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Variation and Formal Theories of Syntax, Chomskyan

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Variable Rule/Linguistic Variable

In the 1960s both sociolinguistic and formal syntax models contained formal rules that could be applied obligatorily or optionally. Formal rules in the earliest Chomskyan transformational model were transformations that connected deep structures with surface structures on the basis of rewrite rules. Optional rules, for example, derived passive, negative, or question sentences from declarative sentences. Labov introduced the concept of variable rule as an extension of this optional rule to include social and stylistic, i.e., external dimensions of language use along with linguistic, i.e., internal dimensions. There is some confusion about the notion of the variable rule since in the earliest literature it refers to both a theoretical model of how to analyze and account for language variation as well as to a method of statistical analysis (Cedergren and Sankoff, 1974). However, both paradigms soon followed their own avenues: the successive transformational models assumed the existence of categorical rules only while variationist sociolinguistics has maintained the notion of the optional rule. The two perspectives on the nature of formal rules reflect deep-seated differences between the two models. The variationist ideas are that the output of a linguistic rule can be probabilistic rather than discrete, and that a linguistic constraint can have a quantitative rather than deterministic effect on the outcome of the process. Formal syntax, however, postulates a blind, deterministic application of a series of procedures given a certain starting point (Chomsky, 1995).

Labov has modified the generative model with the variable rule as a means to accommodate interspeaker and intraspeaker variation. The variationist sociolinguistic practice that has evolved from studies of language variation and change since then takes the principle of accountability as basic (cf, Sankoff, 1990: 296). This principle states that the variants belonging to the same syntactic variable must be specified by the total number of occurrences and the potential occurrences or nonoccurrences in the variable environment, i.e., it ranges between 0% and 100%. It guarantees that the entire range of variability present in the data will be dealt with. The principle of accountability inevitably follows the synonymy principle. This principle is the prerequisite for variants to be assigned to the same linguistic variable: only syntactic variants that are equivocal with regard to referential meaning, i.e., variants that are 'alternate ways of saying "the same" thing,' belong to the same variable. In practice, the assignment of meaning or function of syntactic variants is considered as problematic (Lavandera, 1978).

The indeterminacy of synonymy/functional equivalence is considered not so problematic when examining the phenomenon of verbal agreement, which is present in many vernacular dialects of English all around the world (cf. King, 1994 for French varieties in Canada), as illustrated in (1):

(1a) We parch it (cf. Poplack and Tagliamonte, z1989: 49)

(1b) We parches the coffee

and copula variability, as in African-American Vernacular English (AAVE) (Rickford *et al.*, 1991) or creole varieties, illustrated in (2):

(2a) I **am** just telling the boys (cf. Weldon, 2003:43)

(2b) I'**m** gonna get me a blue tag

(2c) I feel like I Ø fourteen

The examples above illustrate that two or more forms of functional category such as number agreement in (1) and tense in (2) are considered to belong to one linguistic variable. Other linguistic variables that can be found in variationist sociolinguistic practice over the last fifteen years in journals such as *Language Variation and Change* and *Journal of Sociolinguistics* include, for example, null versus overt subjects in varieties of Spanish (Cameron, 1993) and Bislama (Meyerhoff, 2000), particles in Japanese (Takano, 1998) and Mandarin Chinese (Shi, 1989), null versus overt objects in Hungarian (Kontra, 2001), double objects in Dutch (Cornips, 1998), relativization strategies in English varieties and AAVE (Tottie and Rey, 1997), and negation in Scots English (Smith, 2001).

Furthermore, these studies examine nonstandard rather than standard varieties and they may differ considerably in the frequency of the tokens collected, which may range from 29 (Cornips, 1998) to 6809 (Tagliamonte, 1998). It appears that both a low and high frequency of (morpho)syntactic variables may reveal significant correlations between the use of linguistic variants and social dimensions in the speech community.

