Dissertation Summary

Morphosyntactic dependencies and verb movement in Cypriot Greek

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Abstract

This summary presents the main findings of my Ph.D. dissertation (University of Chicago) on verbal morphology and the syntax of the verb in an understudied variety of Greek, namely Cypriot Greek. Allomorphy in the Cypriot verb is explored here by way of investigating the interaction of morphology and syntax.

Keywords

allomorphy – verb inflection – locality – directionality – morphology-syntax interface

The present dissertation (Pavlou 2018) explores existing morphosyntactic approaches to the theory of allomorphy and variation in the grammar as a phenomenon that is subject to particular morphological and syntactic conditions. In the best of all morphosyntactically possible worlds, one might hope that the pieces of syntax and the pieces of morphology would appear to work together. Based on the observation that morphology on the verb depends on its surrounding elements (Zwart 1993a, Zwart 1997, Zwart 1993b, Bogomolets, Fenger

& Stegovec 2018, Adger 2006, Ostrove 2015), the study of allomorphy on verb morphemes can be one of the most convincing pieces of evidence for the interaction of morphology and syntax and the need for theoretical tools that allow the two to communicate in an orderly manner. This work has a strong empirical component in that it explores data from Greek and provides an analysis of the verbal morphology and the syntax of the verb in the understudied variety of Cypriot Greek.

The dissertation is divided in two main parts, with both of them serving both empirical and theoretical goals: The first part of the dissertation presents a detailed description and analysis of the verbal morphology by exploring the different exponents and their allomorphs in the morphosyntactic positions realized: verbalizers, Voice, Aspect, Tense and Agreement. The distribution of these is predicted by standard conditions on allomorphy, locality and directionality, for example, that define variation not to be free and uncontrolled, but to be predicted by the context provided by the surrounding elements. Such an approach to grammar demands access to the component of syntax by looking at the projections available in the structure and their features.

The second part of the dissertation reinforces the assumption of the role of syntax in morphological variation by looking even further into the sensitivity to syntactic configurations triggering a particular realization of the verb's morphology. Contextual allomorphy is the result of a local dependency between the element affected and a trigger, which not only confirms a predicted distribution of morphological variation in the approach adopted here but also an orderly relation between syntactic operations and morphophonological realization. That is exactly the case with different realizations according to the verb's position in certain Germanic varieties and with special morphology when the verb is in T in Cypriot Greek. The analysis of the syntax of the verb in Cypriot Greek argues that it involves T-to-C movement and that this language uses a CP-recursion structure, while it posits problems to previous syntactic analyses of variation in the verb position. In certain Romance languages, for example, variation is captured with a morphosyntactic parameter and the assumption of the existence of an additional functional projection in their syntax, an analysis that does not hold for the verb syntax in Cypriot Greek.

Beyond the analysis itself, the question extends to micro-parameters assumed in explaining variation, in this case in the verb position and the syntactic operations that it is dependent upon and the sharing of those by different languages showing the same properties.

In view of the above, the objective of this dissertation is to provide a detailed description and analysis of how theoretical tools, especially in the framework

of Distributed Morphology, allow us to capture morphosyntactic variation in the verbal domain in Cypriot Greek.

Allomorphy in morphology is often discussed with respect to conditions that trigger its existence, with some of the most well-known conditions being *locality* (or *closeness* as in Carstairs-McCarthy 2001) and *directionality*. Locality is a condition that is often understood to allow allomorphic interactions across a cyclic domain boundary as long as the interacting elements are concatenated (Embick 2010). Directionality is defined in terms of outward and inward conditioning with the first predicting that an affix such as B can be sensitive to material that has already been added to the root, such as A, but not C. The extent to which these conditions, as well as more specific ones, apply is not the same across different languages, and some studies suggest modified versions of these to account for the facts (see Deal 2013 for example). In a derivational view of grammar, the syntactic structure and relations present in the verbal domain define the morphological possibilities—for example, those responsible for allomorphy, in which the phonological forms of morphemes are constrained by grammatical organization. The consequences of our understanding of conditions on allomorphy influences our theories in spell-out and the realization of the actual morphemes.

The conditions on allomorphy that have been identified in the relevant literature can be summarized as the following:

- (a) *Cyclicity/Locality*: Insertion proceeds inside-out, cycle by cycle (Embick 2019, Bobaljik 2000, Deal & Wolf 2013, Carstairs-McCarthy 2001)
- (b) *Directionality*: A morpheme can show inwards sensitivity to form, and outwards sensitivity to morphosyntactic features (Bobaljik 2000, Carstairs-McCarthy 2001)
- (c) *Linearity*: The conditioning environment for allomorphy of a morpheme must be linearly adjacent to the morpheme (Embick 2010, Deal & Wolf 2013, Merchant 2015)
- (d) *Order of Vocabulary Insertion*: In most cases, insertion is inside-out, but some analyses argue that within a cycle, VI does not have to be inside-out (Deal & Wolf 2013).
- (e) *Feature type*: Realization of an allomorph can be based on categorial features (e.g. number) or features specifying the values of categories (e.g. singular) (Bonet & Harbour 2012, Adger 2010)
- (f) *Rewriting*: As morphosyntactic features are expressed by vocabulary items, these features are used up and are no longer a part of the representation (Bobaljik 2000).

