellipses for the different senses. Nevertheless, however disordered and to some extent chaotic as it may seem, the visual distribution of the ellipses points at the centrality that the sense of FILL occupies, which suggests an undifferentiated distribution of contexts within which *plērōō* as FILL is met. In a relevant sense, the prototypicality of FILL as historically prior and diachronically stable meaning, manifests its entrenchment as a lexical sense. Below is a typical use of the term with the aforementioned meaning:

- (6)    Diónusos...        oínou        kratêra        plērósas (Dyris, *Hist.Frag.1339*)  
          Dionysus.NOM    wine.GEN    glass.ACC    fill.PART.NOM.AOR  
          *After Dionysus filled up the glass*

Beyond this, there are also two big clusters of senses that occupy discernible positions. On the one hand, senses such as OCCUPY, SATE, FEED and SATISFY display an intuitive conceptual affinity, which in terms of featural convergence is translated into constructional identity, that of SOG with an AGENTIVE Subject (S) such as *Diónusos*, a Direct Object as a PATIENT (O) such as *kratêra*, and a Genitive Case FILLER (G) such as *oínou*, in (6) above. The difference basically lies in the semantic type of the arguments, especially that of the PATIENT representing the instantiation of the CONTAINER and FILLER. It is interesting to note here the metonymic relation between senses such as OCCUPY, SATE, FEED and SATISFY on the one hand as well as FILL and EQUIP, FILL and OCCUPY, and AUGMENT and COMPLETE, on the other, all seem to fit in the metonymic type CAUSE and EFFECT and vice versa: for example, FILL as an effect of OCCUPY, FILL as a cause for SATE, and the latter as a cause for SATISFY. Nevertheless, the sense of



COMPLETE, whose relevance becomes central in the 4<sup>th</sup> c. BCE, does not appear having any measurable size of elliptical extension.

Looking in turn at the MCA for 4<sup>th</sup> c. BCE in Figure 10, something very interesting can be spotted. This concerns the extension of the ellipsis of the sense COMPLETE, which cuts across the map, covering the quadrants that display the greatest variation between each other, namely the second and the forth, lying diagonally on either side of the origin of the plot:<sup>3</sup>

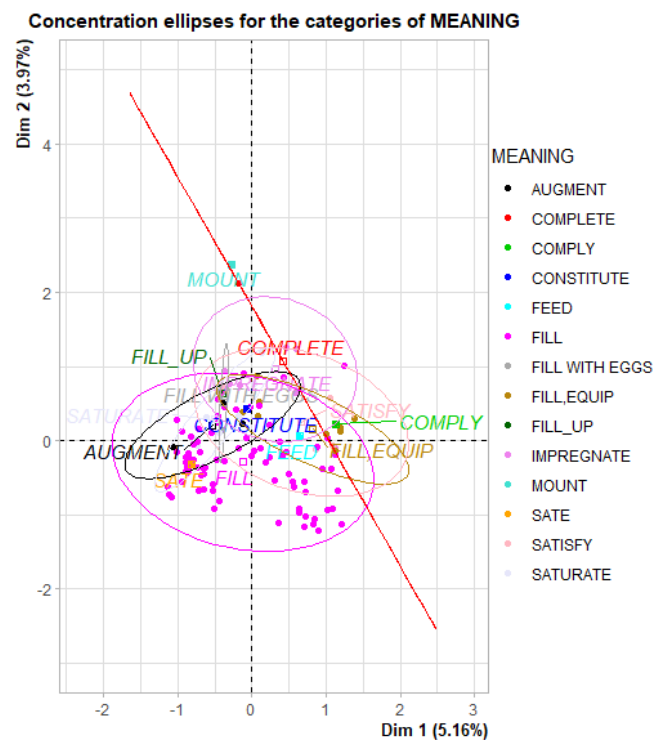
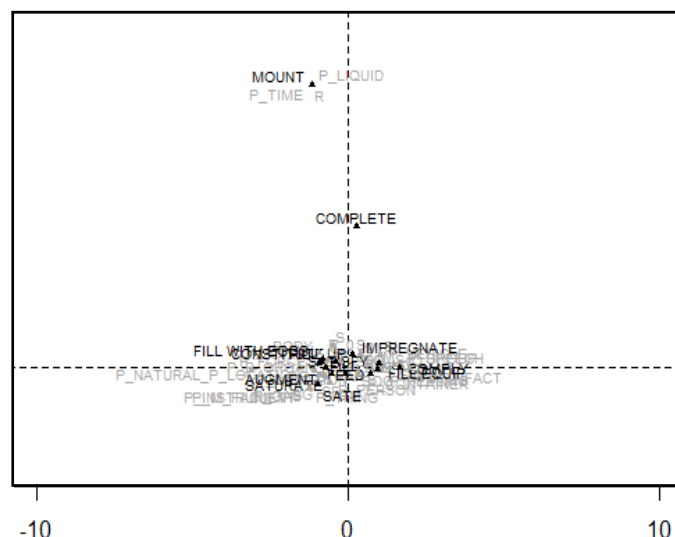


Figure 10. MCA confidence ellipses for senses, 4<sup>th</sup> c. BCE

The comparison between the extent of the sense COMPLETE's ellipsis and that of the rest of the senses is impressive and worth analysing closer. In featural terms, this arrangement implies that the cluster of COMPLETE stretches its variation across (clusters of) features that for the rest of the senses not only do not co-occur but also repel each other. If, instead of depicting the ellipses around the centroids, we visualise the position of the centroids themselves as well as the features that contribute most to their positioning, then we obtain the following picture:

<sup>3</sup> This is so because an MCA plot is organised around the two perpendicular axes that represent two dimensions of variation. Thus, the first with the third and the second with fourth quadrants are the most dissimilar.





We observe a more or less undifferentiated cloud of features around the centre of the plot, and the sense of MOUNT at the upper edge linked to the semantic participants of LIQUID and TIME, as well as the grammatical feature of REFLEXIVE VOICE. The pattern is typical of examples such as the following, where a certain quantity of a measurable entity reaches a culmination, driven from some force that lies within the container (Ioannou 2017). In English, a similar construction would be present in the expression *the vase oil spread on the floor*, with the difference that here VOICE is PASSIVE:

What is especially relevant to the present analysis is the position of the sense COMPLETE. The latter occupies an intermediate position, between the sense of MOUNT and the rest cloud of senses at the centre of the plot. This essentially means that COMPLETE extends its featural configuration from prototypical instances such as those of, say, a voluntary agent completing a task, an active SOG structure with an AGENT, a CONTAINER and a FILLER, to the following: an inanimate object such as the moon reaching a culmination, a *quasi*-reflexive S-structure, with a sole SUBJECT that incorporates the properties and role of the CONTAINER and FILLER at the same time. Even more interestingly, the semantic relation between FILL and MOUNT seems to be one of a gradual transition, reminiscent of metonymy. COMPLETE, on the other hand, appearing in the middle, seems to have stretched its variational pattern so that it encompasses both FILL and MOUNT. In a relevant sense, it can be seen as the intermediary between the other two senses, a *quasi* conceptual link.



a role that falls precisely in the definition of generic space, being at the same time immanent to both. The process is depicted in Figure 12:

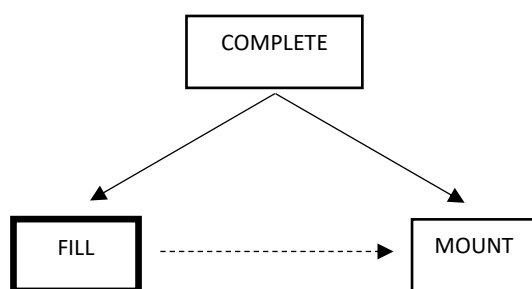


Figure 12. *COMPLETE* as generic space categorising *FILL* and *MOUNT*

How generalisable are the conclusions of these observations? Let us turn to the 3<sup>rd</sup> c. BCE, to test further the plausibility of such a formulation.

#### 4.2 FULFILMENT between SATISFACTION and COMPLETION

Let us first have a look at the confidence ellipses of the senses on the MCA for the 3<sup>rd</sup> c. BCE:

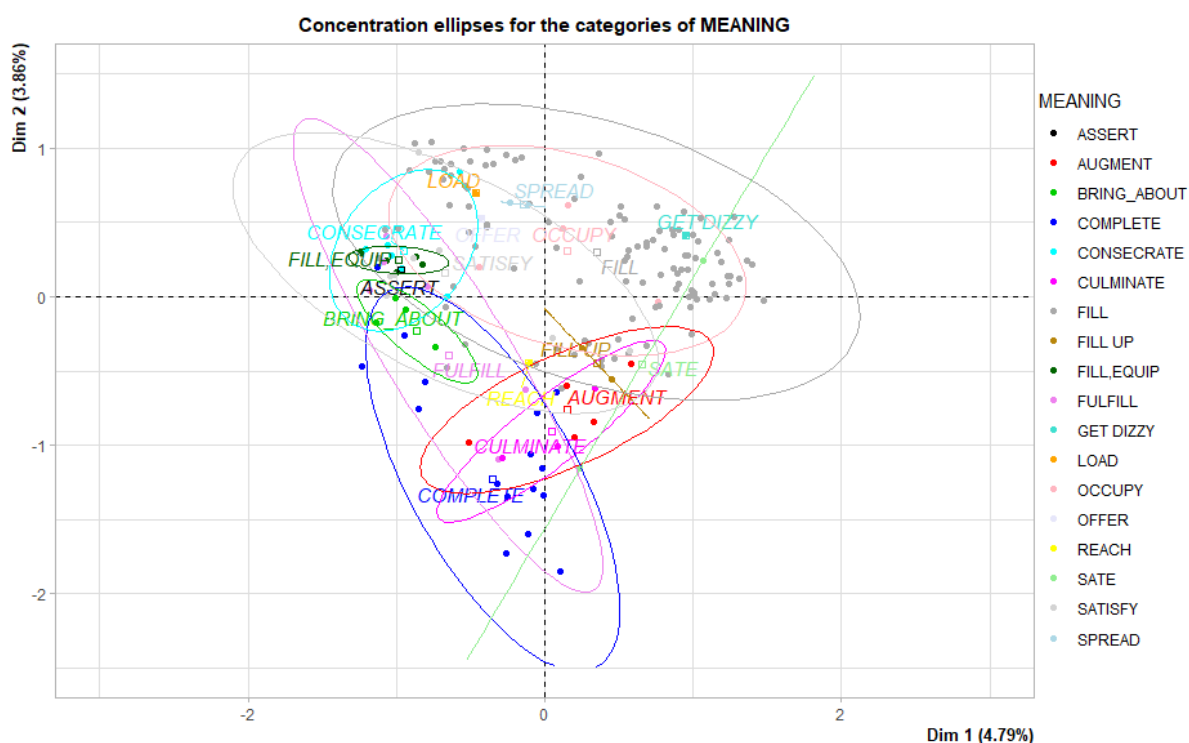


Figure 13. *MCA confidence ellipses for senses, 3<sup>rd</sup> c. BCE*

On a par to what holds for the previous maps, for 3<sup>rd</sup> c. BCE the interpretation is difficult and has an exploratory character. Nevertheless, a closer look reveals a rather interpretable and theoretically coherent distribution of the sense clusters. First of all, the ellipsis representing the prototypical expansion of the sense of *FILL* has been slightly retrieved from the origin of the diagram towards the first quadrant. In practice, this means that it has been limited regarding the contexts in which it appears, in a relevant sense losing the general and undifferentiated



character of its distribution. Second, it tends to group with senses such as FILL\_UP, EQUIP, SPREAD, LOAD, all intuitively forming a natural cluster. SATISFY is in turn partially overlapping with the rest of the group, a situation that was met before for the same sense. As said above, the partial overlapping leads to the possibility of a metonymical relation, that between saturation and satisfaction as a CAUSE-EFFECT relation.

The second cluster of senses concentrated towards the third quadrant forms similarly a coherent grouping. For senses such as AUGMENT, REACH, CULMINATE, underlies an intuitive common conceptual base that profiles the telic state of an incrementing process, either the latter is spatial, temporal or numerical. The constructional and semantic features of these senses are usually sole SUBJECTS that do not take any object, of REFLEXIVE VOICE. The semantic characterisation of these subjects include usually processes and states such as SPEECH, EVENT or TIME (see Ioannou 2017, 2019) and non-animate entities that present the possibility of self-motion, spreading, reaching a limit, etc. Interestingly, COMPLETE, for this century, has lost its schematicity and overarching generality and has been limited to the same contexts that the rest of the senses appear.

What is nonetheless of particular interest on the MCA plot is the appearance and positioning of a new sense, that of FULFILL. As can be seen on the map, repeated in Figure 14 with FULFILL's ellipsis being highlighted, the extension and substantial overlapping of FULFILL with the COMPLETE-cluster and that of SATISFY is the most striking feature:

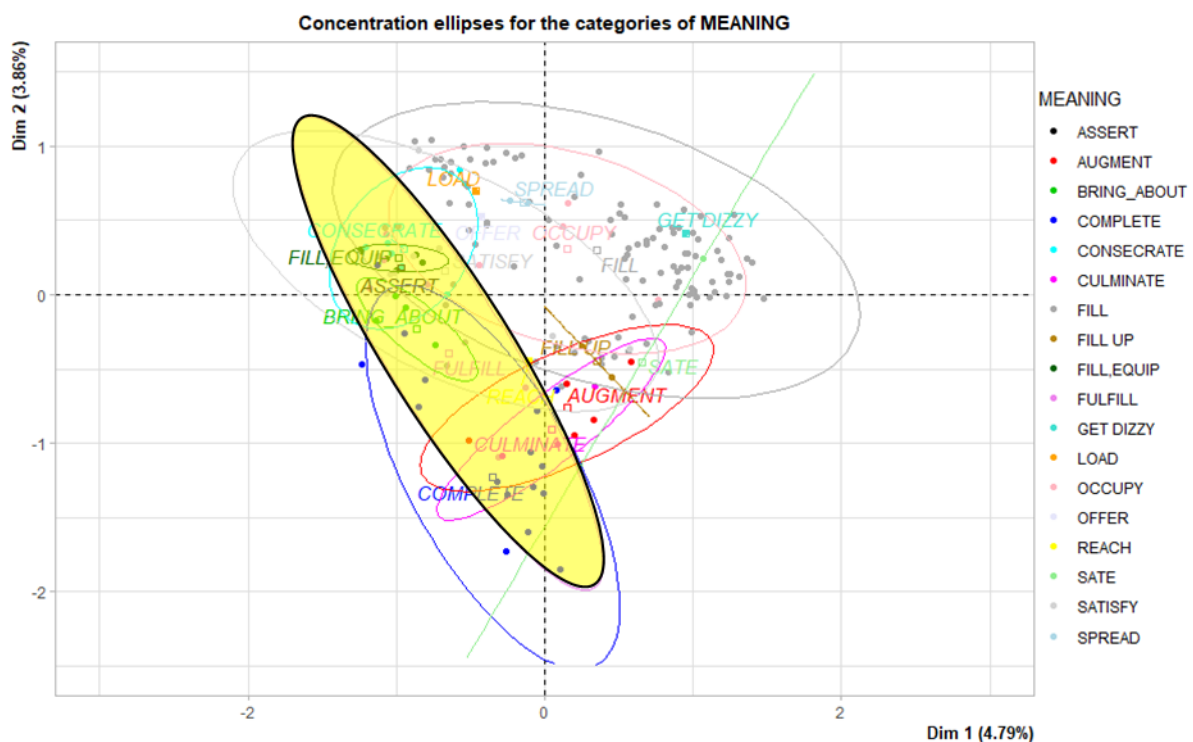


Figure 14. MCA confidence ellipses for senses, 3<sup>rd</sup> c. BCE

It is a case parallel to that met for 4<sup>th</sup> c. BCE and its underlying workings may very well be described as similar too. Taking into account that by now COMPLETE has got a more entrenched meaning, that of reaching a limit or boundary inherent to the nature of the object, such as the end of a time period, the sense of FULFILL seems to function as a schematisation of both senses of COMPLETE and SATISFY, in much the same way COMPLETE did between FILL and CULMINATE/MOUNT for 4<sup>th</sup> c. BCE. FULFILL plays here the role of the intermediary between COMPLETE and SATISFY. In later centuries, the sense of SATISFY will take the more specialised



meaning of economic satisfaction. It seems then that what connects the interpretation of SATISFACTION as being perspectivisation of the latter through its integration with a special type of COMPLETION, that of an economic DUE VALUE (Ioannou 2018), is facilitated by a generic space that can encompass both senses, that of FULFILMENT: on the part of COMPLETION that of a DUE\_PRICE, whereas on the part of SATISFACTION that of the SELLER. Accordingly, the context of a COMMERCIAL TRANSACTION is perspectivised through the notion of COMPLETION, in the name of what the two possess as common ground: the notion of FULFILMENT. The following schema depicts the relation:

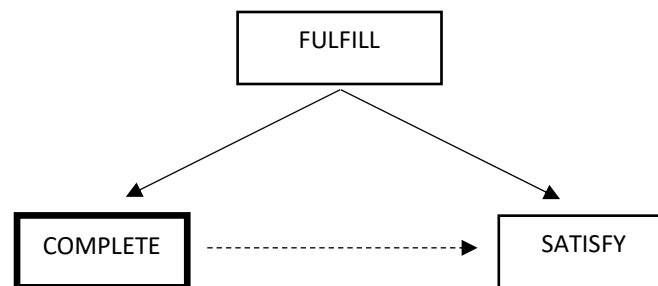


Figure 15. *FULFILL as Generic Space*

What about the emergent structure? This, according to Fauconnier & Turner (2002), must be a selective merge of the inputs, with the presence and elaboration of elements that are not present in those. In a relevant sense, it is also an elaboration of the generic space itself, which is an immanent schematisation of the emergent structure. Thus, I argue that the sense of PAY, eventually entrenched as the Modern Greek sense for the term, is precisely the emergent structure. Completion of a DUE PRICE and the satisfaction of a seller come together, generating the newly sense of GIVE MONEY, which as an emergent structure contains emergent properties not found before in the inputs. At the same time, it can be seen as an elaboration of the sense of FULFILL, the latter being schematically immanent in the act of paying a price as fulfilling both the due value as well as the expectation of the seller. The evolution of the term in a framework that unifies polysemy with conceptual integration for the period under analysis, can be schematically depicted as in Figure 16:



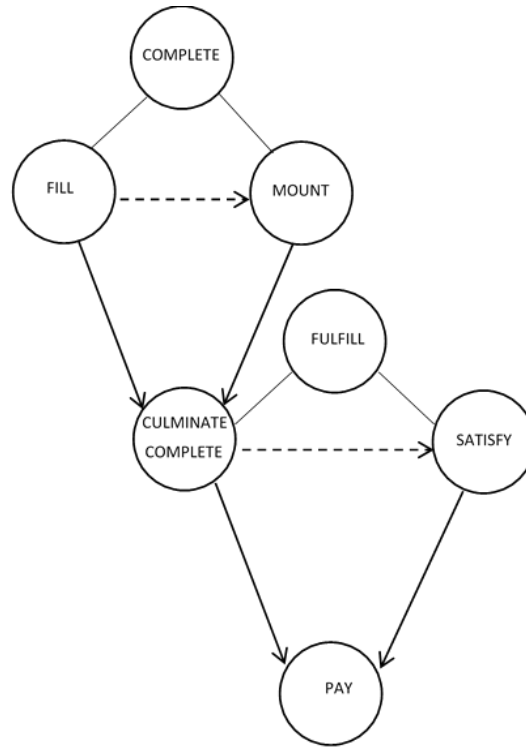


Figure 16. *partial conceptual integration network for plērōō*

## 5. Conclusions

This work has been a theoretical and methodological exploration into the possibility of a unification between phenomena traditionally treated as ad hoc conceptual integration on the one hand, and sense extension in the context of polysemy, on the other. It was argued that, from an onomasiological perspective, polysemy involves an ad hoc component, whereby the choice of a term whose use is entrenched for some situation, bears a construing import into another situation under onomasiological negotiation. The perspectivisation of the ontology of this second situation, through the conceptualisation conveyed by the chosen term, was seen as resulting to a partial overlapping between the two situations, namely a conceptual integration. In this light, and in the context of a behavioural-profile analysis for the Ancient Greek *plērōō*, the spaces of this integration were put under closer examination so that the possibility of their identification with featural clusters within a multiple correspondence analysis was tested.

To this end, the visualisation of MCA for the diachronic evolution of *plērōō* for three successive states of its evolution from 6<sup>th</sup> to 3<sup>rd</sup> c. BCE, was examined. The MCA plots obtained for the term, originally meaning FILL and evolved to mean PAY in Modern Greek, were analysed. It was shown that the use of MCA plots, if accompanied with the depiction of the confidence ellipses around the centroids of the senses mapped, may actually give support to the treatment of polysemy as conceptual integration.

The most interesting aspect of the distribution of the confidence ellipses across the MCA plots lies in the detection of specific senses, lexically attested, that overlap partially with the ellipses of others and manifest two important properties: first, comprising the union of a subset of the semantic and syntactic features that make up the other senses; second, being more schematic in comparison to them. These two characteristics were shown to match two requirements for a categorising generic space: underspecify the senses they categorise and be



immanent to them. Thus, for the pair of the featural clusters that make up FILL and CULMINATE/MOUNT, the sense of COMPLETE constitutes a gestalt more schematic but at the same time immanent to both. It thus mediates between the two, representing a kind of common ground that possibly facilitates the integration of the aforementioned senses. COMPLETE, in this light, is the generic space that mediates between the two senses, facilitating the integration to take place and situations of CULMINATION to be perspectivised as ones of FILLING, when actually no filling takes place in term of the situation's ontology. A similar case is represented by the evolution of the cluster of COMPLETION/CULMINATION to that of SATISFACTION. The space that lies between is filled by the -partially overlapping with both- sense of FULFILL. Knowing that the new context that the term of *plērōō* eventually enters is that of COMMERCIAL TRANSACTION, we can understand how the immanence of FULFILL to both COMPLETE and SATISFY is instantiated. For COMPLETION, it represents the fulfilment of a DUE\_PRICE, whereas for SATISFACTION that of the expectation of a SELLER. Insofar as the emergent structure is concerned, this can be identified with the sense of PAY, which is the sense that eventually got entrenched in Modern Greek for the term. This distinction between schematic and more elaborated meaning may also be a fruitful way for dealing with the double facet of prototypicality: the one related mostly to concerns of categorisation and the other related to (arche)typicality, termed also "schematic" prototypicality and prototypicality of "centrality", respectively.

Someone could also speculate further on the dynamics of the system that may necessitate that evolution of a term from one sense to the other take place gradually and not "in jumps". It may be that conceptual under-specification between two senses curves on a conceptual plane the path through which these two senses meet, so that in a new context their common ground is elaborated into a new, specific to the situation and entrenched lexical meaning.

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## APPENDIX

What follows are three tables that summarise the results of the MCA performed for each period (see Ioannou 2017, 2019). These have been performed using *R*-code, annotating for all aforementioned formal/constructional and semantic features. On the basis of *R*<sup>2</sup> indicator for each variable, there have been reported all cases that exceed 0.4, taking the latter to be a plausible cut-off point between moderate and weak association of the variable with the dimension contributing to variation, on a par with *R*<sup>2</sup> in linear regression models. The same has been applied for the estimation of the features that instantiate the variables. The positive and negative signs represent the polarisation of the features for each variable. Practically, whereas features with the same sign appear attracted in a plot that maps feature associations, polarised features are expected to lie at a lesser or greater distance. The tables gloss the results of these maps:

<i>Table 1. Contribution of variables in dim.1 for 6th/5th c. BCE.</i>					
VARIABLE		INSTANCE			
		+		−	
CONSTR	0.89	SG	0.88	SO	0.98
PATIENT	0.72	PERSON	0.77	VEHICLE	0.68
		BODY_ORGAN	0.74		
		BODY_PART	0.64		
		BODY	0.60		
VOICE	0.60	P	0.74	A	0.43
AGENT	0.59	Ø	0.57	PERSON	0.68
FILLER	0.58	PERCEPT	0.90	Ø	0.98
		ABSTR_OBJ	0.53		
		GAS	0.51		

Table 2. Contribution of variables in dim.1 for 4 <sup>th</sup> c. BCE.					
VARIABLE		INSTANCE			
		+		−	
CONSTR	0.82	SO	0.61	SG	1.1
				SFg	1.0
PATIENT	0.66	VEHICLE	0.79	B_ORGAN	0.64
				PERSON	0.54
				NAT_LOCATION	0.53
VOICE	0.60	M	0.94	P	1.10
FILLER	0.56	Ø		FEELING	0.9
				SUBSTANCE	0.57



<b>Table 3. Contribution of variables in dim.1 for 3<sup>rd</sup> c. BCE.</b>				
VARIABLE		INSTANCE		
		+		—
CONSTR	0.85	SFg SG	1.19 1.08	SO 0.86
VOICE	0.73	P	0.65	R 0.65 A 0.63
PATIENT	0.64	NAT_LOCATION PERSON BODY_ORGAN	0.64 0.67 0.61	ARTIFACT 1.12 DUE 1.08 FEELING 0.98 VEHICLE 0.90 BODY_PART 0.76 SPEECH 0.69
AGENT	0.62	Ø	0.84	ANIMAL 0.62
FILLER	0.52	PROPERTY LIQUID GAS	0.78 0.46 0.43	Ø 0.77
TENSE	0.44	PRES_PERFECT PAST_PERFECT	0.53 0.74	PRETERITE 1.37 PAST 0.67

The formal features that are coded for are the following: VOICE, TENSE, MOOD and CONSTRUCTION. The levels that code for VOICE are ACTIVE, PASSIVE, MIDDLE and REFLEXIVE. The TENSE has been coded for PRESENT, AORIST (coded as PAST), FUTURE, PRESENT\_PERFECT and PAST\_PERFECT. MOOD is coded for INDICATIVE, SUBJUNCTIVE, IMPERATIVE, OPTATIVE. INFINITIVE and PARTICIPLE have been also added as special subcases of INDICATIVE realisation, as they are clearly distinguished from the verbal declination by person and they hold a great role in the perspectivisation of a scene. Finally, The CONSTRUCTION type is coded for a series of syntactic construals, explicated in table 4 for the FILL meaning:

<b>Table 4. CONSTRUCTION TYPES</b>				
SOG	Nom. Subject	Acc. Object	Gen. Filler	<i>Agentive filling of a container with an explicit filler</i>
SO	Nom. Subject	Acc. Object		<i>Agentive filling of a container with implicit or absent filler</i>
SG	Nom. Subject		Gen. Filler	<i>Passive pattern of a container filled by a filler</i>
SgO	Nom. Subject	Acc. Object		<i>Filling of a container through a non-agentive filler</i>
S	Nom. Subject			<i>Non-agentive filling without explicit or implicit filler</i>
SOFg	Nom. Subject	Acc. Object	Dat./PP Filler	<i>Agentive filling of a container via a third means or instrument</i>



# **Changes in the Middle English vocabulary: chronological stratification of occupational terms**

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*The article is devoted to the chronological issues of language development. The research methodology combines traditional linguistic methods with new systemic functional techniques for the reconstruction of the evolution of the semantic system. The purpose is to reveal the changes in the semantic group of occupational terms, basing on the dates of the first written attestation of native vocabulary (as opposed to loan-blends and lexical borrowings). The results prove the relevance of dichotomy of occupational terms into appellatives and anthroponyms as to the kinds of nominative function they performed – classification (categorization) and identification (individualization). This functional approach to language study made it possible to obtain new data as to the stages of formation of the semantic group of occupational terms. Stratification of the vocabulary by means of delimitation of archaic and neologic words resulted in creating the vivid picture of vocabulary enrichment and evolutionary processes in the semantic system of the English language.*

**Keywords:** *archaism, chronological stratification, Middle English, neologism, occupational term, semantics.*

## **1. Introduction**

The issues of language development and language interference were the focus in the works of Wilhelm von Humboldt, Jacob Grimm, Friedrich Schlegel, August Schleicher, Heymann Steinthal, Hermann Paul, Berthold Delbrück, Hermann Osthoff, Karl Brugmann, Antoine Meillet, Charles Bally, Ismail Sreznevsky, Alexander Potebnya, Jan Baudouin de Courtenay et al. Their diachronic studies are based on the principle of historical attitude towards the language phenomenon. Alongside with the linguistic component of pursuing the process of semantic system formation by means of native and borrowed resources both in synchrony and diachrony, its timing and accurate dating are equally very important. Touching upon the issues of formation of the English national literary language, Yartseva (2004) notes that one of the most difficult items for the study of the history of language is the accuracy of the date of attestation of the borrowing in the written monuments – it might not coincide with the date of the appearance of this word in spoken language, as far as the genre variety and subject matter of the document are the facts that determined the choice of words (Yartseva 2004: 65). Yartseva (2004) emphasizes that a real skepticism on the part of philologists arose as to O. Jespersen's calculations of French borrowings in the English language, as far as it turned out that according to the Oxford English Dictionary, the maximum number of words of French origin recorded in the monuments dates back to the 14th century, when French was no longer a national language in England. Besides, the most interesting item is not the mere appearance of the borrowed word, but the very process of its rooting in the vocabulary of the English language (Yartseva 2004: 66).

The important issues of language evolution are to be pursued in the parameters of the complex dynamic adaptive system, especially on the basis of the numerical empirical material within the long chronological period (viz. modern and very prospective



multidisciplinary approaches to surname study aiming at the creation of large surname databases to statistical study of their changes, development, and distribution) (Hanks & Parkin 2016). A valuable object for linguistic analysis is the *lexical semantic group of occupational terms*, constituting a widely represented and constantly supplemented system of words with the diverse structure, semantic peculiarities and a long history. Many papers on historical linguistics, which present occupational terms used as surnames, had become the sources of English historical lexicology and personal names study (Ekwall 1947, Fransson 1935, Mills 1968, Otto 1938, Reaney 1966, 1967, Tengvik 1938, Thuresson 1950). Occupational terms have long been in the focus of scholarly works, in particular the aspects of external and internal factors of their development, as well as their structure and functioning in modern English are viewed in cognitive aspect and that of onomasiology (Bernatskaia 1995, Davydova 1990, Khalilova, 1975, Liapkova 2006, Shilova 2006). Middle English *nomina agentis* have been studied as to their structural peculiarities (Kuznetsova 1984, Nikitina 2005). Old English and Middle English occupational terms are pursued in the aspect of onomasiology (Solonovich 1986); several researches have been provided as to the functional and semantic issues of Middle English occupational terms (Dobrovolska 2016, 2017). The role of medieval occupational terms as one of the main sources of family names (medieval bynames and hereditary surnames) was great (Reaney 1966, 1967). Concerning their meaning in the general context of semantics of bynames, occupational terms are referred to *the semantic category of social function* (Brylla 2016). In Middle English they fulfilled both the functions of classification (as appellatives) and identification (as anthroponyms), as far as the official identification of the person by means of the occupational term coincided very often with the person's real occupation or position (Reaney 1966, 1967; Brylla 2016).

The following *general issues* of the study of occupational terms within the Middle English period are in the focus of our research: 1) functional differentiation, taking into account the basic division of all the nominative units into appellatives (*the function of classification*) and anthroponyms (*the function of identification*); 2) etymological grouping according to the origin of their motivational bases (*native, hybrid and borrowed vocabulary*); 3) semantic grouping according to their lexical meanings. *The general object* of our investigation is the Middle English semantic system, in particular the semantic group of occupational terms as its functional, etymological and semantic subsystems; the *partial object* of our paper is the *etymological subgroup of the terms of native origin*.

*The general aim* of our investigation is to reconstruct the development of the semantic group of Middle English occupational terms; *the partial aim of our investigation*, which is reflected in this paper, is to reconstruct the issues of replenishment of the semantic group under study with the terms of native origin. We set forth the following *particular task*:

- 1) collect occupational terms on the basis of historical dictionaries;
- 2) group occupational terms as to their origin / the origin of their word-stems;
- 3) distribute the occupational terms of native origin within three functional groups as to the kinds of nominative function they perform, in particular: a) the group of occupational terms with both kinds of the nominative function (the function of classification as in appellatives and the function of identification as in anthroponyms); b) the group of occupational terms with the function of classification (appellatives); c) the group of occupational terms with function of identification (anthroponyms);
- 4) fulfil chronological stratification of the first written attestations of native occupational terms, separately as appellatives and as anthroponyms;



5) analyse the subgroup under study as to its ‘qualitative composition’ in the Middle English period, i.e. highlight Old English words (the archaisms among them), Middle English words (and those which disappeared by the beginning of the Modern English period), as well as neologisms which appeared in Middle English with the only function of identification as anthroponyms and become appellatives in Modern English;

6) fulfil semantic grouping of occupational terms according to their lexical meanings;

7) give comparative characteristics of the phenomena observed;

8) represent the language material under study within three functional groups, two chronological lines and five ‘qualitative strata’, as well as the subgroups of semantic classification, then display in tables the data of calculations obtained in the absolute and relative quantitative numbers.

## 2. Methods

We use the following *methods of investigation* – the general scientific inductive-deductive method is the main one for reconstruction of the development of the semantic system (especially the techniques for the study of the lexicographic sources, theoretical analysis of the linguistic sources, analysis of the vocabulary definitions, techniques for thematic and semantic classifications, etymological analysis, morphemic analysis, techniques for linguistic interpretation, quantitative analysis and the language attribution of its results), the linguistic comparative historical method (especially the comparative lexicographic analysis of the data of historical dictionaries). We used the following *techniques for the reconstruction of the evolution of semantic system*:

1) delimitation of occupational terms into the functional layers of appellatives and anthroponyms on the basis of the kinds of nominative function they fulfil (viz. the differentiation of *categorial* and *proprial meaning*) (Nyström 2016), in particular the function of *classification (categorization)* and the function of *identification (individualization)* (viz. dichotomies *name-appellative, lexicon-onomasticon*) (Nyström 2016);

2) compilation of the following three groups of words:

(a) occupational terms which were used both as appellatives and anthroponyms, i.e. fulfilled two kinds of nominative function;

(b) occupational terms which were only used as anthroponyms, i.e. fulfilled only the function of identification (as far as the in the Middle English period these occupational terms only functioned as the anthroponyms, our linguistic knowledge about them is only based on the data of anthroponyms, therefore we treat these occupational terms as reconstructed on the basis of Middle English anthroponyms and mark them with \*);

(c) occupational terms which were only used as appellatives (i.e. fulfilled the only function of classification);

3) on the basis of functional distribution, further chronological delimitation of the first written attestations of occupational terms as appellatives and anthroponyms;

4) on the basis of functional and chronological distribution, further analysis of the qualitative composition of the semantic group within the Middle English period, especially stratification of the following groups:

(a) words dating back to the Old English period, which functioned as appellatives and anthroponyms in Middle English and continued to exist in Modern English;



(b) Old English archaisms (i.e. the word which only functioned as anthroponyms in the Middle English period and were completely outdated by the end of this period of language development);

(c) words, which arose in the Middle English period, functioned both as appellatives and anthroponyms and continued to exist in Modern English;

(d) words, which originated in the Middle English period, only functioned as anthroponyms and then disappeared by the end of this period;

(e) neologisms, which arose in the Middle English period, only functioned as anthroponyms, and then in the Modern English period started to be used as appellatives too.

### 3. Data and generalizations

#### 3.1 Functional differentiation of occupational terms

After processing of the data of historical dictionaries, we distribute the occupational terms into *three groups as to the origin of their word-stems*: a) native vocabulary, b) loan-blends, and c) loan-words. Then we divide 1134 words of native origin into *three groups as to their functioning in the Middle English period*:

(a) 420 words (37%) performing both kinds of the nominative function, i.e. the functions of classification (i.e. appellatives) and the functions of identification (anthroponyms, in particular medieval surnames or bynames), e.g.:

**tauier** ‘one who prepares animal skin or hides for use by dressing, curing, or treating them, a tawer’ 1320 MED, ‘one who taws; one who prepares white leather; white-tawer’ 1311 OED > *Tower* 1255, *Tawyare* 1274, *Tawyere* 1275, *Touere* 1275, *Teware* 1275, *Towyere* 1280, *Tawyere* 1280, *Tawere* 1286, *Tauier* 1300, *Tawyer* 1320, *Tawyare* 1324, *Tawiere* 1332, *tawiere* 1334, *Tawar* 1381, *tawier* 1384;

**whīt~tawier(e)** ‘one who taws animal skins to produce a stiff, white leather, which may undergo further finishing steps, such as dyeing and softening’ 1346 MED, ‘one who taws skins into white leather’ 1284 OED > *Wittauuere* 1224, *Wittowiere* 1246, *Wytewere* 1279, *Wittowere* 1279, *Wyttawyere* 1285, *Whythawere* 1309, *whyttawyere* 1333, *Whitouer* 1364, *wythhawere* 1365, *Whitagheres* 1374, *White tawyer* 1411, *whitawier* 1415, *whittawier* 1439, *Wittowiere* 1224-46, *Wytetawere* 1272-81, *Wittowere* 1279, *Wytetawere* 1279, *Huittawiere* 1279-80, *Witthawyere* 1280, *Whytauwyere* 1280, *Wyttowier* 1281, *Wyttawyere* 1285, *Wytawere* 1288, *Wythhawere* 1296, *Wytchanwere* 1296, *Whyttowere* 1298, *Whythawere* 1309, *Whitawyer* 1311, *Whyttawwyar* 1313, *Quyttower* 1316, *Whitouer* 1364;

(b) 562 words (50%) performing the only function of identification (i.e. anthroponyms):

**hird(e)ler** ‘a maker of hurdles; only in surnames’ MED > *Herdlere* 1279, *Herdler* 1283, 1334, *hirdler* 1288, *Hirdeler* 1387-8, *Herdelere* 1412;

**hegġer** ‘a hedge-maker, hedge repairer’, in surnames only – MED > *Heger* 1286, *Hegger* 1327, 1370;

**pilcher(e)** ‘a maker or seller of pilches; only in surnames’ MED > *Pullchare* 1214, *Pilchere* 1271, 1275, 1301, 1317, *Pilkere* 1279, *Pylechere* 1296, *Pilcher* 1303, *Pilker* 1305, *Pulchere* 1310, *Pilicher* 1327, *Pulcher* 1332, *Pylchere* 1392;



c) 152 words (13%) performing the only function of classification (appellatives):

*göld~smithesse* [< göld-smith] ‘a female worker in gold’ 1450 MED;

*wöl~webbestere* ‘a weaver of wool’ 1378 MED;

*pilche~makere* ‘a maker of pilches’ 1483 MED.

