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Γλωσσολογική Εταιρεία Κύπρου
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PLENARY TALKS

Morphological variation in synchrony and diachrony: The Latin suffix –men and its fate in the romance languages

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The last synthesis of the evolution of word formation from Latin to Romance was published in 1894, in the second volume of W. Meyer-Lübke's *Grammatik der romanischen Sprachen*. Meyer-Lübke's elegant synthesis was an outstanding achievement at the time of publication and can still be read with benefit today. Nevertheless, the work accomplished in the meantime by Romance linguistics would seem to call for a more up-to-date treatment of many aspects of word formation from a diachronic perspective. In some respects, Meyer-Lübke's treatment needs to be completely overhauled, for example concerning deverbal agent, instrument and place nouns (cf. Rainer 2011), while in others the task more modestly is one of refining a fundamentally correct analysis.

The case of the evolution of the Latin suffix *-men* in Romance is of the latter type. Meyer-Lübke correctly pointed out that action and result nouns in *-men*, by reanalysis, already gave rise to denominal derivatives in Latin, witness *calceamen* 'shoe(s)' (Pliny), which could be related to *calceus* 'shoe' in Latin synchrony, though from a diachronic point of view it was derived from the verb *calceare* 'to put shoes on'. The original meaning must have been something like 'what is put on the feet'. Meyer-Lübke also correctly saw that, as a consequence of this kind of reanalysis, the suffix split into different suffixes incorporating what was originally a thematic vowel (cf. Italian *-ame*, *-ime*, *-ume*). He also highlighted the fact that some Romance descendants of *-men* were still used as action nouns, notably in Romontsch. And, most importantly in our present context, he gave a clear idea of the great variability of the outcomes in the different Romance languages.

So, what remains to be done? In the first place, we are now in a position to base our analysis not only on eclectic, though, overall, very well chosen material, as was the case for Meyer-Lübke. Today, we have more or less complete descriptions for several Romance varieties, e.g. Romanian, Italian and Romontsch. For other varieties, such as Corsican, Occitan or Catalan, however, I had to fill the lacunae that still exist by assembling complete inventories myself. This broader empirical basis allows a much finer description of the distribution of the single suffixes than was possible a hundred years ago. The main goal of my talk, however, will be to make explicit, as far as possible, the mechanisms that led to the enormous variation that we observe among the Romance languages and dialects, relying on the framework outlined in Rainer (2005) and (2015). Older descriptions generally were rather laconic on such matters: their main purpose seems to have been to establish beyond doubt the historical filiation between Latin and Romance affixes. The mechanisms behind the changes, by contrast, were hardly ever made explicit.

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Inside 'transposition' morphology: A constructional view

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The general goal of the talk is to demonstrate that transposition can go far beyond just a part-of-speech classification and that construction grammar provides a sufficiently nuanced approach for capturing adequately the complexity of the process. One of the cases that fall under the heading of transposition morphology are various kinds of participial forms. Participles as a hybrid category half-way between inflection and derivation originate in the verbal paradigm; this much is uncontroversial. What happens to them in subsequent development is much less straightforward. Can/should we classify them as adjectives? As nouns? As a separate part of speech? And can we tell simply from their shape, or is there

more to their distribution and meaning? These and other questions have been asked about various participial forms, which are intriguing precisely because the participles do not undergo any visible change in their morphology and on the face of it, seem to depend on syntax for a particular part-of-speech classification, shifting between verbal, adjectival, and nominal status. In this talk, I wish to show that their story can be a quite a bit more involved than a simple shift in lexical category enforced by a syntactic slot. On the example of a particular participial form in Czech (the type *nesoucí* '[the one] carrying'), I argue that the process of mutual adjustments between the meaning of a morphological form and its usage context depend not just on the syntactic slot itself but involves additional elements, including a broader syntactic pattern (in the spirit of Booij's constructional morphology). At the same time, specific syntagmatic contexts may lead to a reorganization of the morphological features of the form in question.

The relevance of construction grammar rests on two fundamental assumptions: (i) categorial change originates in the intricate interaction between a particular item and certain concrete contexts in which it is used and, thus, (ii) mental representations of linguistic structure, including their changes over time, are crucially based on complex, multidimensional cognitive objects called 'grammatical constructions'. The language material that will be presented, together with the constructional approach, offers an instructive case for exploring the general nature of categorial shifts: the development of the special participial form illustrates the crystallization of a conventionalized encoding of distinctions (in this case predicative, attributive, and referential functions), which gradually emerged from a previously more fluid and context-dependent system of differentiation. The investigation, which includes both regularly and irregularly formed tokens, aims at identifying specific recurring semantic and pragmatic features that motivate the gradual reorganization of the relevant grammatical constructions (both morphological and syntactic) and, hence, the categorial status of the participial form.

Variation in contact morphology

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The transfer of items or structures from one language to another should hold a prominent position in linguistics, since it is a common assumption that languages did not develop in total isolation, that is, entirely free of influence from other languages (Thomason 2001, Matras 2009). In language-contact settings, lexical borrowing is admittedly the commonest and most frequent type of transfer. Nevertheless, this type of borrowing does not include only lexical material (*matter replication* in Sakel's 2007 terms) but also grammatical (*pattern replication*), referring to addition, replacement or loss of morphological categories and/or patterns (Gardani *et al.* 2015).

In this presentation, I will deal with the transfer and integration of verbal items to Greek and some of its dialectal varieties from three typologically different donors, which have been in intense contact with the recipient in the course of its long history, English, Romance and Turkish - the latter being also genetically non-parent. Comparing the form and structure of loan verbs of different origin, their divergences and similarities, I will attempt to formulate the constraints that determine the choice of integration strategies and patterns and the specific integrating elements. Following Wohlgemuth (2009) and Ralli (2016), I will show that there is more than one recurrent pattern and strategy which are employed in Greek to accommodate loan verbs, sometimes within the same variety, the selection of which depends on native morphological characteristics, a certain phonological and morphological compatibility of the languages in contact, as well as the degree of contact and the speakers' socio-linguistic attitude towards the dominant language.

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INDIVIDUAL PAPERS & POSTERS

A chapter in the early history of morphology: The brothers de Saussure and the theory of word structure

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We usually think of serious attention to morphology as originating in the work of American Structuralists and some European Scholars in the 1930s, but in fact a significant theory of the principles of word structure is to be found rather earlier in the writing of a generally neglected scholar: René de Saussure, younger brother of the iconic Ferdinand. René is well known for his activities in the development of Esperanto, but he also produced two short but very substantive little books on word structure in natural language: de Saussure 1911 and de Saussure 1919. The goal of these works was to prepare the ground for a satisfactory approach to complex words in Esperanto, but they are explicitly presented as a theory of word structure in existing non-artificial languages.

René de Saussure's theory is resolutely based on the construction of words out of units essentially equivalent to what would later be called morphemes, and in this respect, explicitly opposed to word based relational views, including the approach generally taken in the work of his more famous brother. The 1911 work makes no reference to Ferdinand, but the 1919 sequel, written after the appearance of de Saussure 1916, does cite and engage with some of the points raised there.

Aside from the interesting contrast between the views of the two brothers, René's writing is significant for its rather more explicit discussion of morphological issues and for theoretical positions that presage later theorizing. Among these can be cited the claim that complex words are uniformly binary branching in their structure; the assertion that the head of a word is always its final element (called the "Right Hand Head Rule" by Williams (1981) among others; the notion that universal principles can be violated when in conflict with other, more dominant principles, similar to the architecture of constraint-based systems like OT; a "blocking" principle by which a derived word is excluded if the material added by the derivation is already included in the base (Aronoff 1976); the notion that morphologically complex words can be re-analyzed historically to become simple when their semantics diverges from compositionality, and others. The present paper will summarize some of the points of René de Saussure theory and their connections with issues in contemporary morphologically theorizing.

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Formalizing evaluative morphology in Frame Semantics

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Although evaluation has been the focus of much literature (see Grandi and Körtvélyessy 2015), a satisfactory formal modeling of the semantics of evaluative morphology, and, thus, modification in word formation, is still a desideratum. The traditional view on evaluation is nicely captured in the following: "The meaning of the base is merely modified by adding the semantic component SMALL" (Schneider 2013: 138). A formalization of this view can be sketched as in (1).

(1) base + affix [SEM: *small*] → base[SEM: *small*]

In (1), there is a base, e.g. *book*, we add to it an affix that comes with the semantic specification *small*, e.g. *-let*, and we derive a lexeme with the meaning 'small base', e.g. *booklet*: 'a small book'.

This pipeline is unsatisfactory for two main reasons. First, there is no real interaction between the base and the semantics of evaluation. Rather, evaluation simply adds a component of meaning to the base. The ontological status of this component and the mechanism by which it is added to the base, however, are unclear. Second, the pipeline in (1), and the use of semantic primitives such as SMALL/BIG or SCALAR (Lieber 2007) miss a crucial characteristic of evaluation. SIZE is a relative notion and not an absolute notion (Jurafsky 1996; Wierzbicka 1996). A *book*, for example, is not absolutely small or big. It is smaller than a table but bigger than a dice. Crucially, a *booklet* is still smaller than a *table* but bigger than a *dice*.

In the present study, we challenge the idea that evaluation relates to the addition of a semantic component to the base and we motivate an account that is not based on primitives. To this end, we invoke Frame Semantics as developed in Petersen (2007), Löbner (2014), and Kawaletz and Plag (2015). Frame Semantics is a decompositional model with recursive attribute-value structures, where the attributes are functional relations, assigning unique values to the concept they describe.

We model evaluation as a change in the value of the attribute SIZE of the base lexeme, which serves as the stereotypical exemplar for the category in question. Thus, evaluation overwrites the value of an attribute that is already present in the frame of the base, and does not add a component of meaning to it.

The change in the value of SIZE, is accompanied by a constraint on the relation between the value of the attribute SIZE in the base lexeme and the value of SIZE in the derived lexeme. In diminution, the constraint "$\beta < \alpha$" (i.e. the value β in the derived lexeme is smaller on the scale of SIZE than the value α in the base lexeme) allows us to derive the correct semantics. That is, a *booklet* is not something that is absolutely small, but 'a book that is smaller on the scale of SIZE than the stereotypical exemplar of the category book'.

The approach also allows one to solve the problem of classification of *midi-*, which escapes traditional approaches (Bauer et al. 2013).

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Stress variability in English *-able* and *-ory* adjectives: Markedness, faithfulness, and usage

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In descriptions of English morphophonology, traditionally a distinction is made between stress-shifting and stress-preserving affixes. This distinction has figured prominently in the theoretical literature, providing the basis for far-reaching claims about the nature of phonology-morphology interaction (most notably in Lexical Phonology: cf. Kiparsky 1982 et seq., Giegerich 1999; cf. also e.g. Pater 2000, Zamma 2012, Bermúdez-Otero 2012, Stanton & Steriade 2014).

One aspect that is still not well understood is the question of variability in stress assignment in complex words. Empirically, evidence is so far often anecdotal, but there are indications from recent

work that variability has been underestimated (cf. esp. Zamma 2012, Bauer *et al.* 2013: chpt. 9). Theoretically, many traditional approaches rest on the assumption that application of morphophonological stress rules is categorical, and that variability can only be a result of lexical marking (cf. e.g. Pater 2000), or, in dual-mechanism models, of a mechanism that is fundamentally non-grammatical (but 'associative', cf. e.g. Bermúdez-Otero 2012).

The paper focusses on two adjectival derivational categories, *-able* and *-ory*. *-able* is generally considered to be stress-preserving, *-ory* is usually claimed to be stress-shifting. Exceptional stresses have been reported for both suffixes. Examples are provided in (1).

(1)   a. stress preservation with *-able*:   abrígeable, ánalysable
        b. stress shift with *-able*:   analýsable, documéntable

(2)   a. stress shift with *-ory*:   oscíllatory, compénsatory
        c. stress preservation with *-ory*:   artículatory, antícipatory

We will report on the results of a reading study, which obtained some 1,100 realisations of *-able* and *-ory* derivatives from 31 speakers of British English. All test words are derivatives with long bases (> 2 syllables). The study finds a substantial amount of stress variation both across and within lexical types. Moreover, statistical analysis reveals that the variation is systematic, reflecting the presence and interaction of stress preservation effects and effects of phonological wellformedness (esp. of syllable quantity) in both *-able* and *-ory* derivatives. Both effects are probabilistic, and the two morphological categories differ mainly in terms of their relative strength.

In addition, we find effects of both the speaker and different types of frequency. No speaker in our study has consistent preserving or shifting stresses. Furthermore, speakers differ in terms of how sensitive they are to the lexical frequencies of derivatives and their bases. In general, stress shift is, in some speakers, more likely with high-frequency derivatives. Conversely, high-frequency of the base is found to correlate with stress preservation in other speakers. This is particularly interesting for *-ory* derivatives, for which our findings suggest that frequencies of both nominal and verbal base candidates may play a role, shedding some new light on the debate about whether *-ory* derivatives are denominal or deverbal.

On a theoretical level, our data are not compatible with a traditional stratification account that assumes a categorical divide between strata. Instead, the type of gradience found in both derivational categories seems to suggest an account that establishes a more direct connection between formal markedness, transparency, and frequency, taking them as correlates of psycholinguistic parseability (cf. e.g. Carlson & Gerfen 2011).

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From hypocoristic to stance marker: The grammar of the Hebrew suffix –uš

Jonathan Avidan
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In Modern Hebrew, the hypocoristic suffix *–uš* has expanded from personal names to virtually all lexical categories and even verbal and adverbial constructions (Gonen & Vaismann 2011). This change appears related to the sociolinguistic expansion of this suffix to more speaker groups. In this presentation I claim that this suffix encodes the function of marking **positive stance** towards the addressee, which provides motivation for its expansion both across lexical categories and speaker groups.

The pragmatic study of **stance** is the study of the linguistic inferring and encoding of *attitude* (DuBois 2007). One form of stance taking is encoding positive or negative attitude towards the addressee which enables them to disambiguate the speaker's stance and thereby derive the correct enrichments necessary for comprehension (Ariel 2008, 2010).

Hebrew has two hypocoristic suffixes, *-i* (Bat-El 2005) and *-uš* which have nearly overlapping morphophonological constraints, thus making it possible for any word that can take one to take the other. This redundancy is likely to have facilitated the adoption of the suffix's expanded function.

Semantically, it is illuminating to analyze hypocoristics as special cases of encoded positive stance markers restricted to personal names (Savickiene & Dressler 2007). By generalizing the specification of this function, speakers were able to first expand the suffix from personal nouns (e.g. *dana → dani*) to interjections (*hay* 'hello' → *hayuš* and *bay* 'bye' → *bayuš*), then all nouns (e.g. *ximya* 'chemistry' → *ximyuš*) and then finally verbal constructions (*zanznu* 'let's go' → *zaznuš*).

This use of the suffix originates in the speech of teenagers in the Tel-Aviv area and was especially associated with an underprivileged register (*telavivit* 'Tel-Avivish' and *fakácit* 'Bimbo-ish'). Speakers who do not use the suffix report association with superficiality, childishness, femininity and even homosexuality. Older speakers who have adopted the suffix commonly report that they began using it in ironic speech but later found themselves using it with no such intention. Many over age speakers, however, report adopting it naturally.

