

ATTRACTION ERRORS IN CASE AGREEMENT: EVIDENCE FROM RUSSIAN

Background. Agreement attraction errors, as in (1), have been subject to scrutiny in the last decades (e.g. Bock & Miller 1991; Eberhard et al. 2005; Franck et al. 2002, 2006; Vigliocco et al. 1995).

(1) **[[The key] to the cabinets] were rusty* (the underlined word is an attractor).

The main observations were the asymmetry of the error patterns (only plural attractors elicited errors) and the similarity of the effects in production and comprehension. The theoretical explanations fall into two main groups: (a) feature percolation (e.g. Franck et al. 2002; Eberhard et al. 2005) and (b) cue-based retrieval (e.g. Solomon & Pearlmutter 2004; Wagers et al. 2009). According to (a), the number feature of the attractor percolates upwards and the whole subject DP is erroneously marked as plural. The explanations in (b) suggest that the error occurs when we try to find the head of the subject DP for the purposes of agreement and retrieve a wrong noun. In languages that have morphological case this tends to happen when the form of the attractor coincides with the Nom.PL form, like in German (2a) as opposed to (2b) (Hartsuiker et al. 2003). The Pl/Sg asymmetry is explained by the markedness of the Pl feature.

(2) a. *die Stellungnahme gegen die Demonstrationen* ‘the position against the_{ACC.PL=NOM.PL} demonstrations’
b. *die Stellungnahme zu den Demonstrationen* ‘the position on the_{DAT.PL≠NOM.PL} demonstrations’

Our study. We report a production experiment looking at case agreement errors in Russian, which are frequent in spontaneous speech (e.g. Rusakova 2009). The attractor in Russian is a syncretic form of adjective, an example is given in (3). This phenomenon has some important similarities and differences to number agreement attraction.

(3) **Mozaiiki* [v [novyx xramov]]... (the attractor is underlined)
mosaic_{NOM.PL} [in [new_{LOC(=GEN).PL} church_{GEN.PL}]]

Design and materials. The task was to listen to the beginning of a sentence, to repeat it and to continue it using the words on the screen, one of which required case agreement. Examples are given in (4a-b).

(4) a. Skazki **ob** ispolnyayushchix lyuboye zavetnoye zhelaniye + volshebnytsy
Tales about fulfilling any deep desire + enchantresses
long condition; preposition in bold requires Loc., the case of underlined word must be changed from Nom. to Loc.
b. Po slozhivsheysya traditsii sorenovaniya **sredi** yunyx + lyzhniki
According to established tradition competitions among young + skiers
short condition, preposition in bold requires Gen., the case of underlined word must be changed from Nom. to Gen.

We manipulated the case required (Gen/Loc) and the linear distance from the attractor (three words / no words), using 2*2 square design with 10 stimuli per condition and 80 fillers.

Results. So far, 21 native speakers of Russian (age 18–42, 14 females) took part in the experiment (we are going to recruit more, but all relevant differences between conditions have already reached statistical significance according to the chi-square test). Attraction errors were elicited only in the Loc conditions (i.e. Gen forms were produced instead of Loc forms, 37 errors in total). There were significantly more errors in the long conditions than in the short conditions (34 vs. 3 respectively).

Discussion. The Gen/Loc asymmetry cannot be explained by defaultness/markedness. We propose to use the paradigm of directional syncretism (Baerman et al., 2005) to explain this phenomenon, as it postulates a hierarchical structure of the case system, unlike other paradigms of feature syncretism. According to it, in the Russian case system the Gen.PL value does not have its own form and is defined through a reference to the Loc.PL value. This can be compared to the defaultness/markedness effects producing inequality of feature values.

Comparing our results to the ones obtained in the studies of the same case errors in comprehension, we find a striking asymmetry. In several recent self-paced reading experiments looking at Gen.PL and Loc.PL forms, as we did in our study (e.g. Slioussar & Cherepovskaia 2014), attraction effects have been observed both in the Gen and in the Loc conditions. Namely, attraction errors triggered smaller slow-down

in reading than other case errors after prepositions requiring both Gen and Loc (notably, in the Gen conditions, the reaction to all types of errors was more pronounced). This suggests that the processes underlying the phenomenon are different in production and in comprehension. This is in line with the conclusions from some recent studies of number agreement attraction (Tanner et al., 2014), but the difference is more dramatic in our case. There are two possible explanations. Firstly, number and gender features can be different from case feature in terms of agreement mechanisms. Secondly, the structural relations in attraction configuration in our examples are different from the ones studied before with number and gender features (compare (1) and (3)), so the attraction itself may work differently in our case.

In any account, the percolation approach cannot provide a realistic explanation for the studied pattern because the attractor itself should agree with the noun and the Gen value cannot percolate from it to the preposition, as prepositions obviously do not have cases, but rather assign them. Cue-based retrieval seems to be a more probable explanation, if the error occurs at the re-checking stage when the syncretic form of the attractor activating several feature sets creates a misleading effect.

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