

## **The Formal Dynamism of Categories: stops and fricatives, simplicity vs. primitivity**

Shanti Úlfsbjörninn (SOAS)

Minimalist Phonology (Pöchtrager 2006) has at its heart the phonological epistemological principle (Kaye 2001) and exposes the arbitrariness in previous analyses of data. In constructing his framework Pöchtrager puts the ad-hocness of standard government phonology and strict-CV on trial, particularly with reference to their fondness for fixed categories. For Pöchtrager melody and structure are crucially different concluding that place of articulation is melodic (expressed with elements) while manner of articulation is structural. What Minimalist Phonology does explicitly is break down the dichotomies of sGP and sCV where heads (xN and xO) can license and incorporate elements and length into each other's projections, that is xN influences xO projections as well as its own and vice-versa. The effect this has is rendering the framework far more flexible and dynamic than previous analyses. In MP the difference between length in words like [bi:t] 'beat' and 'bi:d' 'bead' are explained by dynamic licensing alternations whereby in the former the [t] licenses a skeletal point between itself and the nuclear skeletal points while [d] cannot, thus the nuclear head (xN) is forced to license this same intermediary point. Therefore, the alternations between voicelessness and short vowels and voicedness and long vowels is presented as a dynamic alternation between heads licensing 'un-annotated' points; these un-annotated skeletal points are projections of either nuclear or onset heads but their eventual identity is a flexible. This dynamism is an aspect of the whole framework and this paper in particular will show that stops and fricatives evidence a plasticity of category.

This essay starts by amending Pöchtrager's onset-structure to account for the fact that, even though, fricatives are simpler in structure, stops are the more primitive of the two. It will be shown that, contra Pöchtrager (2006), the two licensing forces (which he adopts rather sporadically), m-command and control, can be assigned each to their own environment. Fricatives can be either fortis or lenis (as stops can) but this requires m-command to apply to the higher projection (x1, daughter of O'). Likewise, in stops the lower projection (x2, daughter of O') must be assigned control. This leaves the conclusion that in stops x1 can receive m-command or not, while in fricatives x2 can receive m-command or not. However, in stops x2 must be assigned control while this same position in fricatives can never be controlled. Despite the confusion, one can unify the environments by saying that m-command only ever applies to x1 while control only ever to x2. This comes at the price of starting all onsets with maximally projected structures (like stops), then licensing can be issued, each to its own environment, with the consequence that any un-licensed tiers are removed from the representation leaving, for instance, a fricative. This process evidences a dynamism of category with fricatives and onsets and any other type of onset starting out maximally projected (like a stop) and then reduced into fricatives or other forms.

This flexible view of onset derivation sounds counter-intuitive but it makes a valid prediction: fricatives are simpler in structure but stops are the more primitive of the two structures.

As evidence we will firstly show German, Dutch and Portuguese onset acquisition and show that this is indeed borne out by the facts (Fikkert 1994; Bernhardt and Stemberger 1998; Costa and Freitas 1998). Not only are stops acquired first by children but they even replace (homorganically) their fricative counterpart. This is exactly harmonious with an onset derivation which starts maximally extended and then is reduced into simplicity (fricatives).

Secondly, we will see that the typological implicational universal holds across phonological inventories: if a language has fricatives it has stops while if it has stops it might not have fricatives (Australian languages (Prof. Peter Austin p.c)). Again, this is an indication that fricatives, although more simple structurally are less derivationally primitive than stops. Thirdly, we will show that lenition patterns from stop to fricatives in a language like Qiang (La Polla 2003) are far simpler seen from a view of onset structure and derivation expounded in this paper while an analysis based on Pöchtrager's (2006) would be less economic.

The conclusion to take from this paper is that onsets, like everything in phonology, seems to act in a dynamo with categories which do exist but are flexible and constantly fluctuating. Here we see an example that a highly formal theory of phonology can perfectly account for such a dynamic process as stops becoming fricatives and even posit this position as the standard way in which fricatives are formed in the first place.

### **Bibliography**

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