The Exponent List and the Encyclopedic List: Structurally Parallel, Mutually Mute

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1. Overview

As roots undergo suppletion, they cannot contain phonology. As such, they enter syntax as indices (e.g. √K D23); Harley 2014. Once the syntactic derivation is complete, their contextual allomorphic interpretation and contextual allomeric interpretation are consulted using the Exponent List and the Encyclopedic List, under a fully split Y-model. These lists are highly parallel in their workings.

2. Suppletion in Kinship Terms

The languages of New Guinea show extensive suppletion patterns as determined by the person of the possessor (Baerman 2014).

(1) Kamasau: maternal grandparent is suppletive with 1sg possessor:

\[
\begin{array}{ll}
\text{maternal grandparent} & \text{mother’s brother} \\
1\text{sg} & \text{koku} \\
2\text{sg} & \text{nu-qo} \\
3\text{sg} & \text{ku-qo}
\end{array}
\]

(2) Vitu: mother and father suppletive with 2sg possessor:

\[
\begin{array}{ll}
\text{father} & \text{mother} \\
1\text{sg} & \text{tama-gu} \\
2\text{sg} & \text{ka-mama} \\
3\text{sg} & \text{tama-na}
\end{array}
\]

(3) Kaluli: daughter is suppletive with 3sg possessor:

\[
\begin{array}{ll}
\text{daughter} & \text{sister} \\
1\text{sg} & \text{n-a:la} \\
2\text{sg} & \text{g-a:la} \\
3\text{sg} & \text{ida}
\end{array}
\]

The attempts to explain away number-sensitive suppletion in terms of lexical and semantic properties of collectives and pluractionality won’t generalize to cases of person-sensitive suppletion; it seems inevitable that we have roots such as maternal grandparent that undergo late-insertion, based on the properties they acquire through the course of a morphosyntactic derivation.


Why the arrow from phonological form to the conceptual interface? This reflects the view of roots in which they had no need to pass through the Subset Principle, and their identity was freely determined after Vocabulary Insertion. As a result semantic interpretation needed to know (i) what root is in a particular position (info added at VI), and (ii) what the encyclopedia says about that root. However, given that allomorphy and allosemy are independent for roots, there is no need for such an arrow.

4. Impoverishment and Deprivation

IMPOVERISHMENT is a PF-neutralization of features that go LF-interpreted. With singular addressees, for example, the [+singular] distinction on you present throughout syntax is maintained at LF (*You_{sg,addr} are gathering) but this feature is deleted before the Exponent List can have a chance to refer to it.

DEPRIVATION is an LF-neutralization of features that go PF-interpreted. With impersonal usages, for example, the [+participant] feature on you present throughout syntax is maintained at PF, but this feature is deleted before the Encyclopedic List can have a chance to refer to it.
5. No-Elsewhere and Specificity on Each List

Harley (2014) has an innovative approach to cran-, caboodle, and cahoot morphemes: they have a highly contextually-specific alloseme, and no elsewhere item:

(4) \[ \sqrt{kahut31} \text{: conspiracy} / [ \text{Pr} \text{inesis} [ \text{Numpl} \text{-}] ] \]
\[ \sqrt{kahut31} \text{: (no elsewhere)} \]

There are cases where the exponent list may lack an Elsewhere Item for a specific formative, too: defective forms, such as Russian kochergá ‘poker’, which lack allomorphs for when stress would fall on the root (e.g. GEN.PL):

(5) \[ \sqrt{kerg22} \text{: koterg} / [\text{−rhotonic}] \]
\[ \sqrt{kerg22} \text{: (no elsewhere)} \]

Defectiveness is a highly specific case of allomorphy, where there is no default PF interpretation. caboodles are a highly specific case of idiomaticity, where there is no ‘literal’ LF interpretation (unlike (6)).

(6) \[ \sqrt{kie782} \text{: expire} / [\_ [D_{de,f} \sqrt{okt41} ]] \]
\[ \sqrt{kie782} \text{: kick’} \]

Generating (or hearing) less allomorphically specific forms like childs requires non-automatic suppression of the Subset Principle on the PF side. By hypothesis, going for something less specific on the Encyclopedic List entry of a particular formative should also be non-automatic. In an fMRI study of embodied action semantics and premotor cortex activation, Aziz-Zadeh et al (2006) did not find congruent somatotopic activation when participants read kick the bucket. In conclusion, each list is organized such that favors generation of the most-specific PF or LF interpretations of a particular formative.

6. Domains of Contextually-Specific Interpretation

An ongoing research issue is the extent to which the domains for contextual allosem are restricted, in parallel to those for contextual allomorphy. A relevant case to consider is the ‘informativeness’ requirement that accompanies eligibility in the Encyclopedia as the complement of A- headed inalienable possession, such as brown-eyed, blue-blooded, pig-headed, close-fisted, three-legged. The domain under which this requirement is evaluated does not include negation or the subject: *The snake is legged, *John isn’t eyed, as the Encyclopedia cannot see this far away, either due to inherent restrictions on how its entries can look, or because it is consulted ‘too early’ to save such cases, and what they suggest is that allosemic locality in predicate formation by A- heads may in fact turn out similar to the restrictions familiar from phrasal idioms.