### 3.2 Chronological stratification of occupational terms

Chronological stratification of the first written attestations of occupational terms is presented within the periods of the English language development (the most common is the division into Old English (449 – 1066), Middle English (1066 – 1475) and Modern English (1476 – for nowadays). With the aim to study the history of native occupational terms, we notice their first written attestations; as concerns the first functional group, we notice two written attestations of occupational terms: 1) as appellatives and 2) as anthroponyms, combining the same graphic variants of the names and arranging the dates of their first written attestations in the form of *chronological lines* in order to study the dynamics of occurrence of vocabulary in the Middle English period, e.g.:

*thaccher(e)* ‘one who covers the roof or walls of a building with thatch or other material’ 1312 MED, ‘one who thatches; esp. one whose business it is to thatch houses, corn or hay ricks, etc.’ 1440 OED < *thatch, thack* v. ‘to put thatch on houses’ 1100 OED; ‘to cover (a roof) or roof (a house) with thatch, formerly also with lead, tiles, etc.’ 1440 OED (*Thecker* 1199, *Theccher* 1251, 1333, *Thechare* 1273, 1327, *Theker(e)* 1273, 1297, *Thacchere* 1275, 1303, 1339, *Tecchere* 1277, *thacherer* 1286, *Thecetere* 1311, *Thatcher* 1312, 1327, *Thaker* 1316, *3acheare* 1321-2, *thekker* 1327, *Thecchare* 1327, *Thecchar* 1327, *Thechar* 1327, *Thatchere* 1327, *Thecher* 1327, *Thechere* 1327, *Theckere* 1332, *Thachar* 1332, *Thakker* 1336, 1466, *Thakkere* 1339, 1432, *Thaccher* 1364, *Thaichere* 1401, *Thecchere* 1408;

*sauer(e)* ‘one who saws, a sawyer’ 1350 MED, ‘a workman whose business it is to saw timber, esp. in a saw-pit’ 1350 OED (*Saer* 1202, 1204, 1465-87, *Suir* 1222, *Syur* 1225, 1286, *Sauur* 1230, *Sagyere* 1248, *Sawer* 1257, 1281, 1299, 1465-87, *Sauuer* 1257, *Sawerys* 1267, *Saur* 1268, *Sayhare* 1270, *Sawere* 1270, *Saweare* 1270, *Sawier* 1278, *Sawyer* 1279, 1381, *Saihiere* 1279, *Sawiere* 1281, *Sayer* 1284, *Sahar* 1285, *Sayur* 1286, *Sauwyer* 1288, *Sayer* 1289, *Sahar* 1297, *Sagher* 1297, 1374, *Sauare* 1297, *Saygher* 1301, *Sayeres* 1310, *Sayheres* 1311, *Sawyers* 1312, *Saghare* 1313, *Saghiare* 1313, *Sawyare* 1313, *Ciour* 1316, *Syour* 1316, *Sagher* 1324, *Saghier* 1327, *Saghiere* 1327, *Saweyer* 1327, *Sauger* 1327, *sagere* 1329, *Saghiar* 1332, *Suwyar* 1332, *sagher* 1345-6, *Sawyere* 1380-81, *sahier* 1392, *Saweer* 1404-5, *Sawior* 1431, *Sare* 1465-87, *Saare* 1465-87).

On the basis of two chronological lines, we draw the conclusions about the dynamics of replenishment of the semantic group under study (in particular native vocabulary as its subsystem) within the Middle English period. Here are the relative and absolute figures of our calculations concerning the first written attestations of the words performing both kinds of nominative function, i.e. as appellatives and as anthroponyms:

(a) *the chronological line of appellatives*: the 10<sup>th</sup> century (27 words – 6%); the 11<sup>th</sup> century (33 words – 8%); the 12<sup>th</sup> century (13 words – 3%); the 13<sup>th</sup> century (42 words – 10%); the 14<sup>th</sup> century (116 words – 28%); the 15<sup>th</sup> century (189 words – 45%);

(b) *the chronological line of anthroponyms*: the 10<sup>th</sup> century (6 words – 1%); the 11<sup>th</sup> century (15 words – 4%); the 12<sup>th</sup> century (62 words – 15%); the 13<sup>th</sup> century (230 words – 55%); the 14<sup>th</sup> century (88 words – 21%); the 15<sup>th</sup> century (19 words – 4%).



Having compared these chronological lines, we observe a considerable rectification of the dates of appearance of the vocabulary under study in the Middle English period, in particular the transition of the dates of their first attestation on earlier times (even several centuries earlier): the largest number of the dates of their first attestations as anthroponyms refers to the 13<sup>th</sup> century (55%) and the 14<sup>th</sup> century (21%), while the largest number of the dates of their first attestations as appellatives refers to the 14<sup>th</sup> century (28%) and the 15<sup>th</sup> century (45%). Thus, in the dynamics of replenishment of the semantic group with native vocabulary, which performed two functions, we notice a very quick increase of its appearance in the 13<sup>th</sup> century.

Concerning the words performing the only function of identification (as anthroponyms), *the chronological line of the first written attestations* are the following: the 10<sup>th</sup> century (3 words – 1%); the 11<sup>th</sup> century (9 words – 2%); the 12<sup>th</sup> century (42 words – 7%); the 13<sup>th</sup> century (252 words – 45%); the 14<sup>th</sup> century (208 words – 37%); the 15<sup>th</sup> century (48 words – 8%). The largest number of the occupational terms, which only functioned as anthroponyms, was first attested during the 13<sup>th</sup> century (45%) and the 14<sup>th</sup> century (37%). Thus, in the dynamics of replenishment of the semantic group with native occupational terms, which performed the only function of identification, we notice a rapid increase of its appearance in the 13<sup>th</sup> – the 14<sup>th</sup> centuries, as well as its decline in the 15<sup>th</sup> century.

Concerning the words performing the only function of classification (as appellatives), *the chronological line of the first written attestations* are the following: the 12<sup>th</sup> century (7 words – 5%); the 13<sup>th</sup> century (21 words – 13%); the 14<sup>th</sup> century (42 words – 29%); the 15<sup>th</sup> century (82 words – 53%). In the dynamics of replenishment of the semantic group under study with native vocabulary, that performed the only function of classification, we notice its very gradual appearance starting from the 12<sup>th</sup> century, as well as its rapid increase in the 15<sup>th</sup> century.

Having combined all the chronological data of three functional groups of occupational terms under study, we notice the following difference between the chronological lines of their first written attestations: the largest number of the first written attested *appellatives* belong to the 15<sup>th</sup> century (271 words – 47%), whereas the largest number of the first written attested *anthroponyms* belong to the 13<sup>th</sup> century (482 words – 49%). In the next two tables we give these data in absolute and relative numbers.

Table 1: The first written attestations of the occupational terms used as appellatives

Century	10th	11th	12th	13th	14th	15th	Total
Total	27	33	20	63	158	271	572
Ratio (%)	5	6	3	11	28	47	100

Table 2: The first written attestations of the occupational terms used as anthroponyms

Century	10th	11th	12th	13th	14th	15th	Total
Total	9	24	104	482	296	67	982
Ratio (%)	1	2	11	49	30	7	100

Thus, our knowledge of appearance of native vocabulary, subject to the data of anthroponymy basing on chronology of its first written attestation, is much rectified as compared with the data of appellatives, in particular the following phenomena have been noticed:

1) transition of maximum of the first attested occupational terms on much earlier times, especially from the 15<sup>th</sup> century to the 13<sup>th</sup> century;



2) almost double increase in number of the occupational terms first recorded in the written monuments in the 14<sup>th</sup> century.

### 3.3 *Qualitative stratification of occupational terms*

On the basis of lexicographic data, we determine the following five ‘qualitative groups’ of native occupational terms in the Middle English period:

- 1) words dating back to the Old English period and continuing their functioning as anthroponyms and appellatives in Middle English and Modern English;
- 2) archaisms coming from the Old English period, which in the Middle English period only functioned as anthroponyms, and were outdated by the beginning of Modern English period;
- 3) words, which arose in the Middle English period, functioned both as appellatives and anthroponyms, and then continued to exist with these functions in Modern English;
- 4) words, which originated in the Middle English period, only functioned as anthroponyms and did not continue their existence in Modern English;
- 5) neologisms, which arose in the Middle English period, only functioned as anthroponyms and later in the Modern English period started to be used as appellatives.

#### 3.3.1 *Middle English anthroponyms and appellatives originated in Old English*

As to our calculations, 93 words originated in Old English (the number, which according to the findings of Solonovich (1986) constituted 25% of the total number of Old English occupational terms) and continued their existence in the Middle English period, as well as in the Modern English period. They performed both the functions of classification and identification, some of them subjected to semantic development, especially that of changing or expanding the lexical meaning, for example:

***lēdere*** [OE *lædere*] ‘a cart driver’ 1300 OED, 1325 MED; ‘an animal keeper’ 1385 MED; ‘one who assists or directs a handicapped person on his way’ 1384 MED; ‘a carrier, porter’ 1423 MED; ‘a guard convoying a prisoner’ 1450 MED;

***lēpere*** [OE *hlēapere*] ‘one who jumps’ 1300 MED; ‘one who runs; ?a messenger, ?a courser’ 1376 MED; ‘a dancer’ 1475 MED;

***potter*** [LOE *potter*] ‘a maker of pots, or of earthenware vessels’ 1100 OED, 1200 MED; ‘a maker of metal pots, vessels, or other objects of metal’ 1440 OED, 1440 MED; ‘a vendor or hawker of earthenware’ 1500 OED;

***tapper(e)*** [OE *tæppere*] ‘one who taps casks or draws liquor; a tavern-keeper = tapster’ 1000 OED, 1225 MED; ‘a retailer’ 1478-9 OED);

***tappester(e)*** [OE *tæppestre*] ‘a female tapster, barmaid, an alewife; a tavern hostess’ 1000 OED, 1387-95 MED; ‘one who draws and sells ale, a tapster; a tavernkeeper’ 1400 MED; ‘a man who draws the beer, etc. for the customers in a public house; the keeper of a tavern’ 1400 OED, MED; ‘one who sells by retail or in small quantities’ 1402 OED;

***toller(e)*** [OE] ‘one who takes toll, a toll-collector; a tax-gatherer, publician’ 1000 OED ‘a tax collector, toll gatherer’ 1150 MED, ‘?a usurer’ 1390 MED;

***webbest(e)*** [OE *webbestre*] ‘a weaver: as the designation of woman 1100 OED; extended, or applied to a male weaver’ 1362 OED; ‘one whose occupation is weaving, a weaver; a member of a weavers’ guild’ 1382 MED.



### 3.3.2 Archaisms originated in the Old English period

We have established the list of 8 Old English words, which became archaic during the Middle English period. They were only used in the function of identification and did not belong to the fund of Middle English appellatives. The semantic grouping of these words is as follows:

#### (a) archaisms in the subgroup of the names of artisans:

\***bēter** [OE *bēatere*] 1) ‘one who grinds spices’ MED; 2) ‘one who beats cloth, a fuller’ MED; 3) ‘a metal-worker’ MED > *Batere* 1166, *Better* 1200, *Bettre* 1256, *Betere* 1275, 1325, *Batur* 1292, *Bethir* 1327, *Betare* 1327, *Bettere* 1340;

\***milne~ward** [OE *mylen-weard*] ‘keeper of a mill, miller’ MED, ‘originally, the keeper of a (manorial) mill; in late use = miller’ 1000 OED > *Milward* 1260, *Milleward* 1279, 1429, *Mulvard* 1286, *Meleward* 1296, *Milneward* 1300, *Moleward* 1327, *Moleward* 1327, *Muleward* 1332, *Mileward* 1352, *Mylleward* 1413, *Milleward* 1428, *Muleward* 1432;

\***webbe** [OE *webba* & *webbe*] ‘one whose occupation is weaving, a weaver; also, a member of a weavers’ guild’ MED > *Webba* 1100-30, 1293, *Webbe* 1221, 1247, 1274, 1345-6, 1356, 1407, 1444;

#### (b) archaisms in the subgroup of the names of sailors:

\***sē-man** [OE *sæ-mann*] ‘a sailor’ MED > *Seman* 1250, 1305, *Sceman* 1275, *seman* 1419;

#### b) archaisms in the subgroup of the names of farmers:

\***mēder** (*meader* [OE *mæðere*] ‘a mower’ OED, *mēde* [OE] ‘a meadow’ MED) > *Meder* 1180, *Medier* 1200, *Medarius* 1188, *Meder* 1332;

\***oxan~hērd(e)** (*oxanhyrda*, *oxanhyrde* [OE] 1000 OED, *ox(e)* [OE *oxa*] in OE. in gen. sing. *oxan* or gen. pl. *oxena*) 825 OED) > *Oxenhird* 1301, *Oxenhurde* 1327, 1333;

\***sēder(e)** (*sædere* [OE] ‘sower’ 950 OED) > *sedere* 1221, 1263, *Seder* 1263, 1296, 1317, *Sedare* 1327, *Sedere* 1394;

\***swīne~hērd(e)** [OE *swīn-hyrde*] ‘one who tends swine, a swineherd’ MED, swineherd ‘a man who tends swine, esp. for hire’ 1100 OED; *swine* [OE *swīn*] 725 OED & *hērd(e)* [OE] ‘a herdsman; a keeper of cattle, hogs, horses, goats, or any kind of livestock’ 1150 MED, 725 OED) > *Swynhirde* 1310, *Swyherd* 1316, *Swynhird* 1323, *Swynhurde* 1327, *Swynherde* 1327, *Swynerde* 1332, *Swynerd* 1332, *Swynhird* 1346, *Swynhurde* 1387.

### 3.3.3 Neologisms in the semantic group of Middle English occupational terms

On the basis of comparative analysis of historical lexicographic data concerning the first written attestations of occupational terms, we have revealed neologisms among the occupational terms which in the Middle English period functioned only as anthroponyms. As to their structure, they are suffixed derivatives or compounds with Middle English words as their motivational basis. Their first written attestation as appellatives belong to the Modern English period, whereas their first attestation as anthroponyms belong to the Middle English period. On the grounds of the identity of their motivational bases in Middle English and Modern English, we assume their appellative meaning in the Middle English period to be identical of the semantics of the Modern English derivatives, the formulation of which is presented in historical and etymological lexicographic sources.

Lexical synonyms and all the graphic variants of these neologisms are presented in the chronological line with all the dates of their attestations as anthroponyms, as well as the first



attestations of these words as appellatives in the Modern English period, together with their definitions as to the historical dictionaries. Totally, there are 76 neologisms among the occupational terms of native origin, which existed in Middle English as anthroponyms and only became appellatives in the 16<sup>th</sup> – 19<sup>th</sup> centuries:

(a) *neologisms in the semantic subgroup of the names of artisans*

*The names of weavers:*

- \***blāker** ‘one who dyes or colors things black’ MED, blacker ‘one who or that which blacks’ 1632 OED (*blāken* v. [from *blāk* adj. (OE *blæc*)] ‘to make black, blacken’ 1333 MED; cf. blackener ‘he who or that which blacks’ 1632 OED) > *Blakere* 1047-64, *Blacker* 1246, 1434, *blaker* 1291, *Blackiere* 1293, *Blaker* 1296, 1431, *Blackere* 1312, *Blakar* 1327, *Blakiere* 1332, *Blacker* 1333;
- \***clōth-man** ‘a maker or seller of cloth’ MED, 1538 OED (*clōth* [OE *clāþ*] ‘a piece of woven or felted fabric; a cloth’ 1150 MED) > *Clothman* 1416);
- \***cōmber** ‘one who cards wool or makes cards’ MED, ‘one whose business is to comb wool’ 1648 OED (\**cōmben* v. ‘to card’ MED, *cōmb* n. [OE *camb*, *comb*] ‘a comb for carding wool, a card’ 1300 MED) > *Comberre* 1200, *Kamber* 1202, *Cambere* 1201-2, 1220, *Combere* 1286, *Comere* 1286, *Comber* 1301, 1341, *Camere*, *Camber*, *Comber* 1359-60;
- \***felter** ‘one who makes, or works with, felt’ MED, 1605 OED (*felten* v. ‘to make (something) of felt’ 1330 MED; *felt* [OE] ‘the fabric felt’ 1440 MED) > *Feltere* 1220, 1275, 1280, *Felter* 1273, 1275, 1332, *Veltere* 1279;
- \***stēper** (*steeper* ‘one who steeps; one who carries out the operation of steeping flax, wool, etc.’ 1611 OED) < *stēpen* v. [OE] ‘to soak (sth.) in liquid’ 1325 MED) > *Stepere*, *Stupere* 1327;
- \***throuer** ‘one who converts raw silk into thread’ MED, ‘one who twists filaments of silk into silk thread; a throwster’ 1621 OED (*throuen* v. ‘to curl (hair); turn (sth.) on a lathe; also, fashion (sth.), craft’ 1225 MED) > *Thrower* 1282, *Threwere* 1292, *Throwere* 1293, 1393, *Trawler* 1319, *Praweres* 1301, *Trowere* 1327, *Trower* 1332, *thrower* 1358;
- \***wōl~wīnder(e)** ‘a worker who winds spun woolen yarn or thread in coils or onto a reel’ MED, ‘a worker in the textile trade who winds wool, yarn, thread, etc.’ MED; wool-winder ‘one who ‘winds’ or packs up fleeces for transport or sale’ 1523 OED; cf. *wīndestre* ‘a female winder of wool, silk, etc.’ 1376 MED (*wōl* [OE *wul(l)*, *wulle* & *wyll*] ‘the hair or coat of a sheep or lamb, fleece; also, the hair or fur of other animals’ 1350 MED; *wīnden* [OE *windan*] ‘to revolve, turn; move in a circular pattern’ 1225 MED) > *wolwinder* 1409.

*The names of tailors:*

- \***hōd~maker** MED, 1530 OED (*hōd* [OE] ‘a hood for men or women attached to an outer garment or worn as a separate head-covering with or without attached shoulder cape; often worn under a hat’ 1325 MED, ‘a mail covering for the head and neck, coif of mail’ 1200 MED;
- māker(e)** (from *māken* v. [OE *macian*]) ‘a maker, manufacturer, builder’ 1347 MED) > *Hodmaker* 1361, *Hodemaker* 1393.

*The names of artisans involved in the leather industry:*

- \***bōk~makere** (*bookmaker* ‘one who makes a book (as a material product); a printer and book-binder’ 1515 OED, cf. *bōk~bindere* ‘one who binds books’ 1399 OED < *bōk* [OE *bōc*] ‘any collection of sheets or leaves, bound or unbound, making up a volume



of writings; a book as a material object' 1121 MED; cf. *bīnder* 'bookbinder' 1408 MED, 'one who binds' 1000 OED; 'a bookbinder' 1556 OED) > *Bokmakere* 1293.

*The names of workers in metal:*

- \**blāder* 'a blade maker' MED, 'a maker of blades; a blade-smith' 1598 OED (*blād(e)* [OE *blæd*] 'the blade of a sword, knife, etc.' 1380 MED, 'a sword; any sharp weapon; a razor' 1387 MED; cf. *blād(e)~smith* 'a blade maker' 1408 MED) > *Blader* 1305, *blader* 1309, 1318, 1332;
- \**fīler* 'a file cutter' MED, 'one who files or works with a file; spec. one who files down gold and silver coin' 1598 OED (*filen* v. [OE *filian*] 'to cut or wear away with a file, rasp, or other abrading instrument; to rub or polish' 1200 MED; 'to use a file' 1450 MED; *file* [OE *fīl*] 'a metal instrument having cutting edges or teeth on its surface and used for reducing, smoothing, or cleaning the surfaces of various materials; an abrading or sharpening tool used by carpenters, armorers, fletchers, etc.; a file, a rasp; an instrument for abrading the teeth' 1200 MED) > *Filur* 1275, *Fyler* 1309, *Filer* 1349;
- \**grīndestere* '?one who sharpens tools' MED; cf. *grīndere* 'one who sharpens tools, blades, shears, etc.' 1463 MED, 'one who grinds cutlery, tools, glass, etc.' 1600 OED > *Grindestere* 1272;
- \**hakker(e)* 'a maker of hacks' DBS, 'a hacker, chopper, cutter; ?also, one who makes the tool called a hak', as surname – MED; 'one who hacks; one who hoes with a hack' 1620 OED (*hak* n. [from *hakken* v.] 'a heavy agricultural tool with a long handle and transverse blade or teeth for grubbing; a grub ax, hack; also, any of various other chopping or cutting tools used in masonry, quarrying, etc.' 1333 MED, 1300 OED; *hakken* v. [OE] 'to cut (sth.) with chopping blows, hack' 1200 MED, *hack* v. [OE \**haccian*] 1200 OED) > *Hacker* 1224, *Hakkere* 1262, *Hakyere* 1296, *Hackere* 1296-7, *Haker* 1327, *Hackar* 1434;
- \**hōner* 'a sharpener of tools, a grinder or honer' DBS, 1826 OED (*hone* [OE *hān*] 'a whetstone used for giving a fine edge to cutting tools, esp. razors' 1325 OED) > *honer* 1230;
- \**pot(e)~makere* 'one who makes vessels of various kinds; a smith whose trade includes manufacturing metal pots' MED, 1535 OED (*pot(e)* n. [OE *pot*] 'a vessel, pot, container' 1300 MED; 'a metal pot' 1250 MED) > *Potmaker* 1297, 1399, 1473);
- \**shēre~smith* MED, *shear-smith* 1623 OED (*shēre* [OE *scēar*, *scēr*] 'a pair of scissors or shears' 725 OED, 1300 MED; *smith* [OE *smiþ*] 'smith, blacksmith, farrier' 950 OED, 1125 MED) > *Schersmyth* 1264, *Scheresmythe* 1325, *sheresmyth* 1391, *Sheresmyth* 1402, *sheresmyth* 1469;
- \**shō~smith* (in surnames – MED), 'shoeing-smith, a smith who shoes horses' 1625 OED (*shō* [OE *scōh*, *scō*, *sceō*] 'low-cut outerwear for the human foot, a shoe' 1150 MED; *smith* [OE *smiþ*] 'smith, blacksmith, farrier' 950 OED, 1125 MED; cf. *shōer* 'one who shoes horses, a blacksmith' 1475 MED) > *Shosmith* 1288, *Sosmyth* 1296;
- \**whetter* (as surname MED), 'a sharpener of an instrument' 1556 OED (*whet* 'to sharpen, put a sharp edge or point upon' 897 OED, *whetten* v. [OE *hwettan*, *hwetan*, *hwætan*] 'to make an edge or point sharp' 1200 MED; cf. *whetter* 'a stone for sharpening tools, whetstone' 1444 MED) > *Wetthere* 1332.

*The names of artisans involved in food production:*

- \**tōnner* (*tunner* 'one who tuns liquor' 1598 OED, *tun* sb. [OE *tunne*] 'a large cask or barrel, usually for liquids, esp. wine, ale, or beer, or for various provisions' 725 OED; 'a large vessel in general; a tub or vat; a chest' 1205 OED, *tōnne* sb. [OE *tunne*] 'a large barrel for wine, ale, or other liquid; a cask' 1121 MED, *tōnnen* v. 'to store (sth.,



chiefly a potable) in a tun or other vessel' 1373 MED, 'to put or store wine in a cask' 1430 MED) > *Tunnere* **1280**.

*The names of artisans involved in woodworking:*

\***lēst(er)** (*laster* 'in bootmaking, a workman who shapes a boot or shoe, by fixing the parts smoothly on a last' **1878** OED, cf. *lastmaker* 1583 OED) (*lēst(e)* [OE *lāeste*] 'a form or model shaped like the human foot, a shoemaker's last' 1325 MED, 'a wooden model of the foot, on which shoemakers shape boots and shoes' 1000 OED) > *Lastur* **1275**;

\***lēst(e)-maker** 'a maker of lasts' MED, *last~maker* **1583** OED (*lēst(e)* [OE *lāeste*] 'a form or model shaped like the human foot, a shoemaker's last' 1325 MED, 'a wooden model of the foot, on which shoemakers shape boots and shoes' 1000 OED; cf. *lēst(er)* 1878 OED) > *Lastemaker* **1395**;

\***sleie~makere** MED, *slay-maker* **1583** OED (*sleie* [OE *sleahe*, *slēa*, *slāe*] 'a part of a loom, consisting of wires or strips of reed, wood, etc., set in a frame, used for forcibly compressing the weft, a weaver's reed' 1316 MED; cf. \**sleiere* 'a maker of slays, synonymous with Slaymake' DBS > *Slaer* 1247, *Slayare* 1311; cf. \**sleie-man* (in surnames – MED), 'a maker of slays' DBS > *Sleman* 1277, *Slayman* 1279, *Sleeman* 1306, *Scleyman* 1327; cf. \**sleie~wright* (in surnames – MED), 'a maker of slays' DBS > *slegwrechte* 1250, *Slaywreste* 1280, *Sclaywryhte* 1286, *Sleywright* 1327, *Sleywrihte* 1334, *Slaywryght* 1400) > *Slaymaker* **1379**, *slaymaker* **1388-9**.

*The names of artisans engaged in pottery:*

\***pot(e)-makere** 'one who makes vessels of various kinds' MED, **1535** OED (*pot(e)* n. [OE *pot*] 'a vessel, pot, container' 1300 MED; 'an earthenware vessel; pottery' 1200 MED) > *Potmaker* **1297**, **1399**, **1473**.

*The names of artisans involved in the manufacture of glassware:*

\***glas-man** 'a dealer in glassware' MED, **1610** OED (*glas* [OE] 'glass as substance, material, or a manufactured commodity' 1225 MED, 'an article made of glass: (a) a glass vessel or container; a glass drinking-vessel' 1200 MED, 'an hourglass' 1420 MED, 'a glass mirror, looking glass' 1393 MED; cf. *glas-werker* 1313 MED, *glas-wright* 1301 MED 'one who makes or works with glass') > *Glasmon* **1319**, **1327**, *Glasemon* **1332**, **1342**, *Glasman* **1419**.

*The names of builders and constructors:*

\***līmer** 'one who limes' **1611** OED < (*līmen* v. [OE *gelīman*] 'to cause (particles) to adhere to each other' 1200 MED, *lime* v. 'to cement' 1225 OED, 'to treat or dress with lime' 1440 OED) > *Limer* **1219**, **1279**, *Lymer* **1219**;

\***rideler** (*riddler*) 'one who uses a riddle' 1603 OED, 'a sifter of corn or sifter of sand and lime in making mortar' DBS (*ridel* n. [OE *hriddel*] 'a coarse sieve used for bolting grain, a riddle' 1350 MED, 1100 OED; 'a winnowing fan or fork' 1440 MED; *ridelen* v. [OE] 'to sift (grain); also without obj.; spread (ashes) by means of sifting' 1200 MED, *riddle* v. 'to pass (corn, gravel, etc.) through a riddle' 1225 OED) > *ridelere* **1230**, *Rydelere* **1294**;

\***risher** (*rusher*) 'one who strews rushes on a floor' **1630** OED < (*rush*, sb. (*rische* 725 OED; *russe* 1000 OED), *rishe*, sb. [OE *risc*, *risc*, *rix*] 'the stalk of the rush, cut and used for various purposes' 1250 MED, *rishen* v. 'to strew (the earth, a floor) with rushes' 1325 MED, *rush* v 'to strew with rushes' 1422 OED) > *Russere* **1296**, *Rischere* **1296**;



(b) *neologisms in the semantic subgroup of the names of farmers:*

- \***bōle~ward** (in surnames – MED), *bull-ward* ‘the keeper of a bull’ **1614** OED, *bullard* [contracted from *bull-ward*, or perhaps rather of *bull-herd*] ‘one who keeps a bull, or who takes part in bull-running’ **1825** OED; *bōle* [ON, cp. OI *boli* & OE \**bula*, *bullā*] ‘a bull’ 1200 MED; *ward* [OE *weard* ‘a guard’] ‘a guard, sentinel; a guardian; also, a jailer, keeper’ 1150 MED; *hērd(e)* [OE] ‘a herdsman; a keeper of cattle, hogs, horses, goats, or any kind of livestock’ 1150 MED, 725 OED) > *Buliard* **1198**, *Bulard* **1275**, *Bolhard* **1275**, *Bllward* **1319**;
- \***flōte-man** (*floatman*) ‘a man who manages a float’ **1882** OED (*flōte* (*flout*, *floit*, *flute*) [OE *flota* ‘boat, fleet’; OE *flot* ‘a body of water, the sea; OF *flote* ‘troop, flock’. In ME these three words appear to be merged into one] ‘herd of animals’ 1325 MED) > *Floteman* **1215**, **1524**;
- \***folder** ‘one who folds sheep; a shepherd’ **1571** OED < (*fold* (Sc. *fauld*) n. [OE *falæd*, *fald*] ‘a pen or enclosure for domestic animals, esp. sheep’ 700 OED, *fold* (*fauld*) v. ‘to shut up (sheep, etc.) in a fold, to pen’ 1100 OED > *faulder* **1332**;
- \***hērder** (only as surname – MED), ‘a herdsman’ MED, ‘one who herds; a herdsman’ **1635** OED < (*herd* v. (*hyrd*, *hird*) ‘to take care of or tend (sheep or cattle)’ 1400 OED) > *Herder* **1327**, *Herdere* **1332**, *Hurder* **1333**;
- \***herds-man** ‘a keeper of domestic animals which go in herd, esp. of cattle’ **1603** OED (cf. *hērde-man* (*herdsman*, early gen.pl.) [OE] ‘a shepherd; a tender of goats, cattle, horses, or other livestock; a herdsman’ 1200 MED) > *Herdeman* **1367**;
- \***oxe-man** (in surnames – MED), ‘a man who looks after oxen, a herdsman’ **1830** OED; cf. *ox(e)-herde* ‘a keeper of oxen; a herdsman’ 1398 MED, ‘a keeper of oxen; a cowherd’ 1000 OED (*ox(e)* [OE *oxa*] 825 OED) > *Oxeman* **1201**, **1289**;
- \***shēp-man** (in surnames – MED), *sheepman* ‘a shepherd’ **1591** OED (*shēp* [OE *scēap*, *scāep*, *scēp*, *scīep*, *scȳp*, *scīp*] ‘a ruminant of the genus Ovis, a domestic sheep’ 1150 MED) > *Schipemannus* **1130**, *Scipman* **1221**, *Scipmanus* **1250**, *Sipman* **1267**, *Schipman* **1290**, *Schepman* **1296**, **1316**, *Schapman* **1332**;
- \***shēp~ward** (in surnames – MED), *sheepward* ‘a shepherd’ **1609** OED (*shēp* [OE *scēap*, *scāep*, *scēp*, *scīep*, *scȳp*, *scīp*] ‘a ruminant of the genus Ovis, a domestic sheep’ 1150 MED; *ward* [OE *weard* ‘a guard’] ‘a guard, sentinel; a guardian; also, a jailer, keeper’ 1150 MED) > *Shepeward* **1329**, *Shipward* **1357**, **1471**, *Shypward* **1432**;
- \***stōd(e)-man** (*studman*) ‘a servant attached to the stud’ **1545** OED (*stōd(e)* [OE *stōd*] ‘horses; mares’ 1300 MED; ‘breed, stock’ 1325 MED; ‘a group of mares or colts’ 1350 MED; cf. \**stōd(e)-herde* ‘the keeper of a stud’ MED, 1458 OED > *Stodhyrda* 1195) > *Stodman* **1297**, **1332**;
- \***washer** ‘one who washes sheep before shearing’ **1520** OED (*washen* v. [OE *wæscan*, *wācan*, *waxan*, *waxsan*] ‘to wash (an animal, the feet of an animal), cleanse, rinse off’ 1325 MED) > *Wassere* **1293**, *Wascere* **1295**;

(c) *neologisms in the semantic subgroup of the names of farmers:*

- \***bīnder** (*bindere*) ‘one who binds sheaves behind the reapers’ **1611** OED > *binder* **1219**, *Byndere* **1278**;
- \***hakker(e)** (as surname – MED) ‘a hacker, chopper, cutter’ MED, ‘one who hacks; one who hoes with a hack’ **1620** OED (*hak* n. [from *hakken* v.] ‘a heavy agricultural tool with a long handle and transverse blade or teeth for grubbing; a grub ax, hack; also, any of various other chopping or cutting tools used in masonry, quarrying, etc.’ **1333** MED,



- 1300** OED; *hakken* v. [OE] ‘to cut (sth.) with chopping blows, hack’ **1200** MED, *hack* v. [OE \*haccian] **1200** OED) > *Hacker* **1224**, *Hakkere* **1262**, *Hakyere* **1296**, *Hackere* **1296-7**, *Haker* **1327**, *Hackar* **1434**;
- \***rideler** (*riddler*) ‘one who uses a riddle’ **1603** OED, ‘a sifter of corn or sifter of sand and lime in making mortar’ DBS (*ridel* [OE *hriddel*] ‘a coarse sieve used for bolting grain, a riddle’ **1350** MED, **1100** OED; ‘a winnowing fan or fork’ **1440** MED; *ridelen* v. [OE] ‘to sift (grain); also without obj.; spread (ashes) by means of sifting’ **1200** MED, *riddle* v. ‘to pass (corn, gravel, etc.) through a riddle’ **1225** OED) > *ridelere* **1230**, *Rydelere* **1294**;
- \***sēd-man** (in surnames – MED), seedman ‘a sower of seed’ **1583** OED (*sēd* [OE] ‘seed; grain’ **1150** MED, **825** OED; cf. *sēder(e)* [OE *sēdere*] ‘one who sows seed’ **1425** MED) > *Syde-man* **931**, *Sideman* **974**, **1334**, *Sedeman* **1219**, **1248**, **1301**, *Sedemon* **1260**, *Sedman* **1332**;
- \***shoker** ‘one who piles sheaves in shocks’ **1827** OED (*shok* n. [OE] ‘a group of sheaves of grain placed on end and leaning against one another in order to dry, a shock, stook’ **1325** MED, **1325** OED; *shokken* v. [from *shok* n.] ‘to put (sheaves) in shocks; heap or pile up (sth.)’ **1440** OED, **1440** MED) > *Schokere* **1296**;
- \***siver** (*siever* **1825** OED) (*sive* n. [OE *sife*], *siven* v. ‘to pass through a sieve’ **1475** MED) > *Sevare* **1243**, *Siviere* **1251**, *Siuiere* **1274**, *Siuegar* **1275**, *Siviere* **1279**, *Seuare* **1299**, *Seueare* **1305**, *Siuiger* **1308**, *Sivyare* **1313**, *Seuyare* **1327**, *Suuyere* **1327**, *Seuyar* **1332**, *Suwyar* **1332**, *Suuyar* **1332**, *Suuiare* **1344**, *Syfker* **1379-80**, *Sevyer* **1421**, *sevyer* **1421**, *Syvyer* **1428**;
- \***wāterer** (*watere*) ‘one who waters plants, crops, etc.’ **1549** OED (*wātren* [OE *wāterian*, *wātri(g)an*] ‘to provide (a garden, a tree, an orchard, etc.) with water, irrigate, water’ **1200** MED) > *Waterer* **1443**;
- \***wīndere** (*windere*) ‘winnow’ **1570** OED (*wind* v. ‘to winnow’ **1500** OED, *wīnden* v. [from *wīnd* n. (OE *wind*)] ‘to expose (sth.) to the air or wind, ventilate; also, toss (wheat) in the air’ **1250** MED) > *Winder(e)* **1275**, **1276**;
- (d) *neologisms in the semantic subgroup of the names of bee-keepers, fishermen and hunters*:
- \***bōter** ‘a boatman’ MED, boater ‘one who rows or manages a boat: a canal-boat man; one goes a boating for pleasure’ **1605** OED; cf. *bōt-man* ‘one who owns or manages a boat or ship; also, a sailor’ **1391** MED, boatman ‘a man who manages a boat’ **1513** OED (*bōt* [OE *bāt*] ‘a boat’ **1200** MED; ‘a small vessel carried by (or accompanying) a ship, a ship’s boat’ **1384** MED; ‘a ship’ **1200** MED) > *Botere* **1168**, **1279**, **1301**, **1317**, **1369**, *Botor* **1235**, *Botere* **1301**, *botere* **1321**, **1336**, **1365**;
- \***dīvere** (*diver*) ‘a person who dives under water; spec. one who makes business of diving in order to collect pearl-oysters, to examine sunken vessels, etc.’ **1506** OED) < *dīven* v. [OE *dýfan*] ‘to immerse or submerge oneself; dive, sink’ **1250** MED, **1000** OED) > *Dyvere* **1252**, **1428**, *Dyvour* **1414**, *Divere* **1279**;
- \***flōter** (*floater*) ‘one who or that which floats’ **1783** OED (*flōten*, *-ien* v. [OE *flotian*] ‘to rest or move on the surface (of a liquid), to float; to sail or drift (in a ship)’ **1200** MED) > *Flotyere* **1249**, *Floter* **1281**;
- \***flōte-man** (*floatman*) ‘a man who manages a float’ **1882** OED (*flōte* (*flout*, *flloit*, *flute*) [OE *flota* ‘boat, fleet’; OE *flot* ‘a body of water, the sea; OF *flote* ‘troop, flock’. In ME these three words appear to be merged into one] ‘a fleet of ships, esp. of warships’