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Structural Representation of the Syntactic Variants

In addition to the synonymy principle, the notion of the linguistic variable as a structural unit was also based on the assumption that the variants have an identical underlying structure or representation, which is subject to variable surface realizations (Winford, 1996: 177). So the alternation between active and passive examples was considered to be instances of different surface manifestations of the same underlying or deep structure. Santorini (1993) and Pintzuk (1995) are examples of studies within the government and binding framework where it was argued that different word orders such as SOV and VSO are derived by movement. However, in later generative models, the idea of a derivational model was abandoned in favor of a configurational model (most recently Minimalism), in which a single representation is subject to various constraints. An example is the study of Meechan and Foley (1994), where variable verbal number agreement in existentials was analyzed as a reflection of different configurational positions of the postverbal NP (a second example is Meyerhoff, 2000).

As a consequence, the original notion of the linguistic variable as a structural unit such that syntactic variants are different surface realizations of an underlying structure has been lost too. The consequences are that the syntactic variable as a structural unit has to be defined again depending on the particular model of syntax one employs. Other studies that can be mentioned in the older principles and parameters framework are Henry (1995) and Cornips (1998), where variants constituting the linguistic variable were brought about by different properties of functional categories. Since the consecutive models in generative grammar follow each other at rather high speed, different makeups of the structural unit can be detected in recent decades.

An Overall Theory of Grammar and the Locus of Variability

Many researchers claim that a bridge between variation and theory remains possible; that is, it is assumed that there exists a fairly direct connection between grammar and language usage. The organization of the grammar may be reflected in the patterns of usage (Taylor, 1994) or quantitative results may lend strong support to structural analysis (Pintzuk, 1995). Or, to put it differently, through the use of variationist methodology and knowledge about the factors contributing to syntactic variation, one catches "a glimpse of grammatical structure" (Meechan and Foley, 1994: 82). Wilson and Henry (1998: 8) phrased the advantages of an overall theory of grammar including variation and formal theory as follows: "We may be able better to understand language variation and change as they are driven by social factors but constrained (at one level) by the nature of possible grammars." One problematic issue in this socially realistic account is how to account for the fact that individual speakers can use several variants of the syntactic variable when maintaining the same style level. This issue is related to the questions within the successive generative models about the locus of syntactic variation, and its restrictions and predictions. In the literature, two alternative approaches to this 'choice' have been suggested (Muysken, 2005). Either the 'choice' is put outside the grammatical mechanisms (Kroch, 1989; Adger and Smith, 2005), or it is put inside the grammar by re-introducing optional rules (Wilson and Henry, 1998; Henry, 2002). The first option was advocated by Kroch and his associates, who claimed that grammar is a blind, autonomous system and the notion of 'choice' (optionality, variability) is not part of it. Instead, the individual speaker revealing variability has separate or competing grammars. Adger and Smith (2005) also argued that the notion of 'choice' cannot be accounted for within the autonomous grammar. In contrast with Kroch's vision, this does not imply that individual speakers "have different grammars, *per se*, but rather a range of lexical items open to them, some of which will have syntactic effects." In their analysis, the notion of 'choice' concerned the level that serves as the input for the autonomous grammatical system. However, Henry (1995) argued that individual grammars include variability and, consequently, the speaker has a real choice in terms of syntactic operations, for instance, optional verb movement. However, all agreed that an analysis of language use (quantitative analysis, intra- and interspeaker variation) in addition to formal theory, i.e., the study of both internal and external constraints, has the potential not only to assess but also to refine theoretical conceptions of linguistic structure.

See also: Binding Theory; Chomsky, Noam (b. 1928); Constant Rate Hypothesis; Copula Variation; Functional Categories; Labov, William (b. 1927); Microparametric Variation; Principles and Parameters Framework of Generative Grammar; Syntactic Constructions; Syntactic Variables and Variable-free Syntax; Syntactic Variation; Weinreich, Uriel (1926–1967); X-Bar Theory.

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