

Professions and gender agreement in Russian

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Abstract

In Russian, most nouns denoting professions are historically masculine, but can now be used as common gender: with both masculine and feminine agreement. At the same time, some of these nouns have paired feminine nouns (e.g. *žhurnal'ist* 'journalist_{M/(F)}' – *žhurnal'istka* 'journalist_F'). We investigated for the first time how the availability of such pairs influences the processing of common gender nouns with feminine agreement. We found that online (in a self-paced reading task), this factor does not play a significant role, while stereotypicality (which professions are perceived as stereotypically male or female) does. Offline (in an acceptability judgment task), the situation is the opposite.

Keywords: grammatical gender, profession, stereotype, processing, Russian.

Introduction

Russian language has three grammatical genders: masculine (M), feminine (F) and neuter (N). The gender of the noun cannot be unambiguously determined from its inflectional affixes (although there are some clear tendencies), but becomes evident from agreeing adjectives, participles and verbs. Like in many other languages, most nouns denoting professions are masculine in Russian.

How to call a female director or a female author in Russian? Two routes are available. Firstly, a corresponding grammatically feminine noun can be formed (e.g. *žhurnal'ist* 'journalist_M' – *žhurnal'istka* 'journalist_F'). Russian uses a variety of suffixes to form such nouns, and many masculine nouns denoting professions do not have an established feminine counterpart at all. Secondly, Russian has so-called common gender, and an originally masculine noun can be used with masculine and feminine agreement (e.g. *nash* / *nasba vrach* 'our_M / our_F doctor'). This route is available for any masculine noun denoting profession, even when a paired feminine noun exists.

Many studies focus on processing of gender agreement with nouns denoting professions in different languages (e.g. Carreiras et al., 1996; Gygax et al., 2008), including Russian (Garnham, Yakovlev, 2015; Magomedova, Slioussar, 2021; Slioussar, Generalova, 2018). But it was never investigated how the availability of paired feminine nouns influences the processing of common gender (historically masculine) nouns with feminine agreement. This question is interesting both for gender linguistics and for theoretical morphology. We address it in the present study in two experiments focusing on online processing and offline judgment.

Self-paced reading experiment

Method

63 native speakers of Russian participated in the study. We constructed 24 stimulus sentences like (1). The subject was always a common gender noun. Half of the nouns had a paired feminine noun, the other half did not (we avoided nouns with colloquial pairs). In both groups, half of the nouns denoted professions that Russian speakers perceive as stereotypically male, while the other half denoted stereotypically female professions (based on the study by Garnham and Yakovlev (2015)). The sentences appeared in two conditions, with masculine and feminine agreement, as (1) shows, and were divided into two experimental lists together with 50 grammatical fillers.

- (1) V reklame kosmetolog blestjashche prezentoval/prezentovala novyj krem.
in advertisement cosmetologist brilliantly presented_{M/F} new cream
'In an advertisement, the cosmetologist brilliantly presented a new cream?'

The word-by-word self-paced reading methodology was used. To ensure that participants are reading properly, one third of the sentences was followed by questions with a choice of two answers. No participants were excluded based on low accuracy, and below, only RTs are discussed.

Results and discussion

Average RTs per region in different conditions are shown on Figures 1 and 2 (*p* stands for nouns with feminine pairs, *un* for unpaired nouns, *f/m* for feminine or masculine agreement on the predicate).

Mixed-effects regressions with random intercepts and slopes by participant and by item were used for the statistical analysis. The fixed factors were pairedness, stereotypicality and verb gender. For the first two factors, we were interested not in their main effects (sentences about different professions contained different lexical items), but in their interactions with the verb gender factor. We analysed data in different regions and found significant results only in the regions 5 and 6.