In this presentation I show that by the combined generalization of the suffix as a positive stance marker and its grammatical expansion has enabled the suffix to be enlisted by the speakers for this function *despite* its phonological restrictions and its sociolinguistic underprivileged status. The desired effect of stance taking must outweigh the social "cost" of using an underprivileged register. In addition, I claim that the domains of speech and written language display different usages: while spoken language is satisfied with employing the suffix to mark stance, written language often then uses the positively marked construction as a hedging device (Markkanen & Schröder 1991) to prevent or mitigate the impression that the statement was written with a negative stance in mind. The encoding and grammaticalization of "purely pragmatic" functions is a rapid process and more research needs to be directed at observing the development and adoption of this and comparable suffixes as an accessible case study for the interface of pragmatics and grammar.

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Morphology as a lemmatization criterion in dialectal and historical lexicography

Christina Bassea-Bezantakou
ex-Director of the Research Centre for Modern Greek Dialects of the Academy of Athens

Historical and dialectal lexicography are by definition the lexicographical branches where lemmatization presents the greatest problems, due to a) the difficulty of defining the notion of "lexeme" in a material which is not spatiotemporally limited in an absolutely strict way b) the great

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Historical and dialectal lexicography are by definition the lexicographical branches where lemmatization presents the greatest problems, due to a) the difficulty of defining the notion of "lexeme" in a material which is not spatiotemporally limited in an absolutely strict way b) the great

degree of variation which may be presented by forms belonging to the same "lexeme" and c) the consequent heavy reliance (heavier than in the lexicography of the standard language) on the etymological/diachronic criterion.

Despite the prime role of etymology in these branches of lexicography, it is not possible to ignore the contribution of other lemmatization criteria, namely morphology, semantics and (more rarely) syntax. In the proposed paper, after a theoretical overview centering on the aims and objectives of historical and dialectal lexicography, an attempt will be made to examine, through specific examples, the application of the morphological criterion in these domains (e.g. treatment of multi-word units, change or loss of gender, attestation of the same nominal or verbal stem with homonymous but different derivational suffixes etc.). Special attention will be paid to problematic lemmatization issues, either cases of uncertain etymology or cases where the semantic criterion may overrule the morphological one.

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Semantic variability and semantic change in word-formation: The role of metonymy

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Metonymy has tended to get short shrift in linguistic theorizing. However, in recent years, largely under the influence of various strains of Cognitive Linguistics, its role in various kinds of word-formation has become more recognised. Thus, several scholars, from both the morphological side and the cognitive side, have argued that exocentric compounding can be seen as a figurative use of language, mainly as a case of metonymy (Barcelona 2008, Bauer 2016, Booij 2007), and also that conversion can be viewed as metonymy in action (Kövecses & Radden 1998).

In this paper I wish to discuss the polysemy of derivational markers. It is well-known, for instance that agentive and instrumental marking often use the same morphological markers (Dressler 1986, Rainer 2011), but it has not, I think, been noted that these instances of polysemy can also be viewed as instances of metonymy. In the language of the cognitivists, agent and instrument co-occur in the same Idealized Cognitive Model of events, and so metonymy allows for the transfer of sense from one to the other by contiguity or proximity within the ICM. This explains why the agentive marker can be used for other roles as well as instruments, including locatives, patients and, rather more rarely, temporal locatives. Another example is provided by the readings attributed to deverbal nominalizations (e.g. by Bauer et al. 2013), where the different readings can be found within a single ICM.

It may even be possible to go further than this, and suggest that all derivational morphological markers indicate a metonymic extension to the meaning of the base, as seems to be implied by some cognitivists. This may be too strong, but not by much.

If polysemy of derivational markers is a function of figurative interpretation, this has implications both for diachrony and for typology. Diachronic shift of such markers should be to meanings which are related to the historical earliest pattern by figurative extension; typologically we might expect to find similar patterns of extension across languages (or even with different, partly synonymous, affixes in the same language), but not necessarily identical ones and this may depend to some extent on what the original meaning of the relevant marker was. This is precisely what we find, not only in morphological marking of argument roles, but also in morphological marking of evaluation. Other commentators, though, have not viewed this through the lens of metonymy.

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"What does *a cireși* 'to cherry' mean?". Creative variation in the interpretation of denominal verbs. An experimental and structural approach

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The aim of this paper is to bring to attention the issue of the variation in interpretation of denominal verbs from a structural (Hale & Keyser 2002) and conceptual perspective (Lakoff 1993), by looking at some denominals elicited from Romanian native speakers.

The issue of how to interpret denominal verbs has been investigated by many linguists (Kiparsky 1997, Hale & Keyser 2002, Harley 2006 a.o.), since it is crucial for establishing where it is formed: in syntax or in the lexicon. Contrary to Hale & Keyser (2002), Kiparsky (1997) argues that denominal verbs are formed in the lexicon and their internal structure cannot be captured syntactically; rather, such verbs observe a Canonical Use Principle, according to which, if an action is named after a thing, it involves a canonical use of that thing: e.g. *to corral* means 'to put in a corral'. In spite of its appeal, this canonical constraint fails to explain more figurative verbs, such as *to dog*, meaning 'to chase tirelessly' (Kelly 1998). There is thus a clear need to differentiate between RD (rule-derived) and ID (idiosyncratic) denominals.

As the issue has not been investigated in Romanian, unlike in English (Kelly 1998), I have devised a comprehension and elicited production test, where I gave a group of ten Romanian native speakers two sets of ten possible, but nonexistent denominal verbs, asking them to provide a paraphrase and a sentence with each. The first set consisted of the verbs *a cireși* 'to cherry', *a struguri* 'to grape', *a vulpi* 'to fox', *a renui* 'to reindeer', *a profesori* 'to teacher', *a marinări* 'to sailor', *a pieli* 'to skin', *a furculi* 'to fork', *a șezlongui* 'to tanningbed', *a microfoni* 'to microphone', while the second set simply added the reflexive clitic *se* '(one)self' to the first set.

The results of the experiment reveal that speakers interpret the verbs canonically, but this 'canonical' interpretation may vary Speakers interpret some verbs literally (e.g. *a șezlongui* 'to lie on a tanning bed'), others figuratively (e.g. *a vulpi* 'to trick'), and in some cases, two readings are given (e.g. *a profesori* 'to teach', 'to scold'). When the reflexive accompanies the verb, a change of state interpretation, as well as the 'act like X' interpretation are favoured. In the latter case, the metaphorical reading builds upon a trait that the [+animate] subject has in common with X (being sly, in the *a vulpi* 'to fox' example).

Interestingly, when one can think of many actions involving a certain object (such as the object *cherry*: you can pick, eat, buy cherries a.o.), various representations arise. I provide structural

representations accounting for the creative variation in the interpretation of denominal verbs, thus opting for the view of a large lexicon, comprising all the possible interpretations, out of which the speakers choose:

(1)
```
        VP                              VP
        |                               |
        V'                              V'
       / \                             / \
      V   N                           V   PP
PICK/ EAT/ BUY cherry          BECOME   like a cherry
```
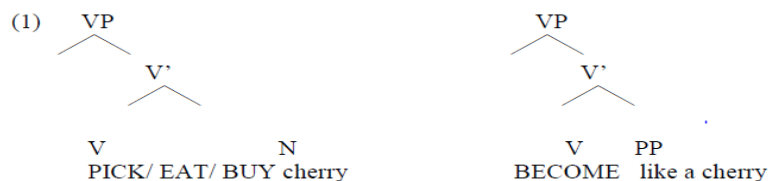
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Transparency and predictability in Modern Greek conjugation: Implications for models of word processing

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University of Patras   *Istituto di Linguistica Computazionale, Pisa*   *University of Patras*

A transparent formal relation between any two paradigmatically-related forms (say *walk* and *walked*, or *love* and *loved*), combined with predictable affixation, is traditionally assumed to be a hallmark of morphological regularity. Non transparent relations (say between *fall* and *fell*), on the other hand, are much less predictable and are typically taken to be irregular. Such a systematic correlation between transparency and predictability in regular inflection motivates the subdivision of labour between rules and the lexicon hypothesized by the Declarative/Procedural model of word processing (Pinker & Ullman 2002). Accordingly, morphologically regular inflections are predictable and transparent and are assembled by rules. All other inflected forms are memorised and accessed in the lexicon as wholes.

It is widely acknowledged that cases of predictable stem alternation (such as English *ring-rang-rung*, *sing-sang-sung*, or German *schreiben-schrieben*, *bleiben-blieben*) are difficult to be accounted for in terms of dualistic models of word processing. Modern Greek conjugation adds a further dimension of complexity to this picture, offering an interesting exception to the purported strong correlation between morphological transparency and predictability. According to Ralli (2005, 2007), Greek verb paradigms can be classified on the basis of two criteria: a) presence vs. absence of the perfective sigmatic affix; b) phonological (predictable) vs. morphological (systematic, but unpredictable) stem allomorphy. In line with Ralli's criteria, we can define the following three verb classes (see also Tsapkini & al., 2001, 2002a, b, c, 2004):

(i)   an affix-based class, requiring the presence of the perfective marker *-s-* and a predictable phonological stem allomorph (e.g., *skoton-o* 'I kill' ~ *skoto-s-a* 'I killed', *ɣraf-o* 'I write' ~ *e-ɣrap-s-a* 'I wrote');

(ii)   an idiosyncratic verb class whose forms are based on non-systematic stem allomorphy (requiring usually either stem-internal change or suppletion) or no stem allomorphy at all, and no (sigmatic) aspectual marker (e.g., *pern-o* 'I take' ~ *pir-a* 'I took', *tro-o* 'I eat' – *e-faɣ-a* 'I ate', *krin-o* 'I judge' – *e-krin-a* 'I judged');

(iii) a mixed class where active perfective past tense forms are produced by affixation of the aspectual marker *-s-* to an unpredictable morphological stem-allomorph (e.g., *aɣap(a)-o* 'I love' ~ *aɣapi-s-a* 'I loved', *xal(a)-o* 'I demolish' ~ *xala-s-a* 'I demolished', *for(a)-o* 'I wear' ~ *fore-s-a* 'I wore').

The three classes illustrate three different cases of interaction between formal transparency (degrees of stem similarity) and (un)predictability of stem allomorphy. Class (i) verb forms are predictable but not fully transparently related (+P, -T). Class (ii) verb forms are unpredictable and (mostly) formally opaque (-P, -T). Finally, class (iii) forms are unpredictable but fully transparent (-P, +T). In the present contribution, we consider experimental evidence of human processing for the three classes of Modern Greek verb forms, and assess the theoretical consequences of this evidence for word processing architectures.

We argue that the Greek evidence calls for a substantial revision of the clear-cut interaction between transparency/predictability and regularity, to make room for a more process-oriented notion of regularity. According to this view, regularity is no longer an epiphenomenon of the design of the human language faculty and the purported dualism between rule-based and memory-based routes, but the graded result of the varying interaction of several structural factors (Figure 1), concurrently affecting the human word processor. Since all these factors interact in a variety of ways, any processing architecture that assumes compartmentalized, independent processing routes for some specific combinations of these factors only (e.g. a rule-based route for a combination of transparency and predictability, on the one hand, and a memory-based route for all other combinations on the other hand) inevitably fails to capture the full range of complexity of Greek conjugation. To account for this complexity, we propose to focus on a different design of the human language processor, and on a more distributed computational architecture for its modelling.
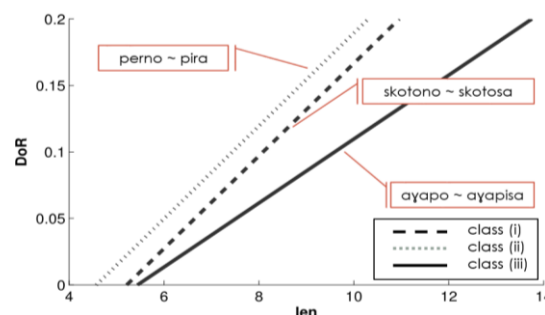
Figure 1. LME analysis of interaction effects between word length and classes of (ir)regularity on Difficulty in word Recall (DoR) by a TSOM (Ferro *et al.*, 2011, Marzi *et al.* 2012, Marzi & Pirrelli 2015, Pirrelli *et al*. 2015) trained on Greek verb forms (Bompolas *et al.* 2016). Type of stem allomorphy determines the different levels of morphological regularity in Greek. Stem transparency in the paradigm is perceived as a key facilitation factor for morphological processing. This seems to involve a regularity-by-transparency interaction, with predictability playing second fiddle. Random effects: TSOM instances (n = 5), paradigms (n = 50). Fixed effects: word log frequency, word length (len), verb class.

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Variation in Polish phrasal lexemes

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This talk will discuss two kinds of variation concerning phrasal lexemes (Masini 2009, Booij 2010) in Polish, i.e. multi-word expressions with a naming function, which are referred to as "juxtapositions" by Polish morphologists (Jadacka 2001, Szymanek 2010).

One type of variation is the competition between phrasal lexemes and compounds proper, exemplified in (1)-(2). Instead of using the juxtapositions in (1), which consist of two fully inflected nouns (optionally) linked with a hyphen, speakers of Polish can employ the copulative compounds proper in (2), which contain two stems linked with the interfix *–o-*.

(1) a   *barman-kelner*
         bartender.Nom+waiter.Nom
         'a waiter bartender'

     b   *kurs-konferencja*
         training.Nom+conference.Nom
         'a training conference'

(2) a   *barmanokelner*
         bartender+o+ waiter.Nom
         'a waiter bartender'

     b   *kursokonferencja*
         training+o+conference.Nom
         'a training conference'

The existence of the forms in (1) and (2) violates the generalization that the coining of compounds is blocked by the occurrence of phrasal lexemes (see Booij 2009: 229). It will be shown that the formation of N+N juxtapositions is the preferred way of coining novel (and often reversible) coordinate expressions in Polish, while coordinate compounds proper are more conventionalized units. Moreover, N+N combinations which represent selected N+N semantic patterns, e.g. Kinship + Profession and Sex + Profession (cf. Olsen 2001), cannot be replaced by compounds proper, cf. *mąż prawnik* (lit. husband.Nom lawyer.Nom) 'lawyer husband' vs. **mężoprawnik*, or *kobieta pilot* 'woman pilot' vs. **kobietopilot*.

Another kind of variation concerns the order of constituents in juxtapositions which consist of a noun and an adjective (especially a relational adjective). The juxtapositions in (3) are syntactically fixed, as is expected of both derived words and phrasal lexemes, cf. Masini (2009), Nagórko (2016). The reordering of the constituents of the A+N unit in (3a) results in the loss of its idiomatic reading (in 4a) while the change of the word order of (3b) changes the meaning (and function) of the adjectival modifier, turning the whole unit into a regular syntactic phrase in (4b).

(3) a. *koński*   *ogon*
         horse.Adj.Nom   tail.Nom
         'a ponytail'

     b. *aktor*   *komiczny*
         actor.Nom   comic.Adj.Nom
         'a comedy actor'

(4) a. *ogon*   *koński*
         tail.Nom   horse.Adj.Nom
         'a tail of a horse'

     b. *komiczny*   *aktor*
         comic.Adj.Nom   actor.Nom
         'an actor who is funny'

However, the juxtapositions in (5) allow both N+A and A+N orders. The greater mobility of their constituents coincides with the compositionality of such phrasal lexemes (cf. Hüning and Schlücker 2015), yet it also depends on the semantic type of the adjectival modifiers.

