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Introduction: Roots in context

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This special issue includes twelve papers that consider *roots* to be a unit of lexical structure that is distinct from the stem, word, lexeme or morpheme. The assumption common to all of the papers is that roots are terminals in morpho-syntactic structure. Given these assumptions, the overarching topic of this volume is the way in which roots interact with their morphosyntactic environment. We have grouped the papers in this collection into four thematic sections: (1) roots and selection; (2) roots and allosemy; (3) roots and allomorphy; and (4) the form of roots.¹

1 Roots and selection

A central issue in the literature about roots is the amount and type of information that a root may carry. For instance, are roots that end up appearing only in one lexical category inserted with that distributional information? Similarly, for roots that give rise to eventive semantics, to what extent, if any, is the argument structure of that event carried by the root? While the null hypothesis may be that roots do not bear such information, researchers nonetheless have to explain why certain roots appear in certain structures and not in others. The first four papers of the volume are relevant for this discussion.

The first of these papers is by **Jason Merchant** (University of Chicago). Merchant examines the consistency with which items derived from the same root require uniform selectional patterning. In a model that ultimately supports the view whereby roots do not directly take arguments, he reports that surprisingly many items are inconsistent in this respect (*pride in* vs *proud of*, presumably derived from the same root). Nevertheless, consistency in root selection can

¹ The papers were selected from among the presentations at *Roots V*, a conference that was held in June 2017 in London, and organized by Hagit Borer and Melisa Rinaldi of Queen Mary University of London and by Andrew Nevins of University College London.

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be restored if one factors in the category of the item (e.g. N- vs A-). Merchant argues that this requires that the categorizing nodes themselves determine selection.

If roots are devoid of argument structure, what determines their distributional restrictions in the syntax? **Patricia Irwin** (Swarthmore College) explores the acceptability of motion sentences in English with *whole-body* roots like √DANCE versus *body-part* roots like √SMILE. She argues that a core component of root meaning is the distinction between body parts versus the body conceived as a whole. It is this conceptual content, rather than syntactic category or argument structure, that is responsible for the degraded or unacceptable status of some root-structure combinations such as *The boy waltzed in* versus *#The boy smiled in*.

Ivona Kučerová (McMaster University) and **Adam Szczegielniak** (Rutgers University) review the original reasons to assume that roots are devoid of any syntactic features, and claim that there is a lack of clarity regarding what constitutes a syntactic feature. Based on evidence from gender agreement, they arrive at the conclusion that grammars systematically distinguish between roots with and without syntactic features. This distinction, they claim, is paralleled by the timing of root insertion: roots without syntactic features are inserted late, while roots with syntactic features must be inserted early.

Dimitris Michelioudakis (Aristotle University of Thessaloniki) and **Nikos Angelopoulos** (University of California, Los Angeles) investigate, on the basis of Greek compounds, how saturation of different theta-roles by the non-head constituent (e.g. ‘an x-ray therapist’ versus ‘therapy with x-rays’) can occur, and what structure mediates the interpretation of these compounds. They conclude that event-related functional structure is needed for the formal licensing of such XPs (like ‘with x-rays’), but not for their selection, suggesting in turn that roots alone are required for the selection of at least some arguments.

2 Roots and allosemy

Alongside claims about roots being without category, there has been discussion as to their semantic import. While some say roots are semantically underspecified, others say they are even devoid of meaning, and thus entirely semantically flexible. Either approach faces the question of the limits of this semantic freedom. To what extent is allosemy (the same root with more than one unpredictable meaning) permitted? The papers in this second thematic group are concerned with this issue.

Víctor Acedo-Matellán (University of Oxford) and **Cristina Real-Puigdollers** (Pompeu Fabra University) present their approach, according to which roots are inserted into functional nodes, including categorizers. They argue that derivational affixes also behave like a type of root in this respect. Focusing on allosemy, they claim that this approach makes correct predictions that are arguably unavailable to competing approaches. They further show that their approach is instrumental in understanding the semi-lexicity of classifiers as the insertion of roots into inflectional nodes, rather than into categorizer nodes.

Itamar Kastner (Humboldt Universität) targets a verb class in Hebrew which exhibits some inconsistency in its semantics. Even though this class is transitive on the whole, it also includes a group of verbs which alternate between causative and inchoative meanings. Following Borer (1991), Kastner analyzes these exceptional verbs as based on adjectives and nouns. He claims that unlike root-derived verbs in this class, the *v* head in the structure of this group of verbs cannot impose any requirement with respect to argument structure: it is “stuck” with the semantics of the adjective or noun from which it derives, which has already fixed the allosemantic interpretation of the root.