7. Social Meaning of allomorphy \notin Encyclopedia

As a consequence of working at the level of lexical items (like ain’t), some researchers have decided that ‘what it means’ for a speaker to use ain’t instead of haven’t somehow merits the annotation of its social status (e.g. stigma or street cred) within its core denotation. But given the model above, the stigma or street cred associated with the use of ain’t in a given conversational situation cannot be part of its encyclopedic entry, any more than the stigma or street cred of glottaling a coronal stop (e.g. British English [ʃɪʔ] ‘city’), is not part of its encyclopedic entry, nor in turn any more than the fact that not all may be implicated in the usage of some is not part of its encyclopedic entry (indeed, implicatures are cancelable, while assertions – part of the encyclopedic entry – aren’t).

The inverted Y-model we have adopted – in which syntax jointly feeds LF and PF, at which point the two modules go their separate ways, and the exponent list and the encyclopedic list are distinct entities with no access one to the other – indeed allows means within the encyclopedia to state whether or not a given PF operation such as impoverishment (or for that matter, glottaling) has happened or not. There is simply no way in the current model for the encyclopedia to have access to which exponent was inserted by the Maximal Subset Principle, nor which impoverishment rules potentially fed or bled Vocabulary Insertion of specific exponents.

Variable phenomena which are optional rules often conditioned by one’s age, gender, identity, socioeconomic class, social attitudes, and so forth, are often modelled in terms of coefficients that act as the ‘weights’ on a bunch of conditioning factors:

(7) \[ p = ax + bw + cz \]

In such equations, the value of p is the result of the sum of weighted variables. For example, x, w, and z might be demographic factors, and a, b, and c are the coefficients that reflect the amount that these variables matter for a given phenomenon; for example, in Maxakalí consonant weakening, x and y and z would be speaker age, speaker gender, and syllable-in-question stressed-or-not, respectively, and the coefficient for this second one would simply be zero. We can annotate the rule of glottaling in British English in a format such as the following:

(8) \[ t \rightarrow ? \text{(with rate of application } 0 \leq p \leq 1) / \dot{y}_{¬} v \]

The formalization in (8) is known as a ‘variable rule’, but it is variable in a very restricted and particular sense of the word. The structural description of the rule is deterministic: in between a stressed vowel and an unstressed
vowel. The structural change is also deterministic: /t/ changes into [?] There is no variability or nondeterministicness either in what the structural change is nor in what the structural description of. What is variable is whether, every time the structural description of the rule is met, the structural change actually fires or not. Thus, whether a given British English speaker, when he or she has a /t/ in between a stressed vowel and an unstressed vowel, actually applies the rule of glottaling turning the /t/ into a [?] will apply with probability p, where p represents the amount of weights on a host of conditioning factors (such as age, geographic area of upbringing, amount of projected ‘street cred’ the speaker is unconsciously aiming for, and so forth).

The theory of phonological rules does not change as the result of the fact that this particular rule is conditioned by social factors – the formulation of the rule remains with the traditional, deterministic structural description and structural change with clear input-output relations. What changes is the fact that the rule only fires with a probability p, ranging between 0 and 1, that is potentially conditioned by the weighted sum of these social factors. As such, the continued formalization of phonological rules can proceed in a ‘modular’ fashion, without integrating social factors into the nature of the rule, and only into a probabilistic annotation on that rule, the computation of which can be carried out in a modular, distinct part of the grammar focused on the relation between social factors and language use.

This division of labor can be seen as parallel to the distinction usually made between semantics and pragmatics: the former refers to the constant, fixed, deterministic meaning of lexical items (such as the fact that some means nothing more than ∃ in logic), while the latter refers to the inferences made in real-time conversational context. The relationship between phonological rules and between social factors in language usage conditioning the probability that such rules are applied reflects a similar modular distinction between a situation-invariant formalization and a situation-dependent influence of and knowledge about how speaker- and hearer-specific factors may add to the choice of and interpretation of certain formats.

Deletion operations in morphosyntax are well-suited to the variable rule approach as well, because a given morphotactic rule (say, impoverishment) can be annotated with the probability p in a manner entirely parallel to glottaling above. Let’s take as a case study the syncretism found in English auxiliary systems: it has been found that in Monmouthshire English that speakers might say either I am or I be, where the latter reflects the elsewhere item in the exponent list for this particular auxiliary system. This can be modeled as impoverishment:

(9) [+part, +auth] (with rate of application p) → ∅ / [+cop, -past, +sg]

The formalization of the environments where this impoverishment rule will apply is explicit, deterministic, and situation-independent, as is the result of the rule (feature-deletion). However, the rule has been annotated with a probability p that integrates the weighted sum of a number of conditioning factors that sociolinguistic studies may reveal (e.g. age, class, gender, and even other potentially influential factors of a more linguistic nature, such as the token frequency of the word following the copula, if that turns out to be relevant).

So where does whether the transmitted ‘social meaning’ of, say, performing glottaling or realization by ain’t reside? If a given speaker enacts glottaling (and therefore signals, consciously or not, that they are a UK, and not US speaker, to their interlocutor, and possibly further specific class- or regional- information), where does the interlocutor make these inferences from? They would have to come from the interlocutor’s inferences about the relative coefficient weights on the speaker’s p and the factors themselves. Thus, if I hear you perform glottaling, I can make the inference that, for you as a speaker, the value of the factor “from UK” is +, and that its conditioning coefficient is nonzero; and similarly with other inferences I might have about the causal structure of your equation p for this rule as they pertain to class and regional information (and of course, part of these inferences might be missing for me, should I lack sufficient information about these conditioning factors). As such, therefore, any ‘social meaning’ associated with the use of ain’t or the pronunciation of /t/ as [?] that cause me to infer you are communicating ‘I am a proud, edgy, twenty-something East Londoner’ are cancelable, situation-dependent, and based on pragmatic-like inferences independent of the fixed, time-independent denotations of items on the Encyclopedic list.

References