(5) a. *sklep*   *spożywczy*
         shop.Nom   food.Adj.Nom
         'a grocery'

     b. *spożywczy*   *sklep*
         food.Adj.Nom   shop.Nom
         'a grocery'

(6) a. *dyżur*   *nocny*
         duty.Nom   night.Adj.Nom
         'night duty'

     b. *nocny*   *dyżur*
         night.Adj.Nom   duty.Nom
         'night duty'

Furthermore, the interpretation of N+A units often requires the knowledge of specialized terminology, while the usage of A+N strings implies no necessary reference to a fixed taxonomy.

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Variation and competition in Realisational Morphology: Overabundance in Adyghe and Maay

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While overabundance is established as a recurrent phenomenon in natural language morphology (Thornton 2011, 2012), it presents a challenge for current formal theories of inflection (including PFM (Stump 2001), AM (Anderson 1992), NM (Brown & Hippisley 2012), OT (Prince & Smolensky 1993), DM (e.g. Noyer 1992)), since they uniformly embrace Panini's Principle, preempting any general rule in the presence of a more specific one. In this paper we attempt to preserve Panini's Principle as an organizational property of inflectional systems, yet license overabundance in a non-stipulative way. We argue for a formal theory of inflection that states generalisations about combinations of realisations.

Most instances of overabundance discussed in the literature involve stem alternations, inflection class hybridization, or variable morphotactics. In this talk, we focus on two cases where overabundance is at the core of the inflection system: optional extended exponence in Maay (Paster 2010) and optional and overlapping exponence in Adyghe (Arkadiev 2014).

Singular	Plural -o	Plural -yal	Plural -o-yal	Gloss
buundo	*	buundo-yal	*	'bridges'
aweesa	*	aweesa-yal	*	'worms'
eey	eey-o	eey-yal	eey-o-yal	'dogs'
ees	ees-o	ees-yal	ees-o-yal	'grasses'

Maay plural formation (Paster, 2010)

	Singular	Plural		
ABS	-r	-xe-r		
OBL	-m	-xe-m	**-me**	**-xe-me**
INSTR	-m-ҫ'e	-xe-m-ҫ'e		

Adyghe noun inflection (Arkadiev, 2014)

Plural inflection in **Maay** comes in two shapes: a phonologically selective marker *-o* that attaches to C-final bases, and a generic marker *–yal*. C-final bases permit not only a choice between these two markers but also license the combination of the two, yielding a pattern of logical disjunction. This presents a challenge: the way in which AM and classical PFM organise rules into blocks makes it impossible to ascertain that at least one of these rules must apply.

Case and number inflection in **Adyghe** is essentially transparent, witnessing recurrent case and nymber markers. Overabundance is manifest in the oblique plural: alongside transparent *-xe-m*, there is a portemanteau marker *-me*, which additionally can undergo averlapping exponence with the regular plural marker, giving -xe-me. Arkadiev (2014) has shown that this type of overabundance clashes with Paninian competition.

We argue that the limiting factor in both cases is to consider rules of exponence in isolation. We build on the framework of Information-based Morphology (Crysmann & Bonami 2016), which organizes rules into an inheritance strategy, permitting generalisations over rules. For **Maay**, we exploit vertical underspecification (Figure 1): the shape of exponents is stated in rules that are underspecified as to the

number of morphs they introduce; only instances of the rules specify that one or two exponent is used, capturing the fact that at least one exponent has to be introduced. For **Adyghe** (Figure 2), we use horizontal underspecification in the spirit of Koening and Jurafsky 1994. Inflection rules are organised in two separate dimensions, where exactly one underspecified rule is responsible for the introduction of each exponent. These function as recipes for the construction of rules that introduce multiple exponents holistically. Since rule instances all realise combinations of case and number, no Paninian preemption occurs; however, since only underspecified recipes need to be stipulated, there is no undue redundancy in the grammar.

Figure 1: Disjunctive extended exponence in Maay

Figure 2: Adyghe

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Constraints on the French [*non*-N] construction

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In this paper, I discuss the productivity of the pattern which, in contemporary French, builds denominal nouns with the prefix *non-* such as NON-REMBOURSEMENT 'non-refund', NON-ITALIEN 'non-Italian' and NON-VILLE 'non-city':

(1)   Le député s'est prononcé pour le **non-remboursement** des frais de scolarité.
        'The deputy has argued in favor of the **non-refund** of tuition fees.'
(2)   La cuisine italienne est appréciée par à peu près tout le monde, les Italiens et les **non-Italiens**.
        'Italian cuisine is appreciated by almost everyone, Italians and **non-Italians**.'
(3)   Sarcelles c'est l'archétype de la **non-ville**, le chef d'œuvre de l'aberration urbanistique.
        'Sarcelles epitomizes the **non-city**, the masterpiece of urban aberration.'

I follow here Bauer who considers that a pattern is productive "if it has the potential to lead to new coinages, or to the extent to which it does lead to new coinages" (Bauer 2001: 41). My analysis is based on the observation of more than 1000 examples drawn from the *TLFi1*, Frantext2 and the online press via the search engine GlossaNet3 and is grounded in the theoretical framework of Construction Morphology, where a construction is defined as a form-meaning pairing with idiosyncratic properties and/or a high degree of entrenchment (Fillmore *et al.* 1988, Croft 2001, Goldberg 2006, Booij 2010). I show that the [*non*-N] construction can be considered fully productive as it can host any given noun. However, I also demonstrate that the [*non*-N] construction can have three different interpretations, corresponding to three subconstructions:

(1')   [*non*-[X]$_{N}$]$_N$ ⟷ 'non-occurrence of X' (cf. NON-REMBOURSEMENT in (1))
(2')   [*non*-[X]$_{N}$]$_N$ ⟷ 'entity which is not an X' (cf. NON-ITALIEN in (2))
(3')   [*non*-[X]$_{N}$]$_N$ ⟷ 'entity which is an X but which does not possess the stereotypical properties of an X' (cf. NON-VILLE in (3))

The analysis of the corpus allows me to identify two constraints on the well-formedness of each of these types of [*non*-N]:

(i) The semantic properties of the base noun. The construction in (1') has a strong preference for bases denoting events and the one in (2') a preference for bases denoting human beings. Conversely, a [*non*-N] with a base noun denoting an event is more likely to yield interpretation (1') and a [*non*-N] with a base noun denoting a human being is more likely to yield interpretation (2'). Interpretation (3') is different as it does not display a clear preference for a particular type of base; my data suggest, however, that it works pretty well with nouns denoting artifacts, such as VILLE 'city' (3);

(ii) Pragmatic information provided by the context, which can at least partly override the constraint on the semantic properties of the base noun. I show that the role of the context is particularly obvious in the case of construction (3'), whose interpretation is meta-linguistic and axiological.

The phenomena discussed in this paper also nicely illustrate the necessity of the distinction between *potential* and *probable* words. Not all [*non*-N] are equally *probable*, because of extra-systemic factors (cf. Bauer 2001) which limit their actualization.

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1. *Trésor de la Langue Française informatisé.* http://atilf.atilf.fr/
2. Frantext is a textual database of literary and scientific French texts.http://www.frantext.fr/
3. GlossaNet. http://glossa.fltr.ucl.ac.be/

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Intensification and deintensification in Modern Greek verbs

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Although intensifying morphemes are very frequent in Modern Greek, there is no detailed treatment of these morphological evaluative means, with the exception of a few in-depth analyses of several specific sub-themes (cf. among others: Fotiou 1998, Delveroudi & Vassilaki 1999, Ralli 2004, Anastasiadi-Symeonidi 2008, Savvidou 2012, Gavriilidou 2013, Efthymiou 2003, 2015, Efthymiou, Fragaki & Markos 2015). This paper aims at examining the morphological means of intensification and deintensification in Modern Greek verbs in the light of evidence provided by the diachrony of Greek. First, it will be shown that in Modern Greek deverbal evaluative verbs the meaning of intensification (and deintensification) is almost always expressed by prepositional prefixes or prefixoids: e.g. para-cimáme 'to oversleep', iper-fortóno 'to overload, scilo-varjéme 'to be bored to death (scilo- 'dog'+ varjéme 'to be bored'), kutso-vlépo 'to see poorly' (kutso- 'lame'+ vlépo 'see'); see also Efthymiou (2016). Secondly, it will be demonstrated that in Modern Greek evaluative verbs the meaning of intensification is mostly expressed by prepositional prefixes, while the meaning of deintensification (attenuation) is almost always expressed by prefixoids. Thirdly, it will be shown that in Modern Greek, the system of intensifying and attenuating morphemes has emerged via the processes of grammaticalisation (e.g. the prefixization of full lexical items like scilo- 'dog', kutso- 'lame', etc.) and refunctionalisation (e.g. the prepositional prefixes iper-, para-, which have developed evaluative meanings) or via borrowing (e.g. the MG colloquial intensive prefix kara- 'very', from the Turkish adjective kara 'black': tsekáro 'to check' → kara-tsekáro 'to check very thoroughly'; see also Manolessou & Ralli 2015). Finally, it will be suggested that a) the diversity of evaluative derivational processes (e.g. kutso-vlépo 'to see poorly', psilo-vlépo 'to see a bit') is largely determined by linguistic factors (e.g. selectional constraints, differences in meaning, register, etc.), and that b) each evaluative morpheme under investigation relates to its base in a more or less idiosyncratic way (e.g. the learned prefix iper- expresses quantitative evaluation, the colloquial prefix kara- has an emotive/pragmatic meaning, etc.). The findings of this study are exemplified by reference to ca. 200 deverbal evaluative verbs, collected from two Modern Greek dictionaries (Triandafyllidis 1998, Babiniotis 2002) and electronic sources (Google).

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Morphological variation: The case of productivity in German compound formation

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This paper discusses productivity in German compound formation – as a case of morphological variation – from a lexeme-based synchronic perspective. Our investigation is based on the observation that even semantically very similar words (e.g. *Angst* (‚*fear*‘) vs. *Furcht* (‚*dread*‘)) respectively words within a semantic field (e.g. colour words like *blau* (‚*blue*‘) and *weiß* (‚*white*‘)) show strikingly different tendencies to occur as head word in compounds (cf. Fleischer & Barz 2012, 81f.: 135). Taking the semantic properties of the head lexeme as starting point and applying corpus-based statistical methods, we are trying to gain new insights into this rather unexplored field of morphology. We understand productivity – in simplified terms – as "the ease with which a linguistic process gives rise to new forms" (O'Donnell 2015: 3) and perceive it as a quantitatively measurable, gradual phenomenon (cf. Roth 2014: 167).

While it is beyond question that "the combination of two or more lexemes […] in the formation of a new, complex word" in general is a productive process of German word formation (Olsen 2015: 364 f.), it is quite surprising that the productivity of compounding has not been investigated in more (empirical) depth (but cf. Roth 2014, Gaeta & Zeldes 2012).

Until now, the notion "morphological productivity" has been predominantly reserved for the domain of derivation (cf. Bauer 2005) (e.g. Gaeta & Ricca 2006, 2015, Scherer 2005 for quantitative approaches to the productivity of affixes). In my talk, I plan to demonstrate its fruitful applicability to the domain of composition.

Two main questions are crucial to this project:

- How can productivity of simplex words with respect to compound formation be measured?
- How can differences in compound productivity be explained? What are the principles that govern this variation?

In a first quantitatively orientated step, we determine the productivity of compounds with the help of current productivity measures (cf. Baayen 2009, 1992) on the basis of large corpora.

In this context, groups of compounds with similiar head words provide a specific focus, e.g. compounds with a color word (*quitschegelb* (‚*squeaking yellow*‘), *papstviolett* (‚*pope purple*‘)) or compounds with an expression of an emotion (*Höhenangst* (‚*fear of heights*''), *Terrorfurcht* (‚*fear of terror*‘)) as head. In a second step, we try to linguistically interpret and to systematically explain empirically carved out differences in productivity. This means that potential factors for determining productivity are empirically validated, e.g. morphophonological / morpho-syntactic / semantic properties of the Immediate Constituents, semantic patterns of compounding, situational factors, etc. Among other things, our previous findings indicate that the frequency of a simplex (in isolation) seems to influence its productivity as a head noun in compounds. Semantic proximity of simplexes, however, does not automatically lead to comparable productivity values concerning the formation of compounds.

All in all, we are providing one of the first empirical, lexeme-based investigations of productivity of compounds. This analysis of selected simplexes can also provide a promising instrument to gain more general insights into the nature of composition.

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Intensifying constructions in the interlanguage of French-speaking L2 learners of Dutch: A collostructional analysis

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Intensification can be expressed cross-linguistically by several morphological and syntactic constructions (among others, Kirschbaum 2002, Hoeksema 2011, 2012, Zeschel 2012, Rainer 2015). The diversity of constructions available to express a single function implies a formfunction asymmetry, alongside marked language-specific preferences for particular types of intensification complicate the acquisition of intensifying constructions for second language learners. Our study is situated within the theoretical framework of usage-based Construction Grammar (cf. Tomasello 2003, Goldberg 2010 among others). Second language acquisition is presumed to be complex because of the competition between L1 and L2 constructions (Ellis & Cadierno 2009). This study focuses on one specific case of such constructional competition, namely the expression of adjectival intensification in the interlanguage of French-speaking learners of Dutch. Previous studies found idiosyncratic preferences for morphological vs. syntactic constructions in Germanic and Romance languages (respectively van Haeringen 1956, Lamiroy 2011) and assume that this also holds for intensification (Van der Wouden & Foolen forth.). Accordingly, we hypothesize that French-speaking learners of Dutch will (i) underuse typical Germanic morphological means of intensification such as elative compounds [<N> [ADJ]]$_{ADJ}$ (e.g. *ijskoud* 'ice-cold') (Hoeksema 2012), and (ii) overuse syntactic constructions frequently used in French, like adverbial modification [[ADV] [ADJ]]$_{AP}$ (e.g. *tout petit* 'very small') and constructions such as [[ADJ] *as* [NP]]$_{AP}$ (e.g. *fort comme un Turc* 'very strong') (Riegel, Pellat & Rioul 1994: 620, 622). More specifically, we will address 3 research questions:

(i) To what extent can we observe constructional transfer in L2 Dutch? (e.g. underuse of morphological constructions and overuse of syntactic intensifying constructions?)
(ii) Which (formal and semantic) constraints can be identified in the preferences for specific intensifying constructions in the native and learner language?
(iii) Does more input provided through a Content and Language Integrated Learning (CLIL) approach lead to a more native-like acquisition of intensifying constructions?

