

Gravitational grammar

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In this talk, we will present our proposal to replace the purely formal features, posited in a substantive body of linguistic work, by 'forces' operating on syntactic and phonological items. We posit that there are only two such forces: CENTRIFUGAL and CENTRIPETAL, and that such forces are operative cross-modularly. Any two elements within a module may either attract or repel each other. We show how such a model of GRAVITATIONAL GRAMMAR can capture many of the properties formerly ascribed to formal features while avoiding postulating different building blocks for different modules.

The proposal is that linguistic representations have two types of primitives: syntactic and phonological items (of the X, XP, Feature sort in syntax, and of the feature, segment, syllable, foot sort in phonology) on the one hand, and forces on the other.

The strongest forces that seem to be at work are: the tendency for elements to become similar to each other (we call this the CENTRIPETAL/ATTRACTING FORCE) and the (conflicting) tendency for elements to become dissimilar (CENTRIFUGAL/REPELLENT FORCE).

An example of centripetal force at work is ASSIMILATION, i.e. getting similar to another element. In syntax, for instance, one such assimilation is AGREEMENT, and consists of elements establishing a mutual co-variance relation, and eventually acquiring the same specification. In an agreement relation, all items "try" to conform to another, more prominent, one. In this case, the centripetal force acts on features.

Centrifugal/dissimilation forces are at work, for instance, in phonology in all OCP-related phenomena. OCP (Obligatory Contour Principle) has been proposed as an acting principle in morpho-phonology by Leben (1973) regarding the impossibility of identical tones to occur next to each other. In the course of time, the OCP has come to indicate any process impeding the co-existence of two identical elements, adjacent to each other. Something very similar to OCP is at work in syntax, namely the ban on symmetrical structures, where two phrases are in a sisterhood relation (XP YP configuration, Chomsky 2011).

In the talk, we will discuss these and similar cases in an attempt to provide evidence for our gravitational grammar model.