To the HSE Dissertation Council  
in Philology and Linguistics

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Victor Kuperman, PhD

On the dissertation of Natalia Slioussar

On the topic: «EXPERIMENTAL STUDY OF SEVERAL CORE CONCEPTS OF THEORETICAL MORPHOLOGY (ON THE MATERIAL OF RUSSIAN): REGULARITY, SYNCRETISM, MARKEDNESS», for the purpose of obtaining Philosophy Doctor in Philology and Linguistics HSE

The dissertation summarizes a program of experimental research in Russian morphology, represented by a selection of seven papers. I find this research program to be both extensive, innovative and theoretically impactful. Dr. Slioussar is among the first to incorporate a broad range of linguistic phenomena that Russian morphology makes available into theories of morphological representation and processing. This enables the dissertation to substantially expand the empirical body of knowledge that is primarily based on very few morphologically-impoverished Indo-European languages. The novel reliance on the Russian material allowed Dr. Slioussar to adjudicate between conflicting accounts of regularity and markedness and offer a new account of syncretism. The toolkit of experimental techniques that Dr. Slioussar uses in her work is impressive: from neurophysiological techniques (fMRI) to behavioral studies of production and comprehension. This multi-faceted approach is an important step towards bridging the subfields of linguistics and psychology that are often disjoint in the literature. One can only hope that more researchers pursue the same methodological breadth and scope that is found in this dissertation. I also commend Dr. Slioussar for contributing to the creation and dissemination of a lexical database, which effectively opens the linguistic phenomena of Russian to be used in cross-linguistic research. The methodological diversity calls for a good command of analytical and statistical methods: I found the data analysis in the dissertation work to be rigorous, valid and well-justified. In six experimental papers, the design is thought-through and adequate to the goals of each respective study. The seventh paper that reports a corpus uses state-of-the-art computational techniques too.
Like every important body of research, Dr. Slioussar’s work raises new questions and hints at new directions. I have several questions and comments on the following paper, presented as publication 3 in the dissertation:


1. This paper makes a convincing case that syncretic (morphologically ambiguous) attractors generate more attraction errors than morphologically unambiguous ones. Moreover, the case of accidental syncretism of nominative plural and genitive singular triggers more errors than the systematic syncretism (nominative plural and accusative plural) in nouns. There exists a related line of research on syncretism that emphasizes the role played in language production and comprehension by distributional properties of the inflectional paradigms and syncretic cells in those paradigms (Blevins, 2013; Milin et al., 2010). This research proposes multiple ways to quantify the complexity of paradigms in information-theoretic terms (involving such measures as entropy, relative entropy and information content). Under this theory, the difficulty of processing individual cells in the paradigm can be determined both by the number of the possible exponents and their statistics of occurrence across all nouns in a paradigm and a specific noun. I would like to invite Dr. Slioussar to speculate on whether the information-theoretic approach can offer an additional viable account of the difference between the systematic and accidental syncretism. The systematic regularities are more expected, less informative and hence more difficult (i.e., trigger fewer errors).

2. My other question on the same topic derives from the fact that information-theoretic measures like entropy or amount of information are gradient (continuous). Thus, syncretic forms in a specific noun can be associated with different amounts of information, depending on how frequently this noun occurs in the cases that show syncretism. Would Dr. Slioussar predict a gradient effect of syncretism on the incidence of attraction errors and other indices of processing effort, as a function of the information encoded in syncretic cells of the paradigm? Or is the distinction between types of syncretism strictly binary, systematic vs accidental? Finally, if the effects of information

3. I have an additional technical observation regarding experimental stimuli in Slioussar (2018). The critical manipulation was whether or not the dependent noun (pole/polya) showed syncretism or not. The head noun was manipulated between singular and plural (trassa/trassy) but was not expected to show syncretism, see below:
trassa/trassy čez pole/polja
highway-NOM.SG/NOM.PL across field-
ACC.SG(=NOM.SG)/ACC.PL(=NOM.PL)

Yet quite a few head nouns were outright syncretic: trassy highway-
NOM.PL(=GEN.SG) or vypiski extract-NOM.PL(=GEN.SG). A few more head
nouns (in about 10% of the stimuli) were homographic with other inflections of
those nouns. Specifically, they only differed in the position of stress, which is not
overtly marked in Russian (pI's'ma-letter-NOM.PL vs pis'mA-letter-GEN.SG; the
stressed vowel is capitalized). Other cases of homography that may elicit the
NOM.PL vs GEN.SG syncretism during reading include cEny vs cenY 'price',
dOski vs doskI 'plank', stEkla vs steklA 'glass', and tEni vs tenI 'shadow'. It is the
case in all these alternations that the verbal agreement unambiguously indicates
that the head nouns are all nominative plural. Still, I wonder if the possibility of
morphological ambiguity in the head noun, even if it is ultimately resolved in the
sentence, may affect the incidence of attraction errors over and above the factors
related to the dependent noun.

To summarize, in my opinion, the performed research is of the highest scientific
quality. Selected topics are very relevant to the current linguistic and
psycholinguistic research. Also, the interpretation of results and theoretical
conclusions are well articulated, novel and influential. The candidate is eligible to
be awarded the academic degree of Philosophy Doctor in Philology and
Linguistics. In view of its outstanding quality, I recommend this candidate for the
cum laude degree.

References:
An information theoretic approach to the processing of paradigmatic structure in
inflection and derivation. Analogy in grammar: Form and acquisition, 214-252.
Full name: Victor Kuperman

Academic degree/academic title: PhD
Place of work: McMaster University
Position: Associate Professor
E-mail: vickup@mcmaster.ca