The data for this study come from a corpus of written productions of 473 5th graders (aged 16-17) in French-speaking Belgium, including 132 CLIL learners of Dutch, 100 learners of Dutch in non-CLIL education, and a control group of 63 native speakers of Dutch of the same age[1]. All instances of intensifying constructions observed in the native and learner corpora are subjected to a collostructional analysis, namely a covarying collexeme analysis (Gries 2007), which expresses the degree of attraction/repulsion of a lexeme to an intensifying construction in the form of *p*bin-values2 (Stefanowitsch & Gries 2003, Gries 2007, Ellis & Ferreira Junior 2009). We will compare the results across speaker groups in order to identify constructional preferences, as well as to reveal the semantic and formal differences in preferences for particular [Intensifier + Adjective] combinations in each group. Preliminary analysis shows, for instance, that learners underuse the compound *bloedheet* lit. 'blood-hot' (*p*bin=2,668 in native Dutch). In addition, we will discuss unusual [Intensifier + Adjective]

collocations and mistakes in the learners' productions discovered through the collostructional analysis, such as *veel leuk* 'many nice' (*p*bin 1,533 for non-CLIL learners).

The collostructional analysis allows us to identify constructional preferences for morphological or syntactic intensifying construction in L1 French, L1 Dutch and L2 Dutch by French-speaking learners. Moreover, the lexical diversity and productivity of the learners' use of intensifiers will be compared across groups, to gain insights into the impact of CLIL and traditional foreign language classes on the acquisition of intensification in a second language.

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1 This study is part of a broader interdisciplinary project on *Content and language integrated learning* (CLIL) in French speaking Belgium. https://www.uclouvain.be/478477.html (Hiligsmann *et. al.* (in preparation).

2 Bins are consecutive, non-overlapping intervals of a variable. In this case if *p*bin (bin of *p*) >3 than *p*<0.001; if *p*bin >2 than *p*<0.01; and if *p*bin >1.30103 than *p*<0.05. The *p* value is adjusted according to the Bonferonni correction.

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Inflectional doublets within Croatian double-gender nouns: From a diachronic to a synchronic perspective

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Recent studies on morphological doublets (overview, Naghzguy-Kohan & Kuteva 2016) have provided many examples that challenge the assumed existence of the blocking effect or synonymy avoidance in language (e.g. Aronoff 1976, Carstairs-McCarthy 2010). Using corpus data, we present this issue in the light of the nominal inflectional morphology of the Croatian language.

In principle, the Croatian language displays a clear correspondence between grammatical form and gender. However, some nouns appear with two genders and two inflectional classes. The nouns

researched here end in a consonant in the N.sg. and are attested both in the *a*-declension (masculine gender) and the *i*-declension (feminine gender).

> Example
> bol '*pain*'
> 1. N *bol* (m); G *bola*; D *bolu*; A *bol*; L *bolu*; I *bolom* (and plural forms)
> 2. N *bol* (f); G *boli*; D *boli*; A *bol*; L *boli*; I *bolju/boli* (and plural forms)

Ten double-gender and double-declension nouns were selected (*bol* 'pain'*, čar* 'charm', *glad* 'hunger', *trulež* 'rot', *gnjilež* 'decay', *živež* 'foodstuffs', *izrast* 'growth', *varoš* 'town', *pelud* 'pollen', *splav* 'raft'). Relevant historical documents from the onset of Croatian literacy were analysed to describe the one-gender stage of the noun (if possible) and to detect the appearance of the second paradigm. Two relevant corpora were used to determine the ratio between two paradigms: CLC, the Croatian Language Corpus (Ćavar & Brozović Rončević 2012) and HrWaC, the Croatian Web Corpus (Ljubešić & Klubička 2014).

The study focuses on four questions:
1. Will the transition period end in exclusively one declension (and gender)?
2. How fast is the change, i.e. do rival pattern disappear rapidly?
3. Is there a constant ratio between the two inflection classes (and genders) through time?
4. Is this is a case of internal or external change?

In most current texts, all ten nouns appear in both genders in their respective declensions, but they differ in the ratio between the two patterns. While some nouns are rarely used in one of the patterns (1%, 4%), for some the ratio is almost equivalent (44%, 56%).

Ten double-gender nouns differ in their historical development. Five of them are attested in the oldest documents written in Croatian, while the others entered the Croatian language during the 19th century. Rival forms of some nouns are attested in both genders almost simultaneously, while others obtained their alternative form in different historical periods (from the 16th to the 19th century). The ratio of the two patterns changed over time. For some nouns, there seems to be a developmental shift from one form to another (e.g. *varoš* 'town' m. decreased from 38% to 4%). The aerial distribution of the usage of the two forms shows that alternative forms could be the result of language contact phenomena, whether through contact between Croatian dialects or through contact with typologically similar languages in the surrounding area.

A detailed analysis shows that double forms do not disappear rapidly in most cases. Instead, our results speak in favour of overabundance (Thornton 2011), i.e. a more flexible approach to the blocking phenomenon in inflectional morphology.

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Variation morphologique dans les dictionnaires du grec moderne

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Adoptant la définition de la langue standard comme la langue décrite par la grammaire officielle et enseignée à l'école primaire et secondaire, nous avons entrepris la tache de repérer les domaines, au niveau de la variation morphologique, où il y a des divergences entre le grec standard et le grec dans les principaux dictionnaires contemporains (*Λεξικό της κοινής νεοελληνικής, Λεξικό Μπαμπινιώτη, Χρηστικό λεξικό Ακαδημίας Αθηνών*) surtout en ce qui concerne la description du système verbal (déclinaison en -άω/-ώ, variation morphologique de l'imparfait passif, p.ex. εθεωρείτο – εθεωρούντο /

θεωρούνταν, et de l'aoriste passif, p.ex. εστάλη/στάλθηκε, etc.). Particulièrement dans le domaine des éléments savants, sujet d'importance cruciale pour la standardisation du grec moderne à cause du passé diglossique, l'étude de corpus reflétant la pratique langagière nous permet de constater quelles sont les tendances d'emploi de formations savantes à la place de formations de la langue standard, telles que l'aoriste παρήχθη (au lieu de παράχθηκε), et comment ces tendances d'emploi sont incorporées dans les dictionnaires.

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Morphological variation in the nominal system of the early Modern Greek (16th-17th c.)

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The major morphological developments towards the nominal system of Modern Greek are generally dated in the Middle Ages (Tonnet 1995, Horrocks 2006) and include: (i) paradigm standardization of the feminine and masculine pronouns of the 1st declension, (ii) elimination of the class of masculine and feminine consonant-stem nouns of the 3rd declension, (iii) interplay between the 1st and 3rd declensions, with e.g. extension in the 1st declension of imparisyllabic paradigms, (iv) interplay between the declension of neuters concerning the genitive ending *-άτου* (*πραγμάτου*) or plurals as *κάστρη*, *δένδρη* etc. Interestingly, the remodeling of the nominal system is considered as accomplished during the period under Ottoman (and Venitian) rule, as no mention of morphological change occurs in the relative chapter of any History of the Greek language. All this reanalysis process is attributed to analogical processes, given that analogy is generally accepted as a major force in morphological change (Hock 2006).

The paper aims to discuss, at first, the degree of generalization of the analogical processes mentioned, during the 16th and 17th c. Our analysis will draw on two representative corpora of (autograph) manuscripts and printed books (Kakoulidi-Panou, Karantzola & Tiktopoulou, in press, Papaioannou 2016), as well as on a wide selection of digitized texts, written in more or less vernacular Greek, and the few Grammars of the period (i.e. Sofianos', Germano's, Portius', Romanos'). In the light of this evidence, we will claim that the innovative nominal forms are still in competition with the archaic ones, which do not survive only in specialized or otherwise marked usages; on the contrary, morphological variation, which correlates with the educational background of the writer and the genre, is the rule.

Secondly, the *directionality* of paradigmatic (allomorph and inflection) reanalysis will be examined. Specifically, besides laws and tendencies, analogical change is much based on social factors (Janda & Joseph 2003), frequency (Bybee & Hopper 2001), markedness (Lahiri 2000), interaction between complexification and simplification processes involving both competence and performance (see inter alia Kiparsky 2000), levelling and paradigmatic uniformity/contrast (Hock & Joseph 1996, Garrett 2008). Along the above theoretical lines, we will shed light on the following questions: (a) Does the analogical extension start from singular or plural and, consequently, does the analogical levelling (Hock & Joseph 1996) operate from singular to plural or the opposite (possibly as a case of back-formation)? For example, in contrast with the singular-based analysis, we will show that the analogical extension from X-*i* feminines, e.g. *τιμή*, to X-*is* feminines, e.g. *πόλις*, starts from plural; (b) How does the optimization process work, if we take into account the competition between marked and unmarked allomorphs, after the reintroduction of archaic types as learned variety? (c) Which is the role of hypercorrection and frequency in both allomorphic variation and optimization process?

Finally, we will show that remodeling is not always physical, since the "winner" of the competition towards Modern Greek is not "physical" analogy but the learned variety, due to sociolinguistic factors, such as register or genre, closely related to the extended period of diglossia.

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Morphology and lexicographic economy:
the case of the *Historical Dictionary* of the Academy of Athens

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When compiling a dictionary, the editors should apply the principle of lexicographic economy, by co-examining various phonological and morphological forms under the same head-word, or subordinating derivatives under the same lemma, or forming sub-entries etc., practices which affect both the dictionary's macrostructure (the number of entries) and the dictionary's mediostructure (the number of cross-references) (cf. Barbato & Varvaro 2004: 435, Katsouda 2012: 120). As is easily understandable, the issue of lexicographic economy is particularly important for dialectal lexicography, and especially for the compilation of a pan-dialectal dictionary, as the lexicographer in this case has to deal with enormous dialectal typological variety.

In practice, the principle of lexicographic economy is applied in diametrically opposing ways in various dialectal dictionaries: in local dialectal dictionaries, phonological or morphological variant forms are usually presented as separate entries, although they are simply variations of the same "word" (Katsouda 2012: 120, for Cypriot lexicography, see also Katsoyannou 2008: 655-656). On the contrary, in pan-dialectal dictionaries, such as the *WBÖ* and the *SI*, a word-base and the related compound words are co-examined in the same entry. However, with this practice one also runs the risk of losing valuable linguistic evidence and information that could shed light on important, morphological phenomena for instance (see Katsouda 2012: 121, 126).

In this presentation, we will present how the principle of lexicographic economy has been applied in the 6th volume of the *Historical Dictionary of the Academy of Athens* (ILNE 2016), according to the *Manual of Regulations of the ILNE* (2012), focusing on the morphological criteria, which force or prohibit the co-examination of different morphological forms in the same entry.

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Processing of morphologically complex words: Evidence from Bengali

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Representation and access of morphologically complex words remains controversial (cf. Amenta & Crepaldi 2012). Along with theories of full-listing of complex words (e.g. Butterworth, 1983), there have been various proposals including affix stripping (e.g. Taft & Forster 1975) and dual access of regular vs. irregular word formations (Pinker & Ullman 2002). Although there is more evidence that morphological decomposition plays a role in language comprehension, differences (if any) in the processing of suffixed words versus prefixed words is not yet well understood.

We used Bengali on account of its rich derivational morphology. With a cross-modal priming design (auditory prime, visual target), we investigated whether accessing the stem via decomposition of prefixes and suffixes is equally efficient. In this paradigm, the stem is heard and accessed first in a suffixed prime. In terms of facilitation of a prefixed target, however, even if the stem is accessed via the prime, to get to the target stem the prefix needs to be stripped first. The opposite is true if the prefix is the auditory prime. Thus, we hypothesise that prefixed primes will facilitate suffixed targets more than vice versa. A further point we focused on is the priming of suffixed words. It has been shown that suffixed words do not activate each other due to phonological cohort interference (e.g. *governor* does not prime *government*; Marslen-Wilson *et al.*, 1994). However, if morphological decomposition is a must, then there should be no inhibition for suffixed words. To examine this further, we used a blocked design.

We report on a series of five cross-modal priming experiments which cover a full range of derivationally complex (semantically transparent) Bengali words (Table 1).

Table 1: Examples of prime-target combinations (⇔ indicates in both directions)

	Exp1	Exp2	Exp3	Exp4	Exp5
Structure	stem⇔ prefix	stem⇔ suffix	prefix⇔ prefix	suffix⇔ suffix	prefix ⇔ suffix
Prime	aʃa *hope*	dɔea *compassion*	dur-din *bad times*	bʰagːo-ban *fortunate*	ɔ-bitʃar *in-justice*
Target	dur-aʃa *without hope*	dɔealu *compassionate*	ʃu-din *happy times*	bʰagːo-hin *unlucky*	bitʃar-ok *judge*
Stem			din *times*	bʰagːo *fate*	bitʃar *judge-ment*

All conditions show significant priming effects. There are three key findings:

(a) Experiments 1 and 2 involved one stem and one affixed word; priming the stem with the affixed form led to significantly <u>greater</u> facilitation than priming the affixed form with the stem. This pattern remained the same regardless of the type of affix (prefix/suffix). This suggests that there is no cost in affix-stripping, be it prefix or suffix.

(b) Contrary to the lack of priming found for suffixed words in English, our data suggests that suffixed items prime each other to the same degree as corresponding prefixed items in a blocked design (Experiment 3 & 4).

(c) A more significant result is the asymmetry in the degree of facilitation achieved by the two types of primes (Exp 5): priming a suffixed word with a prefixed word results in significantly greater facilitation than priming a prefixed form with a suffixed form. This asymmetry confirmed our hypothesis.

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Neurophysiological evidence for morphology-based decomposition of Dutch nouns and verbs

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The notion of morphological complexity is central to the theoretical study of language. While linguistic productivity based on the combination of morphemes is obviously present in agglutinative languages like Finnish, evidence for morphology-based productivity has been harder to find in languages like English or Dutch. Psycholinguistic models have thus far proposed different combinations of storage and decomposition, but while some form of lexical storage is uncontroversial (Baayen *et al*. 2011), evidence for morphology-based decomposition of lexical items has been harder to obtain in a systematic way across languages. Psycholinguistic research has used a myriad of psychometric tests (most notably, masked priming (Silva & Clahsen 2008)) to look for evidence that speakers are able to manipulate linguistic elements smaller than words when processing language. However, during language processing, morphology cannot be separated from its casing of sound and meaning, making it difficult to attest its ontological status independently of phonology and semantics.

Neurophysiological responses offer an opportunity to probe the processing of language as it unfolds over time, rather than assessing it after the process has finished, as is the case with behavioral tests. Specifically, the mismatch negativity (MMN) event-related potential (Näätänen *et al*. 1988), one of the earliest brain responses known to be sensitive to the morphological complexity of words, can be used to probe the neural activation of lexical memory traces (Pulvermüller & Shtyrov 2006). In our experiment, we have used this elecrophysiological response to assess the decomposability of Dutch plural nouns and past tense verbs.

By comparing existing monomorphemic and polymorphemic words to acoustically matched non-existing words, we have obtained different patterns of cortical responses: While monomorphemic words show bigger responses on account of them having stronger memory traces than pseudowords (lexical MMN), polymorphemic words have produced equal or smaller responses than their controls (syntactic MMN), most likely due to the retrieval of the stem priming the activation of the memory trace for the inflectional suffix. Our results, therefore, suggest that the memory traces of morphologically complex nouns and verbs are activated via their constituent morphemes, and not as whole-word lexical forms. Moreover, the early time range of this response (between 100 and 200 milliseconds) suggests that morphological processing occurs before semantic activation, and in parallel to the retrieval of lexical memory traces. These results invite us to think about the place of morphological processing in language comprehension and its relation to lexical representations, their semantics and their phonological realizations.