- 1300 MED; (d)?a set (of fishing nets)' 1350 MED, 'a float for a fishing line or net' 1300 MED, 'a raft or boat of some kind' 1322 MED) > *Floteman* **1215**, **1524**;
- \**hōnī-man* (*honeyman*) 'a man who sells honey or has charge of bees' **1552** OED (*hōnī* [OE *hunig*] 'honey' 1150 MED, 825 OED; cf. *Honymanger* 1382, *Honymetere* 1313) > *Huni* **1199**, **1235**, *Honiman* **1279**, *Honyman* **1296**;
- \**hunte(s-man* (in surnames – MED), 'hunter' MED, huntsman 'a man who hunts, a hunter' **1567** OED; cf. *hunter(e* 'a hunter; esp. one who hunts deer, boar, hare, etc; also, a fowler' 1250 MED, 'one engaged in the chase of wild animals; a huntsman' 1250 OED (*hunte* [OE *hunta*] 'one who hunts wild beasts, a hunter' 1121 MED) > *Huntesman* **1348**;
- \**līmer* 'one who smears with bird-lime' **1611** OED (*līmen* v. [OE *gelī-man*] 1393 MED, lime 'to smear (twigs or the like) with bird-lime, for the purpose of catching birds', 'to catch with birdlime' 1413 OED, *līm* n. [OE] 'birdlime' 1216 MED) > *Limer* **1219**, **1279**, *Lymer* **1219**;
- \**oter-hunt* (in surnames – MED), 'an otter-hunter, a keeper of otter-hounds' MED, 'otter-hunter' DBS, **1601** OED (*oter* [OE] 'the European otter (*Lutra vulgaris*)' 1300 MED) > *Oterhunte* **1246-47**, *Loterhunt* **1246-7**;
- \**punter* 'In earlier use, one who goes fishing or shooting in a punt; often = punt-gunner; later, one who punts or manages a punt' **1814** OED (*punt* [OE] 1000 OED) > *Punter* **1214**, **1243**, *Ponter* **1255**;

(e) neologisms in the semantic subgroup of the names of intellectuals:

- \**bōk-man* '?copyist, scribe' MED, 'a scholar, a student' **1583** OED (*bōk* [OE *bōc*] 'a written composition or compilation (in prose or verse, occupying one or more volumes); a book as an authoritative source' 1121 MED) > *Bokeman* **1279**, *Bukeman* **1279**, *Bocman* **1294**, **1327**;

(f) neologisms in the semantic subgroup of the names of entertainers:

- \**springer(e* 'as occupational term: ?a dancer; ?a fencer' MED; 'a jumper' DBS; 'one who springs or leaps' **1775** OED (*springen* v. [OE *springan*] to leap, bound; jump with joy or excitement; move suddenly, go quickly, run, dash off' 1200 MED, 'to bound or leap' 1205 OED) > *Springer* **1185**, **1296**, *Springere* **1302**, *Sprynger* **1332**, **1346-7**;

(g) neologisms in the semantic subgroup of the names of the official servants:

- \**brīgġe-man* (in names' MED) 'the keeper of a bridge' **1648** OED, cf. *brīgġere* 'keeper of a bridge' 1250 MED; *brīgġe-ward* 'a custodian or warden of a bridge' 1380 MED (*brīgġe* [OE *brycge*] 'a bridge (as over a stream)' 1121 MED, 1000 OED) > *Brygeman* **1296**, *Brigeman* **1307**, *Bregman* **1310**, *Bruggemon* **1332**, *Bryggeman* **1428**;
- \**herker* (*harker*) 'a listener' **1825** OED, cf. *herkener(e* 'an eavesdropper' 1447-8 MED (*herken* v. [from ME *herkenen* (OE \**heorcnian*)] 'to listen attentively, take heed, harken' 1200 MED, *herkenen* v. [OE *he(o)rcnian*] 'to listen in order to overhear, eavesdrop' 1382 MED) > *Herkere* **1280**;
- \**hēvere* (*heaver*) 'a person who heaves; spec. a labourer employed in landing goods at a dockyard' **1586** OED (*hēven* v. [OE *hebban*] 'to raise (an object, a body, the hands, etc.) upright or to a higher position; lift up, hoist' 1200 MED, *heave* v. 1000 OED) > *Heuere* **1297**;



- \***jagger** ‘a pedlar, a hawker’ **1514** OED (*jag* sb. ‘a load (usually a small cart-load) of hay, wood, etc.’ 1597 OED, *jag* v. ‘to carry in a cart, or on a pack-horse’ 1747 OED) > *Jager* **1379**, *Jagher* **1379**, *Jeggar* **1480**;
- \***toller** ‘one who tolls a bell’ **1562** OED (*tollen* v. [OE \**tollian*] ‘to sound (a peal), ring’ 1452 MED, *toll* v. [found in this sense in 15<sup>th</sup> c.] ‘to cause (a great bell) to sound by pulling the rope, esp. in order to give an alarm or signal; to ring (a great bell)’ 1494 OED) > *Toller* **1199**, **1279**, *Toler* **1246**, *Tollere* **1249**, **1251**, **1255**, **1313**, *Toller* **1297**, **1346**, **1380**;
- \***toll-man** (in surnames – MED) (tollman) ‘a man who collects tolls; the keeper of a toll-gate’ **1743** OED, cf. *toller(e)* [OE] ‘a tax collector, toll gatherer’ 1150 MED, ‘?a usurer’ 1390 MED, ‘one who takes toll, a toll-collector; a tax-gatherer, publician’ 1000 OED; *tol~gaderere* ‘one who collects taxes or tolls’ 1395 MED; *tol~reve* ‘an officer appointed to collect tolls at a city gate’ 1433 MED (*tol* [OE *toll*] ‘a tax, levy, fee, toll; payment, dues; also, tribute’ 1150 MED, 1000 OED; *tollen* v. ‘to assess a tax or fee; also, tax (sth.), make an assessment on’ 1387 MED) > *Tholeman* **1219**, *Tolman* **1327**;
- \***wāterer** ‘aquarius’ **1546** OED (*wāter* [OE *wæter*; *wætter*] ‘water as a naturally occurring element or substance’ 1200 MED) > *Waterer* **1443**;
- \***wāter-man** ‘(pl.) ?puveyors of water’ MED, water-man ‘aquarius’ **1565** OED (*wāter* [OE *wæter*; *wætter*] ‘water as a naturally occurring element or substance’ 1200 MED) > *Waterman* **1249**;

(h) *neologisms in the semantic subgroup of the names of domestic servants:*

- \***hakker(e)** ‘one who hacks, a cutter, probably a wood-cutter’ DBS, ‘one who hacks; one who hoes with a hack’ **1620** OED (*hakken* v. [OE \**haccian*] ‘to cut (sth.) with chopping blows, hack’ **1200** MED, **1200** OED; *hak* n. [from *hakken* v.] ‘a heavy agricultural tool with a long handle and transverse blade or teeth for grubbing; a grub ax, hack; also, any of various other chopping or cutting tools used in masonry, quarrying, etc.’ **1333** MED, **1300** OED) > *Hakkere* **1262**, *Hakyere* **1296**;
- \***jobber** ‘one who or that which ‘jobs’, pecks, pokes, thrusts, etc.’ **1580** OED; cf. *nut-jobber* OED (*jobben* [imitative] ‘to jab, thrust, peck’ 1500 MED, *job* v. ‘to pierce’ 1490 OED, ‘to thrust’ 1573 OED, ‘to peck’ 1566 OED) > *Iober* **1317**, *Jobour*, *Jober* **1356**, **1369**, *Jobber* **1524**;
- \***stēde-man** (*stead-man*) ‘steadward’ **1613** OED (*stēde* [OE *stēde*] ‘a house; a palace, castle, fortress; an estate (including both land and buildings), a property, holdings; a section of a cultivated field; also, a home, dwelling; lodgings, quarters’ 1200 MED > *Stedeman* **1275**, *Stedeman* **1275**, *Stedeman* **1285**, *Stedman*, *Stedeman* **1323**;

(i) *neologisms in the semantic subgroup of the names of merchants:*

- \***fether-man** ‘a dealer in feathers or down’ MED, **1621** OED (*fether* [OE *feþer*] ‘a feather or plume’ 1150 MED) > *fetherman* **1275**, *Fetherman* **1305**;
- \***glas-man** ‘a dealer in glassware’ MED, **1597-8** OED (*glas* [OE] ‘glass as substance, material, or a manufactured commodity’ 1225 MED, ‘an article made of glass: (a) a glass vessel or container; a glass drinking-vessel’ 1200 MED, ‘an hourglass’ 1420 MED, ‘a glass mirror, looking glass’ 1393 MED) > *Glasmon* **1319**, **1327**, *Glasemon* **1332**, **1342**, *Glasman* **1419**;



- \***hōnī-man** (in surnames — MED) ‘a man who sells honey or has charge of bees’ **1552** OED (*hōnī* [OE *hunig*] ‘honey’ 1150 MED, 825 OED; cf. *Honymanger* 1382, *Honymetere* 1313) > *Huniman* 1199, 1235, *Honiman* 1279, *Honyman* 1296;
- \***jagger** ‘a pedlar, a hawker’ **1514** OED (*jag* sb. ‘a load (usually a small cart-load) of hay, wood, etc.’ 1597 OED, *jag* v. ‘to carry in a cart, or on a pack-horse’ 1747 OED) > *Jager* 1379, *Jagher* 1379, *Jeggar* 1480;
- \***sēd-man** (in surnames — MED) ‘dealer in seeds’ DBS; *seedman* ‘a dealer in seed’ **1652** OED (*sēd* [OE] ‘seed; grain’ 1150 MED, 825 OED) (> *Sydemman* 931, *Sideman* 974, 1334, *Sedeman* 1219, 1248, 1301, *Sedemon* 1260, *Sedman* 1332;
- \***shēp~monger** ‘a dealer in sheep’ DBS, *shepemongers* **1560** OED (*shēp* [OE *scēap*, *scāep*, *scēp*, *scīep*, *scȳp*, *scīp*] ‘a ruminant of the genus *Ovis*, a domestic sheep’ 1150 MED > *Shepmongere* 1227;
- \***wōlster** ‘a dresser, weaver or seller of wool’ (the feminine form) DBS; *woolster* (Sc.) ‘a wool-stapler’ **1577** OED; cf. *wool-stapler* ‘a merchant who buys wool from the producer, grades it, and sells it to the manufacturer’ 1709 OED (*wōl* [OE *wul(l)*, *wulle* & *wyll*] ‘the hair or coat of a sheep or lamb, fleece; also, the hair or fur of other animals’ 1350 MED; *wīnden* [OE *windan*] ‘to revolve, turn; move in a circular pattern’ 1225 MED) > *Woollestere* 1297.

According to our calculations, the linguistic characteristics of native vocabulary as the etymological subgroup within the semantic group of Middle English occupational terms are the following:

- 1) total number of native occupational terms in the Middle English period is 1134 words;
- 2) 92% of them originated in the Middle English period, while 8% came from the Old English period;
- 3) occupational terms, which originated in Middle English, functioned only as anthroponyms and ceased to exist by the beginning of the Modern English period – 42.6%;
- 4) occupational terms, which originated in Old English and in the Middle English period became *archaic* and went out of use by the beginning of the Modern English period – 0.7%;
- 5) occupational terms, which originated in Middle English and were only used as anthroponyms, i.e. belonged to onomasticon, then in the Modern English period became appellatives, i.e. entered the lexicon, that is why we treat them to be *neologisms* in the Middle English language – 6.7%.

#### 4. Conclusions

According to our calculations, the ratio of occupational terms of native origin, which belonged to the fund of Middle English appellatives, coincides with the ratio of the vocabulary, that only functioned as medieval anthroponyms (50%:50%), but as far as 37% of the words fulfilled both the functions of classification and identification, we have gained the data proving the prevalence of anthroponimic data over appellative (concerning the words which only functioned as common nouns) in the ratio 87%:13%. We have noticed a clear difference of data in the chronological stratification of the first written attestations of occupational terms depending on the functional layers they belong to (in particular according to the fulfillment of two kinds of the nominative function inherent of the lexical units as appellatives and anthroponyms: the function of classification and the function of identification). Taking into



account this difference, we managed to gain the information about the dynamics of replenishment of the semantic group of occupational terms in the Middle English period, in particular with the native vocabulary (as opposed to the loan-blends and lexical borrowings). Basing on the data of their first written attestations as appellatives and anthroponyms, we noticed an apex of their appearance in the 13<sup>th</sup> century, as well as double increase in their number in the 14<sup>th</sup> century, whereas the only consideration of the data of common nouns refferes this apex to the 15<sup>th</sup> century.

We have gained the following data as to the qualitative composition of Middle English occupational terms of native origin:

1) 37% of the words belong the functional variety of native vocabulary, which had both the functions of classification (i.e. appellatives) and identification (i.e. anthroponyms), and consists of the following two parts:

a) the core of this variety is constituted by the native occupational terms, which belong to the fund of Middle English appellatives and continue to exist during the Modern English period;

b) the periphery of this variety is constituted by the native occupational terms, which date back to the Old English period and continue to function in Middle English and Modern English;

2) 50% of the words belong to the functional variety of native vocabulary, which only had the function of identification (i.e. anthroponyms), and consists of the following three parts:

(a) the core of this variety is constituted by the words, which only existed during the Middle English period;

(b) the semi-periphery of this variety is constituted by the neologisms which only entered into the fund of appellatives in the Modern English period;

(c) the periphery of this variety is constituted by the words which arose in the Old English period and became obsolete during the Middle English period, as well as

3) 13% of the words belong to the variety of native vocabulary, which only fulfilled the function of classification (i.e. appellatives) – having arisen in the Middle English period, they continue their existence in Modern English up till nowadays.

The results prove the aptness of methodology used, which combines traditional linguistic methods with new systemic functional techniques for the reconstruction of the evolution of the semantic system, in particular the dychotomy of occupational terms into appellatives and anthroponyms as to the kind of nominative function they performed (classification / identification), aiming at the solution of chronological issues of Middle English occupational terms. made it possible to collect database, which serve to gain new important data concerning the replenishment of the vocabulary of semantic group of occupational terms, and to advance our knowledge of vocabulary development with the flow of long period of time.

On these grounds, the stratification of the vocabulary by means of delimitation of archaic and neologic words resulted in creating the vivid picture of vocabulary enrichment and evolutionary processes in the semantic system of the English language.

The methodology of surname research is supplemented now with our dichotomic approach to the functional, etymological and chronological issues of lexicon and onomasticon evolution, proving the validity of the use of historical onomastic data in the study of appellatives.

Our prospective studies will be devoted to the rest parts of the semantic group of Middle English occupational terms, in particular loan-blends (hybridizms) and loan-words, by means of the techniques of differentiation of appellative and anthroponymic vocabulary, i.e. on the grounds of functional approach to language study.



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## Abbreviations

DBS – Dictionary of British Surnames, MED – Middle English Dictionary, OED – Oxford English Dictionary

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# **The vexing problem of gender stereotyping in world proverbs**

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*In the article an attempt is made to outline the foremost female/male stereotypes embodied in the content of gender-related proverbs. Beyond any conceivable doubt, the female image emerges more precisely, since women's roles and status constitute the core subject of many proverbs, regrettably of negatively-coloured perception, both at a European and a universal level, as instanced by: When woman gets off the wagon, horses have easier work (American English, Polish). On close inquiry, however, one has grounds to distinguish certain categories of proverbs which value women positively, for example the category of mother (as in e.g. God couldn't be everywhere, therefore He made mothers (English)) and grandmother (as in e.g. Respect your grandmother, because without her your mother would not have existed (Umbundu)) or the universal ones where woman is presented through such female features which men either most need or admire (e.g. A good wife and health is a man's best wealth (English)). In turn, the male sex appears much less frequently in the paremiological literature of the subject; and when it does it is mostly of positive stereotyping (e.g. A man of straw is better than a woman of gold (Portuguese)). As a result of the women's liberation movement, though, we have observed a major paradigm shift in gender-related issues manifested by, among others, the easily verifiable fact that men are slowly losing their traditional dominance within society and women frequently take centre stage both within the household and in the workplace; thereby challenging rigid, traditional gender roles (e.g. A career girl would rather bring home the bacon than fry it (American English)).*

**Keywords:** *proverb, gender stereotyping, female, male*

## **1. Introduction**

It goes without saying that proverbs, being a type of phraseological unit, constitute an attractive and valuable element of any language, which is for a number of reasons. To start with, they encode social trends, social preferences, frequently repeated behavioural patterns, and moral norms, but – above all – they tend to reflect a universal and indisputable truth based on common sense or the practical experience of humanity. Therefore, a close relationship between proverb – viewed as the world's smallest literary genre – and the broadly-understood culture of a given community is something indissoluble, and can hardly be subject to any dispute. An example of an approach that shows the direct link between proverbs and the cultural background of their users is Mieder's study (1993) of proverbs used in Vermont, USA, where the author observes that:

Proverbs do reflect to a certain degree the world-view of their users, and with caution one could say that a collection of proverbs from a particular state mirrors certain stereotypical values of its people (Mieder 1993: 178).

Such apparent mutual dependence may easily be strengthened by saying that since, by and large, a language is driven by its users, the right to exist is given to those tendencies that the



large social group considers to be either true, or useful, or both. Therefore, on the basis of a certain body of proverbs, one can inevitably draw well-justified conclusions on the perception of the world that certain social categories, id est the category of women and the category of men, demonstrate and/or are characterised by. On the other hand, already approved proverbs have a propelling function because – when frequently heard or repeated – they constantly revive the described tendencies, patterns, and truth, making them perpetually valid, and vividly alive. This should not be viewed in a negative light, but such a state of affairs leads to the formation of a kind of never-ending paremiologically conditioned vicious circle, which ultimately acquires a *perpetum mobile* dimension and thus must be discussed in such terms.

One of the numerous social phenomena encoded in the variety of proverbs is related to sex and gender issues, thus, strictly speaking, male and female stereotypes. Note that according to the Matti Kuusi's international classification system of proverbs,<sup>1</sup> under the main theme "social life", one of the classes that most represents basic aspects of human life is "man and woman: ranking and position of both sexes" (see also Mieder 2004: 17).

In today's world, talking on the subject of masculine/feminine images, it is necessary to refer to the so-called *gender ideology*, which, according to Hussein (2005: 60), may be defined as "[...] a systematic set of cultural beliefs through which a society constructs and wields its gender relations and practices." Put another way, the concept of gender ideology refers to the entirety of attitudes towards men's and women's expected roles, responsibilities, and rights within the structure of society. As argued by Hussein (2005: 60):

[...] gender ideology contains legends, narratives, and myths about what it means to be a man or a woman, and suggests how each should behave in society. A society's gender ideology is grounded largely in religious and social principles, which are then used as grounds to justify different rights, responsibilities and rewards to each gender.

Thus, one may generalise and say that every society creates its own gender ideology in which men and women are placed in somewhat different/opposing social positions and patterns of expectations. However, a commonly assumed idea, observable – it is fair to say – in every culture, is that men are perceived as hard and tough, whereas women are viewed as soft and vulnerable, which – in turn – entails entirely different gender-related life attitudes.

This seems to be the right background, according to some ideologists, for the formation of gender stereotypes encoded in proverbs, representation of which has become the core subject of our analysis here. It needs to be mentioned that the literature on proverbs offers, among other things, three major treatises covering hundreds of proverbs on the female kind (see Kerschen 1998; Rittersbacher 2002; Schipper 2006)<sup>2</sup>, many of them are of a regrettably misogynistic nature, for instance, the 16<sup>th</sup> century ill-founded piece of wisdom that says that *A woman's tongue wags like a lamb's tail* (American English), or the 20<sup>th</sup> century vintage *Diamonds are a girl's best friend*, popularised by Marilyn Monroe, among others.<sup>3</sup> Little wonder that feminists proposed a somewhat twisted slogan, which maintains that *A woman without a man is like a fish without a bicycle* (American English), which eventually turned into a proverb to combat such gender stereotyping (cf. Mieder 2004: 28).

Somewhat surprisingly, however, one finds that world literature lacks appreciable paremiological works on male-centred proverbs and their contribution to the stereotypical perception of the male kind. Such a highly unequal distribution of male and female proverbial repertoire may testify to the fact that either men do not provide as much interesting and challenging material for analysis as women do, or – more justifiably – "due to the male-dominated world, folklore scholarship pertaining to women had been kept to a minimum and



thus largely excluded women from the picture of civilisation's progress" (see Kochman-Haładaj 2012: 321). As a result, women have never enjoyed equal opportunities in responding to the substantial male-created proverbial stock about the opposite sex. Another important point that can be made is that paremiographical dictionaries tend to offer a considerable corpus of proverbs, where man constitutes a central element as a generic noun, not specifying either masculine or feminine gender, as demonstrated in, for example, *Every man is the architect of his own fortune* (English/Polish) or *No man is a lonely island* (English/Polish).

One significant remark that may be formulated here is that beyond any conceivable doubt there exists a general tendency, which boils down to the fact that human negative features, whether socially, aesthetically, behaviourally or morally negative, tend to be embodied in the content of proverbs. Such a ubiquitous trend has been evidenced by Petrova (2002: 342), who shows that out of 413 gender-related proverbs in the English language that were subject to her scrutiny, there are 106 negatively-tinted ones, while merely 48 of them may be said to convey some positive colouring. Moreover, proverbs may become extremely negatively-loaded when they serve to encode, as many of them do, variously charged stereotypes. This global tendency was given a neat account in Ronesi's (2000) seminal paper titled "Mightier than the Sword: A look at proverbial prejudice". The author maintains that "such negative proverbial texts appear in the earliest proverb collections, and they are still used today despite attempts to be open-minded [...]" and tolerant towards such significant issues as, among others, sexual differences (see Mieder 2004: 138).

Another point of the introductory part which is, nonetheless, of utmost significance to the present study is the fact that the analysed proverbs are approached from the perspective offered by the researchers within the relatively new field of scientific knowledge on the close relationship between language and the cultural milieu of a given community, namely *Linguistic Culturology* (otherwise called *Linguoculturology*).<sup>4</sup> According to the school of thought, the proverb system of a language is viewed as "a most enduring representation of the way of life and values of the people speaking a common language, i.e. of their linguoculture" (Petrova 2014b: 850). Importantly, in the study that follows proverbs are analysed with the use of semantic approach often applied in a linguo-cultural analysis (see Petrova 2014a). Therefore, its primary purpose is to examine the selected gender-related proverbs in terms of a message or a common thought, otherwise referred to as the generalized abstract *meaning* or the proverb *idea* (Grzybek 2007: 205). Due to the fact that concepts of negativity and positivity are subjective with regard to attitude the messages of the proverbial texts referring to gender are explicated in the study either with the help of the publications given below or on the basis of common sense and intuition of the author. What is important to remember, though, is the indubitable fact indicating that proverbs are "limited pieces of folk wisdom that are valid only in certain situations" (Mieder 1997: 410) and "analysis of the use and function of proverbs within particular contexts will determine their specific meanings" (Brunvand 1996: 1254).

The major reference books on proverbs – which depict women and men in various social roles, positions and situations, as well as provide information on the proverbs' country of origin – that have been consulted are such paremiographical works as Simpson and Speake's *Oxford Concise Dictionary of Proverbs* (1998), Stone's *The Routledge Book of World Proverbs* (2006) and Arnott's *Peculiar Proverbs: Weird Words of Wisdom from Around the World* (2007). In turn, the meaning explication of proverbs coming from various world linguo-cultures is chiefly made/given on the basis of the following publications: Manser's *The Facts on File Dictionary of Proverbs* (2002), Schipper's *Never Marry a Woman with Big Feet: Women in Proverbs from Around the World* (2006) and Kerschen's *American Proverbs about Women*



(1998). It should also be noted that the criterion for selecting the proverbs cited in the analytical part (constituting the body of 92 proverbs) has been the search for texts (with the constitutive elements: *woman/man*, *female/male*, *wife/husband*, *girl/boy*, *mother/father*, *grandmother/grandfather*) which centre around gender-related messages encoded in the proverbs of different world linguo-cultures and explicitly present both sexes in the opposing social status and patterns of expectations as well as in various stereotypical features, roles and life attitudes.

## 2. Gender-related proverbs as groundwork for investigation of female/male stereotypes

Since the very beginning of mankind, as it might be presumed, the world of women and men, their points of view, needs and desires, manners of thinking and modes of acting, have varied in all possible respects. Accordingly, traditional gender ideology ascribed them different social roles and status, namely the man was basically assigned the role of the guardian and provider, whereas the woman that of the mother and nurturer. Even in more recent times, such significantly opposing images have been perpetuated by diversified *belle lettres* literature of, among others, moral or psychological nature, but most of all the picture of a mother-and-nurturer woman has been repeatedly accentuated in various types of prose for women or, the so-called light and pleasant women's magazines, but also within the canvas of newspapers and men's magazines.

It seems that the ideal research material that might serve as the basis for representation of differing portrayal of woman and man, resulting from the thus specified differences, are the various types of proverbs, because they provide the meeting points where, as emphasised by Schipper (2006: 87):

The difference between the sexes is not only stressed, but it takes on amazing dimensions. In most cultures, as soon as they are born, children of the two sexes are placed in opposed categories, as if they had nothing else in common than their having come into the world in the same way.

It is certainly not accidental that in most societies "[...] the birth of a boy and that of a girl are far from being greeted with the same enthusiasm" (Schipper 2006: 87), as exemplified in two proverbs drawn from two diametrically different cultures: *It is a blessing to bear a son, a calamity to bear a daughter* (Chinese); *Who leaves a son behind is not really dead* (Danish).

Following this general son-conditioned universal enthusiasm, there appear to be two completely different gender-related approaches to life or, in other words, two distinct male and female human entities that have as much in common, across the cultures, as they have differences from each other. Notwithstanding all the details of the differences, the general picture of women that emerges from proverbs operating in the English language is far from being favourable, to say the least. Such an all-abiding historical tendency for smuggling negatively-tinted female features in the content of proverbs has been evidenced by, among others, Petrova (2002: 344), who provides evidence that out of 106 English axiologically negative gender-related proverbs, as many as 83 reveal an adverse attitude and/or perception towards women.

Obviously, the easiest and most frequently repeated way of accounting for a negative perception of women in proverbs would be to blame their male contemporaries for contributing



to, or – in fact – creating humiliating stereotypes. However, on second thoughts one comes to realise that, in fact, women have not let men have it all their own way, but rather adopted a *tit for tat* attitude, making every attempt to strike back with unfavourable/critical remarks in proverbs. Thence, let us take a closer look at the perception of both sexes in proverbs, to compare whether both men and women have equally contributed to the formation of a certain image of the opposite sex. What needs to be emphasised, though, is the fact that the study which follows does not consider historical or cultural matters of proverbs from various national languages but it merely relies on the explicit messages encoded in the content of the analysed gender-centred proverbial texts, thus constitutes a source of information about various stereotypical ways of perceiving both sexes stored in and transmitted by the language. It is to be hoped that the discussed proverbial texts, both traditional and modern/new ones, including anti-proverbs, and their underlying assumptions may offer a slightly new perspective on the issue of gender stereotyping encoded in proverbs. Put it differently, reference to the contemporary academic discourse in paremiology by means of the inclusion of modern/new proverbs and anti-proverbs pertaining to gender issues is the factor which makes both additional contribution to the analysis contained in the publications mentioned in the brief literature review of the introductory part but also introduces innovative ideas on the discussed subject-matter. Notwithstanding, what needs to be stressed is the author's full awareness of the fact that such an ambitious research question and the vast dataset may require a far more rigorous and extended analysis such as that typical of a monograph.

### 3. On the silhouette of women and men as emerging from proverbs

Since, as argued in the foregoing, the authors of most negatively-tinted proverbs related to women are in effect their male counterparts, on the whole, men tend to identify those female features that they either hardly approve of or seem to very much expect, to be able to get the best out of their life.

To be more specific, within the scope of men's list of expectations towards women, a huge emphasis is placed on women's thrift and resourcefulness, and this is evidenced by the semantics of such proverbs as, for example, the Japanese straightforward judgment *Look for a thrifty woman – even though it may cost you a pair of shoes*. It goes without saying that these are qualities that are essential to the male point of view, considering the fact that the set of characteristics traditionally attributed to the female kind is limited to the basic features required mainly for family life and household maintenance. Moreover, viewed from this perspective, women are supposed to be good, thrifty, and economical, as embodied in, for example, the English proverb, *A good wife and health is a man's best wealth*, or the much more straightforward Chinese piece of paremiological truth *A good wife guards her husband from bad ways*.

One must say that a fairly positively-coloured image of females is reflected in those proverbs where women are viewed as stubborn and ingenious in eliminating all obstacles, e.g. *Not even God is smart enough to catch a woman in love* (Yoruba); *Women know how to find their lover even when they are locked up in a chest* (German); *When a woman cooks up a trick, she can outwit a hundred men* (Abkhaz), and are known for their persistent willpower e.g. *A woman's willpower will pierce even a rock* (Japanese); *What a girl wants at any price, she'll get* (Rwanda); *Nothing is impossible to a woman of will* (Gikuyu). In turn, evidently positive implications are contained within the message of proverbs related to mothers and



grandmothers, as in, for instance, *Mother is God number two* (African); *God cannot be everywhere, that's why he created mothers/grandmothers* (Dutch); *Respect your grandmother, because without her your mother would not have existed* (Umbundu); *Pleasantly lives he who lets his grandmother look after him* (Russian) (for more examples see Kochman-Haładaj 2015). Regarding the role of father reflected in proverbs, there are utterances which also value it in a favourable way, as instanced by *A father's virtue is a child's best inheritance* (Unknown); *A son should treasure his father's advice* (Spanish); *No one knows a son better than the father* (Chinese), nevertheless, the consulted paremiographical sources lack proverbial occurrences where *grandfather* constitutes the key element in the wording of the text.

All these positively-loaded proverbs notwithstanding, the bulk of the proverbs are ones that constitute those proverbs that feature various stereotypical feminine traits that men particularly disapprove of, as implied or clearly expounded by such proverbs as, for instance, *Many children, many debts; many wives, much malicious gossip* (Vietnamese); *The cunning of one woman equals the load of forty donkeys* (Kazakh); *The cunning of women is strong, and the cunning of the Devil is weak* (Arabic) where women are perceived as either mischievous or cunning, or both. Additionally, this significant group of negatively-valued proverbs stereotypes a woman as, among other things, downright vain, e.g. *The fox loves cunning, the wolf covets the lamb, and a woman longs for praise* (Roman), treacherously tearful, e.g. *A woman's weapons are her tears* (French), untrustworthy, e.g. *Beware of a bad woman, and put no trust in a good one* (Spanish); *He who trusts a woman and leads an ass will never be free from plague* (French), ill-natured, often verging on the concept of a witch, e.g. *A woman turned witch is worse than a born witch* (Yiddish); *You get a woman mad and her blood good and hot, better let her blood cool for she'll sho' hurt you* (American English); *It is safer to irritate a dog than an old woman* (Roman), and known for her tendency to be obsessively vengeful, e.g. *A woman's vengeance knows no bounds* (German); *The jealousy of a woman sets a whole house aflame* (Roman); *No one rejoices more in revenge than a woman* (Roman).

Moreover, it is not surprising to find that in a large proportion of paremiological gender-related proverbs it is either directly advised or indirectly emphasised that men must keep women in obedience, and in any case they should in no way allow women to have any advantage, as in, for example, *When women reign, the Devil governs* (German). It is only natural that the male master of the house, a man that features in proverbs and folk wisdom has a great physical advantage over the female, and the somewhat tacitly justified right to physical violence against women. Abominable as it is, in many cultures of the world there are proverbs that seem to openly recommend "[...] wife beating as a 'natural' tool for forcing women, and especially wives, into submissive behaviour" (Schipper 2006: 260), though – to be fair – they are not universally equally numerous in all parts of the world e.g. *Women, like gongs, should be beaten regularly* (American English); *A bad woman and a good woman both need the rod* (Spanish, Argentina); *Good horses and bad horses need the spurs, good women and bad women need the chip* (there are many variants in both Europe and the Americas).

As if to save face for the male kind, there are a number of delicate voices – even in those cultures that warmly recommend violence – that also question wife-beating, and/or are categorically against it, for example, *Women should not be beaten, not even with a flower* (Portuguese, Brazilian, Polish) or *A good man does not beat a woman; a good dog does not fight with a chicken* (Chinese). Furthermore, according to some feminist opinions, wife-beating is regarded as a by-product of the Christian view of woman as a man's property (see Kramarae et al.: 486). In several paremiological units, men who exercise their control through beating are presented as villains or "losers", as in, for example, such proverbs as, *A real man hugs his wife,*



*a weak man hits her* (Adyg); *No-one beats a woman except the wretched man* (Arabic, Lebanon); *A man beats a wife at home only when he has no public status* (Bengali).

Numerous as they appear to be, the female negative qualities that are repeatedly the topic of proverbs are frequently ignored altogether because women are needed by men due to the fact that the former are frequently seen as the foundations upon which the household must rest, as in the selected proverbs: *The house does not rest on earth, but on the woman* (Mexican); *A house without a woman is like a body without a soul* (German); *A hundred men may make an encampment, but it takes a woman to make a home* (Chinese). Yet, on the other hand, it must be pointed out in the context of the household that such proverbs as, for example, *A woman and a stove may not leave the house* (German) or *A man is a king in his own house* (Roman) testify to the all-pervading male-dominated power in the patriarchal social system, and restrict female presence to the home and home-related environment and the whole panorama of family and home-related activities.

Yet, male-dominated as the social system is, a man cannot do without a woman in real life situations because – as the semantics of numerous proverbs seems to suggest – it is mainly women who overcome the difficulties that daily life and the wheel of fortune offer, and here they may be said to defeat their husbands and partners on all fronts, for example, Spanish men are jokingly advised in the proverb *When your wife tells you to jump off a roof, pray God that it be a low one*. Furthermore, every man needs the unique female ability to solve knotty problems, especially in seemingly irresolvable circumstances, as encoded in the proverb of Hebrew origin *When Satan is likely to fail, he sends a woman* or Russian provenance *Where the Devil is powerless, there he sends a woman as messenger*. Tacitly appreciated as it is, such a woman-exclusive feature is in no way openly approved by men, due to the overwhelming fear that women might wrap them around their finger, manipulating and directing them to their own needs and expectations to their hearts' content, so that men must use any means possible to take precautions and defend against such a situation.

The matters get even worse when men are unable to keep pace with their female counterparts because of them being so changeable, as suggested by the contents of, for example, such a proverb as *Women are as wavering as the wind* (German). Furthermore, men believe that a woman is a creature that can in no way be comprehended by males with their miserable five senses. Oftentimes, a woman is revealed to them as a great and inscrutable mystery, who is half a little truth, half a small lie, and all the great unknown. The mysterious and somewhat sinister powers ascribed stereotypically to women are demonstrated by, for instance, the Frisian proverb *A woman can turn a man into whatever she wants, even into an old woman*.

Another significant feature repeatedly highlighted in the proverbial phraseology is that, a woman – perceived as a member of the weak and fragile sex – tends to attract men only because of her physical appearance, as in, for example, *Even an angel cannot resist a beautiful girl* (Hebrew); *Beauty in women is like a flower in the spring; but virtue is like a star in heaven* (American English); *A woman wants to be pretty rather than intelligent and shrewd, because men, in general, see better than they think* (Hebrew). At the same time, having a beautiful and attractive wife is a tricky and uncertain business from a male perspective, because although female beauty and general attractiveness are normally experienced as a pleasure to the male senses and a source of pride and prestige, a pretty woman is frequently viewed as an endless source of anguish and trouble (see Schipper 2006: 85), as in, for instance, *A beautiful woman never stays with one man* (African); *Pity the man who marries a beautiful woman; until she grows old, fear will not leave him* (Spanish, Colombia).



The issue of female beauty and general attractiveness is of a bipolar nature because, simplifying things a little, women are either considered pretty, beautiful, and hence attractive, e.g. *A beautiful woman is a feast for the eyes and loneliness for the soul* (Filipino), or – on the other end of the axiological scale – they are categorised as ugly and hideous, hence unattractive, e.g. *An ugly wife is a good hedge around the garden* (German); *One's house is best protected by a wasted garden outside and an ugly wife inside* (Chinese). Yet, the so extremely unwelcome and undesirable lack of female beauty, if not the presence of well-pronounced female ugliness, may – if viewed from another perspective – serve good purposes in men's world. In the United States of America, it is argued that *Ugliness is the guardian of the woman* and of her chastity, and what is more, *The ugliest girl makes the best housewife*. In a substantial number of world proverbs beauty is usually set against intelligence and, as a rule, beauty is associated with women, whereas intelligence goes hand in hand with the representatives of the male species, which may be illustrated by the semantics of the Vietnamese proverb *The girl is looking for a clever husband; the boy, for a beautiful wife*. As a sign of beauty, attractive long hair has also been widely associated stereotypically with an alleged lack of brains in women, as illustrated, for example, in *Women have long hair and a short mind* (Swedish).

