

## The place of phonology in the mental grammar (A synopsis)

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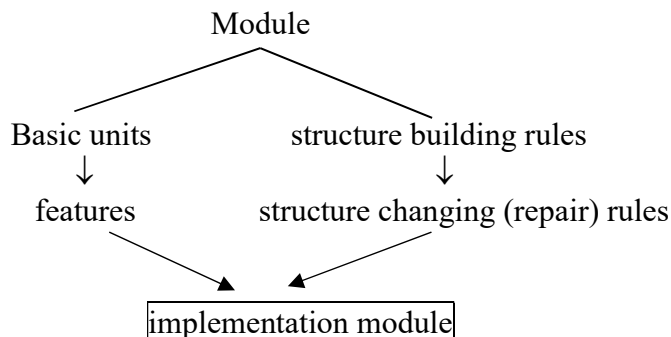
[All references to my own work can be going to the #number next to the references which refer to items under ‘Publications: <https://harry-van-der-hulst.uconn.edu/>’. Other references cited here are provided in the text below. Many other relevant references, among others to related work by others, can be found in my publications.]

A recurrent debate in linguistics has centered on the question whether phonology and syntax are entirely different kinds of grammatical modules. Some would say that they are, a view that is strengthened by placing phonology outside minimal language faculty, regarding it as a system for externalizing abstract syntactic structures. Following a tradition of thinking that is put central in Dependency Phonology, I have adopted the point of departure that different grammatical models are structurally analogous; see van der Hulst (2000 [#79], [#2005 [#117], 2006 [#120], 2010 [#129]), van der Hulst and Ritter (1999 [#89]) and Den Dikken and van der Hulst (2020 [#167]) who formulate a ‘One Syntax for All’ program. The structural analogies between syntax and phonology essentially follow from the fact that representation in both modules are organized in terms of head-dependency relations.

A specific idea about phonology being different is that, whereas syntax allows for recursion, phonology does not. I have pushed back against this idea; see van der Hulst (2000 [#79] and Den Dikken and van der Hulst (2020 [#167])). Assuming that syntax caters to, i.e., tries to express, conceptual structure the best it can, but in an economical, effort-saving way, it is natural that this module makes abundant use of recursion once we accept that conceptual structure is inherently recursive. Phonology, on the other hand, caters to the physical properties of speech and sign which arguably requires must less use for recursion due to the linear and simultaneous nature of these modalities.

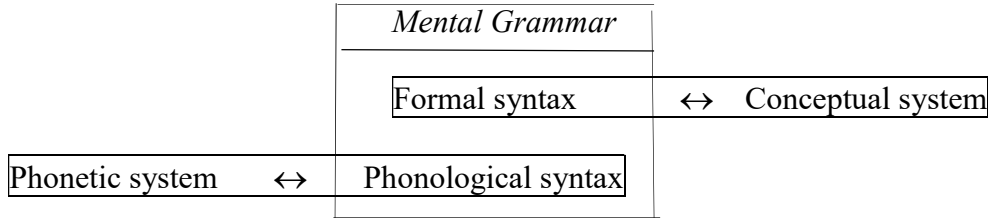
In van der Hulst (2024: chapter 6 and 2025: chapter 2; see books) I discuss in detail how I see the organization of the mental grammar and the place of phonology in it. Firstly, I suggest that both syntax and phonology have the following shared internal organization:

(1)



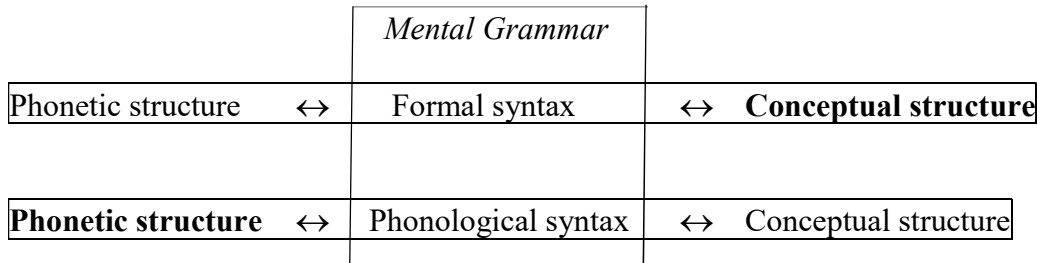
The mental grammar thus contains a syntactic system and a phonological system. In the following diagram, I indicate that Formal Syntax caters foremost to the conceptual structures, while phonology tries to faithfully encode a perceptual *phonetic structure* which is, while mind-internal, external to the mental grammar:

(2)



This model of the mental grammar captures the traditional distinction between the so-called *dual articulation of language*, with (often) syntax being called the ‘first articulation’ and phonology the ‘second articulation’. However, the diagram in (2) can be made more complete once we realize that *both* syntactic systems in the mental grammar can be influenced by *both* grammar-external systems, albeit that for each one type of structure is more important (here in bold):

(3)



The influence of conceptual structure on phonological form gives rise to what is called *iconicity*, which is a resemblance between the phonological form and the conceptual structure.

Given that grammatical modules must be a-modal to cover both spoken and signed languages (and possibly other semiotic systems). An a-modal phonology needs to be *substance-free* (like the founding father of phonology intended it to be), which means that primitives (‘features’), structural-combinatorial principles and rules do not make direct reference to phonetic substance. Nevertheless, for a complete account of the perceptible side of language, a-modal phonological representations must be linked to phonetic substance, which requires a so-called *Phonetic Implementation* module which, while a cognitive module, can be placed outside the mental grammar, just like the conceptual system (see 2 and 3).

The phonetic implementation systems is held responsible for automatic processes and generates a second set of (more ‘shallow’), and modality-specific phonological representations, which differ in many ways from the phonological representations that the a-modal Phonological Syntax generates. I have thus argued for having ‘two phonologies’ in [van der Hulst 2006 \[#127\]](#), referring to several other phonologists who have recognized this ‘duality’.

Once I had started working on the phonology of sign languages in the early 1990s, I realized not only that phonology has to be substance-free, but also that a substance-free approach is at odds with claims that phonological features are innate (even if one were to postulate two such sets). This then compels us to have a theory of how first language learners arrive at sets of features that are suitable for expressing contrast in either spoken or signed languages. My Radical CV Phonology model offers such a theory which is spelled out in great detail in [van der Hulst \(2020; see Books\)](#).

My work on phonology as a linguistic subdisciplines has included attention to the history of phonology. For the phonology of spoken languages, see [van der Hulst \(2013 \[#146\]\)](#), (2004 [#109]); for a history of sign phonology, see [van der Hulst \(2022 \[#171\]\)](#). Without knowing the history of our field, we run the danger of re-inventing wheels.