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Morphological variation and polysynthesis: The case of West Circassian

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In West Circassian (also known as Adyghe), a polysynthetic language of the Northwest Caucasian family, we observe amazing morphological variation. In particular, during the elicitation sessions as well as psycholinguistic experiments based on the constructions of word forms, we find that:

- speakers may insist on different interpretations of the same combinations of words with certain affixes while rejecting interpretations provided by other speakers,
- speakers may insist on different affix ordering while rejecting affix ordering provided by other speakers,
- speakers may construct forms of different complexity and reject more complex forms easily provided by other speakers.

Similar variation is found during the investigation of the corpus of West Circassian texts. Naturally, written texts display more complexity than oral texts, but the authors may differ in the complexity of word forms they use as well.

Arguably, this variation cannot be attributed to the dialectal variation. Rather we suggest that this variation is inherently related to the morphological characteristics of West Circassian. De Reuse (2006, 2009) proposed that (some) polysynthetic languages use a specific kind of morphology which he contrasted with inflection and derivation and dubbed "productive noninflectional concatenation". He further noticed that this kind of morphology has much in common with syntax - including, for example, the possibility of the recursion and the unconstrained compositional variation in the affix order. The formal characteristics of much of the West Circassian morphology clearly fit into de Reuse's concept of productive noninflectional concatenation.

We argue that thanks to the specific syntax-like properties of this kind of morphology, speakers of West Circassian may construct words in the course of speech much more easily than the speakers of Standard Average European languages, which also finds support, for example, in the possibility of pauses separating parts of words. It is this feature that result in the morphological variation observed above: word forms in West Circassian need not constitute parts of common knowledge of speakers, which facilitates the difference in word production and comprehension.

This is not to say that this variation is not constrained. For example, Lander & Letuchiy (2009) demonstrated that the morphological recursion in West Circassian may be restricted. In fact, our own data showed, for example, that while some speakers construct forms with up to three past suffixes, others only allow forms with no more than two past markers. We hypothesize that there may be important limitations on the production of word forms in the oral speech due to the memory limitations of the participants of communication, but we leave this issue for further research.

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Type disambiguation of English *-ment* derivatives

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One of the central problems in the semantics of derived words is polysemy (see Lieber 2016, Plag et al. forthcoming). In this paper, we tackle the problem of disambiguating newly derived words in context by applying Distributional Semantics (DS, Firth 1957) to deverbal *-ment* nominalizations (e.g., *assessment*, *pavement*).

We collected a dataset containing contexts of low frequency deverbal *-ment* nominalizations (59 types, 401 tokens) extracted from large corpora such as the Corpus of Contemporary American English. We chose low frequency derivatives because high frequency formations are often lexicalized and thus tend to not exhibit the kind of polysemous readings we are interested in. The data was manually annotated according to two dichotomies: **eventive** vs. **non-eventive** nouns (Study 1) and **abstract** vs. **concrete** nouns (Study 2), allowing an **ambiguous** label with respect to both dichotomies.

DS characterizes the meaning of a word (e.g., *dog*) in terms of contextual features, i.e. the words that occur in its linguistic context (e.g., *cat, bark, bone*). The set of contextual features for a word is referred to as its distributional vector. Our question is to what extent, and under which conditions, DS representations can be employed to gain more insight into the dichotomies of interest. The task of disambiguating low-frequency words is generally difficult because there are only few, if any contextual features available. The solution is to build vectors for such words compositionally, by summing up the distributional representations of the words occurring in its context.

In order to disambiguate the vectors of the sentences containing our *–ment* derivatives, we need a further computational module which learns how the contextual cues in the vectors contribute to the semantic distinction at issue. We implement this module as a support vector classifier. The classifier requires training examples, i.e. clear-cut cases of eventive vs. non-eventive nouns, and abstract vs. concrete nouns. We extracted our training examples from the WordNet semantic field annotation. To obtain a better understanding of the categories, we consider not just the top-level categories, but also salient subcategories:

- **Eventive/Abstract:** state, feeling, process, phenomenon, event, act
- **Non-eventive**
  - **Strict object:** object**,** substance, food, location, artefact, body
  - **Lax object/Abstract:** communication, quantity, relation, social relation, possession
  - **Living:** person, animal, plant

As a pilot study, we trained and evaluated (10-fold cross-validation) a classifier on the distributional vectors of the training examples, evaluating by F-Score. Performance is very good (with the F-Score ranging between 0.92 and 0.85) and also linguistically plausible.

We also applied the classifier to the sentence vectors of the *–ment* derivatives. Results show that, first, the classifier is able to distinguish between objects/events, that, second, ambiguous instances tend to be classified as events/abstract; and that, third, frequency of the context words plays a crucial role in the disambiguation process. Overall, it can be shown that DS models can be fruitfully employed for the disambiguation of low frequency words in spite of the scarcity of available contextual information.

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On the limits between synchrony and diachrony: Etymology in historical and dialectal lexicography

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The "etymological" section of standard, historical and historical dictionaries is the main locus of morphological analysis in lexicography, involving mostly issues of derivation and composition, as well as, to a lesser extent, loanword adaptation and folk etymology. In lexical/lexicographic items displaying such morphological processes, it is frequently possible to assign alternative analyses, depending on whether one wishes to assume a synchronic or diachronic viewpoint, both with competing claims to "reality": the first on the actual, active, linguistic capacity of the native speaker and the second on the non-falsifiable, passive, record of the written text.

Nevertheless, an absolute distinction is in many cases difficult to draw, as the relevant data for a decision is frequently lacking (e.g. the dating of the creation of an innovative suffix, the productivity of an affix during a certain chronological period or in a certain dialect, or, similarly, the productivity of a morphological mechanism such as backformation or conversion in a certain period or dialect). Furthermore, the decision may depend on the overall morphological analysis one assumes for a specific time period or a specific dialectal variety (e.g. the assumption or not of thematic vowels or linking vowels), although it is hardly possible for any lexicographical enterprise to have developed a fully-fledged morphological model for the linguistic varieties it treats. Also, reasons of lexicographic economy (e.g. treatment of variant forms of an affix in a single lemma, unified interpretation of a form attested in different periods and dialects) may force a certain morphological analysis despite possible contra-indications in the historical record. The problem is exacerbated, in the case of Modern Greek, by the lack of research in the domain of diachronic morphology, especially in the domain of derivation.

These issues will be discussed in the proposed paper on the basis of examples drawn mainly from the *Historical Dictionary of Modern Greek* (ILNE), but also from other lexicographical projects dealing with the Greek language and its dialects.

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Multi-layered constructions in morphology: The example of Italian 'parasynthetic' verbs

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Our contribution proposes a Construction Morphology-based analysis of so-called "parasynthetic verbs" in Italian (*bello → abbellire* 'beautiful' / 'make beautiful'; *bottiglia → imbottigliare* 'bottle$_N$' / 'bottle$_V$'). The constructions in question display a large amount of variation, in particular concerning (a) the prefix used (mainly *a-, in-* or *s-*, at a lesser degree *de-* or *dis-*); (b) the category of the input lexeme (noun or adjective); (c) the verbal class of the output (infinitive in *-are* or *-ire*, traditionally classes I or III); (d) the meaning, that may correspond either to a qualitative (*abbellire*) or to a spatial (*imbottigliare*) change and may have either a positive/associative or a negative/dissociative reading. Although it is possible to observe some tendencies in the mutual relations the above parameters entertain (e.g. *-ire* class verbs only have a qualitative reading; prefixes *a-* and *in-* are limited to positive readings, etc.), a clear correlation between all these factors, that would allow identifying a set of independent well-defined constructions, is impossible to identify. We automatically extracted a list of parasynthetics from the ItWac corpus (one of the largest available for Italian). The analysis of both attested and newly created forms in this database shows that the above factors are in fact variously intertwined within different constructions and sub-constructions. The basic idea we want to defend is that Construction Morphology is the best model to account for the multifaceted behaviour these verbs display. In fact, this model, allows avoiding a discrete and too rigid separation between different constructions which clearly display differences, but also several common features. On the contrary, each individual set of parasynthetic verbs sharing the same properties may be seen as a sub-construction of larger, less

specified, constructions. From the formal point of view, the general construction simply states that a noun or an adjective become a verb by prefixation; from the semantic point of view, it expresses the fact that a property of an individual (in most cases corresponding to the patient of the derived parasynthetic verb) is increased or acquired (corresponding to the predicate BECOME in the representation below):

(1) $[pref-X_{N/A}]_{V\_I/III}$ ↔   CAUSE (z, BECOME (y, (¬) X))

The formal representation in (1) contains several variables, corresponding to the parameters listed above (prefix, input category (N or A), verbal class (I or III)). We propose to isolate each of these parameters, as well as the semantic ones (locative (LC) vs. qualitative (QC) reading; positive (+) vs. negative (–) reading): each individual construction is the result of a series of choices between the set of possible values a parameter can take. Figure 1 shows the possibilities active for Italian parasynthetics, with an example of each.
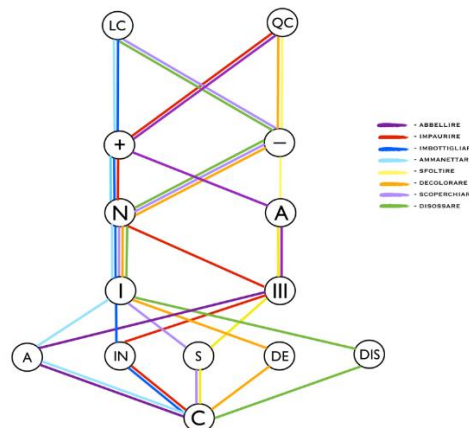
Figure 1: decomposition of the productive verb-forming prefixal constructions in Italian

The advantages of Construction Morphology for analyzing the data in question consist in the possibility of treating each property of such multifaceted constructions as parasynthetic verbs in Romance languages separately. Individual properties correspond to choices made over a set of values for a specific (formal or semantic) variable.

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Broken and sound plural in Maltese: Evidence from a nonce word experiment

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The complexity of the plural formation in Maltese has baffled many linguists (Borg & Azzopardi-Alexander 1997, Cardona 1996, Mayer, Spagnol & Schönhuber 2013, Mifsud 1994, Schembri 2012). In Maltese there are two ways to build the plural of a noun and there is great variation in both: Sound plurals are formed concatenatively by adding one of a number of sound plural suffixes to the singular form. Broken plurals are formed non-concatenatively by internal restructuring of the singular stem (Borg & Azzopardi-Alexander 1997). Within the broken plural we find numerous patterns depending on different classification strategies of earlier works. In addition, some words take both, a sound and a broken plural, without a change in meaning (Borg & Azzopardi-Alexander 1997):

(1) *tapit* – (sound pl.) *tapiti* – (broken pl.) *twapet*   carpet(s)'

Recent accounts on Maltese plurals are based on a strict separation between broken and sound plural forms, focusing on the different patterns of the broken plural only (Mayer, Spagnol & Schönhuber 2013, Schembri 2012). It remains unclear, however, what rules underlie the choice of a sound or a broken plural. In addition, in view of the high amount of variation within the system, the question as to the generalizability of complex word forms arises (Albright & Hayes 2003, Dawdy-Hesterberg & Pierrehumbert 2014, Ernestus & Baayen 2004, Pinker 1998). If morphophonological generalizations are based on analogical principles, Maltese native speakers should be able to generalize from existing items that are stored in their mental lexicon to new word forms.

We conducted a production experiment at the University of Malta in which 80 adult Maltese native speakers were asked to produce plural forms for existing Maltese singulars and phonotactically legal nonce singulars (see also Berko-Gleason 1958). Nonce forms were constructed from words of a corpus of Maltese nominals by changing either the consonants or the vowels or both systematically, leading to three lists of wug words: list C, list V and list CV.

The results of the experiment indicate an analogical learning mechanism (Albright & Hayes 2003, Ernestus & Baayen 2004). Participants produced broken plurals for nonce forms the CV structure of which resembles the most frequent existing singulars which have a broken plural and sound plurals for nonce words with the most frequent suffixes that we find with existing singulars which have a sound plural. Thus, singulars of novel words in Maltese are pluralized and their formation is governed by analogous rules. In addition, a first regression analysis corroborates the finding of other studies on the Arabic plural system (e.g. Albright & Hayes 2003, McCarthy & Prince 1990) that the CV template is a major factor in predicting the type of plural of a given word form. Moreover, consonants are more important for the analogous generalizations of broken plurals since the participants produced the highest number of sound plural forms with nonce words where we changed the consonants (list C and CV).

We will compare the intuitions of Maltese native speakers with the predictions of the *Naive Discriminative Learner* (Baayen, Milin, Durdevic, Hendrix & Marelli 2011), a cognitive learning algorithm, to increase our understanding of the representation of non-concatenative processes in the mental lexicon.

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Morphological code-mixing: The case of Cypriot Maronite Arabic

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In code-mixing part of speakers' grammatical knowledge is the use of a variant which is different from the target language and without the option to use a corresponding variant in the grammar of the target language for a specific morpho-syntactic structure. Morphological code-mixing is defined by rules like this and this paper focuses on the morpho-syntactic constraints that characterize code-mixing in the nominal structure by drawing data from fieldwork research on the endangered language of Cypriot Maronite Arabic (CMA) (Sanna) spoken in northwestern Cyprus (Karyolemou 2010).

CMA allows spontaneous code-mixing between two unrelated varieties, Arabic and Greek. Code-mixing is observed with non-suppletive (1) and suppletive noun stems (2), with the latter appearing at first glance to be a problem for the adjacency requirement on root suppletion in (2) (red=Cypriot Maronite Arabic, blue=Cypriot Greek (CG)) (Moskal 2015, Bobaljik 2012, Embick 2010).

(1) a. xank   −∅   (2) a. sap -i
       mouth -SG   boy -SG
       'mouth'   'boy'

    b. xank   -u   -i   b. sap -u   -i
       mouth -DIM -NEU.SG   boy -DIM -NEU.SG
       little mouth'   'little boys'

    c. xank   -u   -θkja   c. ʃpap -u -θkja
       mouth -DIM -NEU.PL   boys -DIM -NEU.PL
       'little mouths'   'little boys'

In non-suppletive noun stems with code-mixing, the stem appears in CMA and the morphemes to its right in CG (Newton 1964, Borg 1985), as in ((3b)-(4b)).

(3) a. xank   −∅   (4) a. xank -at
       mouth -SG   mouth -PL
       'mouth'   'mouths'

    b. xank -u -i b. xank -u -θkja
       mouth -DIM -NEU.SG   mouth -DIM -NEU.PL
       'little mouth'   'little mouths'

A similar pattern of code-mixing appears in adjectives, where the use of CG suffixes results in the absence of the CMA number (and gender) morphemes, −∅ & -*e*.

(5) a. xilv −∅   (6) a. xilv -e
       sweet -MASC.SG   sweet -FEM.SG
       'sweet'   'sweet'

    b. xilv -u -i   b. xilv -u -a
       sweet-DIM-NEU.SG   sweet-DIM-FEM.SG

In Distributed Morphology, the VI rule for (4b), for example, will insert -*ϑkja* in the context of a diminutive (e.g. -*u*).