When we turn our attention to the body of male-centred proverbs, which are definitely a minority group here, we observe that man is interested in nature of his chosen woman. And here comes a surprise because actually *Curiosity is the habit of women* as the saying goes, pointing out yet another stereotypical feminine trait, as in, for example, the following proverbs: *A curious woman is capable of up-turning the rainbow to find out what's underneath* (Chinese); *Woman, thy name is curiosity* (all over Europe, American English).

Women's talk has become an important focus for recent research, in part because it is so important in women's lives. Many feminists hold the opinion that in male supremacist society where women are devalued, their language is devalued to such an extent that they are required to be silent. Then it should come as no surprise that in a number of English-language gender-related proverbs, men complain about females' talkative, gossip, and quarrelsome predispositions, as illustrated by, for example, the message encoded in such proverbs as *Women are nine times more talkative than men* (Hebrew); *The woman who sits at the window gossips about everyone, and everyone about her* (Portuguese, Brazil); *A quarrelsome woman is rightly hit* (Latin/German). What is also worth stressing is that not only are women's words compared with men's words, but also women's words are set against men's actions, as exemplified in, for instance, *Words are for women, actions for men* (Italian); *Thoughts are male, words are female* (Italian); *Words are female, deeds are macho* (Portuguese, Brazil). Moreover, the female manner of speaking, often pictured as chattering, twittering, cackling and the like, is simply universally disparaged, whereas men's talk is uncritically praised, as in, for example, *A woman's word is wind in the wind, a man's word is rock in the wall* (Arabic, Morocco). According to folk wisdom, a silent woman does best, as demonstrated by, for example, *A silent wife is a gift from the Lord* (Hebrew), because silence creates the impression of depth and covers the deepest shallowness, giving a woman irresistible charm. Nonetheless, ladies can eloquently stay silent, making men believe they are the dominant party and giving them the impression of being rulers.

As a result of the women's liberation movement, though, we have certainly observed variously manifested major 'paradigm shift' in gender-related issues mirrored by, among others, the easily verifiable fact that men are slowly losing their traditional dominance in every walk of social, political, and professional life. Women, in turn, have frequently taken centre stage both within the household and in the workplace; thereby challenging rigid, traditional



gender roles, as exemplified in *A career girl would rather bring home the bacon than fry it* (American English).<sup>5</sup>

Importantly and interestingly, in the contemporary academic discourse in paremiology one can find an evidence for the above-mentioned aspect of ‘paradigm shift’ in gender-related matters. For example, a number of modern/new Anglo-American women-centred proverbs included in *The Dictionary of Modern Proverbs* (2012) edited by Doyle et al. (coined primarily in the United States during the past one hundred years)<sup>6</sup> illustrate the discussed tendency by displaying messages which are far from being stereotypically unfavourable, but rather challenging male dominance and establishing women equality or even their superiority, as in, e.g. *A woman’s place is any place she wants to be*.<sup>7</sup> Another issue which deserves our due attention is the recent coinage of Anglo-American proverbs referring to a male sex, in which, contrary to the overall advantageous perception of man in paremiology, he is perceived in a negative manner, as demonstrated in the following: *The (only) difference between men and boys is the price of their toys; Men are only good for one thing; Men are only good for one thing – and sometimes they aren’t even good for that; The best man for the job may be a man; The man who marries for money earns it*. The progressing linguo-cultural equality of genders can also be observed in the emergence of modern/new Anglo-American proverbs existing in an identical wording for ‘man’ and for ‘woman’, as exemplified in *Girls just want to have fun/Guys, Boys just want to have fun; A good woman is hard to find/A good man is hard to find; A woman without a man is like a fish without a bicycle/A man without a woman is like a fish without a bicycle*.

Furthermore, there is a substantial amount of anti-proverbs, otherwise called, among others, proverb alterations/transformations whose messages apparently challenge the firmly established gender stereotypes and, as postulated by Litovkina (2018: 186), might be considered as “a way to look forward to the change in gender relationships in the modern world”. A case in point are proverb transformations which portray women as good candidates for certain professions and occupations, encouraging them to enter jobs which were traditionally considered to be a male domain, as in *A woman’s place is in the White House* (Mieder 1989) (*A woman’s place is in the house* (Anglo-American)).<sup>8</sup> Moreover, numerous anti-proverbs refer to the changing tendency which questions women’s roles and responsibilities restricted to the household jobs, as in e.g. *Behind every successful man there’s a woman – competing for his job* (McKenzie 1980) (*Behind every great/successful man there is a woman* (Anglo-American)) (see Litovkina 2018: 196-197).

Last but not least one needs to make a reference to the fact that some women intentionally create anti-proverbs to counter sexist messages encoded in proverbial texts and allow for the true liberation and empowerment of women for contemporary challenges. The attempt of reconstructing oppressive Yoruba proverbs against women is taken by, for example, Balogun (2010) who, following Raji-Oyelade’s (1999) call for a post-proverbial exercise in contemporary African discourse, makes an effort to reconstruct some traditional patriarchal proverbial representations in order to make proverbs reveal the reality of African women’s liberated lives. In order to exemplify the point let us take a look at the following: *Pashan ta fi na yale, oun be laja fun’yawo* (“The whip that was used to beat the first wife is kept for the second wife”) whose underlying assumption is that a woman is regarded as a child, to be disciplined anytime she errs, and that a man has the right to beat his wife is reconstructed into *Pashan ta fi na oko kini, owa ni pepe fun oko keji* (“The whip that was used to beat the first husband is on the shelf for the second husband”). Yet, as emphasized by Balogun (2010: 32)



“a post-proverbial like this would be grandeur feminine delusion” as it only swaps the positions of the oppressor and the oppressed and thus does not entirely solve a problem.

Upon reflection, a question that may be formulated is that of whether there is anything that can combine these two worlds, so different and yet so close to each other, or at least provide a bridge between them. Obviously, there is no single all-encompassing answer to the question; however, it seems clear that the evident distance, if not gulf, of variously pronounced otherness may be zeroed or at least minimised and neutralised by a man and a woman combined by the depth of feeling of true love and mutual dependence. Indeed, already from the days of earliest childhood we are taught that the very opposites always attract each other, and – if they are so very different – a woman completes a man, and vice versa. Moving on this trail, it should be pointed out that the world of women and the world of men often overlap with each other, and both sexes need each other because *A man without a woman* [also: *A woman without a man*] *is like a field without a fence* (Swedish/ Norwegian/ Danish/ German/ Finnish). It remains to be hoped that, in spite of all the existing dangers, these two complementary poles will never, contrary to appearances, be strangers to each other, but will naturally remain very close, if only because of all these differences and apparent contradictions. This final idea may be expressed by the saying that shows that despite the numerous differences between men and women, men need and cling to women, and vice versa, as in *Women: can't live with them, can't live without them* (American English).

#### 4. Concluding remarks

As results from the foregoing discussion, the stereotypical features attributed to women and men and encoded in the spectrum of proverbs serve to form two different/opposing portrayals of females and males. When we consider the English and world languages data, it must be unambiguously concluded that female-centred proverbial lore that may be said to contain some axiologically negatively-charged argument very much preponderates over the quantum of world languages data that deserves either positive axiological charge, or may be said to be altogether neutral. Thus, in many world cultures, a woman is typically perceived by her male counterparts as, among others, cunning: *The cunning of one woman equals the load of forty donkeys* (Kazakh), talkative: *Women are nine times more talkative than men* (Hebrew), changeable: *Women are as wavering as the wind* (German) or treacherously tearful: *A woman's weapons are her tears* (French). However, on close inquiry, one has the grounds to distinguish certain categories of proverbs and their representative samples, which operate positively for the image of females. These are either globally-recognised positive stereotypes of the mother: *Mother is God number two* (Chewa) and grandmother: *Pleasantly lives he who lets his grandmother look after him* (Russian), or the universal ones where woman is presented through such female features as men either most need or admire, e.g. *A good wife and health is a man's best wealth* (English); *A good wife guards her husband from bad ways* (Chinese).

In turn, the male sex – by and large – appears much less frequently in the paremiological literature of the subject, but, where it occurs, men tend to be characterised by – among other things – masculine intelligence, toughness, and action, e.g. *Thoughts are male, words are female* (Italian); *Words are female, deeds are macho* (Portuguese, Brazil). Furthermore, due to the increasing overall awareness of the gender equality fight, such male stereotypical features as – widely understood – chauvinism and egocentrism: *A man of straw is better than a woman of gold* (Portuguese) are frequently brought to the fore. Notably, evidently positive implications



are encoded in proverbs with the constitutive element *father*, as illustrated by e.g. *No one knows a son better than the father* (Chinese).

Even though one may speak of various encouraging changes, in the form of modern/new proverbs and anti-proverbs referring to both sexes included in the analytical part, there are also continuities along the lines of age-old hierarchical legacies such as, among others, the stereotypical male and female social roles and status. The ways in which people relate to each other as men and women, publicly and privately, to a considerable degree reflects the contents of historically accumulated proverbial messages that tell us, guide us or directly order us to accept what male and female behaviour ought to be like, as exemplified in an English proverb of Italian origin *Words are for women, actions for men*. However, proverbs and the messages they encode make us aware not only of the impact they have on us, but also of the ways in which we can change our lives as men and women today. Yet, one must conclude that the stereotypical image of both men and women has remained basically unchanged for many centuries, only to recently experience a stage of transition into gender equality.

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<sup>1</sup> See *The Matti Kuusi International Database of Proverbs* (<http://lauhakan.home.cern.ch/lauhakan/int/cerpint.html>).

<sup>2</sup> Notably, these highly informative studies do not consider the proverbs from a historical perspective, also ignoring cultural issues for the various national languages involved. They merely amass proverbial texts and draw conclusions from their semantic content without information whether the proverbs are still up-to-date, when they were used, and how they appeared in contexts.

<sup>3</sup> Other publications addressing the question of gender stereotypes embodied in proverbs of various languages are, among others, Webster (1982), Mieder (1985), Storm (1992), Arora (1993), Yusuf (1994), Amoah (1997), Nuessel (2000), Petrova (2002), Kansu-Yetikiner (2006), Litovkina and Mieder (2019).

<sup>4</sup> See *Linguistic Culturology* ([http://lingvocult.uni-ruse.bg/en/index\\_en.html](http://lingvocult.uni-ruse.bg/en/index_en.html)).

<sup>5</sup> Regrettably, the quoted proverb still shows sexist bias because of the use of the immature and derogatory word ‘girl’ instead of ‘woman’ which indicates the patronizing attitude towards the female sex (Kerschen 1989: 123).

<sup>6</sup> Note that, as stated by Doyle et al. (2012) in the Introduction, ‘modern’ means that the proverbs have not been found before the year 1900.

<sup>7</sup> Other modern/new Anglo-American gender-related proverbs challenging male dominance by their implication of female superiority, which are, however, beyond the scope of present analysis, are, among other, *Chicks before dicks*; *Blondes have more fun*.

<sup>8</sup> Another example of an anti-proverb to illustrate the point is: *Old female lawyers never die; they just lose their appeals* (Berman 1997) (*Old soldiers never die, they just fade away* (Anglo-American)).



# Metaphors in English-language sports discourse: Linguistic means of “MetaSelf” expression

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*Sports discourse is in focus in linguistics due to the influential power of linguistic means, especially the MetaSelf metaphor. The metaphor is of anthropomorphic character since it assimilates all phenomena to a person, his/her morphology, and behaviour. The article aims to establish metaphorical models of MetaSelf in the English-language sports discourse. 300 metaphors were selected from the US and UK periodicals, and publications on open online sources of the sports press from 2001 to 2019. Analysis of the metaphors on a syntactic level and a semantic level was based on frame semantics and the semantic-cognitive method as tools of an integrative approach. The analysis allowed constructing productive metaphorical models of MetaSelf: the physiological metaphor, social metaphor, and morbid metaphor. Within each model, there were established relevant semantic frames and slots that underlay the majority of the MetaSelf metaphors, with examples included. The findings demonstrated prevalence of the physiological metaphor. In the English-language sports discourse, the MetaSelf metaphor was presented in simple (33.8%) and simple sentences in a compound (25.6%) on a syntactic level, collocations (23.4%) and separate words (17.2%) – on a semantic level. A distribution of various parts of speech illustrated a complex structure of the MetaSelf metaphor in the English-language sports discourse. The MetaSelf metaphor serves as an important linguistic means of pragmatically influencing the sports discourse, in which sport is likened to a person as a living organism.*

**Keywords:** English-language sports discourse, MetaSelf metaphor, Semantic frame, Slot, Metaphorical model

## 1. Introduction

Sports media is gaining popularity around the world (Bhattacharyya 2020) and therefore has a significant impact on their audience. Sport, which can be considered a foundational discourse, is discursively and rhetorically executed (Caldwell et al. 2017). It is characterised by constant development of sublanguage of sport (Bobyreva 2015) and language tracking in sports mediatisation (Caldwell 2020). These are the reasons why sports discourse is in focus in linguistics. Its analysis relies upon the notion of discourse and its specifics in the sports field.

“Discourse analysis is a linguistic discipline that studies three main issues: the taxonomy of discourses, discursive structure, and discursive factors influencing more local phenomena” (Kibrik 2015: 595). By discourse, it is legitimate to understand not only written but also oral speech, which is socially marked and caused by certain communicative situations. This point of view is supported by the research of N. D. Arutyunova, who in part IV of her book “The Language and the World of Man” under “discourse” understands speech “immersed in life” (Arutyunova 2017: 380). The author emphasises the importance of having a communicative situation that reflects the characteristic features of a particular type of discourse. Thus, discourse, being a multilevel phenomenon, is variable since it can reflect subjective mental models of the context.



In discourse, the focus is on meaning and form, which determine how “we experience, order and evaluate the world” (Schirato 2014: 2). They stimulate a communicative practice in a cultural field, which sport is, and contribute to the experiences of its members, or subjects of sports discourse. Sports discourse relies upon the idea of sport as “communication through the different structure of physical activity [...] performed by professionals, non-professionals and their supporters” (Yarmolinets et al. 2017: 125) as subjects of sports discourse.

Sports discourse as an institutional phenomenon has some specific features. Institutional types of discourse are communicative processes that adhere to the norms of a particular institution. Common signs for them are dynamism, openness, and discreteness. The differences are due to the professional orientation, which forms a unique cognitive core or informs the basic concepts. Nuclear concepts generate subconcepts, which in turn form the cognitive field of discourse. Thus, discourse is a combination of spoken and written speech, and it is, in fact, live speech, which is framed in a certain communicative situation – the sports field in our case.

Sports discourse underlies its subjects’ relation to the sociocultural sphere where they tend to “naturalize and universalize a particular world-view and set of attitudes” (Schirato 2014: 5). The sociocultural sphere provides “insight into the peculiarities of sport communication through a verbalised description of the cognitive-pragmatic processes involved in this communication” (Yarmolinets et al. 2017: 125). Sports discourse exists in three communicative areas: direct oral communication (live broadcasting), indirect oral communication (news programs and messages), and written communication (sports reports, reports, etc.) (Zilbert 2001).

Today, sports discourse is perceived as a kind of national language correlated with the sociocultural sphere of sport as well as the “broadcasting” of the sports mentality characterised by a special speech system. Of particular interest are printed articles in sports journalism, which continue to play an important strategic role. These articles are simple and understandable for everyone as they reflect the mentality and interests of the country in which a given publication is disseminated (Zilbert 2001).

Linguistic means revealed in sports discourse deserve special attention due to their influential power in the sociocultural sphere. Recent studies are devoted to indentifying syntactic-semantic and discourse characteristics of hyperboles in the narrative of football matches (Ramírez & Guerrero 2019). Other studies characterise the textual function of diverse metonymies found in sports newspaper articles (Quintero Ramírez 2017), as well as formal, semantic, and functional aspects of eponymous units (Bobyreva 2015).

Most investigations discuss metaphors because “sports are highly metaphorically understood and [...] used as a source domain for understanding other concepts” (Raffaelli & Katunar 2016: 144). Metaphors contribute to better comprehension and perception of world-views and sports discourse. Metaphors enhance the impact on the audience due to their relationships of figurative meanings with an extralinguistic context.

Conceptual metaphors shape media language and construct virtual realities (Kövecses 2018). According to Kövecses (2017) (Kövecses 2017), conceptual metaphors are characterised by four levels of schematicity: image schemas, domains, frames, and mental spaces. Conceptual metaphor theory brings forward analysis of conventionalised, semi-conventionalised, and innovative metaphorical expressions, which are represented by two prominent metaphors in sports discourse: “sport is war”, “sport is force” (Raffaelli & Katunar 2016).



The functionality and structural characteristics of the metaphor are quite wide, so their comprehensive review has not been found in the works of scholars. The subject of the study of most theoretical works is the functional features of the metaphor (Kravtsova 2016; Wenchong 2016; Kolpashchikova 2017). They consider the primacy of metaphor as a conceptual construction, following the main provisions of the theory of cognitive metaphor by J. Lakoff and M. Johnson (Lakoff & Johnson 2017). However, insufficient attention has been paid to the study of the structure and types of metaphors based on frames and slots, which determines the relevance of the current research.

Among recent publications, notable works in the cognitive theory of metaphor are by, in particular, E. Sweetser, who co-authored with B. Danziger, the author of academic textbooks. Professor E. Sweetser talks in the famous Cambridge publication “Figurative Language” of her commitment to the theory of metaphor by J. Lakoff, her teacher and colleague (Dancygier & Sweetser 2014: XIV). In her work, E. Sweetser widely uses the concept of mapping, a way of visualising the connections between frame concepts. In one of the joint publications, E. Sweetser states that “we have seen how systematized role-to-role metaphoric relations, constructional slot matching to the source and target frames, and metonymic links within the frames help yield the correct interpretations for such expressions” in a special context (Stickles et al. 2014: 336).

The famous Russian linguist V. Z. Demyankov wrote about the enormous attractiveness of studying the mechanism of knowledge transfer, that is, the processes of the “non-literal use of language expressions from one area more directly given to another, given indirectly”. Introducing the theory of prototypes, he pointed out that there is no uniform understanding of the term “frame”. Common to all definitions is the similarity of a frame to a module of a technical device and to a frame in a movie. In the concept of Ch. Fillmore, the term “module” as a synonym to the term “frame” is associated with sectional (“modular”) furniture: frames are combined into larger modules or frames. The term “frame” has associations with a purpose, with a focus on something (Demyankov 1994).

In this paper, we support the opinion of Ch. Fillmore that the frame represents the essential or possible characteristics of a knowable object (Fillmore 1985). At the same time, the semantic centre is the frame-forming concept that is typical of a particular discourse. The semantic content of the metaphor expressing this frame follows from a hierarchically built system of knowledge extracted from the semantic structure of an indirectly derived sign that denotes a particular denotative situation (Sériot 2014).

A semantic frame, which is the fundamental element of metaphorisation, is a heterogeneous phenomenon; its structural elements are known as slots. According to the *Dictionary of Linguistic Terms* by T. V. Zherebilo, a slot is a terminal node that is part of a frame (Zherebilo 2016). A. P. Chudinov, in his study, characterises slots as “elements of the situation that make up some part of the frame, some aspect of its specification” (Chudinov 2001). Thus, the frame in our interpretation is a structured contextually determined unit of knowledge, which is represented by certain interconnected components and which has an extralinguistic basis.

In sports discourse, semantic frames and slots allow shaping the sports media language via relationships of figurative meanings with an extralinguistic context. In this way, construction of virtual realities leads to the comprehension and perception of the sports world. For instance, the semantic frame “parts of the body” as the fundamental element of metaphorisation may contain different slots. The slot of head, for instance, is made up of cognitive structures, or concepts. These concepts are units of mentality, which together form a



sociocultural map of subjects of sports discourse. Within the slot, the metaphor can be “steel in his eyes”.

We address the metaphor of “self”, or the MetaSelf metaphor, to highlight experiences of subjects of sports discourse gained during communication. This conceptual metaphor is based on the assimilation of all phenomena to a person, his/her morphology, and behaviour (Belozerova 2010). The metaphor is primarily used for a pragmatic purpose, which is to encode information in order to create a certain image of a person or phenomenon in the process of informing and to convince the readership of its truth.

The MetaSelf metaphor is a necessary, inevitable element of the sports media language and thinking, as well as one of the most important ways of knowing and rubricating the sports world. The metaphor is possible due to a cognitive mechanism for identifying concepts in human consciousness. With the help of the metaphor, the formation of a new epistemological experience is carried out. It is of an anthropocentric character as different kinds of metaphorisation are based on associative connections that arise within the limits of human experience. “The back of my mind”, “the highest importance” (Carleton 1995) are examples of the metaphor. The MetaSelf metaphor is one of the most common methods of the allegorical verbalisation of specific information in the designated semantic space.

The complex structure of the MetaSelf metaphor makes us study and identify the direction of the metaphorical expansion in the space of the sports discourse of the English-language media known as sources of sports media. In this regard, we can receive the metaphorical picture of the sports world embedded in the English-language sociocultural sphere. Frequent structures and parts of speech used in the metaphors, meanings of concepts, and compatibility of the words in them contribute to the metaphorical picture.

The semantic-cognitive potential of the metaphor serves as a way of modelling texts in order to conceptualise and represent reality. The study of the potential does not lose relevance in the modern context of linguistic research and is revealed as the linguistic metaphorical modelling of the English-language sports discourse. In addition, the focus should be on discovering and justifying the most effective linguistic methods for investigating the pragmatic impact in the framework of the metaphorical model of MetaSelf.

The current research focuses on the English-language sports discourse and its structure-forming mental-verbal constructs, which is its object. The subject of the research is linguistic means of expressing the MetaSelf metaphor in the English-language sports discourse. The article aims to establish metaphorical models of MetaSelf in the English-language sports discourse.

## **2. Materials and methods**

The generally applied methodology refers to the research by Iranian authors R. Najjari and M. Mohammadi. They studied metaphors in the context of winning/losing at football in a sports discourse based on news headlines in the US media. The stages of analysing the sports metaphors are reduced to identification, integration (recontextualization, that is, comparison with other discourses), and explanation (sociocultural implications of the proposed metaphorical model are given) (Najjari & Mohammadi 2018). We consider this methodological model to be concise and comprehensive for exploring the linguistic means of expressing the MetaSelf metaphor.



The English-language sports discourse was presented in sports media texts, which constitute written sports reporting. The sports media under study included a number of periodicals and publications on open online sources of the sports press from 2001 to 2019. The US periodicals, which provided the language material in journalistic publications, were *Sports Illustrated*, *The New York Times*, *The Washington Post*, *NY Daily News*, and *CNBC*. *The Spectator*, *The Guardian*, and *The Times* were examples of the UK publications. The online sources were some official websites. They included the Fédération Internationale de Football Association (FIFA) (<https://www.fifa.com/>), the daily newspaper *The Guardian* (<https://www.theguardian.com/>), the National Hockey League (NHL) (<https://www.nhl.com/>), the American cable sports channel *Entertainment and Sports Programming Network* (ESPN) (<https://www.espn.com/>), the online sports media service *Rivals* (<https://n.rivals.com/>), and the British television sports channels united under *Sky Sports* (<https://www.skysports.com/>).

The metaphors extrapolated to sports discourse from different spheres of human activity were selected as the language material. At that, the continuous sampling method helped select 100 texts covering major sports events, with 50 ones from the periodicals and 50 ones from the online sources. Totally, 300 metaphors were selected.

To analyse the linguistic means of expressing the MetaSelf metaphor in the sports media, an integrative approach was employed. The approach explores relationships between semantic and cognitive structures inherent to the metaphor. The tools of the approach, frame semantics and the semantic-cognitive method, helped analyse the metaphors on a syntactic level (to identify the type of sentences: simple sentence or simple sentence in a compound) and a semantic level (to differentiate between collocations and separate words). Yu. V. Kravtsova's version of the semantic-cognitive method enabled to determine the meaning of the MetaSelf metaphor, which was based on the frames and slots embedded in them (Kravtsova 2016).

Semantic frames are presented through structural elements, which are fragments of a naive language picture of the sports world. A slot is understood as a specific implementation of a typical situation in the scheme of a frame. In turn, the slot is made up of cognitive structures, also called as concepts, which are units of mentality, for which lexicon units are used. These units together form a socioculturally determined map of an individual, which is an integral part of the national picture of the sports world.

This analysis resulted from extracting the relevant knowledge obtained after observing the MetaSelf metaphors out of the context. The knowledge was associated with determining the most frequent structures and parts of speech used in the metaphors, analysing meanings of concepts and compatibility of the words in them. There were also singled out images most in-demand among subjects of sports discourse. Images and symbols that are understandable to human perception, including those that receive the status of value-specific stereotypes, are of an anthropometric character.

The analysis of the linguistic means under study was based on the metaphor analysis methodology proposed by I. A. Sternin. According to it, signs of the defined concept verbalised by metaphors were revealed and interpreted so that the meaning was consistent with the structure of the meaning or concept (Sternin & Popova 2014). It was possible to identify the mechanism of how relationships of figurative meanings with an extralinguistic context emerged. In the sample, we were cautious of the metaphors based on several features of an object or concept. The same concerned the situations when they did not have a verbal designation or the features had lost relevance or had been forgotten. In this case, the metaphor could not be analysed on a syntactic level and semantic level.



The integrative approach to the analysis is accelerated by an exponentially consistent identification of metaphorical modelling resources, both in the linguistic picture of the world as a whole and in a specific conceptual field. So the analysis contributed to the construction of productive metaphorical models of MetaSelf. The models are characteristic of the English-language sociocultural sphere embodied in the language material of sports media. Within the models, the sources of sports media allowed identifying its subtypes typical of the English-language sports discourse. With this in mind, it was necessary to characterise the subtypes by presenting the relevant frames and slots, with examples of the MetaSelf metaphors included. So the frame values of the MetaSelf metaphor were interpreted. As a result, the most common metaphorical model of MetaSelf was established.

### 3. Results

The collected MetaSelf metaphors assisted in constructing metaphorical models of MetaSelf. They were classified into three major subtypes, with frames and slots embedded in them. In the English-language sports discourse, the subtypes include the physiological metaphor, social metaphor, and morbid metaphor.

1. In the **physiological metaphor**, the anatomy and physiology of a person act as a source sphere; this is because the physiological characteristics are predominant in a person's knowledge of himself/herself and the world. A physiological metaphor allows a person to visualise sports activity, correlating it with oneself. The following frames were distinguished in this metaphorical model: "Body", "Parts of the body/organs", and "Physiological actions".

- *Frame "Body"*. The assertion that a person is something more than just a physical body is not doubted. Moreover, the "body" is perhaps the most primary concept for the human mind in view of the belief that the human soul is in his/her body. In direct relation to the English-speaking sports discourse, the body most often is some kind of sports competition, institution, and so on, while the athletes themselves participating in this competition are its soul.

For example, the article "Rampant Russia ensure quick end to Mohamed Salah's dream" published on the pages of the UK newspaper "The Times" presents the Russian team. At the beginning of the World Cup they appeared as a "nervous host" (social metaphor, metaphorical transfer is carried out on the basis of similarity with the person's social roles (will be discussed in more detail below)), gradually became the "soul" of the championship:

*In the space of six days, Russia have been unexpectedly transformed from anxious hosts, not quite sure of themselves, to **the life and soul of this World Cup party***

*(The Times)*

In this case, as a result of the metaphorical transfer, the world championship becomes a body, the soul of which is the Russian football team, which is also the host of this championship. The metaphor "the life and soul of this World Cup party" is a simple metaphor, that is, the metaphor is based on the convergence of concepts such as "championship" and "body" on the basis of soul possession. This metaphor is a supplement represented by a complex phrase, in its structure consisting of prepositions, articles, conjunction, and nouns.

- *Frame "Parts of the body"*. Both the ordinary and the scientific pictures of the world are characterised by the differentiation of the parts of the human body and its organs. Body parts do not have a prototypical functional load, and the same concept can act both as an organ



(“you need to think with your head”) and a body part (“it was hit on the head”). At the same time, individual parts of the body (especially the face, back, head, and legs) can serve as a spatial reference. Parts of the body perform certain functions, that is, they are “responsible” for certain areas of life.

In this frame, the following slots can be distinguished: head (including the face, nape, chin, etc.), neck, torso (including the stomach, back, etc.), arms, and legs. The listed parts of the body are highlighted mainly visually, whereby each has some kind of function that underlies the metaphor. For example, the slot “hand” indicates the upper limb of a person, an organ of the musculoskeletal system, and one of the most important parts of the body. With the help of hands, a person can perform many actions, primarily the ability to capture and hold objects.

Let us look at examples of how the “body part” frame is realised in the metaphors of the sports discourse. The article “For Russia, Five Goals and One Big Sigh of Relief” published on the pages of *The New York Times* is an example. It says that in order to adequately prepare Russia for hosting guests and participants in the World Cup, the president had to put pressure on the oligarchs, who were forced to sponsor this event. The author metaphorically expresses “He twisted the arms of Russia’s oligarchs”, thereby drawing attention to the fact that the World Cup is an opportunity for Russia (and more precisely for the President of the Russian Federation V. V. Putin) to show everyone their strength and power:

*This World Cup has been seen, almost from the start, as Putin’s. He helped swing the vote to bring it here. **He twisted the arms of Russia’s oligarchs** to help pay for it. He is using it to project Russia’s power to its own citizens, and to the rest of the world*

(Smith)

The metaphor “He twisted the arms” is part of a complex sentence, the members of which are expressed by a pronoun, a verb, and a noun. This metaphor can be regarded as simple, since in this case the convergence of objects is carried out according to one sign – to use force against someone, to force, etc.

- The “*physiological actions*” frame contains the following slots: birth, existence (living), sleep, nutrition, death, etc. Consider this frame using the “Existence” slot as an example. In the dictionary, we find the following definition of this concept: “the fact of something or someone existing” (Cambridge University Press 2020). In this case, by existence, we also understand such concepts as “being” and “life”. The article “The Hidden (and Not So Hidden) Politics of the 2018 World Cup” published on the pages of *The New York Times* contains the metaphor “A style of play is a way of being”. In this metaphor, the style of the game is likened to existence:

*A style of play is a way of being that reveals the unique profile of each community and its right to be different,” the Uruguayan author Eduardo Galeano once wrote*

(Galeano)

The metaphor “A style of play is a way of being” is a simple sentence, the members of which are represented by nouns, prepositions, and a verb.

2. The **social metaphor** has a direct connection with the social life of people, including the roles performed in society and the relations that are smoothed out between people based on roles, obligations, functions, etc. The social life of people determines their relationships, social



roles, etc., which allows us to distinguish between the frames “Social institutions” and “Social roles”.

- *Frame “Social institutions”*. Social institutions are value-normative complexes (values, rules, norms, attitudes, patterns, standards of behaviour in certain situations) as well as bodies and organizations that ensure their implementation and approval in society. We include social institutions such as the state, army, school, etc.

Consider the example of one of the photos signed as follows: “*Green and white army: Thousands of fans lined the streets to celebrate Yeovil’s promotion*” (*Daily Mail*). The author of the article calls the fans “the army”, and the traditional green and white colour of the team is presented as the colour of the army flag. The army, in this case, symbolises the unity of the fans and the determination of their actions. The metaphor “*Green and white army*” is represented by a noun and adjectives.

- *Frame “Social roles”*. A person, who is part of society, performs certain functions in this society, the totality of which allows us to determine or name his/her status, to establish a social role. In the English-language sports discourse, metaphors with an evaluation component are often found, that is, through which status and attitude towards athletes, a coach, etc. are determined.

According to the results of the analysis, in the English-language sports discourse, the status of athletes is indicated by such metaphors as “king”, “host”, etc. For example, in the article “Who will be king? Three-way battle for control rocks international chess” published by The Guardian, there is a metaphor for the “king”: “***Who will be king? Three-way battle for control rocks international chess***” (*The Guardian*).

King is the title of the monarch, the head of the kingdom. It is usually hereditary but sometimes elective. In the figurative meaning, it refers to someone who is important, significant, and occupying a high position. The metaphor “king” is represented in one word – a noun.

3. **The morbial metaphor** is a fairly common model involved in the process of metaphorising the sports discourse.

A morbial metaphor can be represented by the following frames: “Types of disease”, “Patient’s condition”, “Causes of the disease”, “Treatment methods and medications used”, and others. In the framework of this, the following frames were distinguished: “Diseases”, “Causes of the disease”, “Treatment”.

- *Frame “Diseases”*. A disease is a condition of the body expressed as the violation of its normal functioning, life expectancy, and ability to maintain its homeostasis. The article “World Cup fever, gay rights abuses and war crimes – it’s an ugly mix” (*The Guardian*) already contains the metaphor “*World Cup fever*” in the title.

Fever (Latin ‘*febris*’) is a nonspecific typical pathological process characterised by a temporary increase in body temperature due to the dynamic adjustment of the thermoregulation system under the action of pyrogens. In this case, the author of the article draws an analogy, comparing the excitement related to the World Cup with a fever.

- *Frame “Causes of the disease”*. The cause of the disease is here considered as a phenomenon that causes the onset of the disease. The cause of the disease may be the spread of the virus. So in the article “Putin basks in the glory of a World Cup that has broken stereotypes and ripped up the rulebook” published by *CNBC*, the metaphor “the virus of football” is found:



*FIFA's Infantino responded that "the virus of football has entered into the bodies of each and every Russian citizen," he said, adding: "We all fell in love with Russia. All of us, everyone who has been here for some time now has discovered a country that we didn't know."*(Ellyat)

Viruses (biology deciphers the meaning of this term thusly) are extracellular agents that can only be reproduced with the help of living cells. Viruses occupy the ecological niche of intracellular parasites, multiplying only in living cells, using their enzymatic apparatus and switching the cell to the synthesis of mature viral particles – virions. These are eventually distributed everywhere and cause diseases of plants, animals, and humans. It turns out that the main feature of the virus is its ability to spread. The metaphorical transfer of the metaphor “the virus of football” is based on distribution. The metaphor “the virus of football” is a phrase with the structure of noun + noun.

- *Frame “Treatment”*. Treatment is a system of measures aimed at restoring health, preventing complications of the disease and eliminating painful manifestations of the disease for the patient, providing relief through, for example, healing injections.

In the article “Russia’s economy scores as World Cup fans splash out \$1.5bn” published in *The Financial Times*, the metaphor “a welcome shot in the arm” is found: “*The event also gave its economy a welcome shot in the arm, the country’s top bank said*” (*The Financial Times*)

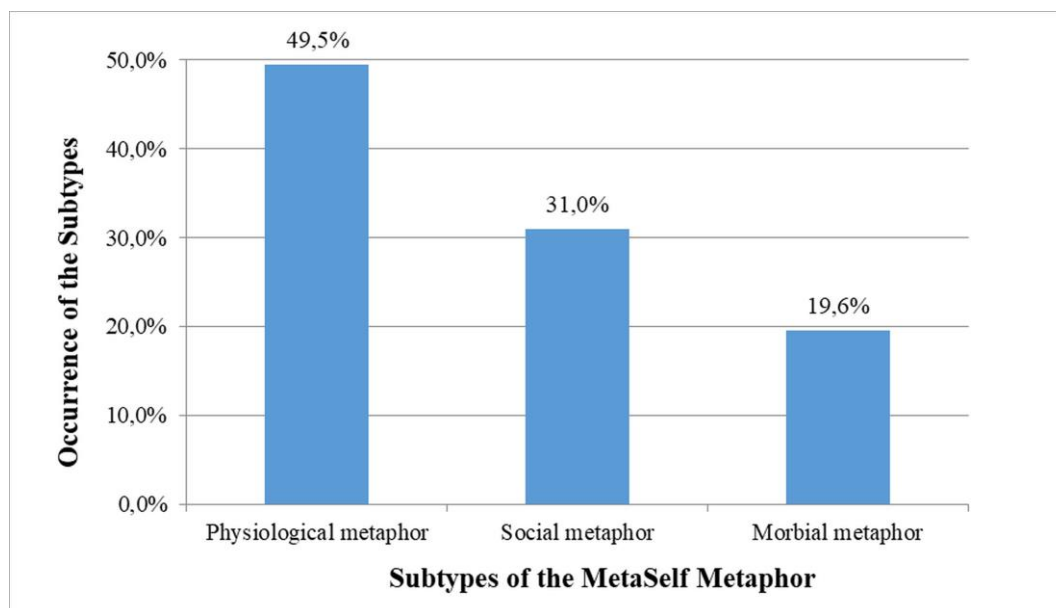
In this case, the author of the article says that the World Cup should significantly improve the economic situation in Russia. The “welcome shot in the arm” metaphor is a complex phrase.

The investigation into the metaphorical models in sports media texts confirmed its tremendously anthropocentric character. The obtained data show that the most common is the physiological metaphor (Figure 1). Most often, the MetaSelf metaphor is presented in the English-language sports discourse in simple sentences (33.8%) and less often in simple sentences in a compound (25.6%), collocations (23.4%), and separate words (17.2%) (Figure 2). The MetaSelf metaphor can consist of various parts of speech, including nouns, adjectives, pronouns, adverbs, verbs, prepositions, articles, etc. Such a distribution indicates a rather complex structure of the MetaSelf metaphor in the English-language sports discourse.

