

Homophony Avoidance: An Experimental Approach

Homophony avoidance (also Anti-Ident) is a disputed tendency for languages to preclude words with differing semantic components from having identical phonological outputs. Detractors of the idea point to many cases of homophony produced by phonological mergers (King, 1967; Sampson, 2013) or discuss the theoretical issues it produces (Mondon, 2009; Chiosain&Padgett, 2009). Proponents of the idea point to instances of sporadic change (Bethin, 2012), inhibition of regular sound change (Crosswhite, 1999) and paradigm gaps (Baerman, 2010), all of which seemingly occur to avoid homophonous forms. Few, if any, however, attempted to broach the question experimentally.

Russian masculine nominals fall into three stress patterns (Coats, 1976): **stable stress** (stress on the stem in the singular and the plural), **end stress** (stress on the suffix in the singular and in the plural), **mobile stress** (stress on the stem in the singular but on the suffix in the plural). See Table 1 for a schema of Russian nominal morphology. In addition, Russian masculine nominals take one of two nominative plural suffixes *-i* or *-a*. Given that the genitive singular for all masculine nominals is also *-a*, one would expect some words to have homophonous nominative plural and genitive singular forms. However, our corpus study finds only one such item; the remaining items ‘avoid’ homophony either by adopting a mobile stress pattern or suppletion of a different stem in the plural.

To test if the correlation between mobile stress and the nominative plural *-a* is motivated by homophony avoidance, an online experiment was conducted. The experiment was a nonce-word forced choice task. Participants (speakers of Russian, N=100) were split randomly into one of two groups: **exposed** and **unexposed**. For each trial, both groups were presented with a picture of an alien accompanied by a recording of two sentences. The **presentation sentence** contained the species name of the alien (nonce) in the nominative plural, which was always disyllabic and suffix-stressed. The suffix in the nominative plural varied between the two forms available (*-i* and *-a*). The **test sentence**, which followed immediately, omitted a noun corresponding to the species name in one of the singular cases (the case could be elucidated from context). Participants were then given an opportunity to fill in the blank by choosing one of the two stress patterns displayed orthographically. Participants in the unexposed group were never asked to give the genitive singular and were, therefore, never exposed to possible homophony. Participants in the exposed group were occasionally asked to give the genitive singular and were exposed to potentially homophony between that form and the nominative singular. Incorrect answers, with the nonce word in a case incompatible with the context, and control items, with varying stress assignment and grammatical gender, were also included.

For words with the *-i* nominative plural suffix, both stress assignments are congruent with corpus. However, for words with the *-a* nominative plural suffix, only stem stress is found in the singular (mobile stress). If the pattern in the corpus is not motivated by homophony avoidance, both groups and all cases should yield the same proportion of stem stress assignments. If the combination of nominative plural in the presentation sentence and genitive singular in the test phase produces a higher degree of stem stress assignments, this is evidence of homophony avoidance as a psychologically salient phenomenon.

The results can be seen in Table 1. As predicted, participants were more likely to shift stress to the stem when a nominative plural ending in *-a* in the presentation sentence was combined with a genitive singular (also ending in *-a*) in the test sentence. The exposed group chose stem stress 37.6% of the time when asked for the instrumental, 43.3% of the time when asked for the dative, and 63.2% of the time when asked for the genitive (the homophonous form).

A generalized logistic regression model was run with singular stress as the dependent variable, group, nominative plural suffix (in the presentation sentence) and singular case (in the test sentence) as independent variables, and with participant and item as mixed variables. The model found the three-way interaction of group, suffix and case to be significant ($p < .001$), confirming the main hypothesis of this project.

Speakers of Russian were more likely to shift stress when doing so would avoid homophony with another form paradigm. In cases where there was no threat of homophony, speakers were less likely to shift stress and were more likely to accept forms which are incompatible with Russian stress patterns. In addition to an exploration of Russian stress, this project contributes experimental evidence, which is lacking, to the debate concerning homophony avoidance, concluding that homophony avoidance is a salient entity in the grammar of speakers.

Stress	Stable		End		Mobile	
Number	Singular	Plural	Singular	Plural	Singular	Plural
Nominative	σ	'σ-i	σ	σ-'i	σ	σ-'i / σ-'a
Genitive	'σ-a	'σ-ov	σ-'a	σ-'ov	'σ-a	σ-'ov
Dative	'σ-u	'σ-am	σ-'u	σ-'am	'σ-u	σ-'am
Instrumental	'σ-om	'σ-am'i	σ-'om	σ-'am'i	'σ-om	σ-'am'i
Prepositional	'σ-je	'σ-ax	σ-'je	σ-'ax	'σ-je	σ-'ax

Group	Unexposed		Exposed	
	-i	-a	-i	-a
Nom. Pl. Suffix				
Dative	.392	.435	.341	.433
Instrumental	.294	.365	.281	.376
Genitive			.381	.632
Prepositional	.385	.374		

References:

Baerman (2010), Defectiveness and homophony avoidance;
 Bethin (2012), Effects of vowel reduction on Russian and Belarusian inflectional morphology;
 Chiosain&Padgett (2009), Contrast, Comparison Sets, and the Perceptual Space;
 Coats (1976), Stress assignment in Russian;
 Crosswhite (1999). Intra-Paradigmatic Homophony Avoidance in two Dialects of Slavic;
 King (1967). Functional Load and Sound Change;
 Mondon (2009), Nature of Homophony and its Effects on Diachrony and Synchrony;
 Sampson (2013), A counterexample to homophony avoidance.