(7) [+ NEUTER, + PL] -> -θkja/_+ DIM

(8)
a.
```
          Num
         /    \
      Dim      [+NEUTER,+PL]
     /   \
 √MOUTH  [+DIM]
```

b.
```
      Num
     /    \
   Dim    -θca
   /  \
 xank  -u
```
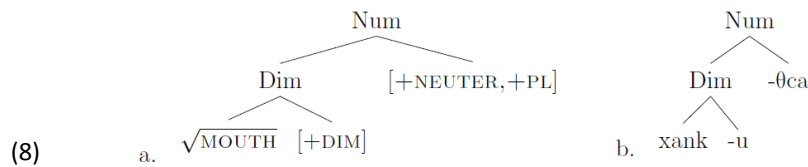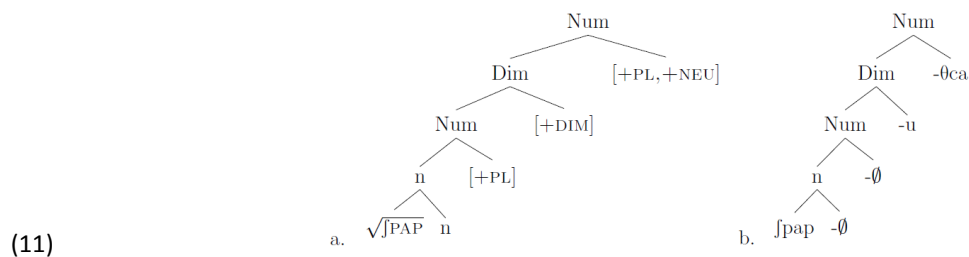
This is supported by the ungrammaticality in the use of the Arabic plural morpheme not specified for the [+DIM] context (9a). A similar analysis in adjectives would predict the same ungrammaticality in (9b), where the exponent -*e* is incorrectly presented after -*u*.

(9) a.*xank -u -at
  mouth -DIM -PL
  (Int. 'little mouths')

b. xilv -u -e
  sweet -DIM -FEM.PL
  (Int. 'sweetie')

The examples in (10) show that the nominal structure can include a num position, which is adjacent to the root. In result, the suppletive noun root is not conditioned by the CG portmanteaux suffix -*ϑkja*, but instead by an adjacent to the root NUM specification.

(10) a. xank -at -u -i
  mouth -PL -DIM -NEU.SG
  'little mouth'

b. xank -at -u -θkja
  mouth -PL -DIM -NEU.PL
  'little mouths'

(11)
a.
```
            Num
           /    \
         Dim    [+PL,+NEU]
        /    \
     Num     [+DIM]
    /   \
   n    [+PL]
  /  \
√∫PAP  n
```

b.
```
          Num
         /    \
       Dim    -θca
      /    \
    Num    -u
   /   \
  n    -∅
 /  \
∫pap  -∅
```

This discussion supports a rule-based proposal on code-mixing in `bilingual' speakers of CMA (Newton 1964) and informs our understanding of the DP structure in the interaction of two unrelated languages.

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Formal variation does not affect morphological processing

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Psycholinguistic research on morphological processing has provided evidence for the role of morphology in the organization of the mental lexicon, not only when formal and semantic relationships among words are transparent (e.g. *dark-darkness*), but also when formal variation occurs. Findings from priming studies on the processing of allomorphic variation have shown similarities in the processing of

formally transparent and opaque morphological relations (Pastizzo & Feldman 2002, Meunier & Marslen-Wilson 2004, Crepaldi, Rastle, Coltheart & Nickels 2010), which could be compatible with the principles of network models of language representation (Bybee 1985, Booij 2010), in which morphological relatedness is assumed to be a gradient feature. While the majority of these studies were focused on inflectional processes, little attention has been dedicated to derivation (but see Boudelaa & Marslen-Wilson 2004, McCormick, Rastle & Davis 2008). In this work, we focus on Italian nominalizations in *-zione* and *-tura* and their relationship with the derivational base. From a synchronic point of view, their stem can either be the verbal theme or the past participle form (e.g. *bocciato* 'failed' or *boccia*(*re*) '(to)fail'→ *bocciatura* 'failure'), as both forms hold a transparent relation with the derived noun. However, there are a number of nouns in *–tura* and *–zione* that can only be considered as derived from the past participle form of the verb (e.g. *scritto*→ *scrittura*, but not *scrive*(*re*) → *scrittura*). Therefore, while the relationships between *bocciato-bocciatura* and *bocciare-bocciatura* are equally transparent from the formal point of view, the same does not hold for *scritto-scrittura* and *scrivere-scrittura*. On these grounds, we investigated whether the difference in the amount of formal overlap between *scritto-scrittura* and *scrivere-scrittura* affects how speakers perceive the relatedness between these forms. To this aim, we conducted a lexical decision task combined with the masked priming paradigm to evaluate whether the recognition of the target *scrittura* is equally facilitated when primed by the formally transparent relative *scritto* and by the allomorphic *scrivere*. The experimental design comprised five priming conditions (including two control conditions: 'orthographic', to tease apart the formal effects due to the visual formal overlap between prime and target and 'unrelated', as a neutral baseline condition), as summarized in the table below:

CONDITION	TRANSPARENT SET	ALLOMORPHIC SET
1. **Identity**	bocciatura/BOCCIATURA	scrittura/SCRITTURA
2. **Morphological (past participle)**	bocciato/BOCCIATURA	scritto/SCRITTURA
3. **Morphological (infinitive form)**	bocciare/BOCCIATURA	scrivere/SCRITTURA
4. **Orthographic**	boccata/BOCCIATURA	scrupolo/SCRITTURA
5. **Unrelated**	stendere/BOCCIATURA	entrare/SCRITTURA

Our results indicate, as expected, a clear priming effect for transparent prime-target pairs with respect to the unrelated and orthographic baselines. As for allomorphic pairs, similar effects with respect to both conditions were found; moreover, there was no significant difference between the facilitation effects induced by past participle and infinitive primes, indicating no advantage for the more transparent form with respect to the opaque one. This is in line with previous findings on inflection and indicates that morphological connections among words hold despite formal variation in the derivational paradigm too. Such results are compatible with supra-lexical models of lexical access (Giraudo & Grainger 2001) that propose abstract morphological representations able to tolerate orthographic and phonological variation produced by derivational and inflectional processes.

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English compounds with participial heads

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This paper investigates the morphosyntactic properties of compounds in which the right-hand element (head) is a present participle or a past/passive participle, as in charcoal-burning or fingerpricked. Such forms are mentioned in the literature mostly as headed by a nominal or adjectival element (see overviews in Lieber and Stekauer (2009), for example). Indeed, nominal or adjectival behaviour is frequent. However, in some cases these compounds also behave as participles and need to be understood as being headed by participles, see for example (1) below:

(1) a. . . . when **flame-pulling** disposable Pasteur pipettes for routine handling of intact embryos. (BNC)
    b. He **hand-picked** fellow agent Chris Thomas to interview Seth. (COCA)

Some aspects of such verbal behaviour have been mentioned in the literature, e.g. Lieber (1983) or Rice and Prideaus (1991), but the focus has been on compounds where the first element is an object of the eventive frame underlying the second element and the full range of possibilities has not been explored. This paper examines such participle-like behavior on the basis of examples drawn from corpora like the BNC and COCA, or attested on the Internet.

The eventive semantics associated with the participle can be present even when the syntactic behavior of the compound is that of an adjective, or a noun. This is clear from eventive modification patterns, as well as from the fact that the left-hand element in such compounds can be an argument of the event semantically encoded in the participial head of the compound, see examples above and also below:

(2)   a. An instant healthy-looking, **sun-kissed** boost for pale skin [. . .] (Internet)

Again, the full-range of possibilities hasn't been explored sufficiently fully in the literature. The claim here is that the main restriction comes from the external syntax of the compound, i.e. depends on which elements of the underlying eventive semantics are expressed in the external syntax.

For some of these compound participles there is no equivalent compound verb, so they can't be seen to be derived from a compound verb, for example verbs like *crew-cut or *track-run seem not to occur, but as participial compounds crew-cut and track-running are perfectly acceptable (verbs are sometimes derived by back-formation). And when attested, they can be part of a constructions like the progressive or the passive which are typically seen as verbal (e.g. as periphrastic tenses or aspects of verbs), see examples like: a. . . . his sandy hair had been fashionably **crew-cut** and he wore glasses (BNC)

    b. . . . where thin native plant cover is being **crew-cut** by increasing numbers of lla-mas or alpacas (COCA)
    c. I was **track-running** and playing rugby . . . (BNC)

The lack of corresponding verb form here opens the possibility that we see such periphrastic constructions in English not as word-forms of verbs, as in some recent research on periphrasis, see references in Bonami (2015) or Spencer and Popova (2015), but as independent participial constructions instead.

Investigation of compound forms like the ones illustrated here suggests that participles cannot simply be seen as nominal or adjectival forms, nor can they be seen simply as inflected verbs.

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Modal verbs in German dialects – a test case for modeling morphological variation

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Modal verbs, which mostly derive from the historical group of so-called "preterite-presents", form an interesting inflection class in several respects. In purely morphological terms, they stand right in between the strong and weak conjugation, making use of both their typical devices, e.g. ablaut differentiation (e.g. *ich kann* 'I can' – *wir können* 'we can'), albeit in unusual paradigm cells, or the dental past tense suffix (*konnte* 'could'). In addition, they developed highly irregular features that are absent from other classes, e.g. umlaut in the present plural (*muss* 'must.SG' – *müssen* 'must.PL'), which can be seen as an analogical development after the model of nominal declensions (Nübling 2009). These modulative features show a high degree of variation across class members.

Dialectal varieties of German offer a different angle for understanding morphological properties of modals because due to their primary use in the spoken domain, grammatical developments can be studied undisturbed by the prescriptivist tendencies observable in the genesis of the standard language (e.g., lack of umlaut with *sollen* 'shall' in the standard, contracted forms only in dialects). Combining data from dialect grammars, transcribed audio-recordings (from the *Zwirner* corpus), and a survey based on a written questionnaire, our talk addresses the following issues:

1. Morphological variation as observed in modals is not random, but follows implicational hierarchies known from other grammatical and morphological domains (Wurzel 2001: ch. 4.1, Stump 2001). This fact can be taken as a hint that paradigms constitute an important interface between syntax and semantics.

2. Modals also show syntactically triggered cases of leveling and allomorphy, the most notable being the *substitute infinitive* (IPP = 'infinitivus pro participio'), i.e. infinitive instead of a participle in complex perfect constructions (see Schmid 2005), as evidenced by the contrast between (1a) and (1b). German dialects employ a range of exceptional forms in such contexts which neither match the infinitive nor the participle completely, see (2) (*supines*, cf. Höhle 2006). In addition, total syncretism between participle and infinitive in perfect contexts can be observed (*indifference forms*, cf. Dal 1954, Schallert 2014), cf. (3).

(1)   Standard German
         Er   hat   das   nicht   tun   können / *gekonnt.
         he   has   that   not   do   can-INF / could-PTCP
         "He couldn't (do) that."

(2)   Oberschwöditz [East Central German] (Trebs 1899: 21)
         de   håsd   darfd   driŋke
         you   have   be.allowed-SUP   drink
         "you were allowed to drink" (regular participle: *gedorfd*)

(3)   Montafon [Alemannic] (Schallert 2014: 267)
         un' [...]   wer   Wiißbroot   wella   håt
         and   who   white bread   want-PTCP/INF   has
         "and who wanted white bread"

On the basis of the assumption that diatopic variation is the result of minimally varying grammatical systems (Seiler 2004, Bresnan *et al.* 2007), we show how these implicative hierarchies can be captured with the devices offered by the framework of *Paradigm Function Morphology* (Stump 2015), e.g. property mappings. Special attention shall be given to the syntactically geared cases of leveling/allomorphy, which can also be captured in the same formalism (see e.g. Ackerman & Stump 2004).

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Phonetic reduction in NNN compounds: The role of boundary strength

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This study investigates phonetic reduction in English triconstituent NNN compounds from a production experiment. The aim of the study is to test the hypothesis that the morphological structure of complex words is encoded in the acoustic signal. 42 native speakers of North American English participated in a reading task, in which NNN compounds in context sentences were read aloud.

Kunter and Plag (2016) and Schebesta and Kunter (in prep.) examined the effect of boundary strength on the acoustic durations of the three constituents in NNN compounds. They tested the Embedded Reduction Hypothesis (ERH) which predicts that constituents at weaker boundaries are more prone to phonetic reduction than constituents at stronger boundaries. In previous research of complex words, Hay and Plag (2004) found that in words with multiple suffixes, the innermost suffix forms a weaker boundary than the outer suffix. Applying these findings to NNN compounds, it follows that in left-branching [N1 N2] N3 (e.g. [*HEALTH CARE*] *LAW*), there is a weaker boundary to be found in [N1 N2], and a stronger boundary between the embedded compound and N3. Results from Kunter and Plag (2016) and Schebesta and Kunter (in prep.) reveal that, overall, an interaction of type of boundary with bigram frequency affects the reduction of acoustic durations in such a way that the free constituent is relatively long compared to the embedded constituents. The separate contribution of these predictors could not be isolated in the studies.

Therefore, this study tests the hypothesis with data in which bigram frequencies are kept constant in order to disentangle the effect of branching and bigram frequency. In the experiment, participants were asked to read aloud NNN compounds within short texts in four different conditions. These are (1) two branching directions, i.e. left- and right-branching, and (2) two positions of the W1W2 bigram, e.g. ACCOUNT SERVICE:

L1: [guest ACCOUNT] SERVICE
L2: [ACCOUNT SERVICE] assistant
R1: guest [ACCOUNT SERVICE]
R2: ACCOUNT [SERVICE assistant]

The short texts primed the branching direction of the NNN. The analysis tested both acoustic durations of constituents and /t,d/ deletion in the coda of W1. Results show that constituent durations are not strongly affected by branching direction, which is not predicted by the ERH, and contradicts previous results. In both branching directions, N3 is overall longer than N1 and N2. This may be interpreted as a result of word-final lengthening (cf. Turk & Shattuck-Hufnagel 2007), or the prosodic structure of the compounds. The variation in /t,d/ deletion cannot be explained by the type of boundary, as there is as much deletion at inner as at outer boundaries. Conditional probabilities of consonant sequences with

the plosive, however, seem to have an impact on deletion.

The effects found by Kunter & Plag (2016) and Schebesta & Kunter (in prep.) disappear once bigram frequencies are controlled. This suggests that bigram frequency affects the phonetic signal more than previously thought, whereas the branching direction seems to play a minor role.

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Morphological decomposition through lexical gaps: Tapping into morphological rules during visual word recognition

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While the distinction between morphologically simple and morphologically complex words is rather uncontroversial in theoretical linguistics, some psycholinguistic approaches to morphological processing do not assume a difference in representation and processing depending on the morphological complexity of the word (cf. Butterworth 1983).

Crucially, however, most psycholinguistic research to date has restricted itself to the study of morphological processing in single-affixed forms (e.g. *hunter*, *government* etc.) or pseudocomplex words such as *corner* and its relationship to a morphologically unrelated word such as *corn* (cf. Rastle, Davis & New 2004, Crepaldi, Hemsworth, Davis & Rastle 2015). From these studies that have relied on the masked priming paradigm and thus the early stages of visual word recognition, it is not possible to see whether on-line language processing merely relies on the orthographic segmentation of letter strings or whether morphological rules are an important aspect of word recognition.