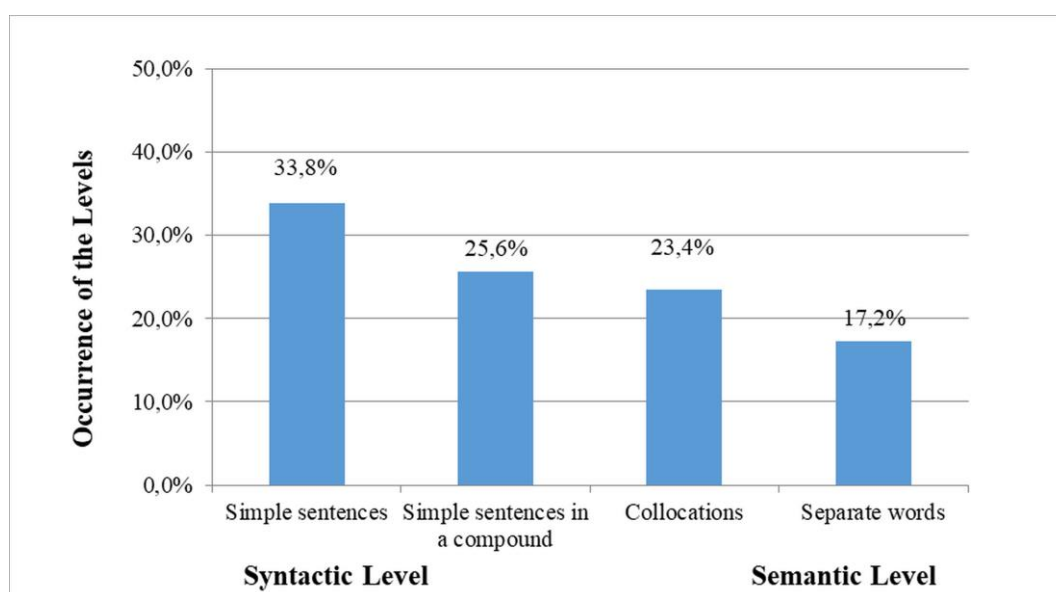
#### 4. Discussion

Analysis of the MetaSelf metaphor in the English-language sports discourse shows that there are three major subtypes: physiological, social, and morbid. The various subtypes, with syntactic and semantic levels incorporated, demonstrate the perception of sports activity as a “living organism”, that is, its anthropocentric character. The MetaSelf metaphor serves as an important linguistic means of pragmatically influencing the sports discourse and, in particular, written sports reporting.





*Figure 1: Occurrence of various subtypes of the MetaSelf metaphor in the English-language sports discourse*



*Figure 2: Syntactic and semantic levels of the MetaSelf metaphor in the English-language sports discourse*



The physiological metaphor is rightfully considered as one of the most common and productive metaphorical models. In this case, all kinds of metaphorisation are based on associative connections that arise within the limits of human experience. Thus, with the help of the metaphor, the formation of a new epistemological experience is carried out. The analysis of the physiological metaphor allowed creating a metaphorical model wherein sport (and everything connected to it) is likened to a person as a living organism.

Similar studies of the metaphor were carried out by other researchers; however, the most frequent focus, and not necessarily in the English-language context, has been on political, economic, and popular science medical discourses. A comparative analysis of the metaphor in political discourse based on three languages is presented in the publication by the Croatian authors N. Stojan and S. Mijić (Stojan & Mijić 2019). E. Semino, Professor of Lancaster University (Semino et al. 2018), studied the morbid metaphor in healthcare within the framework of the cognitive and discursive approaches to communication.

We allow ourselves to mention these sources solely for the sake of quotation:

*there is a rather vast area of research on how the selection is made in the process of metaphorization, what are the patterns of metaphorical combinations in the context of authentic data. The purpose of this kind of research is to establish the consequences of metaphorization on rhetoric, identification in the field of public relations, ideology, etc.*

The object of such research is the metaphor itself, but the main emphasis is placed on the specifics of the communication domains from which text data is selected, and this is mainly education, politics (Musolff 2016), medicine (Semino et al. 2018).

Many institutional discourses of the media often include sports stereotypes, which indicates a high public assessment of sports. And, in contrast, we can also often see comparative studies of metaphorisation in sports discourse intersecting with other discourses using metaphors of war (Pirsl 2015; Maslova 2017; López 2018) or culture (Vaczi 2015). Thus, the current research has scientific novelty due to the emphasis on a unique meta metaphor in an autonomous sports discourse.

## 5. Conclusions

The MetaSelf metaphor is an important verbal operation of pragmatic influence in sports discourse, particularly in written sports reporting. Considering only slots helped correctly interpret the frame values of the MetaSelf metaphor in the English-language sports discourse. The analysis of the linguistic means of expressing the MetaSelf metaphor allowed establishing metaphorical models of MetaSelf in the English-language sports discourse. In particular, the MetaSelf metaphor is represented by three subtypes (physiological, social, and morbid).

The physiological metaphor serves as one of the most common and productive metaphorical models of MetaSelf. In addition, in the MetaSelf metaphor found in the English-language sports discourse, we identified such frames as “body”, “body parts”, “physiological actions”, “social roles”, “diseases”, “causes of illness”, and “treatment”. The most common ones include “physiological actions” and “diseases”.

It is on the basis of these frames that the majority of the MetaSelf metaphors are created in the English-language sports discourse. Thus, frame-context metaphorisation functions are an actual linguistic phenomenon for further study from the point of view of perception, discourse and practice, including plural-linguistic reflection. Also, it outlines the prospect of



studying the representations of metaphorical models of sports discourse in other languages, countries or cultural communities with the aim of further developing philology and cognitive science.

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# Anti-language: A Case Study of Jordanian Inmates

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*This study investigates Jordanian inmates' anti-language based on data collected from interviews with 15 Jordanian male inmates who recently had their freedom in 2016. The data shows that the inmates employ several relexicalization processes to distinguish themselves from the wider Jordanian community and establish their own subculture (anti-society). These processes include neologisms, compounding, metaphors, idiomatic expressions, semantic narrowing and extension, rhyming expressions, and euphemisms. They all join forces to account for maintaining secrecy and experimenting with verbal art at the same time in order to represent prison life both linguistically and socially.*

**Keywords:** *anti-language, Jordanian Spoken Arabic, male inmates, relexicalization processes, subculture.*

## 1. Introduction

Language is a communicative and semiotic system that shapes the ideas, thoughts and even the culture of the interlocutors in a speech community. However, when a group of interlocutors are socially isolated for a certain reason, they tend to create their own code or jargon that has a completely different pragmatic import which reflects their counter-society (anti-society), technically known as *anti-language*. In his 1976 seminal article *Anti-languages*, Halliday states that anti-language is generated by anti-society, which is a society that is built within another society “as a conscious alternative to it.” He views it as “a mode of resistance, resistance which may take the form either of passive symbiosis or active hostility and even destruction...an anti-language stands for an anti-society in much the same relation as does a language to a society” (Halliday 1976:570). The members of an anti-society are constantly striving to maintain a counter-reality which is under pressure from the established world.

Giblett (1991: 1) indicates that “anti-language and anti-society go together; one is not possible without the other.” Therefore, anti-language is a special linguistic variety or code created and used by a certain group of interlocutors and embodied by an anti-society, thus occurring as a resistance to that society. The users of anti-language seek to create their own society (subculture) and maintain their secret spoken language. In this way, anti-language is only communicated and understood within one particular group, and it categorically excludes outsiders from such communication. Another explanation can be psychological, as those interlocutors may suffer from racism, discrimination, suppression, or unfairness in their societies. For these reasons, they may isolate themselves from their normal society and create an anti-society that, subsequently, gives rise to an anti-language. Prison language “is a symbol of group identity and solidarity and a way to express aggression without resorting to violent behaviour” (Wittenberg 1996: 50).

Prison language or anti-language is used by prison gangs or prisoners in general to deceive the wardens or other rival gangs in prison (Hurst 2019; Wittenberg 1996). Inmates



use a variety of language with limited vocabulary and structures to communicate with each other. This variety is associated with the prison language at the one end and the youth language at the other end (Mesthrie 2008). Prison language or argot brought cohesiveness in prisoner's life because of the distinctiveness of its vocabulary and patterns. It helps them to protect their privacy "even in the presence of intense surveillance" and to define their 'relative status' and rights like workers of corporations, who have their argot to the same ends by using words or expressions that are only known by the group to reinforce 'its shared identity' (Wittenberg 1996: 45).

Wenger (1998) uses the term 'community of practice' to refer to a group of people who have shared the same interests, crafts or concerns and interact regularly. This concept may be similar to anti-society as the members of this group can share the same stories, concepts, ideas and so on. Similarly, Milroy and Gordon (2003) refer to the concept of 'individual's social network' as unlimited web of ties or networks between individuals in a social and geographical space. These networks can also be within individuals who share the same interests and concerns.

Wittenberg (1996: 50) illustrates that prison language depends on six contextual factors: 1) Setting the time and place of conversation, such as dining hall or prison chapel; 2) Participants, i.e., inmates to inmates or inmates to staff members or vice versa; 3) Activity in which inmates are engaged in; 4) Channel of communication; 5) Code of prison language; 6) Message form, i.e., 'conversational, aggressive, direct, loud, or soft.' Inmates usually curse, swear or use profanity to express feelings, ideas and attitudes.

Anti-language is mainly employed for secrecy purposes and a verbal art display, as the speakers wish to protect themselves from the outside world on the one hand, and to distinguish themselves by having a different spoken jargon on the other. To isolate themselves from the outside society and have safe communication, German prisoners "have created their own language – a criminal jargon. In the process of prisoners' communication symbols, gestures, signs, nicknames, and tattoos that function in an organized subcultural hierarchy as a distinctive sign, are of certain meaning language" (Osovska & Tomniuk 2019:3). Mallik (1972) reports that out of 385 responses from criminals and anti-social elements, 158 attribute anti-language to the need for secrecy, while 132 mention communicative force or verbal art. Anti-language has the same grammar and vocabulary of the ordinary language, but it has different semantic and phonological systems. Halliday (1976:582) argues that anti-language is "recognizable by its phonological or lexicogrammatical shape as a metaphoric alternant to the everyday language." The users of an anti-language try to protect themselves by generating words, expressions, or giving some existing words new meanings that can be understood only by the members of their group.

By way of illustration, Jordanian inmates use the expression *djibt il-ṣaḍḡal* (Have you brought the wheel?) to refer to bringing drugs. The word *ṣaḍḡal* denotes a 'wheel of a vehicle and is devoid of any connotative meaning in Jordanian Spoken Arabic (Henceforth JSA), but the inmates employ it here to refer to drugs in a metaphorical way. To explain, the wheel's circular shape is invested as an area of cognitive correspondence that can represent what drugs do to a person, i.e. feeling dizzy when taking drugs. This conceptual mapping (Lakoff & Johnson 1980) is not accessible to ordinary language users and may sound incomprehensible to prison guards and police without further investigation. This study aims to investigate Jordanian inmates' anti-language. It specifically looks into the relexicalization processes employed in their anti-language and the motivations behind them.



## 2. Literature Review

According to Halliday (1976), anti-language is a process of relexicalization and resocialization through which old vocabulary acquires new meanings or new connotations, and new vocabulary may be generated. Jordanian inmates, for example, use the word *xalle:tʕ* as an active participle form to mean ‘boss’. Actually, the active participle form from the verb *xalatʕ* ‘to mix’ in JSA is *xalla:tʕ* ‘a mixer’, thus the word has acquired a new meaning by relexicalization. Not only does the word acquire a new meaning, but it also undergoes a phonological change by replacing the second vowel /a:/ with /e:/. Sometimes, the process involves only adding a connotation to the word, e.g. the generic word *sʕandu:g* ‘a box’ is employed by the inmates to specifically mean ‘a packet of cigarettes’. Moreover, anti-language becomes extremely opaque when a new word is generated, e.g. the word *laʔu:n* (a fagot) does not exist in either Standard Arabic (Henceforth SA) or JSA. For its part, resocialization is the process of generating a new social environment for the users (i.e. a subculture), which makes the anti-language socially acceptable within their group, i.e. the anti-society incubates anti-language.

Hurst (2019: 123) studies the phenomenon of relexicalization and metaphor in South African Tsotsitaal, the vernacular spoken by young African Urban Youth. This language practice arose in 1940s during the apartheid period in South Africa due to “the conditions of inequality in colonial, and later, postcolonial societies, in imposed nation-states where the dominance of European languages and capitalist consumerism further disadvantages those outside the western episteme.” This practice appeared as “decolonial practice, a challenge to coloniality.” In other words, Tsotsitaal is a linguistic variety used by South African youth as a revolution against “the monolingual, anglonormative linguistic hegemony of western modernity.” The speakers mix the linguistic codes and do not follow the linguistic rules of the standard language.

Montgomery (1986-1995: 101-102) states that anti-language “can be used to illuminate certain kinds of social dialect” and argues that a speech community “emerges as an arena of competing affiliations and antagonistic differences”. One should note that such competing affiliations which represent different social dialects may arise within the same family. In Jordan, for example, there is a wide-spread phenomenon by which females glottalize standard /q/ to become /ʔ/, while males veralize it (/q/ becomes /g/) within same families as a strong marker of gender identity, despite the fact that they belong to the same social class. Montgomery gives examples from Citizens’ Band (CB) radio slang which involves metaphorical anti-language such as *bear cage* for *police station*, *kojack with a kodak* for *police using radar* and *bubble-gum machine* for *police car*. Such jargon is directed to listeners who affiliate with this anti-language and is usually incomprehensible to large sectors of the population.

Allan & Burridge (2006: 58) consider anti-language as a jargon and they define jargon as “the language peculiar to a trade, profession or other group; it is the language used in a body of spoken or written texts, dealing with a circumscribed domain in which speakers share a common specialized vocabulary, habits of word usage, and forms of expression.” Jargon, they state, is used “to promote in-group solidarity and to exclude as out-groupers those people who do not use the jargon,” adding that it is a “kind of Masonic glue between different members of the same profession” (Allan & Burridge 2006: 61). One should note that the term ‘anti-language’, in contrast to the term ‘jargon’, has a negative shade of meaning that relates



to anti-society and secrecy which Mallik (1972) and Halliday (1976) stress. Thus, jargons affiliating with various professions like ‘the medical jargon’, ‘the sport jargon’, and ‘the linguistic jargon’ do not involve anti-social or secret motifs the way ‘inmates’, ‘Red Necks’, ‘Lavender’, or ‘drug mafias’ anti-language does. Such jargons, however, may transpire professionalism and solidarity among users.

Baihui & Fengjie (2017: 50) review the scant volume of literature on anti-language, asserting that as a social symbol code, anti-language “can reflect the social attitude and create social identities, and as a special form of language, it verifies closely the relationship between language and society.” They give several English examples from the anti-language of homosexuals like *bent* for *homosexual* and *straight* for *heterosexual* and from Netspeak like *BTW* for *by the way* and *tttt* for *to tell you the truth*. The two processes of semantic extension and abbreviation here are respectively employed to create a subjective and secret reality accessible only to those who invented it, at least in the early stages of the anti-language. As time goes on, however, several anti-language vocabularies sneak into the language of the community at large, but at the same time, more anti-language-specific terms may come into existence as a counter process.

Allan & Burridge (1991) discuss euphemism, which aims to replace offensive words/expressions with words/expressions that have positive connotations, e.g. *economical*, *elderly* and *sleep with* for *miserly*, *old* and *sexual intercourse*, respectively (also see Farghal 1995b for interpreting euphemism from a Gricean perspective). It also deals with dysphemism as a lexical process in the opposite direction to euphemism, that is, it replaces positive or neutral words with words carrying negative connotations, e.g. to *babble*, *scribble* and *screw* for *speak*, *write* and *make love*, respectively. Farghal (1995a) views dysphemism as a lexical resource in natural language whereby lexemes are created for combining denotation and negative attitude via a complex process of lexical compression in response to existing psychological and social pressures. Given such pressures, the speaker of JSA may produce the negative *ga:ʕid bitsamam* ‘He’s poisoning himself’ instead of *ga:ʕid bu:kil* ‘He’s eating’ and the negative *?ingalaʕ* ‘He was extracted’ instead of the neutral *ra:h* ‘He left’.

Wolfer (2011: 2) investigates Damascene secret languages and explains that anti-language or secret language in the Arab world is embodied in three varieties: “argots, luldings and mixed languages” (i.e. Christian Goldsmith of Damascus). Secret language is used among closed groups of people such as occupational groups such traders and craftsmen, religious people, soldiers, etc. “Luldings are formed by systematic changes of the colloquial language... usually those changes are morphological.” Luldings is used among non-closed social groups. It uses the existing roots of Arabic words and derives new “luldings words according to existing or invented forms of stem formation in a way that is typical for the Arabic language” (Wolfer 2011: 44). Wolfer’s (2011) study describes the luldings used in Damascus, which is called *lsa:n il-ʕasʕfu:ra* (the language of small birds). It is mainly used by women and sometimes it is used by men in family chatting, especially in the presence of guests to deliver a certain message to his wife. It is also used by men especially when they play cards. Wolfer (2011: 3) explains that Arabic luldings belong to “seven linguistic categories, using affixes, methathesis, substitution, creation of new stems, spelling, intertwining with Koranic verses and numbers.”

Arabic argots on the other hand are used among closed social groups such as occupational group, religious minorities or ‘peer groups’. These argots have limited vocabulary with strict ‘hierarchical and closed’ structures. They are used by craftsmen in the *Suqs* (Market). Wolfer classifies five mixed Arabic secret languages: The use of Arabic in



the *kalamu tesitesi* (Madagascar), the use of Hebrew by Jewish as a secret language in Morocco, Algeria, Tunisia, Egypt and Syria, the Christian goldsmiths in the old city of Damascus adopted the Jewish secret language (lo:so:n), the Yemeni Jewish argots which used words related to Hebrew.

Nieuwkerk (1998) studies the secret language or ‘code’ used by Egyptian entertainers such as musicians, dancers and singers. She explains that the profession of entertainers is disregarded in Egyptian society, as people think that these performances are prohibited. Yet, people still enjoy watching these performances. As a result, entertainers developed their own distinctive argot. She examines three contexts for secret language used by entertainers at wedding and saint’s day celebration ‘popular circuit,’ the circuit of nightclubs and the performing arts circuit. Entertainer’s occupation is infamous in Egyptian society, so entertainers are spatially, socially, cultural and economically marginalized (Nieuwkerk 1998). As a result of that, the entertainers “create a world for themselves and foster a positive self-image. It is not only a reaction against exclusion by society, but a way of group inclusion for the members of the marginal group” (Nieuwkerk 1998: 32).

According to Rowson (1983)<sup>1</sup>, there are two types of secret language in Egyptian Arabic “the *sīm* of gold- and silversmiths (*sīm il-sdgha*) and the *sīm* of entertainers (*sīm ilfannantn or sīm il-ḥawalim*)” (Nieuwkerk 1998: 33). Nieuwkerk (1998: 40) classifies the secret words in words related to money, food, people and warnings. She concludes that entertainers are not strongly marginalized by the society; they use this argot among themselves as well as with outsiders. Therefore, they think that there is no need to create their own distinctive social world. In addition, “the secret codes does [sic] not function as a way of affirming their solidarity.”

One should note that anti-language, being reflective of anti-society, tends to neutralize or euphemize rather than dysphemize vocabulary from the wider community’s perspective. In this way, while the term homosexual is generally viewed as a neutral/objective term in the base community, the Lavender terms *fagot*, *queer* and *bent* are viewed differently by in-groupers and out-groupers. While homosexuals employ them neutrally by way of objective denotation, outsiders use them dysphemistically by way of pejoration. There is a strong tendency, therefore, to come up with words carrying positive connotations to replace ones with negative connotations, e.g. *gasʿir* ‘palace’ and *beet xa:ltuh* ‘his aunt’s house’ are used by Jordanian inmates to refer to ‘prison’. According to Piechota (2018), anti-language often corrupts the language norms, values and perceptions.

Shunnaq (1994: 227) studies anti-language expressions used by male college students at Yarmouk University, Jordan. He considers these expressions as anti-language, because they are only employed among young male students. He concludes that these expressions are used for secrecy reasons, to show solidarity and intimacy among the interlocutors, and “to avoid embarrassing other people, to create an atmosphere of humor, fun, and amusement, and to express unpleasant ideas, acts, facts and events by using more acceptable and pleasant expressions.”

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<sup>1</sup> Cited in Nieuwkerk (1998)



### 3. Method and informants

The data was collected in 2016 with the help of two volunteers who had intimate relationships with some inmates who had recently obtained their freedom then. The volunteers played a pivotal role in managing the meetings with the inmates and collecting the written data as used and pronounced by them. The two male volunteers were MA students of linguistics who studied Sociolinguistic course. They were given detailed instructions on how to conduct the meeting and obtain the data. The participants were informed about the aim of the study, and they were reassured that their identities and privacy would be kept highly confidential. The data was the output of casual and friendly meetings with 15 male inmates in different places in Irbid city. The inmates refused to record these meetings for embarrassing reasons. Therefore, the volunteers wrote down the elicited data that was obtained in individual and collective meetings with inmates. The inmates' ages ranged from 25-50 years; they spent periods in prison lasting from six months to ten years. They confirmed that all the expressions and terms collected are used by all Jordanian inmates regardless of their age or the period they spent in prison. The corpus consisted of 96 common words and expressions used by the inmates. These words and expressions are completely different from JSA as the majority of them are used in JSA with different meaning.

### 4. Analysis and discussion

The data analysis shows that inmates follow several relexicalization processes in constructing their anti-language. Halliday (1976: 571) defines relexicalization as the creation of "new words for old" in areas "that are central to the activities of the subculture and that set it off most sharply from the established society". The lexical procedures in creating the subculture mainly include: neologisms, compounding, metaphors, idiomatic expressions, semantic narrowing and semantic extension, rhyming expressions, and overlexicalization. Each of them will be discussed with illustrative examples below.

#### 4.1 Neologisms

Inmates create neologisms that do not exist in JSA or SA by way of relexicalizing existing words or by filling in lexical gaps to produce the most opaque lexemes in their anti-language insofar as communicating in the presence of outsiders is concerned. That is to say, it is usually impossible for an outsider to guess what a neologism denotes based on the verbal sign alone. The following examples are illustrative:

- |     |    |                |   |
|-----|----|----------------|---|
| (1) | a. | <i>laʕu:n</i>  | ‘a fagot’   |
|     | b. | <i>mukin</i>   | ‘red-handed’  |
|     | c. | <i>dazdu:z</i> | ‘a prisoner who acts treacherously’                 |
|     | d. | <i>ʕatʕu:n</i> | ‘a policeman who brings drug pills for the inmates’ |

In the above data, (1a) and (1b) relexicalize the existing JSA words *mitlabbis* ‘red-handed’ and *manyak* ‘a fagot’ by creating words that have no trace in JSA or SA. The examples in (1a) and (1b) can be considered euphemisms by way of mystifying the familiar, inherently negative JSA words for ‘a homosexual’ and ‘red-handed’, so that only insiders would



understand them. As for (1c) and (1d), they fill in gaps by creating words that represent aspects of the prison world. To explain, the coinage of a word that stands for ‘a prisoner who acts suspiciously and treacherously’ in (1c) and a word that denotes ‘a policeman who secretly cooperates with inmates by bringing them drug pills’ in (1d) becomes a lexical necessity for the inmates during imprisonment. JSA and SA do not need such lexemes because the circumstances requiring them are non-existent.

#### 4.2 Compounding

Compounding is a word-formation process that involves joining two existing lexemes to create a compound. Compounds fall into two categories: endocentric and exocentric (idiomatic). The former presents the compound as a kind of the second lexeme (item) in it, e.g. a *textbook* is a kind *book* and a *bedroom* is a kind of *room*. The latter, by contrast, presents the compound as a kind of something else, e.g. a *bigmouth* is not a kind of *mouth* but a kind of *person* (a talkative person) and a *tallboy* is not a kind of *boy* but a piece of *furniture*. Note that compounds reorganize reality in terms of new concepts. Being locked away in prison (which is an abnormal reality), Jordanian inmates relexicalize the elements of the existing environment in terms of their own experience and needs. They relexicalize metonymies which happen to be compounds. The following examples are illustrative:

- (2)
- a. il-ʔurfa is-su:da  
the- room black  
‘the black room (a lightless room assigned for inmates who make trouble regularly)’
  - b. ʔurfit il-xirwiʕ  
room the-castor oil  
‘the room for castor oil (a room for those who are suspected of swallowing drugs, so they are given castor oil for excrement)’
  - c. ʔurfit il-hilwi:n  
room the-handsome boys  
‘the room for the handsome boys (the room for young, handsome and sexually attractive boys)’
  - d. ʔurfit ʕamra:ʕ nafsiiyyih  
room illness mental  
‘mental illness room (a room for serious guys who do not have a good sense of humor)’

As can be observed, the compounds in (2) are all endocentric compounds that can be interpreted properly only by the inmates because they dissect a reality which is not accessible to outsiders. That is, these compounds denote objects that do not exist in the environment of the Jordanian community at large. Therefore, for instance, if an outsider were to guess what (2c) and (2d) based on the way they are lexicalized given general language competence, they would say they refer to ‘the room for well-behaved prisoners’ and ‘the room for prisoners with mental problems’ respectively, which both prove to be wrong. In this way, common sense in interpreting anti-language may not help.

However, the inmates’ anti-language may include compounds that are transparent or relatively transparent to outsiders, as can be exemplified in (3) below:



- (3) a. *xurfit it-tafti:f*  
           room the-inspection  
           ‘inspection room (a room for searching new inmates thoroughly for illegal things before being checked in)’  
       b. *xurfit il-ṣazil*  
           room the-quarantine  
           ‘the quarantine room (the room assigned for inmates who are highly dangerous)’

The compound in (3a) denotes a room that is familiar in several other contexts such as airports and police stations, which makes it easy to comprehend by outsiders. For its turn, (3b) is less transparent than (3a), despite the fact that the compound ‘quarantine room’ is a familiar concept because it applies differently to the prison context here, i.e. ‘quarantine’ is not implemented in terms of a person’s contagious disease but in terms of a person’s dangerousness.

#### 4.3 Metaphors (*Metaphorical extension*)

Relexicalization by the construction of creative metaphors to stand for familiar entities is one of the main procedures in Jordanian inmates’ anti-language. In most cases, the conceptual mapping in the metaphors is accessible only to the community of inmates. The following examples in (4) are illustrative:

- (4) a. *sʿa:ru:x*                    ‘a rocket’ for ‘a hashish cigarette’  
       b. *farru:ḏjih*                ‘a grilled chicken’ for ‘a method of punishment where the feet of the prisoner are tied together’  
       c. *ṣaḏḡal*                   ‘a wheel’ for ‘a drug pill’  
       d. *maḥru:g*                  ‘burned’ for ‘very angry’

As can be observed in (4), it would be impossible for an outsider to guess what is denoted by these creative metaphors based on familiar conceptual mapping. Let us examine (4a) and (4b) by way of illustration. The familiar *sʿa:ru:x*’s (rocket’s) attribute ‘being fast’ in (4a) may be metaphorically mapped onto a person’s act in the domain of speed. One should note that outsiders might detect such an area of cognitive correspondence that gives rise to this conceptual mapping. However, going as far as establishing conceptual mapping between *sʿa:ru:x* and *hashish cigarette* would be opaque to Jordanians other than inmates because when creating such metaphorical expressions in their anti-language, the inmates construct a cognitive world of their own. In this world, the hashish cigarette lifts the smoker up in terms of pleasure the way a rocket finds its way easily into the skies. A similar argument can be made about (4b) where it is impossible for an outsider to figure out that the inmates’ *farru:ḏjih* ‘a grilled chicken’ denotes ‘a certain method of punishment’, which is a creative metaphor that invests the position of a chicken’s legs while being grilled metaphorically, thus finding its legitimacy only within the confines of prison life.

Some metaphorical expressions in the inmates’ anti-language are borrowed from Jordanian slang and, subsequently, they are applied to prison life. The examples in (5) are illustrative:



- (5)
- a. *mgalliʕ* 'a toothless person' for 'a very experienced person'
  - b. *ʕakal ra:si* '(he) ate my head' for '(he) convinced me to do something'
  - c. *be:t xa:ltuh* 'his aunt's house' for 'prison'
  - d. *xa:ru:f* 'a lamb' for 'a gullible person'

The metaphorical expressions in (5) belong to Jordanian slang, some of which are only used by the older generation, while some belong to the new generation. Apparently, Jordanian inmates are aware of both old and modern slang in JSA. For example, the loss of a person's teeth due to progressing in age is metaphorically connected to having wide experience in (5a), hence the conceptual mapping, which is mostly accessible to the older generation of Jordanians and may not be heard in the young generation's speech. However, it has been borrowed into the inmates' anti-language to denote a prisoner's wide experience in the world of crime. By contrast, the inmates have borrowed the creative metaphor *xa:ru:f* in (5d), which exclusively belongs to the young generation's vernacular to denote a 'gullible prisoner' in the world of crime. Therefore, Jordanian slang constitutes one of the lexical resources the inmates resort to in constructing their anti-language within the borders of prison life.

#### 4.4 Idiomatic expressions

The data includes a number of idiomatic expressions that are specific to the inmates' anti-language. Such idiomatic expressions further consolidate the inmates' subculture. The examples in (6) are illustrative:

- (6)
- a. *btilʕab bʕadda:d ʕumrak*  
are playing(you) odometer life your  
'You're playing with your life's odometer' for  
'I'm warning you not to dare me'
  - b. *mħammad in-nus<sup>ʕ</sup> bisallim ʕale:k*  
Mohammad the-half say hello to you  
'Mohammed the half says hello to you'  
for 'give me half of your cigarette'
  - c. *tihit taxtak ħaʕi:ʕ*  
Under bed -your hashish  
'There's hashish under your bed'  
for 'I'll make trouble for you'
  - d. *ʕixtas<sup>ʕ</sup>ir w gassim ʕala ʕaʕra*  
be (you) brief and divide on ten  
'Be brief and divide by ten'  
for 'Be careful not to argue with me'
  - e. *ʕigra su:rit fa:rig*  
read (you) Surah departure  
'Read the Surah of departure' for 'Get out of here'

If we exclude (6e), the idiomatic expressions in (6) are not heard in JSA, i.e. they exclusively belong to the inmates' anti-language. Just like idiomatic expressions in language in general, the import of these expressions cannot be worked out on the basis of the individual words



comprising them, i.e. they have a unitary meaning. Apparently, inmates usually coin their own idiomatic expressions that color their anti-language with interestingness, forcefulness, and emotiveness. In this way, not only do the idiomatic expressions in (6a) – (6d) distinguish the inmates from the wider Jordanian community, but they also surpass their literal counterparts in the aforementioned attributes. As for the idiomatic expression in (6e), it is borrowed from JSA slang and it sounds very forceful and, simultaneously, humorous by idiomatically intertextualizing with the Holy Quran by employing the Quranic term *Surah* (chapter).

#### 4.5 Non-metaphorical semantic narrowing and extension

The data shows that narrowing down the generic senses of common nouns to specific senses is an important relexicalization process in the inmates' anti-language. This process seems to be less taxing than creating neologisms and, at the same time, it achieves the same communicative purpose, i.e. both processes produce vocabulary whose sense may only be understood by inmates. The following examples are only a selected few, out of the multitudes which have been observed in the corpus:

- |     |                    |  |
|-----|--------------------|--|
| (7) | a. <i>sʕandu:q</i> | ‘a box’ for ‘a packet of cigarettes’   |
|     | b. <i>gisʕa</i>    | ‘a story’ for ‘a problem, especially when some inmates conspire against someone’ |
|     | c. <i>dʒamʕa</i>   | ‘a gathering’ for ‘a problem’  |
|     | d. <i>il-xuz</i>   | ‘a weak, effeminate young male’ for ‘the one who washes the inmates’ underwear’  |
|     | e. <i>bas</i>      | ‘boss’ for ‘gambling controller’   |

In all the examples in (7), the generic sense of the word is changed to a specific one. To explain, the generic senses of the familiar JSA common nouns in (7a) – (7c) have been narrowed down to specific senses. In (6a), for example, the generic common noun *sʕandu:q* is used by the inmates to specifically denote ‘a packet of cigarettes’. Hence, it is impossible for an outsider to assign this specific denotation to it. While the noun *sʕandu:q* familiarly collocates with a variety of contents such as *sʕandu:q bandu:ra* ‘a box of tomatoes’, *sʕandu:q bibsi* ‘a box of Pepsi’ and *sʕandu:q mudʒawhara:t* ‘a box of jewelry’, it fails to collocate with cigarettes – the collocation in JSA is *ba:ki:t duxxa:n* ‘a packet of smoking’. Thus, the collocational behavior of *sʕandu:q* in JSA further mystifies the specific sense of this word in the inmates' anti-language. The same process can be observed in (7b) and (7d) in which a generic sense is narrowed down to a specific sense that may not be detected by outsiders. In (7d), for instance, the young generation's familiar noun *xuz* is generically used to label ‘a sissy, weak young male’ but is specifically used to mean ‘the one who washes the inmates’ underwear’. Last, (7e) is of special interest because it is an English borrowing that has undergone the same process, i.e. the generic noun *bas* ‘boss’ is used to specifically mean ‘gambling controller’.

For its turn, non-metaphorical semantic extension involves changing a specific sense of a word into a generic sense, i.e. a hyponym becomes a superordinate. While semantic narrowing (a superordinate becomes a hyponym) is a very common process in the inmates' anti-language, semantic extension is rarely found. This strong tendency may be motivated by the inmates' desire to distinguish their subculture from rather than dilute it into the base



(wider) culture. The data includes only one example of non-metaphorical semantic extension, as can be witnessed in (8) below:

- (8) *iz-zahir* 'dice' for 'gambling'

The 'dice' *iz-zahir* game in (8), which is a hyponym of 'gambling' *ligma:r* like 'poker' and 'roulette', is semantically extended to become a superordinate, a semantic phenomenon which is attested in both English and Arabic, e.g. *cat*, *lion* and *tiger* are all hyponyms of *cat*.

#### 4.6 Rhyming expressions

Rhyming expressions also contribute to establishing the inmates' subculture. They color the anti-language with musicality and amusement while communicating the message forcefully. Following are some illustrative examples (the repeated syllables/sounds are highlighted in boldface):

- (9) a. allah yikab**ruh**    hatta    ndab**ruh**  
 Allah grow him up so (we) deal with him  
 'May you live long, so I'll punish you', i.e. 'I'm warning you'.  
 b. ʔimba:riḥ ilʕasʕir    ʔije:t    ʕal lgasʕir  
 Yesterday afternoon came (you) to the palace  
 Yesterday afternoon, you came to the palace', i.e. 'to the prison'.  
 c. ʕa:li w miʕʕayif    ʕe:rak    gba:li  
 dear (you) and not see    other than you    in front of me  
 'Dear and I see only you in front of me', i.e. 'You are nothing'.  
 d. mur ya ʕabdissala:m u ʕaddi ma:lik    ʔiʕi    ʕindi  
 pass oh Abedelsalam and go    don't you have anything with me  
 'Oh Abdelsalam go past you have nothing with me', i.e. 'I'm warning you not to dare me'.  
 e. Gu:l na:dir    u gu:m    ʕa:dir  
 Say(you) nadir    and stand up(you) (to) leave  
 'Say Nadir (a proper name) and leave', i.e. 'Get out of here'.

The rhyming expressions in (9) furnish the inmates' anti-language with an artistic dimension through creative repetition of syllables and sounds in parallel parts within the same utterance. In terms of communicative import, they vary in transparency. For example, while it is impossible for an outsider to understand the message intended in (9c), which goes as far as using an endearing term 'dear' in addressing the interlocutor, an outsider can readily assign a mild request to (9d) rather than a strong order as intended in the anti-language. In addition to relative secrecy, therefore, communicative force and verbal art emerge as key motivations for rhyming expressions. While these rhyming expressions may sound humorous and unserious at face value, they usually communicate forceful messages.

By way of illustration, (9e) is almost entirely built on repeating syllables and sounds in a parallel way and, at first glance, may seem a funny, unserious attempt at verbal art to make a mild request but, in reality, it forcefully performs the illocution of *ordering*. More subtly, it is unlikely in (9a) for an outsider to detect the illocution of *threatening* based on its familiar linguistic signs which may transpire a pleasant invocation rather than a threat.



#### 4.7 Euphemisms

Jordanian inmates tend to replace familiar taboo words with pleasant sounding ones in their anti-language mainly for the purpose of secrecy, i.e. it would be impossible for outsiders to guess what the replacements stand for. The following examples are illustrative:

- (10)
- |    |                        |   |
|----|------------------------|---|
| a. | <i>ʕaya:n</i>          | ‘a sick person’ for ‘an asshole’              |
| b. | <i>rafa:hiyyih</i>     | ‘luxury’ for ‘a fagot’                        |
| c. | <i>ʕilt-il-uns</i>     | ‘the friendly gang’ for ‘judges of the court’ |
| d. | <i>madrasit yu:sif</i> | ‘Joseph’s school’ for ‘prison’                |
| e. | <i>mraffif</i>         | ‘lifted up’ for ‘intoxicated’                 |

All the examples in (10) employ euphemism to replace words/expressions with negative or neutral connotations with ones having neutral or positive connotations. In (10a), for example, the JSA negative expressions *gawwa:d* or *ʕars* ‘an asshole’ are euphemized in the inmates’ anti-language by the neutral *ʕayaan* ‘a sick person’. Similarly, the neutral *quḍa:t al-mahkamah* ‘judges of the court’ is relexicalized as the humorously positive *ʕilt-il-uns* ‘the friendly gang’. By contrast, the dysphemistic JSA *manyak* ‘a fagot’ and *msʕatʕil* ‘intoxicated’ are replaced with the pleasant sounding *rafa:hiyyih* ‘luxury’ and *mraffif* ‘lifted up’ in (10b) and (10e).