In the study of Greek morphology, other work has approached the question of allomorphy and its importance with regard to understanding the interface of

morphology and syntax. Joseph & Smirniotopoulos (1993) propose an approach to Greek verb morphosyntax as part of a morphological component that does not interact with syntax. In this approach, there is no one-to-one mapping of morphemes and categories and no inflectional category can be matched with a single morpheme. This is supported by the claim that inflectional markers that follow the root in Greek “are the exponents of a complex of the features for voice, aspect, tense, person and number. Clearly, then, no single element in this complex can be isolated as the exclusive marker for a given morphosyntactic category” (Joseph & Smirniotopoulos 1993: 392).

(1) a. *plen -onde*

wash NONACT.IMPER.NONPAST.3PL

‘They are washing themselves’.

b. *pli -θ -un*

wash NONACT NONACT.PER.NONPAST.3PL

‘They will be washed’.

An alternative suggestion on the conditions of the context of allomorphy is the *Span Adjacency Hypothesis* (Merchant 2015), which states that allomorphy is conditioned only by an adjacent span and permits nonadjacent heads and their features to participate in the conditioning of an allomorph, but requires that these nonadjacent heads form a span, up to and including the head that is adjacent to the conditioned form. But while it is clear how inflectional allomorphy would be predicted, the *Spanning Insertion Hypothesis* is a hypothesis about which nodes can be targeted for lexical insertion or be realized by a single morpheme bearing on the question of treating suffixes in Greek as portmanteau morphemes.

In a derivational framework, the exponents are morphemes in terminal nodes of the syntactic structure of the verb, where bundles of features are realized with Vocabulary Insertion. Inflectional suffixes are exponents of functional projections, as those shown in the tree below, resulting in head movement in (2a) and its outcome in (2b) (see Embick & Noyer 2007).

Within this framework, the first chapter examines the appearance of different allomorphs and the context for their appearance, as in the case of verbalizers and theme vowels. For the latter, such an approach contradicts the idea that these vowels are part of the verb stem and stored in the lexicon as such (see Bermúdez-Otero 2013 for relevant discussion) providing “lexically” the information on the division of verb conjugations. Assumptions that support that in these cases “the selection of allomorphic variants must be a matter of the lex-

icon or morphology” or “the stem variation can be handled at the level of the lexical entry, by a lexical redundancy rule” (Ralli 2006: 5) are canceled. Müller (2004: 218) concludes that “inflection class features are of no use in syntax; they are not interpretable in this component”, which cannot be the case for verb class features as discussed here. The presence of features on roots is crucial to the insertion of a verbalizer or a theme vowel. The context of the conditioning environment leads to the assumption that syntactic terminal nodes that follow the root should be able to access it. This kind of relation is syntactic in nature, as drawing contextual information to complete the derivation (for example, a Probe-Goal relation in agreement) involves the assumption of hierarchical structure.

The Cypriot Greek verb also marks tense, which is registered in three ways: through the presence of a prefixal vowel known as the augment, through the stress and through allomorphic suffixes. Traditionally, the Greek verb system

has been divided into two conjugation classes (verb classes) according to the position of the stress and the form of the agreement suffixes (see Holton, Mackridge & Philippaki-Warbuton 1997). Tense and Agreement have been treated as a portmanteau suffix (Spyropoulos 2015, Spyropoulos & Revithiadou 2009, Merchant 2015, among many others). Instead, the current work proposes to divide the morphemes of tense and agreement and to provide an account for their distribution. A DM approach to the Cypriot Greek verb morphology also explains the optionality with respect to e_2 -, which is surprising given that the augment in Greek is typically found adjacent to the verb stem; not surfacing in that position with a verbal form in the past tense is a non-predictable form in other cases (i.e. **psisa*). This chapter proposes an analysis that explains this optionality and the obligatory appearance of the augment word-initially. The appearance of the augment in a non-adjacent position to the verb stem is also only attested in these cases. The distribution of the augment depends on an *Initiality* constraint (see Arregi & Nevins 2012 for similar constraints) that requires a verbal complex to always have a word-initial augment.

With respect to allomorphy, the Cypriot Greek verb has a number of allomorphic dependencies, discussed in terms of the conditions summarized above. The study of these allomorphic dependencies is revealing when it comes to the adoption of strict theoretical approaches to the fact of allomorphy: definitions on locality and sensitivity, both as main conditions to understand the phenomenon, can only benefit from these data. In this way, this chapter shows that an asymmetry in sensitivity is not always present, and this potentially has consequences about the assumptions made for the interaction of morphology, syntax and Vocabulary Insertion.

Allomorphy is conditioned word-internally and is subject to conditions of locality, directionality and more, but also particular syntactic configurations may condition allomorphy. In a morphological account of verb movement, recent work argues that the presence or absence of V-to-C movement can in fact have an effect on the realization of the agreement morphology on the verb (Bogomolets, Fenger & Stegovec 2018). Agreement is sensitive to the syntactic position of the verb in Dutch, where the presence of the 2ND SINGULAR agreement suffix on the verb depends on its position in the syntax, specifically, its position in relation to the subject (Zwart 1993a, Bennis & MacLean 2006). The variation in the morphological realization of the agreement suffixes is not accidental, but is based on particular syntactic configurations that condition the alternation. Bogomolets, Fenger & Stegovec (2018) present morphological and phonological evidence for V-to-C movement based on locality restrictions on the allomorphy of the suffix. The claim that movement feeds allomorphy, which supports generalization on the conditioning of allomorphy in syntax, is

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