Recent neuroimaging studies (Meinzer, Lahiri, Flaisch, Ronnemann & Eulitz 2009, Pliatsikas, Wheeldon, Lahiri & Hansen 2014) have shown that speakers are sensitive to the depth of derivation in words differing in their degree of internal morphological complexity, which are otherwise matched for all critical lexical variables. Thus, the German complex noun *Heilung* (N, 'healing') as part of the derivational chain *heil – heilen – Heilung* elicited higher activation in the LIFG (left inferior frontal gyrus) than *Deutung* (N, 'interpretation'), which is derived directly from the base in *deuten.* Activation in the LIFG is indexical of computational effort during processing, which suggests that the processing of two-step derived nouns (e.g. *Heilung*) required more effort than the processing of their one-step derived counterparts (e.g. *Deutung*).

Building on these results, we were interested to see how pseudonouns consisting of lexical gaps within derivational chains would be processed. For instance, while **Spitzung* (N, 'sharpening' through *spitz > spitzen > *Spitzung*) is non-existent, it is nonetheless structurally well-formed. In a series of four lexical decision tasks with delayed priming, we varied the number of lexical gaps in the derivational chain in order to assess the extent to which speakers are sensitive to different degrees of 'pseudowordedness'. For this purpose, we compared the processing of items such as **Spitzung* in which only the final noun form is a lexical gap with pseudonouns such as **Mildung* (N, 'mildening') for which the intermediate derivation within the chain is also a lexical gap (*mild > *milden > *Mildung*).

We found that all morphologically viable formations primed their corresponding base words equally well. As no semantic or form control pairs triggered a priming effect, the effects obtained point to a purely morphological stage in visual word recognition. Responses to the primes revealed asymmetries in processing between the two sets of pseudowords with items such as **Spitzung* eliciting significantly higher error rates than the **Mildung* set. Together with our recent EEG and fMRI results, this supports the hypothesis that speakers rely on the structural and lexical composition of morphologically complex

words during processing. This suggests that our morphological knowledge is not tied to specific stored representations during word recognition.

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Parameters of variation in the syntax of gender

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This work proposes formal and functional criteria to distinguish between two different syntactic positions of gender: Determiner gender (D-gender) and nominal gender (n-gender), as in (1).
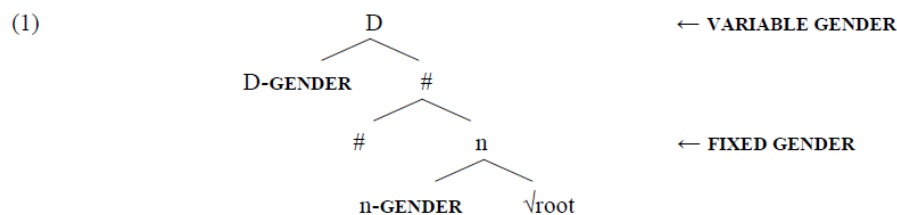
Focusing on D-gender and how it differs from n-gender, this work is done in the framework of Distributed Morphology and supports the previous analyses of gender as a heterogeneous category that occupies various positions in a syntactic tree (Fassi Fehri 2015, Pesetsky 2013). Data are presented from 33 languages, many of which are critically endangered or now extinct.

In Sare (Papuan), gender can vary according to the size and shape of the referent. Small, short, or rounded referents are usually feminine, while big, tall, or slender referents are masculine, as in (2).

(2) *Sare*

  a. seboxu-**r**   b. sebox-**u**
      table-MASC   *table-FEM*
      'high table'   'squat table'   (Sumbuk 1999: 115)

In the Harar dialect of Oromo (East Cushitic), gender can vary to indicate the speaker's emotions. In (3), the speaker's negative attitude toward a dog is shown by changing the usual feminine gender of the noun 'dog' to masculine.

(3) *Harar dialect of Oromo*

  a. sareé   takka   ganda   xeesa   arkinne.
      dog.FEM   *one.FEM*   *village*   *in*   *we.saw*
      'We saw a dog in the neighborhood.'

  b. sareé-**n**   xun   bashoo   tizza   jala   fige.
      dog-MASC.SUBJECT.TOPIC   *that.MASC*   *cat.FEM*   *my.FEM*   *after*   *ran.MASC*
      'That (nasty) dog chased my cat.'   (Clamons 1995: 392)

In Indo-European languages, although a change in gender is also attested (e.g., in gender-changing evaluative morphology), the gender of a noun is mostly fixed. For example, the word for 'sun' is masculine in French, neuter in Russian, and feminine in German (4).

(4) a. *French*   b. *Russian*   c. *German*

   le   soleil   solnce   die   Sonne

   ART.MASC.SG   *sun.MASC.SG*   *sun.NEUT.SG*   *ART.FEM.SG*   *sun.FEM.SG*

   'sun'   'sun'   'sun'

The diagnostics to distinguish between two different types of gender are proposed in Table 1: (i) D-gender is discourse-dependent, while n-gender is not; and (ii) D-gender is variable, while n-gender is fixed.

Table 1: Diagnostics for n-gender and D-gender

	D-GENDER	**n-GENDER**
Discourse-dependent	✓✓	*
Fixed	*	✓✓

I adopt the underlying universal DP-hierarchy, as in (5), from Acquaviva (ms., based on the critical overview in Svenonius 2008), where gender (in bold) is placed under the categorization node. My contribution to this DP-hierarchy is an additional position of gender (showed with an arrow), placed under the discourse node and corresponding to D-gender in a labelled tree.

(5) DP

DEFINITENESS/SPECIFICITY DEIXIS REFERENCE IN DISCOURSE articles, demonstratives — QUANTITY numerals quantifiers unit classifiers number — COUNTABILITY sort / shape classifiers noun classifiers — CATEGORIZATION **gender** — root

↑ gender

(Acquaviva, Ms.: 9)
(my contribution)
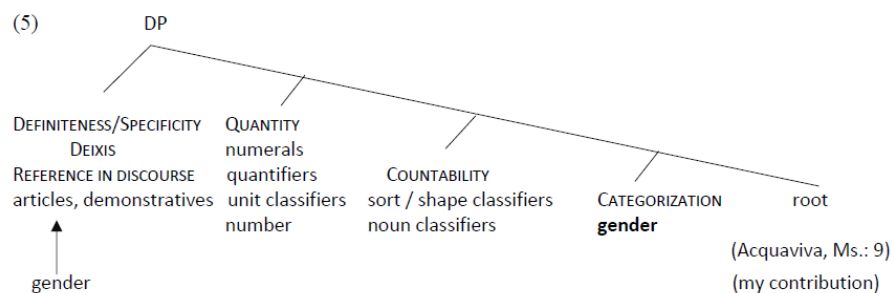
The structure (5) makes certain functional and formal predictions, as in (6) and (7), which I show are borne out across languages, as well as within a single language.

(6) **Functional predictions**
- Correlation of D-gender and definiteness/specificity.
- Correlation of D-gender and deixis.
- Correlation D-gender and referentiality.

(7) **Formal predictions**
- Double-marking of gender should be possible.
- Mixed gender agreement should be possible.
- Separate gender systems in a single language should be possible.
- A certain morpheme ordering is expected, e.g., with respect to the Number node.

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# Ordinal variables: Acquiring ordinal numerals in Dutch and English

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This talk compares the acquisition of ordinal numerals in Dutch and English. Putting aside *eerste* 'first' (a superlative), Dutch has one irregular ordinal, morphophonologically irregular *derde* 'third', and two ordinal suffixes: *–de* and *–ste*. Though the English ordinal system only has one suffix, reliable evidence for the English rule only appears from *sixth* on. These considerable differences between the two languages notwithstanding, we find children approach learning them in a similar rule-based fashion, both in comprehension and production.

Using a Give-X comprehension task (Wynn 1992), we asked 62 Dutch (2;8–4;11) and 36 U.S. English L1-learners (3;3–5;3) to pack certain items in a suitcase, such as *three t-shirts* (cardinals), *the fourth bear* (synthetic ordinals) and *car three* (analytic ordinals). We tested *one–four*, *six*, *eight, nine*, their synthetic and analytic ordinal counterparts, plus the ungrammatical yet regularized form **driede* 'threeth' in Dutch, and the first seven of all three numeral types in English.

Figure 1 shows that the percentages of Dutch CP-knowers (i.e. children who have mastered the relevant counting principles, N=37) who understand synthetic and analytic ordinals are similar (e.g. scores on *de vierde beer* 'the fourth bear' do not differ from *kabouter vier* 'gnome four'). Ordinals for *three* constitute the only exception: scores on the analytic forms (*konijn drie* 'bunny three') and **driede* 'threeth' were similar to ordinals for *two* and *four*, whereas grammatical synthetic items (*de derde auto* 'the third car') were harder. Figure 2 shows that in English, too, irregular synthetic ordinals are more difficult than regular forms and *bunny three*-type ordinals, despite such analytic forms being uncommon.

Fig. 1: Ordinals that Dutch CP-knowers (N=37) know
Fig. 2: Ordinals that U.S. CP-knowers (N=36) know
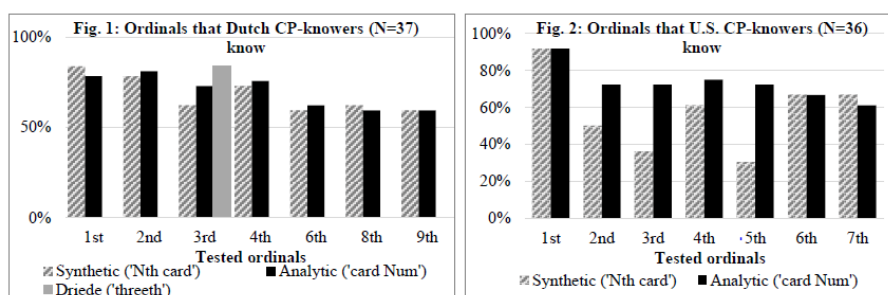
Production data from an additional 68 Dutch children (3;3–6;0) complement these findings, showing that root allomorphy is more difficult in comprehension, whereas having two suffixes complicates production.

Though it may, on some intuitive level, seem to make sense for children to prefer regular forms, our data go against different approaches that sound plausible given acquisition patterns found for other phenomena, such as frequency-reliant approaches and ideas involving a Ushaped type of development. Instead, the data strongly suggest that children acquire ordinals in a rule-based, rather than lexical, fashion in which children use ordinal morphosyntax to acquire ordinal meaning. To be more precise, we argue that children take in ordinals from the input, initially storing them without being able to use them, then recognize their complexity (i.e. identify the cardinal root and the ordinal suffix) and use that structure to discover what ordinals (and ordinality) mean. It is at this point that children both comprehend and produce ordinals appropriately.

Of course, this rule-based approach can hardly be discussed in isolation. We address how it ties in with Yang's (2016) principles of Tolerance and Sufficiency, and illustrate that both a linguistic and a conceptual component are at play here: children use language to apply knowledge they developed in cardinal acquisition to the ordinal domain. We conclude with what predictions this makes for variation and acquisition in other languages.

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Number inflection in adjective-noun and noun-adjective compounds in Italian: Observing morphological variation through corpora

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In this poster I will analyse a case of morphological variation in Italian, i.e. number inflection in compound words, through a corpus-based study. I will focus on compound nouns made of a noun and an adjective, i.e. Noun-Adjective (e.g. *rocca*$_N$*forte*$_A$ 'stronghold') and Adjective-Noun (e.g. *mezza*$_A$*luna*$_N$ 'half-moon') compounds. This kind of compounds seems very interesting since it presents both cases of double inflection (e.g. *casse*$_{PL}$*forti*$_{PL}$ 'safes', *doppi*$_{PL}$*vetri*$_{PL}$ 'double glasses'), in which there are two plural markers, and cases of external inflection (e.g. *rocca*$_{SG}$*forti*$_{PL}$ 'strongholds', *doppio*$_{SG}$*petti*$_{PL}$ 'double-breasted'), in which the plural marker is in the canonical position, namely on the right. Furthermore, in some cases the same compound shows both kinds of inflection: e.g. *caposaldo* 'cornerstone' (pl. *capo*$_{SG}$*saldi*$_{PL}$ – *capi*$_{PL}$*saldi*$_{PL}$) or *terracotta* 'terracotta' (pl. *terra*$_{SG}$*cotte*$_{PL}$ – *terre*$_{PL}$*cotte*$_{PL}$). This work aims at describing this twofold variation through the analysis of both quantitative and qualitative data from two corpora of Contemporary Italian.

The study of Italian compound words through a corpus-based approach poses significant methodological issues, as Italian compound words are characterized by low frequency (cf. Iacobini & Thornton, 1992) and are never annotated in corpora: studying morphological variation in compounding requires a very large corpus that allows the extraction of a sufficient amount of data. However, big corpora are also less reliable corpora: for instance, web corpora (e.g. *itWaC*; cf. Baroni *et al.*, 2009), while being very large resources, have unbalanced content and less accurate annotation. In order to balance the pros and cons of the two types of corpora, in this work the combination of two different resources will be tested: a balanced corpus, namely the PEC – *Perugia Corpus* (26M tokens; cf. Spina, 2014), will be used as the main source of data; a web corpus, i.e. *Paisà* (250M tokens, cf. Lyding *et al.*, 2014), will be used as a secondary resource.

A sample of Noun-Adjective (NA) and Adjective-Noun (AN) compound words, that have been manually extracted from the wordlist of the *Perugia corpus*, will be analysed in order to shed light on both the quantitative (i.e. both whole word and constituent frequency) and the qualitative (i.e. constituents order, language source, apocope in the first constituent) factors that influence the formation of plural. The analysis reveals that about 40% of compounds have two plural forms. Furthermore, it is noteworthy that, except for some subtypes of AN compounds (i.e. *mezzo/a* + Noun or *malo/a* + Noun), that regularly have double inflection, it is very difficult to identify general trends, since each compound seems to behave differently. The lack of regularity in the number inflection seems to depend on the different sources of these two kinds of compounds: in some cases, they originate on the syntactic level and undergo a process of lexicalization; in others, they are calques from French or English, and only in a few cases are the result of a purely morphological mechanism.

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The plural of (some) Italian VN compounds: A possible instance of productive overabundance

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The phenomenon of overabundance (i.e., multiple filling of the same cell in a paradigm) has been the object of much recent work, especially by Thornton (e.g., 2011, 2012) within the framework of Canonical Typology (Corbett 2005; Brown *et al.* 2013). In this perspective, since overabundance is inherently non-canonical (as, for instance, suppletion, cf. Corbett 2007), its best (= most canonical) instances should be the most idiosyncratic, unpredictable, isolated ones. Therefore, Thornton (in press) suggests at least four independent criteria to locate instances of overabundance along a scale of decreasing canonicity: number of both cells and lexemes involved (1 > many > all), relative frequency of the cell mates (best case: 1:1 ratio), relevance of conditioning factors (unconditioned > conditioned).