#### 4.8 Overlexicalization

The data shows some examples of overlexicalization where several words/expressions are employed to denote the same thing. Such cases usually involve key concepts in prison life such as *homosexuality* and the *warning* illocution. The examples in (11) and (12) represent these two concepts, respectively:

- (11)
- |    |                    |          |
|----|--------------------|----------|
| a. | <i>rafa:hiyyih</i> | ‘luxury’ |
| b. | <i>laʔu:n</i>      | ‘?’      |
| c. | <i>bala:tʕah</i>   | ‘a tile’ |
| d. | <i>zaʕtar</i>      | ‘thyme’  |
- (12)
- |    |  |
|----|--|
| a. | <i>mif ʕa:yfak ʔirfaʕ ʕafa:yfak mif ʕa:jbak ʔirfaʕ hawa:jbak</i><br>not see-you raise lips-your not like-you raise eyebrows-your<br>‘Lit. I don’t see you, so raise your lips, if you don’t like it, raise your eyebrows’. |
| b. | <i>allah yikab-ruh hatta ndab-ruh</i><br>Allah grow- him- up so deal with him (we)<br>‘Lit. May you live long, so I can punish you’  |
| c. | <i>btilʕab bʕadda:d ʕumrak</i><br>play (you) with odometer age-your<br>‘Lit. You’re playing with the odometer of your life’.   |
| d. | <i>ʔixtasʕir w gassim ʕala ʕafra</i><br>be (you) brief and divide on ten<br>‘Lit. Be brief and divide by ten’.   |



The words in (11) overlexicalize the JSA dysphemistic word *manyak* ‘a fagot’ in the inmates’ anti-language, which is indicative of the need to have several lexical options to refer to the concept of homosexuality in prison life. While (11a) euphemizes the concept, (11b) neologizes it. As for (11c) and (11d), they metaphoricize the concept of homosexuality. The conceptual mapping in (11c) is hardly decipherable, viz. a fagot’s skin is as smooth as the surface of a tile. In (11d), the mapping is achieved in terms of food, viz. *zaʕtar* is a popular Jordanian dish consisting of ground, dry thyme mixed with sesame and eaten with bread and olive oil, to imply a delicious taste. Overlexicalization of this concept, therefore, enables inmates to readily call up one of these terms when need arises.

Similarly, prison life generates a lot of friction between prisoners which requires issuing the *warning* illocution. Consequently, the JSA warning illocution *baħaðrak* ‘I warn you’ is overlexicalized in the inmates’ anti-language by experimenting with verbal art using both rhyming and idiomatic expressions. In (12a) and (12b), the inmates issue forceful warnings by employing rhyming expressions, while in (12c) and (12d) they achieve the same objective by utilizing idiomatic expressions. In both cases, the inmates’ even distinguish themselves more sharply from the wider Jordanian community by not only relexicalizing but also overlexicalizing familiar JSA concepts in their subculture.

## 5. Conclusion

By examining Jordanian inmates’ anti-language, this study emphasizes the notion that anti-language reflects anti-society and is linguistically informed by the physical, psychological, and social environment surrounding prison life. The inmates employ anti-language as a restricted, context-dependent spoken code to protect themselves from the outside society. It is mainly used for secrecy purposes and for contest and verbal display to maintain “a counter-reality that is under pressure from the established world” (Halliday 1976: 582). The study has also shown that Jordanian inmates’ anti-language was associated with power, control and dominance. The expressions they use in their communication can only be understood by inmates inside the prison. In this way, the inmates’ anti-language is established as a resistance tool against the wider community, which is created and used in prison and is naturally given up when the inmates get their freedom and return to their normal life in society. This may lead to the assumption that the use of anti-language is temporary and occurs under certain circumstances, and any group of people who are suppressed, isolated, or neglected by their societies may contrive it. The study recommends other researchers to investigate prison language from a sociolinguistic perspective because it will further our understanding of the relationship between language and society. Future research can also focus on the female inmate subculture since their communication, feelings, needs, and concerns are different than those of the males’.

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# Exceptional Case Marking in Standard Arabic: Minimalist View

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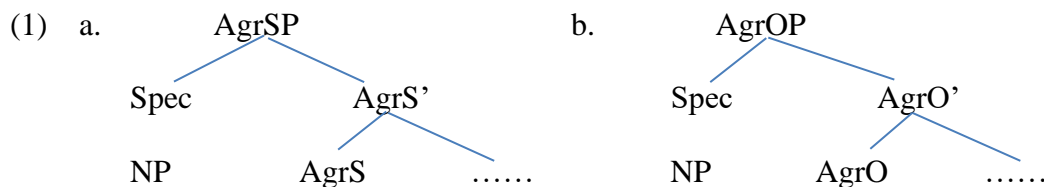
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*This work aims to explain how Exceptional Case Marking (ECM) in Standard Arabic (SA) is licensed via checking features theory within the minimalist framework. I will account that  $Fin^0$  includes mood<sup>0</sup> can license NPs case of the embedded clause when the finite heads ( $AGR^0$  &  $T^0$ ) fail to account optimally to case by the features of  $[\phi]$  and  $[T]$  that found to be deficient. The subjunctive mood of a verb is assumed to assign nominative case to the embedded subject rather than accusative case and the NP receives accusative case by Agree Relation with the matrix  $v^{*0}$  as base-generated NP in the matrix clause.*

**Keywords:** Case, minimalist, license, checking, feature, Arabic

## 1. Introduction

Case theory adopted Chomsky's (1995) Minimalist Program (MP) with new merits distinguished from his earlier version of Generative Grammar (GG) in (1981-1989). This advancement abandoned the head government model due to valid drawbacks cross-linguistically to account for case assignment. MP follows Case Checking applications as represented in the Theory of Feature Checking utilized as a technique to check the morpho-syntactic features. The Checking process takes place in Specifier-head relation wherein the Spec-AGRSP to check nominative case and Spec-AGROP for accusative case as represented in tree diagram (1. a, b):



Case within this view is said to be assigned as a reflex of  $\phi$ -features valuation on case license head. The proposal involves  $T^0$  and  $V^0$  as functional heads with interpretable and uninterpretable features that must be checked with the NPs to value the uninterpretable feature(s) in both T and V head. Other heads can be valid to account for case feature checking. The checking process potentially results in licensing the case to the NP.

Following the basic structure clause model of checking formulated by Pollock (1989), modified later by Chomsky (1993), inflectional functional head includes agreement, tense, and mood features adopted to license structural case. The process occurs when the NP enters in Logical Form (LF) of derivation process and undergoes agree relation with valued  $\phi$ -features of T-head to acquire value for uninterpretable case feature.

The ultimate goal of NP features checking is to get it licensed for nominative case at Spec-subject position and object NP is to be licensed for accusative case at Spec-object position via NP-V agree relation. As a result, the object receives accusative case license if verb  $\phi$ -features match with the counterpart of object. Thus, the inflectional finiteness as a domain including features of AGR, T, and mood is adopted in this paper as functional heads to license



structural cases as proposed by Rizzi (1997). In some structures, however, Complementizer Phrase (CP), on the base of Complementizer (Comp) presence is seen to occupy the Spec-head position whereby NPs can be checked for case in association with Comp  $\phi$ - features with goal features to result in case license. For the features of checking, agreement plays a central role in licensing the structural case ECM in SA. Agreement in SA exhibits the same counterpart property of  $\phi$ -incomplete to that of English, but there may be no persuasive account to disagreement in some forms of VSO order to justify such deviation. The deficiency of agreement legitimizes revising  $\phi$ -complete and proposes a spare other  $\text{Fin}^0$  heads to case checking. This is in consonance with Chomsky (2001) proposal that  $\phi$ -defective of probe  $\phi$ -incomplete on  $\text{I}^0$  results in unlicensed case to the goal.

Tense as an essential feature to case proposed to carry intrinsic features needed to be checked in order to assign nominative and null case to the subject and PRO, respectively. Therefore, tense presence is necessary to case license. In SA, [tense] is manifested primarily through verbal part. Hence the absence of verb in structures such as equational sentence (non-verbal sentence) reflects [T] absence. I assume, with reference to incomplete inflection of feature, the defective tense such as in infinitival clause does not necessarily result in case unvalued, but rather, as in defective agreement, T-incomplete might be reduced into the minimum inflectional level, and legitimized to value case accordingly.

Mood is a feature of finiteness taken on  $\text{I}^0$  to be a basic feature whereby case can be licensed. On the basis of Rizzi (1997) proposal, mood, tense, and agreement represent finiteness that can license SC of the embedded clause of ECM in association with the verbal case of mood. In such proposal, INFL-finiteness can project moodP. For SA, modality instantiates mood through force such as subjunctive and jussive represented by particles use such as ‘qad-may’ and ‘sawfa-will’ potentially indicate mood as Fassi Fehri (1993) argued. In ECM, one tries to account for the embedded  $\text{I}^0$  to license nominative case to the embedded subject NP or *pro* and  $v^{*0}$  to license accusative case to the embedded object. Thus, on the basis of  $\text{Fin}^0$  as proposed by Sultan (2006), subjunctive [mood] rather than [ $\phi$ ] and [T] utilized in such structures to license case are due to the incomplete set of [ $\phi$ ] and [T].

The functional head  $v^*$  is proposed to license accusative case and assign  $\theta$ -role in ditransitive verb and embedded clause structures. The motive of this proposing is that the indirect object agrees with [T] but the direct object does not. Therefore, the  $v^{*0}$  is offered to organize multi-agreement relation as Ura (2010) suggested. This multiple-agree relation is established between one probe- $v^*$  and two goals of indirect and direct object. On the other hand, the subject of the imperfective tense of the embedded infinitival clause does not move to the specifier-position of case license. Hence case association with  $v^*$  is licensed in VP-shell due to the reason that the embedded clause exhibits T/ $\phi$  – incomplete to the subjunctive NP. Case, now, is base-generated in Spec-VP where accusative case is received by agree relation  $v^{*0}$  (See Sultan 2007). The  $\text{I}^0$  licenses nominative case to the subject NP. On the other side,  $\text{Fin}^0$  selects MoodP which then selects  $v^{*0}$  for accusative case. The  $v^{*0}$  proposed to license accusative case to the internal object in embedded clause rather than to raise, see Koizumi (1995) into matrix clause to get licensed by virtue of matrix lexical verb.

Based on the finiteness preview, SA ECM analysis evidently accounts for features, agreement, and tense and case interpretation associated with case license in the view of MP. Finiteness is the feature whereby structural cases are licensed cross-linguistically within the framework of MP. One issue with finiteness is that no consensus cross-linguistically by which finite head/feature can license structural case to any particular language. However, inflectional – finiteness includes features of tense, agreement, aspect, and mood where all are applicable to



test their presence or heads compatibility as a valid evidence to case license. These features were debatable among linguists who effortlessly try to account finite features validity to license structural case. Uchibori (2000), Caresten (2005), Baker (2007) and Al-Balushi (2011) who evidentially introduced, through the languages they studied, evidences that inflectional-finiteness failed to be a licenser since the feature is either lost such as [T] or defective as in [ $\phi$ ]. Therefore, they alternate between these finite heads in order to account for case license.

To add a further fundamental issue of case license, agree based checking mechanism, Chomsky (2005, 2006) admits that case license is a property of phase heads  $C^0$  and  $v^{*0}$ . To clarify,  $T^0$  and  $V^0$  are said to be inherent case checking from their respective Phase Heads,  $C^0$ ,  $v^{*0}$ , respectively. Inheritance, in this scenario, assumes that [T] and [ $\phi$ ] features are inherent on  $C^0$  and  $v^{*0}$ , and derivative on  $T^0$  and  $V^0$ . However, the problem of inheritance raises with relevance to accusative case which is assumed to be licensed by  $v^*$  that inherits the properties from  $v^{*0}$ . This property of case checking process is based on Chomsky (2001, 2005, 2006) and Schütze (2007) assumption that structural case is licensed by agreement. So, case is licensed as reflex of [ $\phi$ ] features valuation on case assigning head that does not necessarily have case features. Therefore, in this paper we will adopt the structural case where case is licensed by functional head(s), following the case model feature inheritance approach that represents Agree Theory.

## 2. Why exceptional case marking

The core of Exceptional Case Marking refers to case-marking across a clause boundary as Pesetsky (1989) defined. The lexical verb of the matrix clause is proposed to assign accusative case to the subject of the [- Tense] embedded clause and  $\theta$ -marked by the predicate in the subordinate clause. In sentence (1) the verb ‘want’ assigns accusative case to the subject ‘him’ but is  $\theta$ -marked by ‘to be brave’. The internal argument can be checked for structural accusative case at AGRO- in minimalism- by virtue of main clause lexical verb contribution and adjacency which requires certain movement. Why exceptional, here, is for being pronominal marked accusative case but functioning semantically as the subject of the infinitival verbs to their right. The NP acquires theta roles from the verb of the matrix clause. This indicates the bold pronouns in (1-2) as determiner phrases have a specifier and the entire dependent clause can be proposed as an IP that verbs such as ‘want’ and ‘judge’ can mark case for.

(1) I wanted **him** to be brave.

(2) She judged **them** to be good players.

The complex structure of ECM sentence represents a virtual challenge to case checking process. The complicity roots back to GB where a verb such as ‘believe’ as in sentence (3) assigns case to ‘her’. The problem lies in that no thematic relation between the verb of the matrix clause ‘believe’ and the subject of the non-finite clause ‘her’. Hence, case can be assigned to ‘her’ through the verb ‘arrive’ in the embedded clause. The NP ‘her’ is said to be a determiner which has a specifier before, and the embedded clause must have IP where verbs such as ‘believe’ can assign case to ‘her’. However, this is a brief explanation to the earlier GB assumption to how case is assigned in such forms.



(3) I believe [her to arrive by 9:00 pm.]

The Agree operation proposed by Chomsky (2001) establishes a relation between the functional categories that have uninterpretable features of the so-called probe and goal and enables  $I^0$  and  $v^{*0}$  to value case feature of the subject and object as nominative and accusative. The operation is expected to value the uninterpretable features of probe element by the interpretable features of goal element. Thus, abandoning GB model, structural case is assumed to be checked on the subject Spec-  $v^{*0}$  and object complement to  $v^0$  position as a reflex of valuing  $\phi$ -features on the case checking heads:  $I^0$  and  $v^{*0}$ , respectively. These two heads are seen to probe goal to value their  $\phi$ -features potentially having then an independent case feature which is valued by  $Fin^0$ , hence case is then checked and valued to the subject and object when they are forced to probe upward to get [case] feature valued by  $I^0$  and  $v^{*0}$ . Hence, we assume that feature checking might take place without A-movement.

In Arabic, the Agree- based operation tries to explain the presence of the functional head extracted from  $Fin^0$ . However, the structure of ECM sentence is observed [-T] equivalent, as it has T-deficient. Thus, the T-deficiency and  $\phi$ - complete imply the subjunctive  $I^0$  of the verb of wish ‘?rāda-want’ to assign the nominative case to the subject of the embedded clause instead of being exceptionally assigned an accusative case. This subject remains in situ (No raising to check case and agreement). The subject of the sentence is the null *pro* which is base-generated in Spec-  $v^{*0}$ . So, case can be licensed without A-movement. It has the schematic representation [V S *pro* O]. A further issue is that the definite NP does not occur preverbally, and this results in odd structures and can undermine the idiomatic representation of the sentence. On the other side, the accusative case of the NP is marked in thematic object, and no raising of the object via co-indexation is expected to the post-verbal position in the embedded clause (the accusative case is thus base-generated in embedded clauses), given that finite  $I^0$  can license case as shown in (4):

- (4) ?rāda-Ø                      ?l-malik-u              ?an    yahdur-a                      ?l-wizarā-u  
      PST.want.3.SG.IND *pro* the-king-NOM    COMP IMPRF.attend.3.SG.SUBJ the-ministers-NOM  
  
      ?l-?jtimāʕ-a  
      the-meeting-ACC  
      ‘The king wanted that the ministers to attend the meeting.’

The NP ‘?l-malik-u’ is observed to be controlled by the post-verbal *pro*-subject which indicates the subjunctive mood in the clause. The acc-marked NP ‘?l-?jtimāʕ-a’ is base-generated in the matrix clause [Spec-VP] position. This NP is, thus, receives the accusative case via agree relation with the matrix  $v^{*0}$ . This goes against exceptional case marking for the NP, now it receives ACC case by agree relation with the matrix head  $v^{*0}$  while being base-generated in the matrix clause.

### 3. The verb *want* and ECM

As in English, SA has verbs of desire and expectations such as ‘?rāda-want’, ‘yara-view’, and ‘yatwaqʕ -expect’ are functioning as ECM verbs. The embedded clause with  $I^0$  is T-deficient but  $\phi$ - complete as demonstrated before. The verb ‘?rāda’ as in (5.a) appears to assign nominative case to the embedded subject ‘Ali-un’ instead of being assigned accusative as it



remains in situ, but ‘Ali-an’ can be assigned accusative in case it moves to the preverbal position as in (5.b):

- (5). a. ?rāda                      ?rrajul-u              ?an    yatsalaq-a              Ali-un    ?l-jidār-a  
          PST.want.3.SG.MSC the-man-NOM COMP climb.3.SG.MSC Ali-NOM    the-wall-ACC  
          ‘The man wanted the Ali to climb the wall.’
- b. ?rāda                      ?rrajul-u              Ali-an ?an    yatsalaq-a              ?l-jidār-a  
          PST.want.3.SG.MSC the-man-NOM Ali-ACC COMP climb.3.SG.MSC the-wall-ACC  
          ‘The man wanted Ali to climb the wall.’

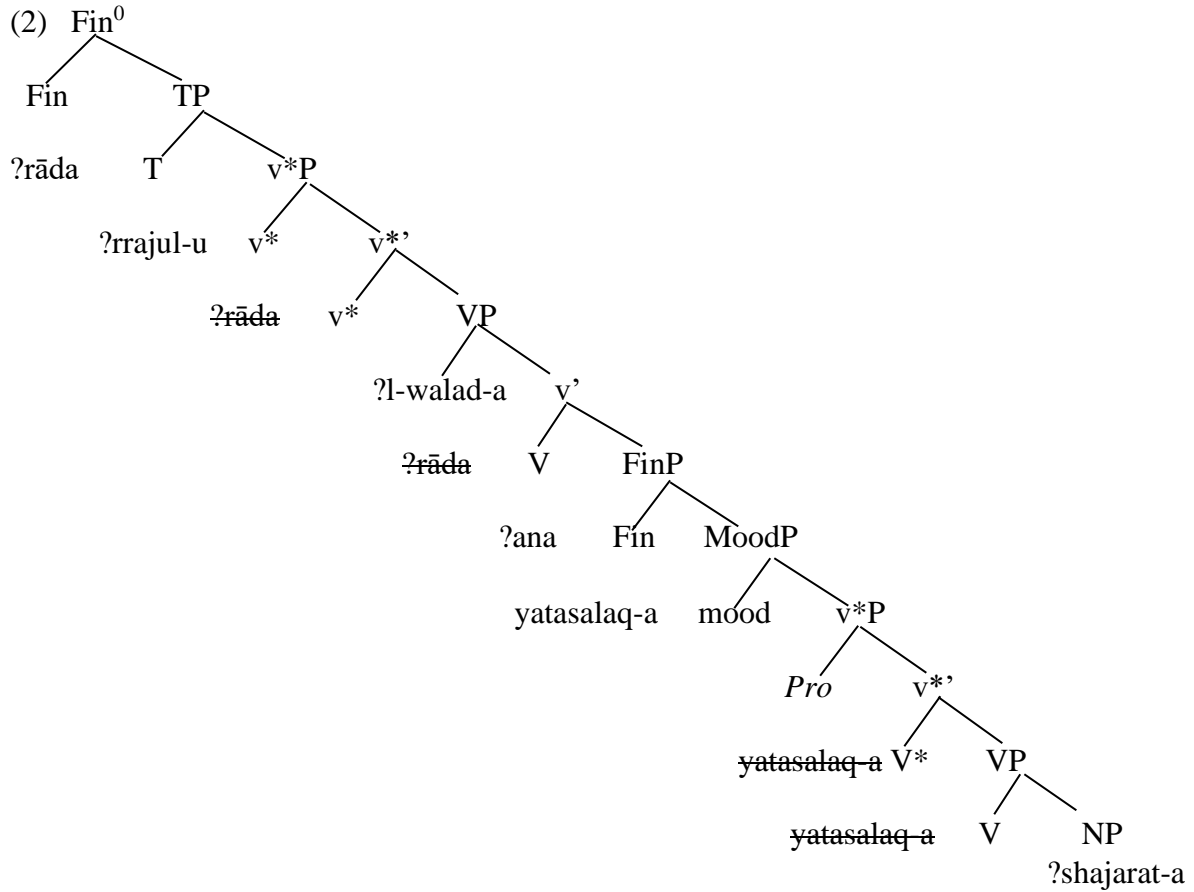
To explain the process of case assignment, we say that the verb ‘yatsalaq-a’ located in the embedded clause is [-tense] imperfective due to being preceded by the complementizer ‘?an’. However, it has a full agreement with the subject ‘Ali-un’ and the object ‘?l-jidār-a’. In contrast to English in which defectiveness of the embedded infinitival [T] triggers the ECM subject to get its case valued from the lexical verb in the matrix clause, this doesn’t apply to SA as Sultan (2007) stated because SA embedded subjunctive [T] exhibits  $\phi$ -complete. Based on this view, the NP ‘Ali-an’ receives nominative case in the post-verbal position within the subjunctive clause. Therefore, one can state that subjunctive [T] can assign a nominative case to the embedded subject in situ refuting the proposal of raising to object position as a requirement to case assignment.

#### 4. Mood and accusative case marking

Following Sultan’s (2007) footsteps, we say that the accusative NP ‘Ali-an’ in (5.b) is marked via the thematic object position of the matrix clause and no raising to the post-verbal position in embedded clause. This indicates that the accusative case marked to the NP occurs in the matrix clause rather than in the embedded clause. Hence, the accusative case marked NP is base-generated in the matrix [Spec-VP] position where ‘Ali-an’ in (5.b) receives case through agree relation from the matrix  $v^{*0}$  without moving to Spec- $v^*P$ . To sum up, the embedded  $I^0$  is to license nominative case to the embedded subject NP or *pro* and the embedded  $v^{*0}$  to license accusative case to the embedded object. In such a structure, I argue that the subjunctive [mood] feature of  $Fin^0$  is the central feature which has a supremacy over  $[\phi]$  and [T] due to the reason of being deficient to assign case by. This proposal has been proved by Sultan (2007), Fehri (1988), and Benmamoun (2000) who also admitted that the embedded clause of ECM selects [mood] represented by the complementizer ‘?an’ to establish moodP as a head to case license. To illustrate, see the following tree diagram (2) that refers to sentence structure (6):

- (6)?rāda                      ?rrajul-u              ?l-walad-a              ?an    yatasalaq-a              *pro* ?shajarat-a  
          PST.want.3.SG.MSC the-man-NOM ?l-walad-a-ACC COMP climb.3.SG.MSC EC    the-tree-ACC  
          ‘The man wanted the boy to climb the tree.’





According to the tree diagram (2), the embedded subject dichotomized into internal subject ‘?l-walad-a’ as a post-verbal subject and the external subject of *pro*. The existence of the *pro* as an external argument contributes to mood<sup>0</sup> as exhibited in the diagram. Mood is proposed due to the fact that the embedded verb ‘yatasalaq-a’ realizes only [person & gender] but not [Number]. The absence of this *pro* can lead to mood<sup>0</sup> defectiveness and hence cannot assign case through, see Al-Balushi (2011). To explain the process of assigning case, the verb ‘yatasalaq-a’ is merged in v\* the valued [v] feature. The object ‘?shajarat-a’ has unvalued [case] feature. Therefore, it has to merge with VP, and *pro* is merged with v\*P. The valued [v] is projected to v\*P then selects [mood]. To apply agree relation, due to [-φ] and [-T], the relation takes place between mood<sup>0</sup> and Fin<sup>0</sup>. The match between [V] and [mood] on v\*P leads to value both via agree relation. Another agree relation takes place between [mood] feature and v\*<sup>0</sup> results in value mood, and hence moodP is projected from Fin<sup>0</sup>. Now agree between mood<sup>0</sup> and Fin<sup>0</sup> takes place, resulting in valuing [V] and [Mood] on Fin<sup>0</sup>. The embedded subject *pro* and object ‘?shajarat-a’ enters agree relations with Mood<sup>0</sup> and v\*<sup>0</sup>, respectively. Consequently, *pro* and ‘?shajarat-a’ assigned to case as nominative and accusative, respectively.

## 5. The case of matrix clause

In contrast to the embedded clause, the matrix clause displays [T] feature. Therefore, I expect T of Fin<sup>0</sup> to license nominative case to the lexical subject. On the other side, I assume accusative case of the same clause via v\*<sup>0</sup> to be licensed to the NP ‘?l-walad-a’ in the VP as in (7). To



explain the process of assigning case in matrix clause, I-finiteness is [T] where I<sup>0</sup> is valued on [T<sup>0</sup>]. Hence, the nominative case is assigned to the lexical subject ‘?rrajul-u’. On the other side, the accusative case is assigned to the NP ‘?l-walad-a’ by virtue of CP represented by the Complementizer ‘?an’. The object is A-bar and can be ACC-marked NP by co-indexation with *pro* in A-domain.

- (7) ?rāda                      ?rrajul-u              ?l-walad-a              ?an    yatasalaq-a              *pro* ?shajarat-a  
 PST.want.3.SG.MSC the-man-NOM ?l-walad-a-ACC COMP climb.3.sg.MSC EC the-tree-ACC  
 ‘The man wanted the boy to climb the tree.’

One proposal arises, here, with regard to the accusative case in [Spec-VP] where the case can be licensed to the NP of the CP due to the fact that case is licensed to the CP complement and no NP is found as seen in (8):

- (8) ?rāda                      ?rrajul-u              ?an    yatasalaq-a              ?l-walad-u              *pro* ?shajarat-a  
 PST.want.3.SG.MSC the-man-NOM COMP climb.3.SG.MSC ?l-walad-a-NOM EC the-tree-ACC  
 ‘The man wanted the boy to climb the tree.’

To explain case license with reference to (8), the matrix verb  $v^{*0}$  is expected to assign the accusative case to the NP ‘?shajarat-a’. The CP – argument ‘?l-walad-u’ may receive no case, in such scenario, due to remaining in A-domain. However, in applying A-domain notion to case license in which such NP as ‘?l-walad-u’ is not deemed as an argument of the matrix verb ‘?rāda’. Instead, it receives a lexical case when this NP merges in [Spec-VP]. To tackle that and get it receive a structural case, I propose the accusative case NP ‘?shajarat-a’ to co-index with the *pro* to get case licensed. One raising issue in this regard is that co-indexation with adjacent categories can or cannot grant case to that NP. To justify, I claim that a PP acc-marked NP as in (9) can be a non-argument wherein the Gen-marked NP ‘?l-walad-u’ receives  $\theta$ -role from the preposition ‘min’ that can also assign the it oblique inherent case.

- (9) ?rāda                      ?rrajul-u              min ?l-walad-u              ?an    yatasalaq-a              ?shajarat-a  
 PST.want.3.SG.MSC the-man-NOM to the-boy-NOM COMP climb.3.SG.MSC the-tree-ACC  
 ‘The man wanted to the boy to climb the tree.’

## 6. The verb *yaʕtaqid* and ECM

The verb ‘*yaʕtaqid*’ found in ECM construction has been observed to contribute to accusative case marking to the NP of the embedded clause. The embedded clause is introduced by the Complementizer ‘?an’. This distinctive feature of the clause structure gives a privilege of clause completeness. The presence of comp provides a rational evidence to the accusative case marked NP ‘?a-tālib-a’ to occur within the embedded clause according to Arabic grammar the NP of the embedded clause can receive lexical accusative case by the comp as seen in (10). However, concerning structural case, CP is seen to have unvalued case features. So, case feature in this clause can be valued to this NP by the functional head  $v^{*0}$  via agree relation:



- (10) ?ʔ taqad-a                      ?al-muʕalim-u    ?ana    ?a-tālib-a                      marīd-an  
 PST.believe.3.SG.MSC the-teacher-NOM that    the-student-ACC sick  
 ‘The teacher thought that the student is sick.’

In the same vein of clause completeness, and regardless its association with embedded NP case license, the absence of overt complementizer is seen- in such clause structure- to result in acc-marked NP in the embedded [Spec-TP] to be checked and licensed accusative case by the matrix  $v^{*0}$  through agree relation between ‘?a-taqs-a’ and the  $v^{*0}$  in its base-generation without movement process as seen in (11):

- (11) ?ʔ taqad-a                      ?nnas-u                      ?a-taqs-a                      barīd-an  
 PST.believe.3.SG.MSC the-people-NOM    the-climate-ACC cold  
 ‘The people thought the climate is cold.’

In the view of the previous examples (10-11), there seems a consensus among linguists that acc-marked NPs ‘?a-tālib-a’ & ‘?a-taqs-a’ are within the domain of embedded clauses. This conclusion contrasts with Sultan (2007) and Al-Balushi (2011) proposals who claimed that ACC-marked NPs are to be checked for case at TP position where the embedded clause they occur in is full CP. Their claim could be considered due to the speaker intuition that a sentence such as (10) is odd but not ill-formed, and indeed lacks the complementizer. However, such a clause is advocated by many ways as being tensed, but tensed CP. This proposal is based on the evidence that the verb of the embedded clause can realize the past tense as in (12):

- (12) ?ʔ taqad-a                      Samir-un    ?a-tālib-a                      ghab-a    ?l-barehat-a  
 PST.believe.3.SG.MSC Samir-NOM the-student-ACC absent    yesterday  
 ‘Samir thought the student was absent yesterday.’

According to this sentence, SA has- contrasting to English- an embedded independent [T] in the embedded clause which comes from the inflected verb as underlined in (12). This property seems different from the infinitival verb form in English which has [-T]. Moving to agreement, it has been shown earlier that  $I^0$  exhibits  $\phi$ -complete between the subject ‘?a-tālib-a’ and the verb ‘ghab-a’. These two heads are fully inflected for finite features and encode the inflectional property that indicates and proves existence of CP layer. Far from tensed clause property, ACC-marked NP is seen to be within the domain embedded clause but not in the matrix clause. The evidence for that –See Al-Balushi (2011)- is seen in a structure of the embedded clause that is modified by  $Fin^0$  which is represented by a negative particle providing a reasonable evidence to be a CP clause as shown in (13):

- (13) Zanna-Ø                      Ali-un    ?tullab-a                      lan                      yahdur-u-Ø ]  
 PST.believe.3.SG.MSC Ali-NOM the-students-ACC NEG.FUT IMPRF.attend.PLUR.MSC.SUB  
 ‘Ali believed that the students will not attend.’



In sentence (13), the negative particle ‘lan’<sup>1</sup> is associated with accusative case license to NP ‘?ttullab-a’ of the embedded clause which occurs to the left periphery of the clause boundary. The negative particle ‘lan’ occurrence in embedded clause is higher than T<sup>0</sup>; the *pro* does not occur at [Spec-TP], rather it occurs at [Spec-TopP]. One significant point in this vein is that having a negative particle is pertained to null CP as shown in (14):

- (14)?ʔtaqad-a                      Ali-un    (?ana) ʔal-mudaris-a    lan            yaʔti  
 PST.believe.3.SG.MSC Ali-NOM    that-EC    the-teacher-ACC NEG.FUT    come.3.SG.MSC  
 ‘Ali believed (that) the teacher will not come.’

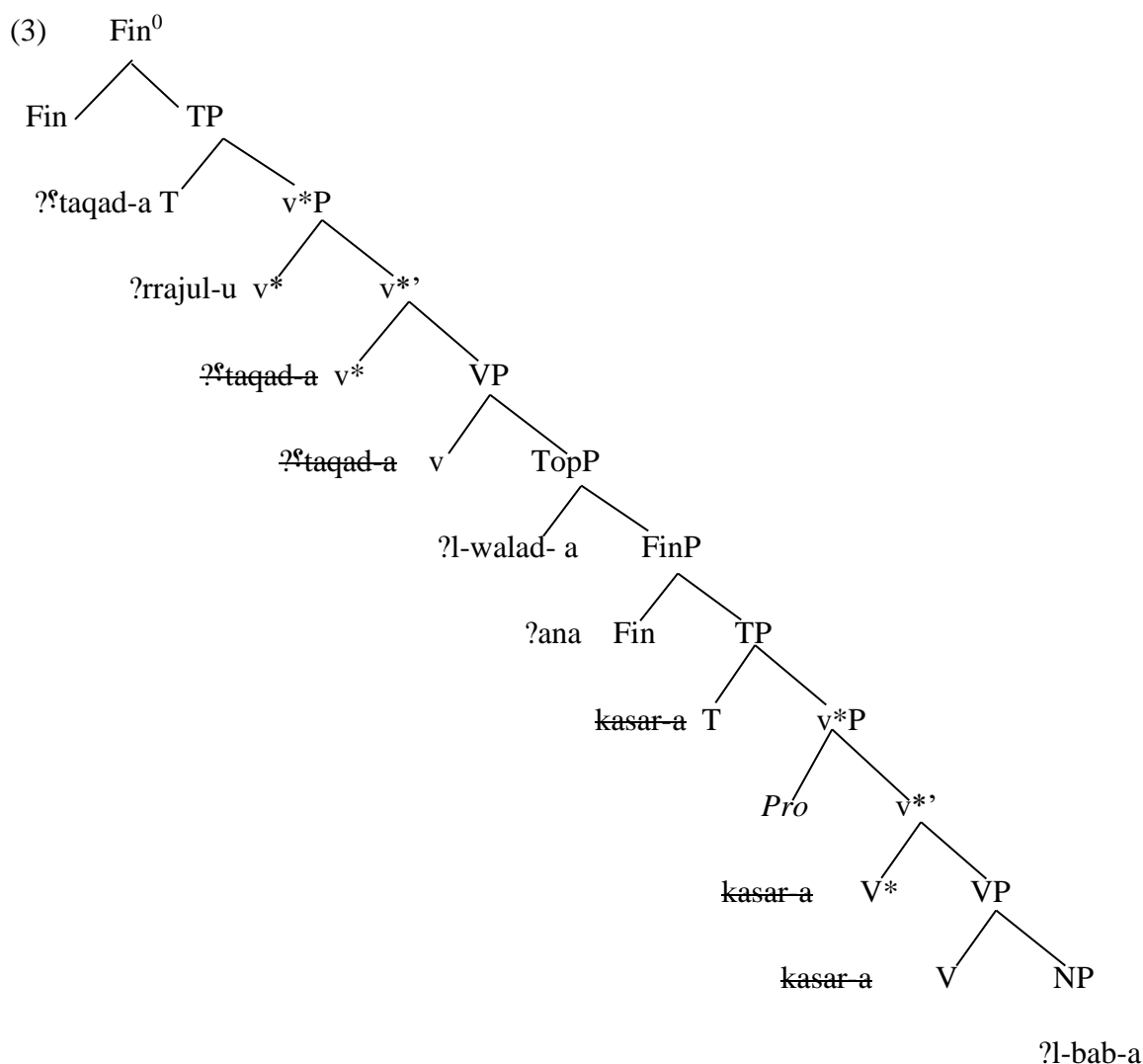
The structure of sentence (14) has a CP, and thus manifests Fin<sup>0</sup> feature of [T] and [ϕ] which legitimizes to check the structural case as further explained in (15) followed by the diagram (3) where null C co-occurs with the null subject of the embedded clause.

- (15)?ʔtaqad-a                      ʔrrajul-u            [(?ana) ʔl-walad-a    kasar-a    *pro* ʔl-bab-a  
 PST.believe.3. SG.MSC the-man- NOM (that)-ec the-boy-ACC break.PST EC    the-door-ACC  
 ‘The man believed (that) the boy broke the door.’

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<sup>1</sup>. According to Benmamoun (2000) functional categories such as negative particles occupy a projection that encodes [T]. However, incomplete inflection of the feature can result in unvalued tense, and hence case unlicensed. In this vein, the sentence negation particle carries temporal information located between tense and verbal projection. Hence, in sentence (13), tense interpretation as encoded in the particle ‘lan’ shows that imperfective verb doesn’t carry tense. Therefore, the imperfective paradigm in SA displays a mood feature such as indicative, subjunctive, and jussive which are followed here to account for case license.





Tree diagram (3) shows sentence (15) structure in which the NPs case for the embedded clause starts in the verb ‘kasara’ merge in  $v^0$  with the case unvalued object ‘?l-walad- a’. The  $v^{*0}$  merges with  $v^*P$ . The argument *pro* is located in Spec-  $v^{*0}$ . The  $v^{*0}$  projects [v] and gets its value at Spec-  $v^{*0}$ . The  $v^{*0}$  is inevitably selected by  $T^0$ . Both  $v^{*0}$  and  $T^0$  enter agree relation that results to value [T] on [Fin<sup>0</sup>]. The *pro* as external subject has a co-referential relation with the topic in the embedded Spec-TopP. The *pro* and the object ‘?l-walad-a’ enter agree relation in order to value their cases. So they enter that relation with  $T^0$  and  $v^{*0}$  which results in value nominative case to the *pro* and accusative case to ‘?l-walad- a’, respectively. The topic ‘?l-walad-a’ is assumed to merge at Spec-TopP wherein it can receive the lexical case by occupying A-bar position from the verb ‘? ʕtaqad-a’ in the matrix clause. On the other hand, the NP ‘?rrajul-u’ can get the nominative case by virtue of agree relation with the verb ‘? ʕtaqad-a’ because it encodes [T]. For the CP of the embedded clause, it gets valued through the agree relation with the head  $v^{*0}$  to receive structural case that results in C visibility at LF.