Sam Steddy (Queen Mary University of London) examines the semantic freedom that can be wielded by heads and non-heads of compounds, contrasting the interpretation of roots such as $\sqrt{\text{FIRE}}$ in *firefly* vs *fireman*. Building on a prior analysis by Harley (2009), compound structures are argued to vary according to the ways in which the head and the non-head are categorized. These variations are paralleled by different degrees of permitted interactions both within and without the compound structure, specifically with respect to semantic compositionality and allomorph selection.

3 Roots and allomorphy

The form of roots, like their semantics, has also been claimed to be underspecified to different degrees. This allows for allomorphy (variation in realization that cannot be attributed purely to phonology) and, according to one’s theory, for suppletion (two completely different realizations of the same morphosyntactic unit). As in the case of allosemy, questions of locality arise: given a root’s position in the structure, what other parts of the structure can influence its form? Conversely, to what extent can roots influence the exponence of other elements in the structure?

It has repeatedly been noted that the trigger and target of allomorphy should not be too far away from each other. Yet it is also clear that there can

be allomorphy without adjacency. **Jurij Božič** (McGill University) presents a cross-linguistic survey of such non-local allomorphy, reporting that the maximum distance in cases where the root is targeted involve considering two heads in a single direction as context. He develops a formal model of insertion that accounts for the observed patterns, in which the limited distance follows from computational properties of the PF-interface.

Miloje Despic (Cornell University) focuses on a group of gradable adjectives in Serbian, whose suppletive comparative forms display unexpected semantic properties: while the basic adjectives are ambiguous between intersective and non-intersective readings in the positive form (e.g. ‘a good thief’), their suppletive comparative and superlative forms are limited to the non-intersective interpretation. This correlation between form and meaning, he argues, implies that either adjectival roots or category-assigning heads are specified for certain semantic properties, and hence that this suppletion is related to well-defined conditioning.

Abigail Thornton (University of Connecticut) also examines suppletion, more particularly the suppletion triggered in verbs by participant number. Linking together suppletion and reduplication, she argues that the allomorphy in such cases is not directly triggered by the argument, but rather by a feature on a verb-internal number node. This node, which mediates an agreement relation between the argument and the root, can either be realized as reduplication, or trigger root suppletion. The analysis leads to a novel definition of locality conditions on suppletion in terms of domains and sub-domains.

4 Roots and their phonology

As already mentioned, the phonological form of a root need not correspond exactly to the eventual realization of any of the structures involving that root. Indeed, the form of a root can be underspecified and then be realized taking into consideration surrounding factors. In such cases, the variation arises not through allomorphy – as there is only one underlying representation and no competition – but via regular phonology applying to roots that are phonologically defective in some sense. The last two papers of this volume explore two cases where roots can be shown to be unlike any surface form derived from them.

Anthi Revithiadou (Aristotle University of Thessaloniki), **Giorgos Markopoulos** (Aristotle University of Thessaloniki/University of the Aegean) and **Vassilios Spyropoulos** (National and Kapodistrian University of Athens) approach a set of alternations in root forms in Greek. Following Smolensky &

Goldrick (2016), they assume that certain segments across different manifestations of the same exponent of a root involve a less-than-optimal degree of phonological *activation* in their lexical representation. Accordingly, the realization of such defective exponents is determined by their environment, which may also be not fully phonologically activated. The authors capitalize on the advantages of their analysis relative to alternative accounts that resort to extensive listing or to the application of readjustment rules.

Noam Faust (Paris 8 / CNRS SFL) explores data from Semitic, a language family in which, famously, roots have a phonological shape different from any of the forms derived from them. There has been a debate in the literature about whether such abstract roots are adequate or necessary in representing the knowledge of speakers. Faust provides two new arguments for the existence of the root as a level of phonological representation. In Mehri, the choice of a suffixal exponent is sensitive to non-root material in its base, even though the root itself is phonetically closer to the position of the suffix; this can only be understood if despite appearances, the root is structurally more distant from the suffix than the non-root material. The second argument shows how in two Neo-Aramaic languages, only the consonants of verbs must be stored; the realization of non-root material is identical, and thus predictable, for all roots.