

Postcard theory: how higher level modules communicate with phonology through a translator's office

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The views on how phonology interacts with higher modules (morphology, syntax, semantics) have ranged over "there is no interaction at all" (American structuralism, Natural Generative Phonology) to the post-SPE zoo of diacritics that poor phonologists spent their time to feed. The first question to ask when talking about "interaction" concerns directionality: phonology may send or receive information. Whether phonology conditions processes that are located in other modules is certainly an interesting question – one that will not be debated here.¹ The only question considered is how much higher-level information phonology receives and treats, and how exactly the mechanics of this transmission work.

Since SPE, the general move followed by all theories (with greater or lesser engagement) was to reduce the number and nature of things that have an extra-phonological origin but are managed inside the phonological module. As in syntax, much burden was shifted to the lexicon, and a specific interface device was created in order to salvage the phonological treatment of the remaining non-phonological information (Lexical Phonology).

I believe that the general orientation was correct, and accept the cyclic nature of the interface (Lexical Phonology, Kaye 1995): communication between modules is procedural; first you do a little phonology, then you continue to build your word, then you do phonology again etc. Phonology in itself is not procedural, but its conversation with other modules is.

The central idea that I promote is the need for *translation*. As a matter of fact, phonology and the other modules do not speak the same language: case, person, aspect, gender etc. are words that syntax, semantics and morphology understand – but they are meaningless for phonology. On the other hand, syntax, semantics and morphology do not know what [labial] or an onset is. Therefore, Jackendoff (1992,1997,2002) has introduced the idea that there are (at least) two ontological worlds in linguistics. As a consequence, he proposes a parallel, rather than the

¹ The orthodox autonomous syntax hypothesis denies any such conditioning, but there seems to be good evidence that especially higher prosodic levels have some bearing on syntax.

orthodox top-down model. Modules talk to each other via postcards (Jackendoff's correspondence rules) while building their respective constructions on the grounds of all information needed, i.e. originating in the lexicon, their own or foreign modules.

This scenario supposes a translator's office: in phonology, incoming postcards that were sent down through *phase* from higher modules need to be translated into the phonological idiom. In Government Phonology, the particular case that has already been treated in this perspective is the non-phonological information "beginning of the word", which needs to be translated into a phonological object before it can be processed by phonology. The output of the translator's office here is "an empty CV unit" (Lowenstamm 1999, Ségéral & Scheer 2001, Scheer 2004).

A necessary consequence of this approach is an absolute ban against diacritics: "#", "+" and the like do not qualify (neither in phonology nor elsewhere – physicists do not have any pink panthers in their theory). The only thing that diacritics represent is the fact that phonologists are unable (unwilling?) to discover the real identity of placeholders. Prosodic Phonology (Selkirk 1980, 1984), the dominant interface theory up to date, is an incarnation of the diacritic philosophy: it creates an arboreal structure that parallels morpho-syntactic divisions. Its units are purely diacritic (feet, prosodic word, phonological phrase etc.) because the only rule according to which they are created is their phonological effect. Contrary to syllable structure which depends on inherent properties of the terminal elements (sonority), prosodic arborescence replicates higher divisions and higher decisions without being subjected to any control of its terminal elements. Therefore, it makes no predictions: phonological phrases and the like do not have any predictable effect other than for the phenomenon that they are supposed to explain. By contrast, an empty CV unit makes predictions precisely because it is not of diacritic nature: an empty Nucleus is a regular phonological object that has stable and predictable properties everywhere in phonology – in the area that it has been called into, and elsewhere.

Privativity is another important principle. As a matter of fact, phonological structure is underfed with higher level information. Only a (small) subset of morpho-syntactic divisions has a phonological effect. Hence, there is no reason at all to follow SPE where *all* morpho-syntactic divisions were shipped off to phonology and later erased or modified (creating thereby the aforementioned boundary zoo). Rather, higher level intervention in phonology betrays itself by an inordinate event – inordinate according to domestic phonological standards. That is, either an

item is marshalled by phonological rule alone. In this case nobody has sent any postcard, the translator's office has not worked and nothing suspicious has happened. Or higher levels have decided to deviate the regular phonological rule. This is when diacritics come into play in traditional approaches, and when the translator's office is working here.

One major goal, then, is to discover what the result of the translation can be: is it arbitrary or does it follow some principles? I propose that there are four and only four outlets on the phonological end of the translator's office: higher level orders may

- 1) insert syllabic space: an empty CV unit
- 2) modify existing phonological structure, that is
 - a) make final empty Nuclei governed (hence silent: the muteness of final empty Nuclei (FEN) is an old problem in Government Phonology that usually runs under the label "parametric Licensing of FEN")
 - b) enable final empty Nuclei to govern
 - c) enable final empty Nuclei to license

These interventions are theory-specific: they apply only when Government Phonology representations are assumed. There is no way that I can see how translation could be theory-neutral: different theories manipulate different objects.

Nevertheless, some aspects of this approach also bring to light empirical patterns that are not usually identified. For example, it appears that non-phonological rule is only found to affect consonant-final words. I have not come across a phenomenon whereby vowel-final words show a peculiar behaviour at their right edge that has an extra-phonological conditioning. The reason for this is the existence of a FEN in the former, but not in the latter case. FEN are the actual targets of higher level intervention.

Another prediction that is made by the central role of FEN in higher level intervention also seems to have a strong empirical response: there should be, and there is, a disbalance between extra-phonological events at the left and at the right edge of words. We encounter final, not initial devoicing, there are super-heavy clusters at the right, not at the left edge, and so forth. Again, the reason for this is the existence of FEN at the end of words, but their absence from the left edge.

In sum, the amount and nature of extra-phonological information can be processed inside the phonological module ("how much morphology is there in phonology?") is defined by the four outlets of the translator's office: I hold that any variation of sound that responds to extra-

phonological factors but cannot be described by the manipulation of FEN or the insertion of syllabic space is not a possible derivational event.

Illustration of the purpose developed comes from several languages; it namely concerns the relative strength of word-initial consonants and the parametric existence of syllabic consonants in various languages (they are banned from Czech, but exist in Serbo-Croatian).

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