## 7. Conclusion

This paper has attempted to explain how ECM of various forms in Arabic can be licensed in the view of minimalism. It demonstrates the diverse structures of ECM sentences that all account for case assignment through finiteness. The finite features (Agr and T) have certain limitations to account for case assignment of the embedded clause due to defectiveness. Hence, the subjunctive mood verb of ECM can assign the nominative case to the embedded subject. Rather, the study accounts for the NP in embedded clauses and shows the accusative case through agree relation with the matrix clause  $v^{*0}$ . Agreement, on the other hand, is proposed initially to license case, particularly in SVO forms. In contrast, the agreement feature fails- in particular VSO forms- to license case due to deficiency of the feature. Therefore, the study extended  $Fin^0$  to include tense as encoded in the verb to assign both nominative and null cases to the subject and *pro*, respectively. We found also that case license in this exceptional form is structural dependent as in SVO where agreement assigns case but fails in certain forms of VSO. This led to propose [T] to license case after entering agree relation with  $v^{*0}$  results in valuing it on  $Fin^0$ . Yet, deficient [T] in imperfective tense clause when preceded by the complementizer makes the issue of case license more complicated.

Mood is proposed through its force as in the subjunctive and jussive constructions represented by modality particles complementizer insertion to enter agree relation with *v* on  $v^{*0}$  results to value both *v* and mood and hence project moodP. Now, the embedded subject *pro* and object enter agree relation with  $mood^0$  and  $v^{*0}$ , respectively which results in assigning them nominative and accusative cases, respectively. As we see, the  $v^{*0}$  has a central role to bridge the agree relation between the functional heads and NPs. We see in embedded clause, an indirect object agrees with T, but the direct object doesn't. Hence,  $v^{*0}$  is functioning to establish a dual agreement between both objects. Furthermore, the  $v^{*0}$  is utilized in imperfective infinitival embedded clauses when the subject remains in VP-shell and case assigned in base-generated Spec-VP in which  $v^{*0}$  assigns the accusative case to the internal object. Rather,  $v^{*0}$  functions in matrix clause where the pre- verb NP has been licensed accusative case in base-generation through agree relation with  $v^{*0}$ .

Abbreviation	Interpretation
acc	accusative case
Agr	agreement
AgrOP	agreement object head
AgrSP	agreement subject head
$C^0$	complementizer head
ec	empty category
fem	feminine
$Fin^0$	finite Head
fut	future
imprf	imperfective
ind	indicative
$I^0$	inflectional head
$mood^0$	mood head
msc	masculine
neg	negative
nom	nominative case
plur	plural



pre	present
pro	little null pronoun
pst	past
sg	singular
Spec	specifier
T	tense
TopP	topic Phrase
T <sup>0</sup>	tense head
v*	light verb
v* <sup>0</sup>	light verb head
φ	phi-features
Ø	null NP

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**Are dialects still alive?**  
**Selected aspects of children's talk in relation to dialects**  
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*The aim of this paper is to introduce the analysis of data collected in field research which focuses mainly on the dialectal elements in spoken discourse of preschool children and also on children's neologisms originating in "kopaničářská nářečí" [Kopanice dialects], the varieties belonging to a group of East-Moravian dialects which are spoken in two Moravian villages. The purpose of the field research was to determine whether the traditional dialect is still a living part of their language. The research is based on contrasting collected answers and data from Český jazykový atlas [Atlas of the Czech Language], edited by Jan Balhar and Pavel Jančák. The results suggested that not only the traditional local dialect is still alive in the region, but that local people also produce new variants of forms. These local neologisms are commonly used, and they seem to have almost replaced the original forms. As this field research focused on the preschool children, the majority of new forms seems to be children's neologisms with dialectal features. Among other things, these children's word formations show how existing patterns in the lexicon are used in the present-day Czech language.*

**Keywords:** *dialect, neologism, children's neologism, field research, morphology, comparison*

## **1. Introduction**

What is the purpose of doing field research on Czech dialects these days? There are plenty of articles discussing Czech dialect levelling (Bělič, 1972: 9–10; Lamprecht et al. 1976: 15) or reflecting on how Czech dialects are disappearing (Chloupek 1971: 12) or can be heard just among the oldest generation in some parts of the Czech Republic. Language changes are an inherent part of every language system, so we should not consider the current stage of Czech dialects to be an unnecessary or uninteresting field where nothing new can arise. In every stage of human history many languages have emerged, changed and even died, but it should be said that this is a completely innate process which only reflects the development of a society. A task of linguists therefore should be not to discuss the adequacy of doing dialectal research, but to *undertake* the research to gather a representative corpus of present-day data. It should not be ignored that whatever feature occurs in a language is there for reason because if its presence was useless, it would not occur in the language anymore.

This paper introduces the results of field research which focused mainly on the dialectal elements in spoken discourse of preschool children. The research was conducted in two Moravian villages, Strání and Starý Hrozenkov, both belonging to an East subgroup of East-Moravian dialects, to kopaničářská nářečí [Kopanice dialects]. The present analysis is mainly based on a comparison of collected answers and data from *Český jazykový atlas* [Atlas of the Czech Language], edited by Jan Balhar and Pavel Jančák. Part 5, moreover, discusses further aspects that were recorded during field research. As this field research was focused on the



preschool generation, some new forms discussed later are children's neologisms with dialectal features that have been not described previously.

## 2. Theoretical background

East-Moravian dialects represent one of four main interdialectal groups of the Czech language. East-Moravian dialects are spread in a wide belt alongside the Czechoslovak border and the isogloss can be delineated among the border between East-Moravian, Middle-Moravian and Silesian dialects is represented by cities Mikulov – Kyjov – Kroměříž (which does not belong to East-Moravian dialects) – Fryšták – Bystřice pod Hostýnem – Lipník nad Bečvou – Velký Újezd – Moravský Beroun – Nový Jičín – Rožnov pod Radhoštěm. Some sources classify the East-Moravian dialects as “a transition between Czech and Slovak dialects”: West-Slovak and East-Moravian dialects show many correspondences, and the isoglosses on the Moravian-Slovak border tend to fluctuate and overlap (Bělič & Křístek 1954: 4). Neither a strict line between East-Moravian and Middle-Moravian nor between East-Moravian and Silesian dialects can be drawn.

There are numerous features that distinguish East-Moravian dialects from other Czech interdialects; East-Moravian dialects were not influenced by historical changes that had influenced other Czech interdialects. In East-Moravian dialects there is neither a vowel change  $a > \check{e}$  (12<sup>th</sup>–13<sup>th</sup> century);  $'u > i$  (14<sup>th</sup> century); diphthongisation  $y > ej$ ,  $ú > ou$ , a change of vowel quality  $\acute{e} > \acute{i}$ , nor a sound change of a tautosyllabic group  $aj > ej$  (15<sup>th</sup> century). East-Moravian dialects thus have specific phonetic, morphological and syntactic features, and they differ in vocabulary, too. East-Moravian dialects can be further divided into four subgroups: North (valašská), South (slovácká), West (kelečské and dolská) and East (kopaničářská) dialects. The fact that East-Moravian dialects are not unified, and they are further divided into these subgroups is a natural result of a historical and social context as well as geographical conditions. Each of these subgroups has specific language features that are not found in the remaining three subgroups. Generally speaking, no dialect that covers such a large area can be fully homogeneous (Vašek 1967: 11).

The purpose of this paper is not to give a full list of dialectal features of East-Moravian dialects, so the following characteristic is selective only. Apart from the features mentioned above, the East-Moravian dialects are characterized by

- a consonant cluster <šč> remained unchanged compared to standard Czech [std. CZ] <št> (e.g., *klišča*, in std. CZ *klišťe* ‘tick’; *ešče*, std. CZ *ještě* ‘another, still, besides’),
- regressive assimilation in a consonant cluster <sh> > [zh],
- shortening of vowels in originally mono- and disyllabic nouns and verbs (e.g., *mak*, std. CZ *mák*, ‘a poppy’; *dat*, std. CZ *dát*, ‘to give’; *mucha*, std. CZ *moucha*, ‘a fly’; *chtět*, std. CZ *chtít*, ‘to want’),
- lengthening of the vowel <o> before consonants <ň> and <j> (*hóní*, std. CZ *honí*, ‘he chases’ – 3<sup>rd</sup> sg./pl.; *dójí*, std. CZ *dojí*, ‘they milk’ – 3<sup>rd</sup> sg./pl.),
- absence of a prothetic <v->,
- a suffix of instrumental plural <-ama> for all declension paradigms,
- a specific declension of pronouns *můj* ‘my, mine’, *tvůj* ‘your, yours’, *svůj* ‘one’s own’ (*mojeho / mojého, mojemu / mojém(u), moja, mojej / mojěj, mojí...*),



- 1<sup>st</sup> person sg. of the verb *být* ‘to be’ has the form *su* instead of std. CZ form *jsem*,
- last but not least there is a characteristic particle *tož* used as a linker between phrases and sentences.

The research focuses on a subgroup of East-Moravian dialects, the [Kopanice dialects], *kopaničářská nářečí*, specifically. *Kopaničářská nářečí* have several varieties and some of the features defined below do not occur in the whole area. One of the first major Czech dialectologists, František Bartoš (1886: 33–47) lists 13 sub-subgroups of dialects called *růžnořečí uherskoslovenská*, [Hungarian–Slovak varieties]: *alenkovské*, *radějovské*, *blatnické*, *boršické*, *bystřické*, *stráňské*, *lipovské*, *velické*, *javornické*, *súchovské*, *hrozenkovské*, *březovské*, and *lhotecké*. According to Bartoš, almost every village had its own dialect. *Kopaničářská nářečí* had been evolving along Slovak dialects for a long time, hence they share some linguistic features with the Slovak language. *Kopaničářská nářečí* are characterized by features such as an absence of consonant <ř> (*rezat*, std. CZ *řezat* ‘to cut’; *trí*, std. CZ *tři* ‘three’); a consonant cluster <\*dj> developed into <dz> (*medzi*, std. CZ *mezi* ‘between’); 1<sup>st</sup> person sg. of the verb *být* ‘to be’ has the form *sem* / *som* instead of std. CZ *jsem* or East-Moravian variety *su*; ending of instrumental pl. in all paradigms is <-ami/-ámi> (compared to the East-Moravian suffix <-ama>: *rokmi*, std. CZ *roky* ‘years’).

### 3. Data and methodology

Field research took place in kindergartens in two villages, Strání and Starý Hrozenkov, between March 2017 and February 2018. These villages share some features listed below and for these similarities they had been chosen for the purpose of field research. Both villages are located along a borderline between the Czech Republic and Slovakia, hence it is supposed that both of them might have a similar frequency of contact with Slovaks. Also, both are distant from larger towns (the closest town to Strání is Uherský Brod [22 km], to Starý Hrozenkov the closest town is Bojkovice [11 km]). The most salient feature is that both villages are a part of the same dialect area.

The research included 47 subjects, i.e., 22 children from the nursery school in Starý Hrozenkov and 25 in Strání. Considering the age of respondents and the size of their vocabulary,<sup>1</sup> the research focused on the lexicon only and respondents were supposed to give one or two-word answers. It was presumed that the children will be attracted by a picture presentation rather than in questionnaire-based survey and that they will be willing to participate. This assumption has been proved.<sup>2</sup> Moreover, during the first visits, they were too shy and bashful to talk, so the reaction to the pictures was the maximum that could be expected.

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<sup>1</sup> The subjects were 4.5–6 years old, so it was possible to obtain reliable data. Attempts with younger children had also been made, but they had been unsuccessful. This is related to the linguistic competences at this age; Bytešniková (2007: 78), among others, states that a typical 4-year old child has about a 1,500-word vocabulary, 5-year old child a 2000-word vocabulary and a 6-year old child about 2,500–3000-word vocabulary. Children below this age were too shy to participate in the research and unable to recognise the objects included in the analysis.

<sup>2</sup> A different research method would have required more time spent in each kindergarten to become acquainted with children prior to the research itself; this was not possible due to the fact that each visit of a researcher in the kindergarten would have disturbed a normal daily schedule.



Material for field research was chosen from a database of CJA, *Český jazykový atlas* [Atlas of the Czech Language], in field research 100 items<sup>3</sup> were included for the main quantitative analysis. For the major part of research, 88 items were chosen from a lexical part of the CJA database, the remaining 12 words were chosen from a morphological part. This ratio was made for purpose as it was supposed that a lexeme comparison will be the most effective method regarding the age of respondents and time limits. The choice of lexemes followed several criteria: first, and most importantly, the items had to be recognizable for young respondents, which required a careful selection of illustrative pictures. Second, a range of items was to cover different fields of interest. The respondents were asked to name the items which were presented in a PowerPoint presentation in the form of photographs or drawings.<sup>4</sup> In some cases the explorer tried to cause the reaction by non-verbal means, i.e., by pointing at objects present in the room (e.g., a wood batten, a ladle), pointing at particular parts of the body (an ankle, a nail) or using body language and facial expressions (e.g., to frown, to cradle [a baby]). Considering the age of respondents, the chosen lexemes were divided into four presentations. To maintain respondents' motivation to complete the whole task, children were given various kinds of awards. In total, all respondents successfully finished all tasks. The goal of the research was unknown to these respondents at first, and it was explained to them at the end of the project. The respondents' answers were noted down into paper forms containing four columns: the CJA dictionary entry, the expressions expected and recorded in Strání and Starý Hrozenkov, the expressions used in a wider region, and a blank slot for other answers.

One of the crucial benefits of doing research with respondents of children's age is that they do not have doubts about giving a so-called *proper answer*; they focus on correct recognition of a chosen item and not on the form of word used for the act of naming. Respondents of this age are not influenced by thoughts such as *an inappropriate answer* when speaking with an explorer, i.e., an unfamiliar person, or by a pressure to use the standard variety of the Czech language as they have not entered the primary schools yet.<sup>5</sup> For these reasons the time for a reply was not restricted, and hence field research respected individual needs of every single respondent. The only criterion was to answer one whole presentation after which each respondent had the opportunity to continue in research, or to take a break and to finish the next part after a while.

On the other hand, field research has shown some difficulties for analysis proper, too. From the total amount of responses only 71.85 per cent were used for the final analysis. There were several reasons for not to include some of the answers: the most frequent one was giving an incorrect name of a presented object (e.g., instead of a std. CZ variant or a dialectal variant of a lexeme *vlčí mák* 'wild poppy' respondents used names such as *ruže* 'rose', *tulipán* 'tulip' etc.). Another reason was the use of a diminutive form which could not be classified as dialectal (e.g., *slepička* is not recorded by CJA, so this variety does not allow to decide whether the respondent would use a non-diminutive dialectal variety *slépka*, or whether they would use a std. CZ form *slepice* 'hen').<sup>6</sup> The final results also did not contain the answers in which a

<sup>3</sup> See the Appendix for the full list.

<sup>4</sup> For examples of the pictures see Appendix.

<sup>5</sup> Hence it is supposed that children chose the expressions that are widely used both among other children and in their families.

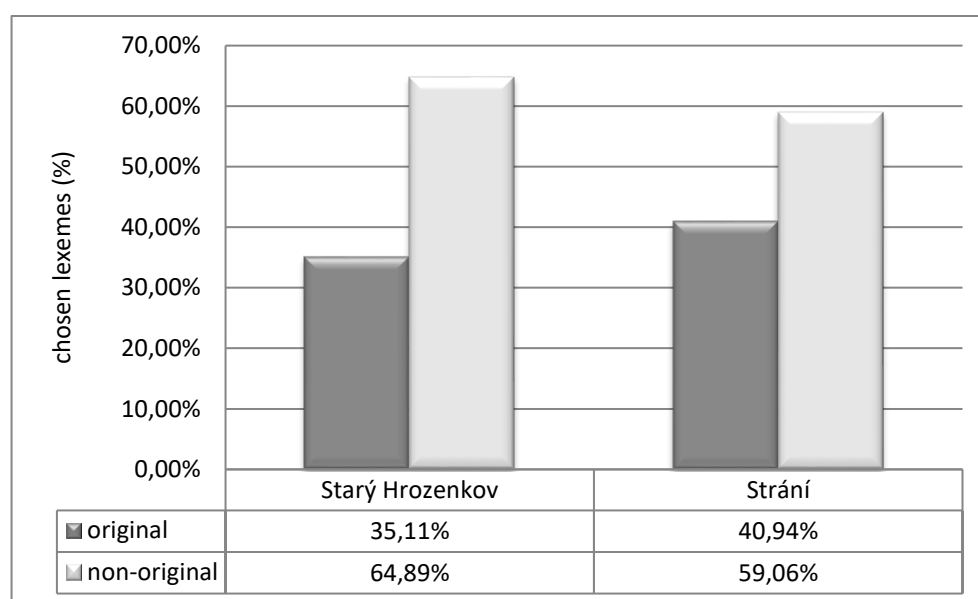
<sup>6</sup> Note that in some cases a diminutive form allows to decide whether the respondent had used a dialectal equivalent or a std. CZ form. A standard Czech lexeme *šle* has the regional varieties *šle*, *šráky*, *(k)šandy*, etc., a diminutive form *šráčky*, therefore, can be classified undoubtedly as a variety derived from *šráky*.



hyperonym was used instead of an expected hyponym (e.g., *dřevo* ‘wood’ instead of the expression *prkno* ‘batten’). Other difficulties arise from inability to form a singular form from plural one – even though for children the singular form is a primary form to use (Pačesová 1979: 57–60); despite the fact that an ability to differentiate consciously between singular and plural forms is acquired at the age of three (Watts 1944: 45–46), in some cases respondents were not able to use a singular, e.g., for *nehty* (pl.) ‘fingernails’ – *nehet* (sg.) ‘fingernail’. The uncountable nouns used instead of countable nouns could not be included, either. This was the case of, e.g., a countable noun *kamének* ‘a small stone’ (*kamínek* in std. CZ) which some respondents replaced by uncountable *kamení* ‘stone’. The last reason for omitting an answer was incorrect articulation of phonemes in the regional varieties, in most cases caused by dyslalia. (Speech Production Disorders: Articulation Disorders – Dyslalia. 2017), e.g., the dialectal variant *střešně* (třešně in std. CZ) ‘cherries’, pronounced as e.g., [tʃɛʃnɛ], [ʃɛʃnɛ] etc.

#### 4. Results

From the total number of 2,972 responses, 71.85% were used in the analysis, i.e., 1,316 answers from Starý Hrozenkov and 1,656 answers from Strání. Figure 1 shows the current distribution of dialectal elements in both villages contrasted to the data of CJA. In Starý Hrozenkov active usage of dialectal elements by young children is about 35.11%, in Strání the ratio is even higher, the original dialectal elements occurred in 40.94% of answers.



However, the actual number of dialectal elements might be different. As it will be illustrated on examples in the analysis, new dialectal varieties are commonly used in these areas and at the same time they are considered being *non-original* (names which were recorded by CJA and also recorded in the present research were labeled as *original*, dialectal, another answers were labeled as *non-original*. Non-original answers were both std. CZ variants and forms with dialectal features not recorded by CJA in the region). The original dialect has thus changed

Figure 1: Results of field research in Strání and Starý Hrozenkov



over the years and definitely since the last field research presented in CJA. Nevertheless, as this field research has proven, the territorial dialect is still alive in these regions despite its inner changes. New forms of words do occur in both Starý Hrozenkov and Strání. In Starý Hrozenkov, there is a new name for *pomlázka* ‘plaited osier stick for whipping girls on Easter Monday’: the form commonly used nowadays is *koribáč* instead of the original expression *korbáč*. In Strání, there is a completely new name for *nudle* ‘noodles’: instead of the lexeme *lokše* the major lexeme is *šišky*, and *pomlázka* is mostly called *mrskáč* instead of *mrškačka*. This research used the entries of CJA as a primary source, and the answers that were not recorded in CJA were marked as non-original. To establish the exact ratio of dialectal elements, another research should be done in these areas.

## 5. Analysis

Field research focused on hundred lexemes chosen from the database of CJA and tested their actual usage by young children in two Moravian villages. For the purpose of this article the findings will be demonstrated by selected examples. These lexemes illustrate repetitive features identified in the field research i.e., creation of words non-existent in std. Czech and also unrecorded in dialectal dictionaries, historical development of dialectal lexemes, influence of Slovak language, and increased usage of diminutives.

As for a lexeme *pomlázka* ‘plaited osier stick for whipping girls on Easter Monday’, CJA lists various regional words. In the area of East-Moravian dialects there are three main expressions for *pomlázka*: *žila* × *korbáč* × *tatar*. A form detected by CJA in Starý Hrozenkov is *korbáč*, in Strání it is *mrškačka*. However, the most recent findings (Table 1) show crucial differences from CJA. In Starý Hrozenkov, the most frequent name is *koribáč* (84.21%) instead of *korbáč* (0%). At first it seemed that it is too difficult to pronounce the consonant cluster <rb> for children at the age of 4.5–6, so they simplify the pronunciation by inserting the vowel <i>. However, as it was proven afterwards,<sup>7</sup> the form with a <rib> sequence, *koribáč*, is widespread in this region and used by speakers of all ages. In Strání the original name *mrškačka* (5.88%) seems to be replaced by *mrskáč* (70.58%). The present-day form indicates that the word has undergone a change in gender from feminine to masculine by adding a derivational suffix <-k-a>. In spite of this change, the tendency to use the dialectal forms prevails over the standard Czech form *pomlázka* in both villages (84.21% in Starý Hrozenkov, 82.35% in Strání).

Table 1: Names detected for the lexeme *pomlázka* ‘plaited osier stick for whipping girls on Easter Monday’

Detected names	Starý Hrozenkov	Strání
<i>pomlázka</i>	1	3
<i>koribáč</i>	16	0

<sup>7</sup> In the time when the field research was conducted, a journalist Karolína Peřestá made a radio report for Český rozhlas about traditional Easter traditions in Starý Hrozenkov (Peřestá, Karolína. 2018. Holky samy skáčou do vody. Poslechněte si, jak vyrazili na šibáky za děvčaty kluci z Kopaničáru. (<https://zlin.rozhlas.cz/holky-samy-skacou-do-vody-poslechnete-si-jak-vyrazili-na-sibaky-za-devcaty-kluci-7152950#volume>) (Accessed 2020-01-16)).



<i>karabáč</i>	0	1
<i>mrskáč</i>	2	12
<i>mrškačka</i>	0	1

Another example of a dialectal language change can be illustrated with the word *světluška* ‘firefly’ (*Phausis splendidula*). There are two lexical motivations for naming the firefly in the Czech dialects. Either the name refers to the period in which fireflies are the most active, i.e., around Saint John’s night (24th June), or arises from the bug’s ability to produce light. The expected forms in Starý Hrozenkov were *svatojánská muška*, *svatojáncký brouček*; in Strání it was a form *svatojánka*. In case of this lexeme, the list of answers (Table 2) showed a high ability to produce new forms by using the suffix <-k-a> as one of the most productive suffixes in the Czech language. The majority of respondents used a std. CZ expression *světluška* (72.22% in Starý Hrozenkov, 85% in Strání). Remaining responses, mostly children’s neologisms, clearly show a second type of motivation, the bug’s ability to produce light. All answers – *svatojánská muška*, *lucernička* (diminutive from *lucerna* ‘lantern’), *svítící brouček* ‘luminary bug’, *svítička* and *svítilka* – show this kind of lexical motivation. Names *svítící brouček*, *svítička* and *svítilka* are all derived from the root or base word <svit-> / <svět->. Neither *svítička* or *svítilka* exist in the standard Czech language but were created spontaneously by a very frequent word-formation processes in Czech, i.e., derived from the root <svit-> / <svět-> with the suffixes <-l-k-(a)> and <-č-k-(a)>.

Table 2: Names detected for the lexeme *světluška* ‘firefly’ (*Phausis splendidula* L.)

Detected names	Starý Hrozenkov	Strání
<i>světluška</i>	13	17
<i>svatojánská muška</i>	0	1
<i>lucernička</i>	1	0
<i>svítící brouček</i>	1	0
<i>svítička</i>	1	0
<i>svítilka</i>	0	1
<i>včelka</i>	1	0
<i>kobylka</i>	1	0
<i>mucha</i>	0	1

New forms that might have been created during the research are varieties of a lexeme *chrastítko* ‘rattle’ (Table 3). CJA records multiple varieties, and these names differ semantically, morphologically and phonetically. In East-Moravian dialects, the traditional form for the rattle is a feminine derived from the root <hrk-> with a suffix <-vka>, <-á-vka>. A std. CZ neuter *chrastítko* is, on the other hand, recorded even in some cities in Moravia, and the research proved that it has been slowly entering some villages, too (13.33% in Starý Hrozenkov, 9.52% in Strání). Evidences of a traditional dialectal form were detected both in Starý Hrozenkov (6.66%) and Strání (28.57%), in some cases these have undergone a change in the grammatical gender or the derivational suffix, for example *hrkačka* (4.76% in Strání), *hrkátka* (6.66% in Starý Hrozenkov). However, the majority of respondents used the hyperonym *hračky* ‘toys’ (60% in Starý Hrozenkov, 47.61% in Strání). Other answers such as *třepátko* or *sypátko* might show the attempts to form a name using the visual or other sensory stimuli.



Table 3: Names detected for the lexeme *chrastítko* ‘rattle’

Detected names	Starý Hrozenkov	Strání
<i>hrkávka</i>	1	6
<i>hrkačka</i>	0	1
<i>hrkátko</i>	1	0
<i>chrastítko</i>	2	2
<i>třepátko</i>	0	1
<i>sypátko</i>	0	1
<i>sítka</i>	1	0
<i>hračky (pro miminka)</i>	7	10
<i>hračička (pro miminko)</i>	2	0
<i>kulička</i>	1	0

The fourth lexeme which deserved a commentary is *nudle* ‘noodles’. In a wide dialectal belt between the Czech Republic and Slovakia, a variety *lokše* is the most common expression. According to CJA the traditional name for noodles in Strání is *lokše*, however in Starý Hrozenkov there is another name *řezance*. The present research, nevertheless, indicated that respondents do not use traditional names for noodles anymore (Table 4). In Starý Hrozenkov, the expression *nudle*, which is also a std. CZ form for noodles, was the most frequently used word (73.68%). In Strání this name occurred as well, but only a minority of respondents used it (20.83%). Another lexeme (and one variety of this lexeme) which is not listed in CJA was captured in Strání: evidently, *šišky* and *šiše* (70.83% and 8.33%) are not the neologisms produced by young respondents, but widespread expressions for noodles. It was not expected to hear these two varieties because the lexeme *šišky* has a different denotation in this area. CJA defines *šiška* as a name for a ‘Czech’ dumpling, ‘a boiled roll of dough (= flour and water mixed together) eaten with meat’. The lexeme *šiška* is widespread in the eastern part of Moravia and the meaning depicted by CJA goes back to Middle Ages (Balhar & Jančák, CJA 1: 210). The meaning in Strání had thus changed over the years, the dialectal word *šišky* has not disappeared from the language of the youngest generation and it is the most frequently used word for noodles there. As both villages are located along a Slovak border, an influence from the Slovak language is noteworthy in this context. Some respondents in Starý Hrozenkov used also a word *slíže* (5.26%) which is according to Slovníkový portál Jazykovedného ústavu Ľ. Štúra SAV a regional word for a kind of pasta in Slovak.<sup>8</sup>

Table 4: Names detected for the lexeme *nudle* ‘noodles’

Detected names	Starý Hrozenkov	Strání
<i>nudle</i>	14	5
<i>nudličky</i>	3	0
<i>lokše</i>	1	0
<i>šišky</i>	0	17
<i>šiše</i>	0	2
<i>slíže</i>	1	0

<sup>8</sup> JÚEŠ: headword *slíž*.



The last two lexemes to be analyzed are *kachna* ‘duck’ (Table 5) and *kachňátko* ‘duckling’ (Table 6). The main dialectal difference given in CJA involves the change in a stem consonant, i.e., <kač-> vs. <kach-> which CJA qualifies as the lexical difference. Both <kač-> and <kach-> words are geographically widespread; in Moravia, Silesia and East Bohemia the root <kač-> prevails, in the remaining part of Bohemia the root <kach-> is used most commonly. The research suggests that the original name with the stem <kač-> is still the most frequently used expression for both duck (95% in Starý Hrozenkov, 79.16% in Strání) and duckling (85% in Starý Hrozenkov, 80% in Strání); however, the other variant emerges as well: 5% in Starý Hrozenkov and 20.83% in Strání for duck, 15% in Starý Hrozenkov and 20% in Strání for duckling. When two lexemes were analyzed in the field research, the contrast in using the unmarked form *kachna* and the diminutive *kačenka* illustrated an important aspect of children’s talk. Diminutives play an important role in the language system of children (Pačesová 1979: 62–65), they are used actively, or even overused by children in particular situations. Asking young respondents to name a duck and a duckling showed their tendency to use diminutive forms for objects which they regard as something having positive attributes, e.g., to be small, pleasant, cute or nice (Pačesová 1979: 43). The respondents first saw the picture of the duck and used the diminutive form *kačenka* (20.45% pct.). The lexeme *kachňátko* is, in fact, a diminutive on its own (the unmarked form being *kachně*), but to stress the smallness or cuteness some respondents have modified the expression by adding an adjective *small*; the same modifier was added to the lexeme for the duck, i.e., [*malé kachňátko*]<sub>NP</sub> or [*malá kačenka*]<sub>NP</sub>.

Table 5: Names detected for the lexeme *kachna* ‘duck’

Detected names	Starý Hrozenkov	Strání
<i>kachna</i>	1	5
<i>kačena</i>	10	18
<i>kačenka</i>	8	1
<i>kačka / kačica</i>	1	0

Table 6: Names detected for the lexeme *kachňátko* ‘duckling’

Detected names	Starý Hrozenkov	Strání
<i>kachňátko</i>	2	2
<i>malé kachňátko</i>	1	0
<i>kachnička</i>	0	3
<i>káčátko</i>	11	13
<i>kačička</i>	1	0
<i>kačeňátko</i>	0	1
<i>kačenka</i>	4	5
<i>malá kačenka</i>	1	1

This feature of adding an adjective and hence modifying the whole noun phrase has occurred also in pair of lexemes for pig (Table 7) and piglet (Table 8).



Table 7: Names detected for the lexeme *vepř* ‘pig’

Detected names	Starý Hrozenkov	Strání
<i>prase</i>	10	16
<i>prasa</i>	2	0
<i>prasátko</i>	8	9
<i>prasnice</i>	1	0
<i>čuně</i>	1	0

Table 8: Names detected for the lexeme *sele* ‘piglet’

Detected names	Starý Hrozenkov	Strání
<i>prasátko</i>	8	14
<i>malé prasátko</i>	10	7
<i>menší prasátko</i>	1	0
<i>prasátečko</i>	0	1
<i>selátko</i>	2	0
<i>malinké čuňátko</i>	1	0
<i>jehňátko</i>	0	2
<i>gustíček maličký</i>	0	1

## 6. Conclusion

The aim of this field research was to determine the dialectal elements in spoken discourse of preschool children in two Moravian villages, in Strání and Starý Hrozenkov. These villages both belong to an East subgroup of East-Moravian dialects, to *kopaničářská nářečí* [Kopanice dialect]. The purpose of the research was to obtain a reliable amount of answers to do a relevant comparison with data from *Český jazykový atlas* [Atlas of the Czech Language], and to show how the local dialect is being changed. In the villages, the field research was realized in cooperation with two kindergartens and 47 children in total (22 in Starý Hrozenkov and 25 in Strání) participated. It was confirmed that the dialect is still present in preschoolers’ discourse, in Starý Hrozenkov active usage of dialectal elements by young children is about 35.11%, in Strání the ratio is even higher, the original dialectal elements occurred in 40.94% of answers. Collected data shows a substantial part of lexemes has been preserved in the region since the last vast study published in the atlas of Czech dialects. In some cases, however, new expressions with dialectal features were recorded which are either children’s neologism or more recent varieties used commonly. Field research has proven that to do research on Czech dialects is still a meaningful project and we should pay more attention to the dialectal changes in the Czech language not only for the possible purposes of the future generations of linguists, but also for the fact that the spoken discourse actually might differ from dictionaries and dialectal monographies a lot.

The field research itself also indicated some methodological aspects that should be considered in the future, e.g., reduction of diminutives that disallow to decide whether the answer is



dialectal or not, elimination of generalized answers in situations where hyperonyms are used, inclusion of more similar objects to decide whether the respondent does not know the object at all or is just misled.

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## Abbreviations

std. CZ = the standard form of Czech language

CJA = Český jazykový atlas [Atlas of the Czech Language]

## Appendix

### A List of lexemes used for the analysis

*chlapec*, ‘boy’  
*děvče*, ‘girl’  
*tatínek*, ‘father’  
*maminka*, ‘mother’  
*dědeček*, ‘grand-father’  
*babička*, ‘grand-mother’  
*milý, milá*, ‘boyfriend, girlfriend’  
*hezká*, ‘nice’  
*dopis*, ‘letter’  
*dvojčata*, ‘twins’  
*chovat (dítě)*, ‘to cradle’ (a baby)  
*šidítka*, ‘pacifier, dummy’  
*chrastítka*, ‘rattle’  
*míč*, ‘ball’  
*koulovat se*, ‘to snowball’  
*cop*, ‘braid’  
*mračit se*, ‘to frown’  
*břicho*, ‘belly’  
*nehet*, ‘fingernail’  
*kotník*, ‘ankle’  
*hůl*, ‘stick’  
*boule*, ‘(head) bump’  
*hubený*, ‘thin’  
*kalhoty*, ‘trousers’  
*uzel*, ‘knot’  
*šle*, ‘suspenders, braces’



*nůžky*, ‘scissors’  
*bota*, ‘boot’  
*nudle*, ‘noodles’  
*knedlík*, ‘dumpling’  
*okurka*, ‘cucumber’  
*škvarek*, ‘cracklings’  
*hrníček*, ‘mug’  
*poklička*, ‘lid’  
*sběračka*, ‘ladle’  
*lžíce*, ‘spoon’  
*vařečka*, ‘stirring spoon’  
*květináč*, ‘flowerpot’  
*židle*, ‘chair’  
*postel*, ‘bed’  
*peřina*, ‘duvet’  
*polštář*, ‘pillow’  
*kouř*, ‘smoke’  
*kominík*, ‘chimney sweeper’  
*koště*, ‘broom’  
*vesnice*, ‘village’  
*prkno*, ‘wood batten’  
*sud*, ‘cask’  
*třešně*, ‘cherries’  
*švestka*, ‘plum’  
*slupka*, ‘fruit peel’  
*dýně*, ‘summer squash’  
*rajské jablíčko*, ‘tomato’  
*krtek*, ‘mole’  
*brouci*, ‘bugs’  
*světluška*, ‘firefly’  
*slunéčko sedmítečné*, ‘ladybird’  
*pavouk*, ‘spider’  
*dešťovka*, ‘earthworm’  
*ještěrka*, ‘lizard’  
*les*, ‘forest’  
*větev*, ‘branch’  
*keř*, ‘bush’  
*jedlá houba*, ‘edible mushroom’  
*borůvka*, ‘blueberry’  
*ostružina*, ‘blackberry’  
*vlčí mák*, ‘wild poppy’  
*pampeliška*, ‘dandelion’  
*kamínek*, ‘little stone’  
*kaluž*, ‘puddle’  
*slunce*, ‘sun’  
*rampouch*, ‘icicle’



*pomlázka*, 'plaited osier stick for whipping girls on easter monday'  
*rozinka*, 'raisin'  
*křížaly*, 'dried fruit, dried apple'  
*pole*, 'field'  
*brambor*, 'potato'  
*kukuřice*, 'corn, maize'  
*trakař*, 'wooden wheelbarrow'  
*vepř*, 'pig'  
*sele*, 'piglet'  
*psík*, 'dog/doggie'  
*slepice*, 'hen'  
*vejce*, 'egg'  
*housátko*, 'gosling'  
*kachna*, 'duck'  
*kachňátko*, 'duckling'  
*krocan*, *krůta*, 'turkey (cock, hen)'

## B Examples of pictures used for the purposes of the analysis



Picture 2: edible mushroom



Picture 4: ball



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# The discourse use of *ʔilʔa:n* ‘now’ in Jordanian Arabic

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*This research paper shows that the deictic temporal marker ʔilʔa:n ‘now’ has developed a discourse function of organizing the ongoing discourse. This latter use helps the hearer appreciate the underlying structure of the relevant discourse, hence providing pragmatic clues that maximise the hearer-speaker communication. Additionally, based on a corpus of one million words (which is a part of a larger project), this paper shows that the use of the discourse marker ʔilʔa:n ‘now’ outnumbers its use as a deictic temporal signal in Jordanian Arabic. This is mainly due to the use of other words whose meaning is exclusively temporal, conveying a similar use of temporal ʔilʔa:n ‘now’. We interpret this situation as that the lexical use of words is overridden by their grammaticalized/discourse use, especially in the presence of other words that convey a similar lexical meaning of these words. This correlation is best viewed as a direct effect of language economy which curtails redundancies in language use.*

**Keywords:** *Deictic temporal markers, discourse markers, grammaticalization, hearer-speaker communication, Jordanian Arabic.*

## 1. Introduction

Discourse markers (or discourse connectives) and the notion of grammaticalization (of discourse markers) have recently become overarching hotly-debated research agendas. These two phenomena are related to how language changes over time (i.e. mutability) and how it interacts with discourse (Newmeyer 2000; Wang 2017; among many others). Additionally, they are important in revealing how the speaker-hearer communication is processed and perceived. These two notions have also been investigated with reference to other pertinent phenomena including pragmatization (e.g., da Silva 2006; Paradis 2011), syntactization (e.g., Haegeman & Hill 2013), and language economy (e.g., Van Gelderen 2011). This manifold significance of discourse markers is evidently the main factor why the study of discourse markers ‘has turned into a growth industry in linguistics, with dozens of articles appearing yearly’ (Fraser 1999: 932).

