Complexity in complementation: understanding lifespan change in verb complementation of individuals

Eleanor Smith¹, Peter Petré¹ University of Antwerp¹

Keywords: syntactic change, lifespan change, complementation, multifactorial classification models, complex adaptive system

For many linguists – regardless of their theoretical framework – linguistic variation occurs at the level of speech communities. Some have even ventured to say that the individual is "reduced below the level of linguistic significance" (Labov 2012: 265) regarding language change. This view leaves important questions unanswerable: how/why does variation spread? How do individuals accommodate this change in their understanding/use of the language? To answer these questions, the behaviour of the individual must be studied in detail.

This paper aims at providing such a detailed study of ten writers across two generations born around the 1660s and the 1710s respectively. It provides an investigation of the changes in their use of the competing variants of finite/nonfinite complement clauses (CCs) with a select group of complement taking predicates (CTPs). An example of the variation at issue is given in (1)

- (1) a. They *believed that* the Bible was the word of God. (1821, CLMET)
 - b. They *believed* the Bible *to be* the word of God. (adapted from (2a))
 - c. The Bible was believed to be the word of God. (adapted from (2a))

In this type of stable variation the newer variant coexists with the older variant, thus complementing the variationist literature focused on replacement of the older counterpart (e.g. Nevalainen et al. 2011). It has also been theorised that syntactic change often resides below the level of awareness (Labov 2001:28), making this an ideal case to study the role of cognitive representations and their flux due to the lowered influence of social variables. With this analysis of an unstudied type of syntactic change from a new perspective, we aim to add to Fonteyn & Nini's (2020:18), usage-based model of Individual variation. Further, in studying stable variation we seek to contribute to a theory of language as a complex adaptive system (Beckner et al. 2009).

Data consist of over 500,000 words per individual, annotated for CCs featuring a selection of CTPs falling within two semantic clusters (private and public factual verbs). Each instance is coded on eight functional variables (semantic, structural and discourse). Multifactorial classification models (conditional inference tree and random forest algorithms) are then employed to determine which language-internal factors an individual uses to condition the variation in their linguistic output, and to compare the relative importance of the constraints across individuals. An important advantage of the proposed statistical methods is that they are robust even with a relatively small amount of data (Fonteyn & Nini 2020).

Results suggest that individuals organise their complementation behaviour more along the lines of smaller partly idiosyncratic local systems rather than sweeping semantic groupings, which results in a substantial degree of inter-individual variation, which we will argue correlates with long-term stable variation. We also discuss the available evidence that certain individuals' grammatical generalisations exert more impact on the subsequent generation than others.

References:

Beckner C., R. Blythe, J. Bybee, M. Christiansen, W. Croft, N. Ellis, J. Holland, J. Ke, D. Larsen-Freeman & T. Schoenemann. 2009. *Language is a complex adaptive system*. Lang Learn 59.1–26.

Fonteyn, L. & A. Nini. 2020. *Individuality in syntactic variation*. Cogn Linguist 31(2).

Labov, W. 2001. Principles of linguistic change. Vol. 2. Social factors. Oxford: Blackwell.

Labov, W. 2012. What is to be learned: The community as the focus of social cognition. Rev Cogn Linguist 10.263–293.

Nevalainen, T., H. RaumolinBrunberg & H. Mannila. 2011. *The diffusion of language change in real time*. Lang Var Change 23.1–43.