However, if the diachronic perspective is taken into account, overabundance as such becomes much less marginal, since every instance of analogical change should entail a phase (often not brief at all) of coexistence/competition of the two forms in the same cell, at least within the speakers' community. Overabundance then becomes interestingly "weird" only as long as it displays stability in the long term (admittedly, a very difficult concept to operationalize), at the community level and especially in the active competence of individual speakers. In this perspective, the best instances of overabundance should be those in which it is transmitted unproblematically across generations, and systematicity (as in the double SUBJ.IPFV *hubiera/hubiese* in Spanish) would probably enhance rather than impair such stability. Still more significant would be instances of *productive* overabundance: Sp. *hubiera/hubiese* undoubtedly is one, since it is automatically extended to new entries in the mental lexicon.

In this contribution we explore a further possible instance of productive overabundance, within the open class of Italian nominal VN compounds. We focus on those cases in which N is singular when the compound itself is singular (e.g. *il copriletto*, 'the.M.SG cover-bed(M).**SG**'), but can be either singular or plural when the compound is pluralized (*i copriletto/-i* 'the.M.PL cover-bed(M).**SG/PL**'). In such cases, both the plural form of N – justified by the fact that more than one N is globally involved (cf., in a partly different context, von Heusinger/Schwarze 2013:335) – and the singular – licensed by a distributive interpretation – are plausible from a semantic point of view. A corpus of 112 such compounds has been gathered, using lexicographical sources (De Mauro 2000) as a starting point; the token frequencies of the two competing plural forms have been obtained from the Web, given their very low values in the Italian corpora available. Our data show a remarkable presence of overabundance in this subclass of VN compounds, especially – but not exclusively – when N has the same gender as the whole compound. This seems to suggest that both pluralization strategies are available to the speakers, and that in this well-defined area of the Italian lexicon overabundance is productive. To support these claims, some preliminary, directly elicited data will also be discussed, which aim at testing the individual speakers' competence dealing with new formations (or very unusual items) in the same domain.

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Phonetic evidence for morphological structure: Segmentability effects in English complex words

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Traditional approaches to the role of sound structure in morphology have usually focused on the phonological level. The amount of variation observable at the phonetic level has been largely ignored, although it has been frequently noted that phonetic reduction may have some relation to morphological complexity. Consider, for example, the word government. It is mostly pronounced [g2vm@nt] or [g2v@m@nt], and its phonological opacity goes together with semantic opacity: government does not primarily denote 'action of VERBing' (as is standardly the case with -ment derivatives), but rather denotes the people who govern, or, more generally, 'political authorities'. It can thus be argued that government is morphologically less easily segmentable than, say, discernment, where there is no phonetic reduction and full semantic transparency.

At the theoretical level, such facts have been accounted for, e.g. by adducing dual route models (e.g., Schreuder and Baayen 1995; de Vaan et al. 2011) of morphological processing, which assume that complex words may be processed using a direct access route in which the word is directly retrieved from the mental lexicon, and a composition route in which the word is decomposed on the basis of its constituent morphemes. Hay (2003) argues that the degree to which a word is decomposed in lexical access determines the degree of phonetic reduction. Her segmentability hypothesis says that the less decomposable the word, the more reduction can be expected.

To date there is only one study that clearly confirmed the segmentability hypothesis, Hay (2007), while other studies have often failed to replicate the effect (see Hanique and Ernestus 2012 for an overview). The present study tests the segmentability hypothesis with data from the Switchboard corpus (Godfrey and Holliman 1997), using different measures of morphological segmentability, and looking at five affixes: un-, locative in-, negative in-, dis- and adverbial -ly. The results vary somewhat across affixes but, in general, we find good support for the segmentability hypothesis. Affixes in words that are more easily segmentable have longer acoustic durations.

These results are in line with a growing body of evidence for the influence of morphological structure on phonetic detail (e.g. Plag et al. (2015), Zimmermann (2016) on durational differences between morphologically different types of /s/ and /z/). Such results have important implications for morphological theory and for models of speech production. The observed effects are unpredicted by theories that try to separate lexical and post-lexical phonology. In such models morphological boundaries are no longer visible post-lexically and are unable to influence articulation. Similarly, widely accepted speech production models also do not allow for morphological structure influencing articulation. The present results thus call for the development of new models of phonology-morphology interaction that can accommodate the gradient effects of morphological structure on the phonetics of complex words.

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Constructionist perspectives on two competing associative plural constructions

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Associative plural constructions have been attested in many languages across the world (cf. Daniel & Moravcsik 2013, Moravcsik 2003). The constructions usually mean 'X and X's associate(s)', and often consist of a noun *X* (the focal referent) together with one (or more) affix(es), clitic(s) and/or word(s) *Y*:

(1) $[[X]_{Ni} \, Y]_{Nj} \leftrightarrow [SEM_i \text{ AND ONE OR MORE ASSOCIATES}]_j$

In Afrikaans, a West-Germanic language closely related to Dutch, there are two competing morphological constructions expressing the associative plural: one with the third-person plural pronoun *hulle* as in (2); and the other with the mass noun *goed* as in (3).

(2) $[[X]_{Ni} \, \text{-hulle}_{PRON.3PL}]_{Nj} \leftrightarrow [SEM_i \text{ AND ONE OR MORE ASSOCIATES}]_j$
pa-hulle
dad-they
dad and mom; dad, mom and my other siblings; dad and his friends, etc.

(3) $[[X]_{Ni} \, \text{(-)goed}_{N(mass)}]_{Nj} \leftrightarrow [SEM_i \text{ (AND ONE OR MORE ASSOCIATES)}]_j$
pa-goed (or *pa·goed*)
dad-goods
dad; dad and mom; dad, mom and my other siblings; dad and his friends, etc.

Over the past more than hundred years, these two constructions have been studied from both diachronic and synchronic perspectives, with the main interest in their origins. The one school of thought is that they both have Germanic roots, either in Dutch compounds with *goed* 'goods/things' as right-hand member (e.g. *snoep·goed* munch·things 'munchies, sweets, dainties'), or the Frisian constructions *heit-en-hjar* ('dad-and-them') and *heit-en-dy* ('dad-and-these') (Sipma 1913). The other school of thought is that both are creole constructions, with roots either in Cape Khoekhoe, Nama (Khoekhoegowab), Malayan, or African languages. No definitive conclusions have been reached.

The last synchronic description of the *-hulle* construction was published in 1969, where Kempen (1969) states that *pa-hulle* and *pa-goed* are fully equivalent in meaning, but that the latter is regarded "socially lower", and that it could be "ignored as untranslated Khoekhoe". In some of the other, more recent literature similar claims about these two constructions are often made, but not substantiated with usage-based data (e.g., Webb (1989) claims that the *-hulle* construction is used only in informal contexts). Moreover, there is not consensus on whether the *-hulle* construction should be regarded as a noun phrase (Smith 1944), compound (Booij 2010, Kempen 1969), derived word (Deumert 2004), inflectional form, or indeed as "an oddity" (Moravcsik 2003).

In this paper, these two constructions will be approached from two complementary constructionist perspectives. In the first part, results from a recent synchronic, usage-based study will be presented. From a construction morphology (Booij 2010) and cognitive grammar (Langacker 2008) perspective, various schemas and subschemas will be identified, clearly indicating where the constructions overlap but also diverge. It will be illustrated that there are many misconceptions about these two constructions, especially regarding their meaning in actual, modern usage (anno 2017).

In the second part, the origins of the constructions will be approached from a constructionalisation perspective (Hilpert 2013, Traugott & Trousdale 2013). It will be illustrated how similar constructions from different languages spoken in South Africa at the end of the seventeenth century, influenced each other and changed through the mechanisms of neoanalysis, analogisation, and relexification.

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Inherited French morphological schemas in Creole: A case of French variation?

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French creole languages are considered as full-fledged languages in which 90% of the vocabulary is inherited from their superstratum/lexifier language (French). The vocabulary is inherited with the morphological schemas which become productive in Creole to form new lexemes, either on French bases or non-French bases (Lefebvre 2003, Brousseau 2011, DeGraff 2001).

Can these new words be considered as examples of French variation?

Morphological schemas are not fully inherited: at the very least, they are accompanied by phonological, semantic or syntactic changes with respect to the original schema.

This talk will focus on the study of three morphological French schemas reanalysed in Creole:

a) –*asyon* suffixation which phonologically reanalyses the French –*ion* suffix

    (1) konpòrtasyon 'negative behavior' ← konpòrté 'to behave'

        pwofitasyon 'profit' ← pwofité 'to enjoy'

        poursuivasyon 'pursuit by the devil' ← poursuiv 'pursue'

b) –*é* suffixation which consists of a "deinflectionalization" of the infinitive verbal suffix that becomes a derivational suffix.

    (2) bwanné 'to move' ← bwann 'movement'

        grajé 'to grate' ←graj 'grate'

        miganné 'to mix' ← migan 'purée'

c) the parasynthetic formation in *dé-X-é* which is a reanalysis of a prefix and a flexional marker in a parasynthetic affix.

    (3) déchèpiyé 'to shred' ← chépi 'shred'

        délyanné 'to disunite' ← lyann 'union'

        dépyété 'to remove the legs (of a crab)' ← pyèt 'leg'

The focus here is on Guadeloupean Creole, which has seldom been studied from the point of view of morphology. Like all languages that do not have a long-standing written tradition, it is difficult to constitute a corpus (Brousseau 2011). Our study is based on a corpus collected by Maxime Deglas, a native speaker, based on dictionaries (Ludwig *et al.* 2012, Poullet *et al.* 1984, Tourneux & Barbotin, 1990) and field surveys of native speakers. It is composed of 7045 lexemes of Guadeloupe Creole from all the islands, including 1731 verbs, which enabled a specific study of Noun/Verb morphological relations. The analysis was conducted within the theoretical framework of lexematic morphology (cf. for example, Aronoff 1994, Anderson 1992, Booij 2010, Fradin 2003).

These reanalyses follow mechanisms already known from work on morphological change. For example, the suffixation in -*asyon* corresponds to a case of "secretion" in the sense of Rainer (2015: 1771) and Jesperson (1922: 384) but also Haspelmath (1995: 8-10). The –*é* suffixation corresponds to a case of "deinflectionalization" in the sense of Rainer (2015: 1768-69). The study of these reanalyses allows us to take a position in the debate on the morphology of Creole languages (alongside Brousseau 2011, DeGraff 2001, Lefebvre 2003, Braun & Plag 2002, LaCharité 2011, Plag 2005), for example (i) against the claim that derivation emerges only through gradual grammaticalization and (ii) against the hypothesis of a not very rich and simpler morphology of Creoles (McWhorter 1998).

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Prefix conceptual salience in L2 acquisition and processing

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The idea of morphological salience refers to the prominence of a morpheme (stem or affix) in a morphologically complex word and has been dealt with, implicitly or explicitly, in several ways and definitions, from (token/type/relative) frequency (e.g., author/s, 2009), productivity, contribution of the constituents to the meaning of the complex word (e.g., Plag 2003), to surface characteristics (e.g., pseudo-derivation effect, Longtin & Meunier 2005) and their perception (Giraudo & Dal Maso 2016a).

Focusing on the introductory levels of processing and particularly on the formal characteristics of stimuli, which is a main characteristic of purely bottom-up approaches, obviously obscures the participation of semantic and conceptual factors. As Giraudo & Dal Maso (2016b) underline, "the issue of the relative prominence of the whole word and its morphological components has been overshadowed by the fact that psycholinguistic research has progressively focused on purely formal and superficial features of words, drawing researchers' attention away from what morphology really is: systematic mappings between form and meaning".

The present study seeks to examine the role of conceptual salience in a more top-down perspective, through an L2 self-paced reading experiment (with context). This variable, also related to Kilani-Schoch & Dressler's iconicity (2005) and more generally, to Natural Morphology (Dressler, Panagl, Mayerthaler & Wurzel 1987), is tested using two types of words: on one end of the spectrum, words such as προνήπιο 'prekindergarten', προνόμια 'privileges', υπεραγαπώ 'to treasure', where the prefixes προ- and υπερ- are salient; on the other end, words such as επίδειξη 'demonstration', επικίνδυνος 'dangerous', where the multiplicity of the prefix's semantic instruction meanings reduces salience. The number of meanings of the semantic instruction is estimated with the help of the Liddell, Scott, Jones (1996) AG dictionary and the Modern Greek Dictionary (1998): this value can be viewed as an epiphenomenon, since what counts is the degree of homogeneity of the prefix's semantic instruction, which can be obscured by various factors, e.g. the application of metaphoric or metonymic semantic rules on the base-word before that of Word Construction Rules (Corbin 1987).

In the experiment reported here, the variable 'conceptual salience' is combined with semantic transparency; the participants are foreign students living in Greece and learning Greek at an advanced level. They were asked to make a consistency judgment (Yes/No), and their reaction times were recorded. In a pilot study with a small number of subjects, we obtained statistically significant consistency effects for the salient conditions, both transparent and opaque, but not for the non-salient ones.

We examine the implications of our findings with regard to the following issues: how do L2 learners process complex words and what kind of variable influences morphological segmentation in L2 (author/s, 2010)? Furthermore, our data suggest that 'processes' and 'levels' do not tell the whole story, and that language specific information in word boundaries may influence the ease of L2 acquisition, including in 'informativity' terms (Geertzen, Blevins & Milin 2016).

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French-Greek and Greek-French general language dictionaries of the 19th and 20th centuries: Morphology, language learning and Greek language diversity

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Bilingual dictionaries relate the vocabularies of two languages together by means of translation equivalents. Grammar and, more specifically, morphology is a key structural feature of each language and one of the difficult fields in acquisition as far as French and Greek are concerned. The production of French-Greek and Greek-French general language dictionaries, especially in the 19th and early 20th centuries, is due to the close relations between the French and Greek languages, as French was admired as a prestigious language by Greek scholars while Modern Greek was considered as a language with long history and glorious past but in the process of being (re)created after the long Ottoman domination. Most of these dictionaries, especially the oldest ones, were elaborated by Greek scholars and, according to their introductory texts, were governed by the same principle, that is, French language learning and dissemination along with simultaneous lexical enrichment of the Greek language through translation. On the other hand, the dictionaries created by French scholars had different targets. Some of them were primarily intended for use by French travellers in the Near East but all of them sought to highlight the wealth of Modern Greek, language whose lexical material encompasses ancient, popular and dialectal forms as pointed out in introductory texts.

Over the years, the principles of new dictionaries changed, as, after World War II, French gradually lost prestige in Greece as English gradually became the international *lingua franca*.

In this presentation, bearing in mind that the aforementioned bilingual dictionaries constitute, to a certain extent, an important tool for language learning as well as a means of enrichment of the Modern Greek lexicon, we will trace the evolution in their macrostructures and microstructures and their impact on morphology presentation, and we will study the use of metalanguage that allows identification of morphological particularities in these dictionaries. We are particularly interested in the lexicographical symbols and abbreviations announcing both inflectional and derivational morphological information in comparison between the two languages and we will focus on the presentation of learned, popular and dialect forms. In addition, we will study lexical phrases and examples proposed by lexicographers as they contribute to morphological - and semantic - clarification of words. Finally, we will make a comparison between the dictionaries created by Greek scholars and those elaborated by French lexicographers in order to highlight similarities and differences.