In region 5, the verb gender, stereotypicality and their interaction were significant ($\beta = 51.19$, $SE = 13.63$, $t = 3.76$, $p < 0.01$; $\beta = 59.02$, $SE = 13.59$, $t = 4.34$, $p < 0.01$; $\beta = -45.65$, $SE = 19.58$, $t = -2.33$, $p = 0.03$). In region 6, the verb gender and its interaction with stereotypicality were significant ($\beta = 49.01$, $SE = 14.45$, $t = 3.39$, $p < 0.01$; $\beta = -44.19$, $SE = 21.17$, $t = -2.09$, $p = 0.05$). In other words, sentences with feminine agreement are processed more slowly than the ones with masculine agreement (i.e. it is still a less expected option), but this delay is less pronounced with stereotypically feminine professions. We can conclude that in online processing, the existence of a paired feminine noun does not play a significant role, while stereotypicality does.

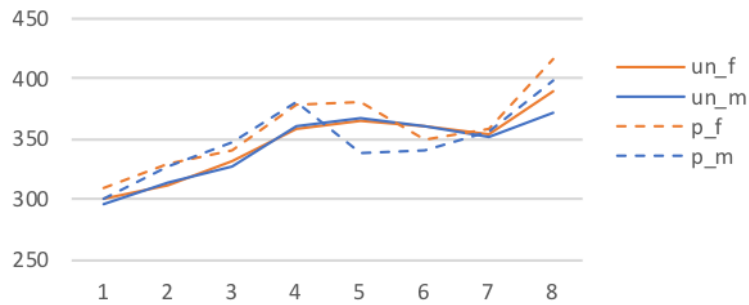


Figure 1. Average word-by-word RTs (in ms) with nouns denoting stereotypically female professions.

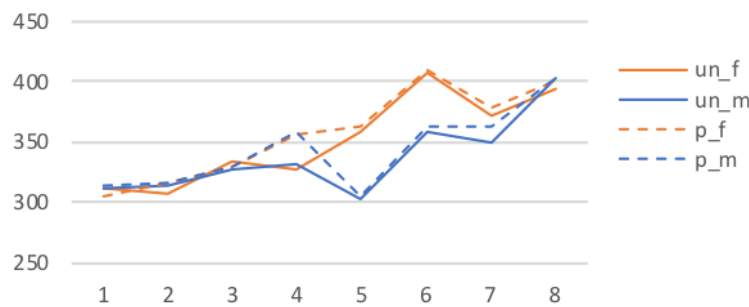


Figure 1. Average word-by-word RTs (in ms) with nouns denoting stereotypically male professions.

Acceptability judgment experiment

Method

40 native speakers of Russian participated in the study. We constructed 24 stimulus sentences like (2). Like in the first experiment, the subject was always a common gender noun, and we had an equal number of paired and unpaired nouns denoting stereotypically male and female professions. The proper names made it clear that target sentences described women. We also had 24 analogous filler sentences with male proper names. Participants were asked to judge the acceptability of the sentences on a 1 to 5 scale.

- (2) Psikholog Lidia Mikhajlovna chutkaja.
 psychologist L.M. sensitive_F
 'Psychologist Lidia Mikhajlovna is sensitive.'

Results and discussion

The average ratings in the paired conditions were 3.8 for stereotypically female professions and 3.7 for stereotypically male ones, while in the unpaired conditions, they were 2.8 and 3.2, respectively. We used mixed-effects ordinal regressions with random intercepts and slopes by participant and by item. The fixed factors were pairedness and stereotypicality. The results were the opposite to the online experiment: pairedness was significant ($\beta = 2.73$, $SE = 0.42$, $t = -7.54$; $p < 0.01$), while stereotypicality was not, although numerically, there is a tendency for stereotypically female professions to receive higher ratings.

We assume that the pairedness factor reaches significance only offline because it requires a complex metalinguistic judgment (figuring out that there is another, better way to express the same meaning). We also hypothesize that stereotypicality is significant only online because it influences predictability: feminine agreement is used more often with stereotypically female professions and is more readily expected after nouns denoting such professions. Judging how natural a sentence sounds, readers do not take stereotypes into account. This is a non-trivial result because stereotypes are very persistent and, if we go beyond its strictly scientific implications, a very encouraging finding.

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