Discourse markers are also heavily used as empirical evidence in favour of or against the rationale and application of competing theories of discourse analysis and pragmatics. For example, Schourup (2011) argues that the discourse marker *now* in English makes available corroborating evidence for the plausibility and superiority of the relevance-theoretic account over the coherence-based account of utterance production and perception. This current research paper contributes to this line of research, exploring the discourse use of *ʔilʔa:n* ‘now’ in Jordanian Arabic. This word, used as a deictic temporal signal, develops into a discourse marker which helps structure discourse and hence facilitate the speaker-hearer communication. This argument implies that there exists no conflicting implication that a discourse marker is both used as a coherence marker and a facilitator of the speaker-hearer communication, in which case the given discourse marker is vital for ‘the hearer’s search for optimal relevance’ (Blakemore 2002: 170).

The following discussion is structured as follows. Section 2 provides a general overview of Jordanian Arabic (JA), from which the data of the present study comes. This



section also explains our corpus which is part of a larger project. Section 3 discusses the temporal use of *ʔila:n*. Here, we show that JA distinguishes lexically between focused *now* and non-focused *now*. When the notion of *nowness* is the prominent information (i.e. the new information Chafe 1976) that the relevant utterance conveys, the use of *ʔilʔa:n* ‘now’ is promoted. On the other hand, when *nowness* is part of the background information, *hassaʕ/ hassaʕat/ hassa/ halla* (meaning now) is used. Section 4 examines the discourse use of *ʔila:n*, arguing that this marker is used to organize discourse subparts in that it thematically connects the previous discourse with the following discourse, hence strengthening discourse coherence and textuality. *ʔilʔa:n* marks the speaker’s thematic progression whereby subparts of discourse are ordered sequentially, depending on their thematic/informational contribution for the ongoing discourse. Section 5 includes the conclusion of this paper.

## 2. Preliminaries: Jordanian Arabic and the corpus

In this section, we provide a general background of JA as well as the corpus on which we built our analysis of the discourse marker *ʔilʔa:n*.

### 2.1 Jordanian Arabic

Jordanian Arabic (JA) is an Arabic dialect that is spoken in Jordan, a country in the Middle East. According to Ethnologue, there are about 9,456,000 JA speakers.<sup>1</sup> JA is subcategorized as a southern Levantine Arabic dialect which includes several sub-dialects (e.g. Bani Hasan Arabic, Urban Jordanian Arabic and Rural Jordanian Arabic) that share the basic syntactic, phonological and morphological properties (see Jastrow & Fischer 1980; Al-Wer 2007). As is the case in other Arabic dialects, JA does not have written records due to the diglossic situation in Jordan. Modern Standard Arabic (MSA) is the variety that is only used in formal settings, newspapers, and news, whereas JA is used as an everyday language (see, mainly, Zughouli 1980).<sup>2</sup>

The lack of written records of JA makes it difficult for researchers to delineate and investigate any discourse phenomena that are present in this dialect without building a corpus of naturally occurring data. As is broadly known in the relevant literature, discourse uses and functions of words are mainly manifested in the oral form of language (i.e. orality; see Schourup 1999). Dependence exclusively on the written form of the language is not sufficient to examine the actual discourse underpinnings of the language (see Fraser 1990, 1999; Maschler & Schiffrin 2015). Discourse markers vanish in written discourse which is for the most part considered non-spontaneous. In order to secure naturally-occurring data that best mirror the actual use and functions of discourse markers, we compiled a corpus of JA (as a part of a larger project to investigate the use of discourse functions in JA). We used this corpus to investigate the discourse uses of *ʔilʔa:n* ‘now’. In the next subsection, we provide more information about the nature of this corpus.

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<sup>1</sup> <https://www.ethnologue.com/country/JO>

<sup>2</sup> See Bani-Yasin & Owens (1987), Jarrah (2017; 2019a,b), and Jarrah & Al-shamari (2017), among many others, for studies that have discussed different aspects of JA.



## 2.2 JA corpus

In order to collect naturally-occurring data of JA, we recorded 250 episodes of *Al-Wakeel Radio Show* at Radio Hala from June 2017 to June 2018. This morning show tackles the political and social issues which really matter to the Jordanian public who contact the host from different parts of Jordan in order to voice their concerns using JA. This show is a rich source of JA where callers belong to different social classes, ages, genders and educational backgrounds. This program is evidently a representative sample of JA. Additionally, in order to support our data with conversations of discursive topics, we recorded 100 informal sessions among 10 JA university students, upon their permission. These informal sessions revolved around several everyday topics including education, tax evasion, living abroad, fashion, etc. We listened to all of these episode and informal sessions and extracted all occurrences *ʔilʔa:n* ‘now’ from them. All occurrences are examined with respect to their lexical meaning and/or discourse functions. In the next two sections, we present our analysis of this word which, as we show later, develops a discourse function. This function helps to structure the ongoing discourse, facilitating the process of discourse perception and understanding of the build-up of the idea. It also reduces the effort of the hearer to follow the speaker, achieving as such the optimal relevance (cf. Sperber & Wilson 1986, 1995).

## 3. *ʔilʔa:n* between temporality and discourse

In this section we first provide evidence that *ʔilʔa:n* ‘now’ is still used in JA as a deictic temporal adverb meaning *now* (*right now*; *at the moment*); hence JA shares MSA with this use of *ʔilʔa:n* ‘now’. However, *ʔilʔa:n* ‘now’ is used in JA as a deictic temporal adverb when the notion of temporality is emphasised by the speaker. *hassaʕ/ hassaʕat/ hassa/ halla* are others words that are used when the notion of *now* (*nowness*) is not emphasised by the speaker.<sup>3</sup> This situation is different from what we find in MSA where *ʔilʔa:n* ‘now’ is used, regardless of whether or not the notion of *now* is emphasised by the speaker.

*ʔilʔa:n* may be used in JA as a temporal adverb, meaning *now*, *at the moment*, or *at present*, as clearly shown in the following occurrences/exchanges.

- |     |                               |             |                |      |           |
|-----|-------------------------------|-------------|----------------|------|-----------|
| (1) | la:zim                        | ʔaya:dir    | <b>ʔilʔa:n</b> |      |           |
|     | should                        | leave       | now            |      |           |
|     | ‘I need to go right now.’     |             |                |      |           |
| (2) | a. we:n                       | nawa:lʔ     |                |      |           |
|     | where                         | Nawal       |                |      |           |
|     | ‘Where is Nawal?’             |             |                |      |           |
|     | b. hijjeh                     | fi-ʃ-fuyul  | <b>ʔilʔa:n</b> |      |           |
|     | she                           | in-the-work | now            |      |           |
|     | ‘She is at work now.’         |             |                |      |           |
| (3) | <b>ʔilʔa:n</b>                | rah         | ʔahki          | maʕ  | ʔidukto:r |
|     | now                           | will        | talk           | with | doctor    |
|     | ‘I will call the doctor now.’ |             |                |      |           |

<sup>3</sup> The choice between *hassaʕ/ hassaʕat/ hassa/ halla* depends on the particular region of the JA speaker. *hassaʕ*, *hassaʕat* and *hassa* are used in rural regions interchangeably, whereas *halla* is much more used in urban centres, especially by girls.



- (4)      ka:n              biʃtayil              fi-markiz              ʔitarbija  
             was              work              in-center              education  
             ʔilxa:sʕa              w-huwwa              bilimaraat              **ʔilʔlaan**  
             special              and-he              in-Emirates              now  
             ‘He used to work in a center for special education and now he is in the United Arab Emirates.’

The examples (1-4) clearly show that *ʔilʔa:n* ‘now’ is used as a deictic temporal adverb that denotes the notion of *now*. It is worth mentioning that there are other alternatives of the word *ʔilʔa:n* which are frequently used in JA. These include *hassaʕ/ hassaʕat/ hassa/ halla* ‘now’, as evidenced in the following examples:

- (5)      baddi              halla      ʔaru:h              ʕa-l-beet  
             want              now      go              to-the- home  
             ‘I want to go home right now.’
- (6)      ʔiz-zalameh      hassaʕat              sallam              ʔil-mablay  
             the-man              now              handed in              the-money  
             ‘The man has now handed in the money.’
- (7)      hassa              baji:b-la-k              ʔil-iðin  
             now              bring-to-you              the-permission  
             ‘I will bring you the permission [slip] now’.
- (8)      ma      ʕaka-li:-ʃ              hassaʕat              ʔajʔiʃi  
             not      told-me-not              now              anything  
             ‘He has not told me anything right now.’

Upon reviewing our data, it appears that there are no preferences related to the tense of the sentence between *hassaʕ/ hassaʕat/ hassa/ halla* and lexical *ʔilʔa:n*. In other words, *hassaʕ/ hassaʕat/ hassa/ halla* and lexical *ʔilʔa:n* are used in combination with all tenses. On the other hand, our corpus reveals that although *hassaʕ/ hassaʕat/ hassa/ halla* and lexical *ʔilʔa:n* express the same deictic reference (i.e. now); they do not express the same informational value relating to the notion of *nowness*. With *ʔilʔa:n* in place, the speaker emphasises the notion of *now* in which case *nowness* is the main message the speaker attempts to deliver, i.e. it is the new information (see Chafe 1976). On the other hand, when *nowness* is not the central information the speaker attempts to express (being here a subpart of the given or background information of the relevant utterance), other temporal adverbs including *hassaʕ/ hassaʕat/ hassa/ halla* are used. The evidence that supports this line of analysis is based on two arguments. The first argument comes from the fact that lexical *ʔilʔa:n* is mainly used either sentence-initially or sentence finally with rising intonation. According to the related literature, sentence peripheral positions are the typical positions for focused or given information (see Ouhalla 1997; Samek-Lodovici 2006).<sup>4</sup> For instance, in example (1) above,

<sup>4</sup> Following the distinction between informational focus and contrastive focus (see E Kiss 1998), it can be suggested that when lexical *ʔilʔa:n* occurs sentence-finally. It denotes informational focus, whereas it expresses



when the speaker expresses the idea that he wants to leave right now (not e.g., in two hours) he implies that there is some urgent matter for his departure at this point, which stands for the main information of the utterance. Likewise, example (4) above implies that the person the conversation is about is living nowadays in the UAE. Here the notion of *nowness* is part of the new information the utterance communicates. On the other hand, *hassaʕ/ hassaʕat/ hassa/ halla* are much used sentence-internally without being a locus of any intonational rising.

The second argument comes from the answer of when-questions in JA. According to our data, it appears that *ʔalʔa:n* ‘now’ is the typical answer of when-questions (about 65% of the relevant questions) when the answer is *now*, *at present*, or *at the moment*. As widely confirmed in the relevant literature, the answer of any question should include new information that is focused rather than being topicalized (part of the backgrounded information) (see Rizzi 1997). On the other hand, *hassaʕ/ hassaʕat/ hassa/ halla* occur more in statements which are not answers of the ongoing questions. This situation implies that JA differentiates between focalized *now* and non-focalized *now*, a distinction that is lexically manifested through the use of *ʔilʔa:n* in comparison to *hassaʕ/ hassaʕat/ hassa/ halla*. However, this discussion should not imply that *hassaʕ/ hassaʕat/ hassa/ halla* are not used when *nowness* is focused. Our corpus reveals that such words may be used to express focused *nowness*. On the other hand, *ʔalʔa:n* is exclusively used when focused *nowness* is intended. This state of affairs implicates that *hassaʕ/ hassaʕat/ hassa/ halla* are taking over the notion of *nowness* irrespective of being focused or not. This taking-over process is underway.<sup>5</sup>

MSA involves a similar lexical meaning of this adverb which is classified as a deictic temporal adverb that similarly means *at the moment* or *at the present time*. On the other hand, MSA does lexically manifest the focused/non-focused *now* distinction. *ʔalʔa:n* ‘now’ is used in all settings. Consider the following MSA examples:<sup>6</sup>

- (9)        sawfa        ʔaðhab        **ʔalʔa:n**        ʔila        ʔal-ʕamal  
               will        go                now            to            the-work  
               ‘I will go to work now.’
- (10)    a. mata        ʔatajit  
               when        came  
               ‘When did you come?’  
               b. **ʔalʔa:n**.  
                       now  
                       ‘Now!’
- (11)    **ʔalʔa:n**        sawfa        yabdaʔ        burnama:dʒ-i    ʔal-mufaɖʕal  
               Now        will        start        program-my    the-favorite  
               ‘Now my favorite program will start.’

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contrastive focus (as in it is now not two days ahead that ....). This distinction has been advocated for Arabic by Ouhalla (1997), among many others.

<sup>5</sup> Given that we do not obtain any diachronic data of the use of lexical *ʔilʔa:n* and *hassaʕ/ hassaʕat/ hassa/ halla*, it is hard to figure out the exact nature of this taking-over process, if it really exists. We put this discussion aside, pending further research.

<sup>6</sup> All MSA examples are taken from newspapers and written media.



- (12)    ʔarsaltu            ʔalʔa:n            al-wasʕil  
           sent            now            the-receipt  
           ‘I just sent (you) the receipt.’

This discussion reveals that MSA *ʔalʔa:n* ‘now’ is not a complete equivalent of JA *ʔilʔa:n* ‘now’. The former is used across the board, whereas the latter is limited to a subset of cases; when *nowness* is focused.

In the following subsection, we examine the discourse use of *ʔilʔa:n* ‘now’ whose main function is to structure the going discourse. It marks the speaker’s thematic progression whereby subparts of discourse are ordered sequentially.

#### 4. Discourse *ʔilʔa:n*

According to our corpus, *ʔilʔa:n* ‘now’ has developed a (grammaticalized) discourse function that is quite different from its usual temporal use as a deictic temporal signal. Such function is important in organizing the ongoing discourse and facilitating the speaker-hearer communication. Let us first discuss how discourse *ʔilʔa:n* organizes the ongoing discourse and acts as a connective that connects the stretches of the discourse altogether. Using Schourup’s (1999) terminology, *ʔilʔa:n* is a connecting textual element which is better translated into English as *at this point/given this/ in reference to what has been just said*. Consider the following example (taken from our informal discussion with the students):

- (13)
- |                |         |            |             |     |          |             |
|----------------|---------|------------|-------------|-----|----------|-------------|
| lamma          | ʔiykoon | ʕind       | ʔid-dakto:r | sit | ʔabħa:θ  |             |
| when           | there   | for        | the-doctor  | six | research |             |
| wa-xamis       | siniin  | xibrah,    | bigdar      |     | ʔijqadim | laltarqija. |
| and-five       | years   | experience | can         |     | apply    | promotion   |
| <b>ʔilʔa:n</b> | biqdar  | yo:xuð     | ʔija:zeh    |     | bidu:n   | ra:tib      |
| now            | can     | take       | leave       |     | without  | salary      |
| la             | mudit   | ʔarbaʕ     | sniin.      |     |          |             |
| for            | period  | four       | years       |     |          |             |
- ‘When a university professor has six research papers and five-year experience. **At this point**, he can apply for unpaid six-year leave.’

In (13), *ʔilʔa:n* ‘now’ does not mean *now*. Rather, it works as a connector of the previous and following subparts of the discourse. We translated it as *at this point* because the following subpart of the utterance is based on the preceding discourse. The speaker in example (13) mentions that when a university professor secures his promotion, he can leave the university. Using *ʔilʔa:n*, the speaker implies that the second part of his utterance depends on the first part of the utterance. The sequential relation between the two subparts is maintained through the use of *ʔilʔa:n*, which is apparently a coherence marker that organizes the parts of the discourse through tying them with each other. Using *ʔilʔa:n*, the speaker refers the hearer to the previous discourse which is important for his/her following argument/question. This entices the hearer to pay more attention to the different parts of the relevant discourse, contributing to the whole discourse perception. This is why connective *ʔilʔa:n* does not occur sentence initially or sentence finally, a position that does not fit its discursual uses (in



comparison to lexical *ʔilʔa:n*). The following instances provide further representative examples on this use of *ʔilʔa:n* as a coherence marker..

(14)

ʔihna	fi-mudʒtamaʕ	minʕi:f	ʕala	ʔifa:ʔʕa:t,
we	in-society	living	on	rumors
ʔilʔa:n	zay	ma	ʔitfaðʕalit	fi-bida:jet
now	like	as	stated	in-beginning
				ʕadi:θak [...]
				speech.your

‘We are in a community living on rumours. **Given this**, as you just said at the beginning of your speech...’

(15)

ʔihna	lamma	niħki	ʔiirada:t
we	when	talk	evenues
mi:t	ʔalf	w-mi:te:n	ʔalf
hundred	thousand	and-two hundreds	thousands
ka:n	bi-l-muqa:bi	ʕin-na	bi-nafis
was	in-the-exchange	for-us	in-same
min	ʔis-sana	ʔarbaʕa	maljo:n
from	the-year	four	million
ʔil-ʕfi	sʕifir	la	ʔiirada:t
the-thing	zero	to	revenues
<b>ʔilʔa:n</b>	ʔihna	taħafuðʕa:tna	ka-mustaθmiri:n
now	we	reservations	as-investors
ʕala	ʔil-ħokoma	miʕ	ʔinno
on	the-government	not	that
			ʔihna
			ðʕidd
			ʔil-ħuku:ma.
			against
			the-government

‘When we consider hundred or two hundred thousands in revenues, there was last year, in comparison at the same time, four millions. This is a zero for the treasury. **Given this**, we, as investors, have our reservations for the government [to answer]; we are not against the government, [nonetheless].’

(16)

a. walla muʕkileh ʔiða ma-wafaqu ʕala muʕamalit-ha.  
by-God problem if not-approve on application-her  
‘I swear to God it would be a problem if they did not approve her application

b. tʕajjib, ʔilʔa:n ʕu: baddo ʔisʕi:r ʕale:-ha  
well now what want happen on-her  
ʔiða ma wafaqu ʕala moʕamalit-ha.  
if not approve on application-her  
‘Well, **given this** what would happen to her if her application was not approved?’



(17)

- a. sʕidqan      ʔana    ma-ʕindi      maʕluma:t    bas    ha:lama      jitaʔakad  
honestly      I      not-have      information    yet    once      confirmed  
mawʕid      ʔin-nata:jidʒ      into    ʔawal    nas    raħ    jiʕrif.  
date      the-results      you    first    people will    know  
'Honestly, I don't have any information. However, once the date of the results is confirmed you will be the first to know.'

- b. *ʔilʔa:n*      ʔihna    minqaddir      ʔil-dʒuhu:d    ʔilli    bitqu:mu  
now      we    appreciate      the-efforts    that    doing  
fi:ha      w-ʔihna      minqaddir      ʔʕuru:f-ku  
in-it      and-we      appreciate      circumstances-your  
'At this point, we appreciate the efforts that you have put into [this]; we also appreciate your circumstances.'

*ʔilʔa:n*, as a connective, does not indicate any sense of temporality under this use. Rather, it orchestrates the ongoing discourse in that the background information is mentioned first and then followed by the information that the whole argument revolves around. For instance, in (15) above, the speaker starts his speech stating that local people depend much on rumors (on their relationships). The speaker mentions this to build his following argument that the interlocutor's previous speech is wrong as it depends on such rumors. Note here this is evidence that *ʔilʔa:n* is not a marker that essentially denotes a cause-effect or cause-result relationship. It rather introduces the main argument that is based on background information which appears in the preceding discourse. This background information might be the cause or the effect of the following subpart. The notion that background information is first mentioned in discourse is the normal way of discourse structuring; however, with the use of *ʔilʔa:n*, the speaker emphasizes this structuring in that the background information is necessary for the speaker's argument. *ʔilʔa:n* is thus important for the so-called local discourse coherence (see Schiffrin 1987). Its function is to signal discursual relations between subunits of discourse, hence contributing to discourse coherence. This analysis of discourse *ʔilʔa:n* goes in line with Lewis' (2006) characterizations of discourse markers as a category that essentially relies on the notion of connectivity.

Likewise, the examples (16-17) show that *ʔilʔa:n* is employed as a connector between the stretches. It connects the two parts together thus economizing the number of words used. In sentence (17), Speaker A talked about the results of *tawjihi* 'the high school results' stating that he does not have any information concerning the date of the results. Speaker B using *ʔilʔa:n*, touched on the effort done by the ministry in order to end the discussion. The speaker here used *ʔilʔa:n* to help himself gently finalize the discussion without using too many words. Given this, it can be proposed that the function of discursual *ʔilʔa:n* in JA is similar to that of discursual *now* in English, which has been a topic for several coherence-based accounts (Schiffrin 1987; Aijmer 1988). In English, it has been argued that discursual *now* establishes and maintains

textual coherence between parts in the discourse which seem at first sight to lack coherence or where coherence can only be established by means of presuppositions, thematic connections between elements in the text etc. Now can be viewed as a signal



to the hearer to reconstruct a discourse structure in which the coherence of the utterances connected by *now* becomes apparent (Aijmer 1988: 16).

and it “can be inserted wherever there is a break in the linear sequencing or coherence of the utterances of a text” (ibid: 16). As we have shown above, *ʔilʔa:n* is used as a connective that maintains the sequential order of the speaker’s themes.<sup>7</sup>

This coherence use of *ʔilʔa:n* should be tied to its role of *ʔilʔa:n* in facilitating the process of discourse perception. With the use of *ʔilʔa:n*, the speaker brings backgrounded information that is important in understanding the speaker’s argument. Additionally, *ʔilʔa:n* enforces the speaker to start with the backgrounded information followed by the speaker’s main argument, the two subparts which are separated by *ʔilʔa:n*. In doing so, the hearer finds it easy to follow the speaker’s argument, given the structuring role of discursial *ʔilʔa:n*. Under the Relevance Theory terms of the effort-effect trade-off (Sperber & Wilson 1986, 1995, 2002, and subsequent work), discursial *ʔilʔa:n* plays an important role in reducing the speaker’s effort to deliver his/her information and the hearer’s effort to follow the speaker’s argument. At the same time, it maximizes the contextual effect of the speaker’s argument, reaching the optimal relevance. As Jucker (1993: 438) mentions “there is a trade-off between processing effort and the information the addressee can get out of a particular utterance.” Discourse *ʔilʔa:n* helps the hearer in his/her ‘search for optimal relevance’ in that it provides an input to the inferential processes which are involved in the utterance comprehension. Without the use of *ʔilʔa:n* the hearer might find it difficult to connect discourse stretches altogether, while the speaker might not succeed in conveying his/her informational message in an elegant way. The use of discourse *ʔilʔa:n* complies with the demands of the Cognitive Principle of Relevance (Sperber & Wilson 1995), which states that human cognition tends to be geared towards the maximization of relevance (see Schourup 2011).

The idea that discourse markers/connectors are essential in maximising the contextual effect of the discourse and minimising the interlocutors’ cognitive effort in processing the discourse is much corroborated in the related literature. For instance, Al-Jarrah et al. (2015) discussing the contextual role of three pragmatic operators (another name of discourse markers; see Fraser 1999) argue that discourse markers in Arabic is important in exerting less effort and hence facilitating discourse processing. They state:

In RT terms, what this means is that if *bal* had not been used there, the hearer would have to exert relatively larger effort to relate the propositional content of the current portion of the text with those explicated and implicated by the other portions. One immediate negative consequence is that the act of communication would slow down. What is also more effort-consuming is that the current portion of the text would be open to more than one type of implicature, not necessarily echoing the speaker’s real intentions, and thus enhancing the vagueness of the instruction (1999: 61).

The next question to raise here relates to the status of *ʔilʔaa:* as a coherence-based marker or a comprehension-facilitating marker that is important for optimal relevance. Schourup (2011) investigates English discourse *now* and argues that coherence-based formulations fail to

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<sup>7</sup> Additionally, the use of discourse *ʔilʔa:n* in Arabic is similar to that of English *now* in that ‘it displays that what is coming next in the discourse is but a subpart of a larger cumulative structure, and thus has to be interpreted as a subordinate unit in relation to a progression of such units. In short, *now* marks the speaker’s orderly progression in discourse time through a sequence of subparts’ (Schiffrin 1987: 237).



account for the actual function of *now*. He instead argues that *now* encodes a procedural constraint on context selection. He states (2011: 2128):

The account of the marker *now* I have suggested, on the other hand, makes no essential reference to local or even global coherence. Rather, it begins from the assumption that comprehension is relevance-based, and that the hearer's goal in processing an utterance is to construct a hypothesis about the speaker's meaning that satisfies the presumption of optimal relevance conveyed by the utterance. From this viewpoint, what it is most important to know about the marker *now* is how it contributes to achieving that goal.

Schourup (2011) follows Blakemore (2002: 5) in that “the object of study is not discourse, but the cognitive processes underlying successful communication, and the expressions which have been labelled discourse markers must be analyzed in terms of their input to those processes.” Although Schourup's (2011) argument is well-based and follows from several pieces of empirical evidence, it does not undermine the role of discourse *now* in English. Even if we submit Blakemore's (2002: 169) assumption that “if a hearer identifies a coherence relation, then it is a result of successful comprehension rather than a prerequisite for it”, the coherence role of *ʔilʔa:n* is important in revealing the underlying role of its context. It alerts the hearer to pay more attention to the preceding segment of the discourse as it is vital for the speaker's statement that follows. Such alerting facilitates the process of the context comprehension.

A point that is worth discussing here is that the use of discourse *ʔilʔa:n* outnumbers the use of lexical *ʔilʔa:n*. According to our corpus, discourse *ʔilʔa:n* occurs 600 times, whereas lexical *ʔilʔa:n* occurs 50 times. This quantitative difference should be expected given the substantial role of discourse *ʔilʔa:n* in discourse comprehension. Additionally, as we have mentioned above, lexical *ʔilʔa:n* has a very limited usage. It appears that JA is deploying *hassaʕ/ hassaʕat/ hassa/ halla* in place of lexical *ʔilʔa:n* which is starting to vanish. This state of affairs is better viewed as a language economy where lexical items are sought to pair to one function or one lexical use.

## 5. Conclusion

In this paper, we have provided evidence that JA distinguishes lexically between focused *now* and non-focused *now*. When the notion of *nowness* is the prominent information (i.e. the new information Chafe, 1976) that the given utterance conveys, *ʔilʔa:n* is used. On the other hand, when *nowness* is part of the background information, *hassaʕ/ hassaʕat/ hassa/ halla* is used. This paper has provided evidence that *ʔilʔa:n* may be used as a discourse element to organize discourse subparts in that it thematically connects the previous discourse with the following discourse. This helps strengthen discourse coherence or textuality. *ʔilʔa:n* marks the speaker's thematic progression whereby subparts of discourse are ordered sequentially, depending on their thematic/informational contribution of the ongoing discourse.



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## Interview with Bernd Heine

Tania Kuteva (TK)

*You are known for the outstanding academic excellence and international leadership in such a great variety of areas of linguistics that my first question comes almost automatically: had you ever imagined that you would become a trend-setter, one of the leading scholars in linguistics in the world? What attracted you to linguistics as a young man?*

Bernd Heine (BH)

Thank you for this kind characterization of my person. To be honest, linguistics was never on my agenda when I was young. It all started at age 13 when I happened to watch *King Solomon's Mines* -- a movie about predatory European adventurers traveling to the central Africa in the 19th century on the way to searching for wealth and excitement. I would never watch that movie again, riddled as it was with prejudices and an obtrusive belief in the white man's superiority. But at that time, in 1952, it revealed to me the fascination and the mysteries of the African continent and I decided to become an 'Africa explorer'. Accordingly, when I entered the University of Cologne in 1960, I registered for African Studies as my major subject.

Professor Oswin Köhler, then director of the Institute of African Studies (*Institut für Afrikanistik*), informed me that learning African languages and studying linguistics was a requirement to graduate in African studies. At that stage I was on the verge of abandoning my plan to become an 'Africa explorer' because during my school time language and linguistics was never something close to my heart -- I was interested in people, not in languages. But in the end, my curiosity to 'understand Africa' was stronger and I joined the Institute, which became my academic home up to my retirement in 2004. And during all that time, doing field research in Africa and writing publications on African linguistics were my favorite activities.

TK

*Which was the first area of research that you were drawn to and why?*

BH

As you can see from what I just said, my aversion to linguistics had disappeared soon and, what is more, I soon became aware that African languages differ in some respects from languages in other parts of the world. In 1978 I published a book on African language typology (Heine 1978) but subsequently my research focus shifted gradually from Africa to languages elsewhere.

One of the main reasons was due to Tom Givón: He published a devastating review of my 1978 book, arguing that my traditional approach merely consisted of descriptive calculations rather than offering any explanation. I responded to him in a paper and he seems to have been impressed by my reaction -- we became friends and up to this day we still are very close friends. At the same time, he inspired me to look for explanations and I followed his line of research by looking for explanations in diachrony, our joint stance being that languages are the product of their history and hence can best be accounted for with reference to how they came to be what they are.

TK

*You are a world-leading founder of grammaticalization as a theory in its own right. What is it that attracted your attention to grammaticalization, and made you invest so much effort on elaborating – and „shaping“ – it as a theory?*



BH

This line of research was also shared by a number of other colleagues, most of all Elizabeth Traugott and Joan Bybee, and in 1988 Givón staged a conference at the University of Oregon in Eugene to promote the study of grammaticalization. The results of that conference were published in two collective volumes (Traugott and Heine 1991) and cleared the ground for establishing this new field of linguistics. To be sure, our perspectives were not exactly the same. Elizabeth was mainly interested in semantic change, Joan in language usage, and I in cognitive processes. On the whole, however, we were all driving in the same direction, namely trying to overcome the at that time prevalent bias against diachronic perspective of language structure.

TK

*How did you come to use the methodology of grammaticalization theory to an area of language research that had been banned for almost a century, i.e. the study of language evolution?*

BH

Right, language evolution had no positive standing in linguistics until the turn of the century. Likewise, with grammaticalization. I remember, for example, that in one of my early publications I used the phrasing 'so-called grammaticalization' in order not to annoy the many colleagues for whom the term grammaticalization then was close to a swearword.

TK

*In the second half of the 20th century Noam Chomsky postulated that recursion is a design feature of language – in addition to the design features of language that Charles Hockett identified in his work in the 1950s and 1960s – and this became one of the tenets of mainstream linguistics both inside and outside the USA. In your own research on the reconstruction of the genesis and evolution of human language grammar you take a radically different standpoint. You claim that recursion is not an innate, or in-built, cognitive mechanism, specific to a special 'human language device' but rather an epi-phenomenon of grammaticalization. On what grounds did you come to this conclusion?*

BH

This is actually an issue where your research was at least as important as mine. Remember that in 2007 we published a book where we argued that grammaticalization theory is able to reconstruct the evolution of recursion -- yes, as a kind of epi-phenomenon of general language evolution (Heine and Kuteva 2007). Our findings suggest that recursive language structures must have evolved when early humans developed grammaticalized structures of phrasal and clausal modification. Such a development is a natural outcome of grammaticalization processes and, accordingly, can generally be explained with reference to the way humans constantly extend the usage of their linguistic resources to cope with new needs of cognition and communication.

It goes without saying, however, that explanation is contingent on the kind of questions that one may wish to ask and, accordingly, an account in terms of grammaticalization theory provides only one of the many conceivable explanations one may think of. Whether recursion is in fact the result of some in-built cognitive mechanism is an issue that is beyond the scope of work on grammaticalization but at least a hypothesis to that effect does not find support from this work.

TK

*Your work on grammatical typology – which takes into account the most sizable knowledge accumulated so far on the commonalities observed in the rise and development of grammatical categories in the languages of the world – as well as your research on language contact has*



*enabled you to come up with a coherent model of grammaticalization. You have published conclusive data showing that grammaticalization runs the same course, i.e. it proceeds according to the same principles, independent of whether we are dealing with a language-contact situation or not. This was the main agenda you pursued in your work till the end of the first decade of the 21st century. Ever since then you have started focusing on an area of language that had been marginalized in grammaticalization studies for decades, namely discourse. What was the trigger for this radical change of focus in your work?*

BH

One finding emanating from our research on grammaticalization is that it is sensitive to contact between languages or dialects in that it can, for example, be triggered or accelerated by language contact. Furthermore, that research has also shown, as you say, that grammaticalization in fact follows essentially the same principles irrespective of whether or not language contact is involved, and that the traditional distinction between internal and external grammatical change is in need of reconsideration: The boundary between the two is much more fluid than many of us, including myself, were believing.

But, right, for roughly the last decade my interest has shifted to the study of discourse. The trigger for this radical change was the observation that our models of grammar, and of language at large, were too much centered around the structure of sentences and the presentation of information in a propositional format. What tends to be ignored in this work is that sentences constitute but one of the building blocks that people use for processing discourse.

TK

*In your recent work on Discourse Grammar you have turned your scientific curiosity to the issue of (in)compatibility of linguistic research with the latest developments in neuro-science. This is reflected in your work on neural correlates between the parts of Discourse Grammar (Sentence Grammar and Thetical Grammar, in your terminology) and the human brain. How important is, in your view, an interdisciplinary approach in this respect, in spite of the caveat that – at this stage of development of cognitive neuro-science – we might very well be the ‘victim’ of a fad, the fad of ‘neuromania’?*

BH

Sure, there is a kind of neuromania in contemporary linguistics. Considering that neuro-science is such a fascinating and booming field it comes as no surprise that linguists proposing new hypotheses on our understanding of language will also look for neuro-linguistic evidence to support their hypotheses. In our work on Discourse Grammar, an interest in neuroanatomy emerged when we found that our distinction between two modes of structuring discourse, referred to as Sentence Grammar and Thetical Grammar, shows striking parallels to a distinction that had been made earlier in neuro-linguistic research, where the distinction is usually described as one between a microstructure and a macrostructure of discourse.

Since that work by neuro-linguists was the result of extensive empirical analyses there was no major need for our research group to engage in experimental testing: Rather, we were able to draw on the findings made by our colleagues from neuro-science to establish that the distinction exhibits remarkable correlations with that of brain lateralization. Accordingly, the conclusion we reached in 2015 was that, whereas the microstructure implicates mainly parts of the left hemisphere of the human brain, building a macrostructure of discourse is a task that cannot be achieved without the participation of right hemisphere activity (Heine et al. 2015).



TK

*Do you think that the results of your research on Discourse Grammar can be applied also to areas outside linguistics and if so, how?*

BH

All models of language teaching that I am familiar with are heavily biased in favor of concepts of sentence grammar. It would seem that these models could benefit from incorporating findings made in the framework of Discourse Grammar and other dual-processing models, which assume, for example, that both language production and language comprehension are immediately anchored in the attitudes of the speaker (or writer), speaker-hearer interaction, and the monitoring of discourse.

So far, however, we are preoccupied with basic research, and the question of how this research addresses the needs of disciplines other than linguistics is to be looked into in a second phase of our research.

TK

*Linguistics is a discipline where a clear-cut theoretical divide exists between formal linguists and functional linguists. Do you think this is a disadvantage or an advantage to the discipline as a distinct scientific domain within the whole domain of science?*

BH

Having been brought up in a tradition of functional linguistics, I remember from my time as a graduate student that the then emerging paradigm of Chomsky's generative grammar was characterized by some of my professors somehow as 'devil's work' that should be opposed before it destroys linguistics. Things have fortunately changed and formal linguistics has greatly enriched the development of linguistics.

Functional linguistics and formal linguistics are based on contrasting theoretical perspectives and assumptions, and each has its strong and its weak points. On the whole, however, there is a lot of cross-fertilization between the two, which is beneficial to both domains. Furthermore, the fact that a student is able to decide between two different ways of looking at and describing one and the same phenomenon suggests that the presence of such a divide is definitely an advantage to our discipline.

TK

*What is your vision for the direction to be taken in future linguistic research?*

BH

Alright, so the question now is what is going to happen in the years to come -- a question that I find hard to answer. But what is obvious to me is that linguistics in ten or twenty years to come is likely to have little in common with the kind of linguistics that you and me are used to. For one thing, electronic technology will not only provide access to new masses of data, it is also likely to shape our techniques of analyzing and our ways of interpreting the data. So we may be faced with new theories and methodologies to establish what language is about.

For another thing, linguistics as a monolithic discipline may no longer exist. When I joined the university some sixty years ago, a professor of linguistics was somehow the king of an empire: He or she (almost invariably then it was a 'he') was in charge of anything that concerns language, from declension paradigms in Latin to Chinese syntax. In view of the increasing diversification and cross-disciplinary research one may wonder how much will remain of language as a unitary subject in the academic world of the future.



TK

*What is your advice to younger researchers who are at the beginning of their academic career?*

BH

I am not sure if I am qualified to offer any sound advice, especially since it is almost sixty years now since I was a younger researcher. Let me therefore just tell you what guided me when I began my academic career. The most intriguing experience I made was that doing research means that you acquire access to a new world of fascinating phenomena, discovering things that maybe nobody before you has ever seen, or seen the way you think they should be seen. Doing research then may no longer be considered to be hard work, or work at all, it may become your favorite activity, sometimes even an obsession. To be sure, research entails hard work, collecting and analyzing data requires a lot of time and energy, but since you feel it is so enriching you are prepared to spend evenings and weekends when other people are relaxing and, still, you don't feel tired.

Of course, this was not the experience that most of my classmates made, for whom studying and doing research was a means to an end, to become a teacher, a lawyer, or a government officer. And I am glad that this is the way it is because a world consisting only of professors might not be the best of all conceivable worlds.

TK

*Thank you very much for the interview.*

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