

THE CONSTRUCTIONAL EVOLUTION OF GRAMMATICAL FUNCTIONS AND THE THEMATIC REPRESENTATION OF EVENTS

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In this programmatic paper we explore the possibility of explaining the existence of grammatical functions (GFs) in languages as a consequence of the generalization by learners of correspondences between syntactic form and the representation of the thematic features of events and relations.

The GFs Subject and Object are taken for granted as having descriptive and explanatory significance in the vast majority of grammatical analyses. In some theoretical approaches, such as Relational Grammar, Simpler Syntax, HPSG and LFG, they are taken as primitives of syntactic representation. Thus, they are assumed to be universals. In Chomsky (1965), Subject and Object are names given to universal properties of syntactic configurations.

At the same time, there are significant exceptions. For example, Schachter (1976) argued that the grammars of Tagalog and other Phillipine languages are not organized around GFs, but around the marking of Topic and θ -roles. Mithun (1991) shows that there are 'active/agentive' languages that manage the correspondence between morphosyntactically marked grammatical arguments and θ -roles without appeal to GFs, while Mithun (2008) goes a bit further and argues that Central Pomo lacks a Subject GF, although it does have a construction that can be viewed as ?passivization?.. Many languages show 'differential argument marking', which suggests that what we think of as GFs are in fact various degrees of generalization of the correspondence between thematic structure and grammatical form.

The idea that a language can be fully functional in expressing θ -roles and distinguishing arguments without fully general GFs or without GFs at all raises the question that we explore in this paper: Where do GFs come from, if they are not universal? And if they are not universal, what are they, and why are they so ubiquitous in the languages of the world?

The idea that GFs are essentially grammatical categories that arise from the generalization of formal devices for marking thematic properties of arguments is not new. Shibatani (1991:103) writes that "our view on the subject is that: (a) it is a syntactic category resulting from the generalization of an agent over other semantic roles, (b) languages vary as to how far this generalization has taken place; i.e. the grammatical status of subject differs from one language to another, and therefore (c) the subject is not necessarily a universal category." And Keenan (1976) argues that an NP is a subject to the extent that it possesses a subset of properties on a list of semantic, thematic and syntactic properties.

Our goal is to explore the mechanisms that yield the sorts of 'generalization' envisioned by Shibatani. The approach thus has three components. First, we must specify how events and other kinds of relationships between entities are represented conceptually. Focusing here on subject, this means that we have to say in more precise terms what it means for an argument to have

agentive properties. Fortunately there is a reasonably solid foundation to build on in this regard, in the form of Keenan (1976), Dowty (1991) and others, and extensive typological description of differential marking, which we illustrate using data from Agul (Ganenkov et al. 2009).

Second, we must explain how a GF category is formed through generalization. Again, fortunately, there is a long and rich literature of grammaticalization that we can build on. The key idea, which is found throughout the literature, is that grammatical categories are formed through changes in the licensing conditions that define grammatical constructions (e.g. Traugott and Trousdale 2013). We assume a formal characterization of CONSTRUCTION, a definition of a grammar as a set of constructions, and a scenario in which a learner arrives at a grammar by hypothesizing constructions based on input consisting of individual constructs. Generalization (as well as complexification) is a consequence of the imprecision of the learner's hypotheses. We assume Alishahi and Stevenson's (2010) computational simulation of Bayesian learning of constructions to model construction acquisition.

The third component concerns the question of why change actually occurs. Why isn't the imprecision of the learner corrected through subsequent intense exposure to the correct correspondences? We suggest that errors by learners can become established changes if: (i) the errors are not so salient that they demand immediate correction, (ii) the social network in which learners interact allows for errors to propagate in a subpopulation, and (iii) the change is computationally advantageous (Culicover 2013). We propose to adapt the Alishahi and Stevenson (2010) simulation to model change in the network, and hence differential marking, as a consequence of propagation of learner error in the network.

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