Is each person's lexicogrammatical system unique? An experimental study on linguistic individuality

A logical prediction of usage-based approaches is that each person possesses a unique linguistic system, as it is extremely unlikely that two individuals have been exposed to the exact same input or have interpreted it in the same way. Research on this hypothesis is scarce, although a few corpus linguistic studies (Mollin, 2009; Barlow, 2013, 2018), indirect evidence from forensic linguistic casework (e.g. the Unabomber case, see Coulthard, Johnson and Wright, 2017; Wright, 2017), and computational authorship attribution research (Grieve, 2007; Stamatatos, 2009) do suggest that this prediction is correct. Experimentally, the most notable example is Dąbrowska's (2018, 2012) work, which lends support to the unique lexicogrammars hypothesis even though it does not directly address the question.

The present paper reveals new evidence in support of the hypothesis of unique personalised lexicogrammars using experimental methods. Expanding on a statistically re-analysis of Dąbrowska's (2014) "Words that go together" experiment, we present finding from a new experiment to test the uniqueness of the lexicogrammatical system. A small but highly controlled sample of eight native British English academics in the humanities was recruited to perform a test in a psycholinguistic laboratory. The test was made up of two sections: (i) given a sentence with a gap, the participants were asked to select the most appropriate variant of a grammatical construction; (ii) given a sentence with a gap, the participants were asked to write down the word that would more naturally fill it. The sentences for both sections were taken verbatim or with slight modifications from the British Academic Written English corpus to control for register variation. Section (i) was designed to test preferences for the choice of grammatical alternations in those contexts in which choice is unconstrained by other factors. Section (ii) was designed to study choices of collocations, with gaps positioned in slots where equally likely lexical options could be chosen. This test was taken twice by each participant: the second time after at least two weeks. The participants were not told that they would have taken the same test twice and for the second session the prompt sentences were randomly re-ordered. The post-experiment de-briefs with the participants suggest that they were not aware that the two tests were completely identical.

The results of the experiment are indicative of the uniqueness of the lexicogrammatical systems, despite the highly similar background of the participants. Not only not two sets of answers were identical, but the percentage of similarity between intra-speaker tests was significantly higher than between inter-speaker tests. This result suggests that the uniqueness found is not just arising from chance but is a reflection of the participant's lexicogrammatical system. The paper will deal with the consequences of this finding for general linguistic theory and its implications for forensic linguistics.

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