Factual Imperfectives in Russian: A picture-selection task

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Across Slavic languages, imperfective (IPFV) verb forms can lead to perfective (PFV) interpretations of event completion−−called factual imperfectives (henceforth factual IPFVs) This project focuses specifically on one subtyle of factual IPFV: presuppositional factual IPFVs (example (1)).

(1) Zimnij Dvorec **stroil** Rastrelli.
Winter.ACC palace.ACC **built.IPFV** Rastrelli.NOM
'It was Rastrelli who built the Winter Palace.' (Glovinskaja 1981)

Grønn (2004), in his influential theoretical account of factual IPFVs in Russian, assumes that the IPFV is underlyingly underspecified, with context strengthening the IPFV to either a true or a factual IPFV. The context must adopt a retrospective viewpoint in order to presuppose event completion [6]; the VP must be backgrounded, with non-canonical word order (OVS) used. Once a factual IPFV interpretation is triggered by the context, perfective (PFV) semantics are assigned. The event is contained within the reference time and event completion is semantically entailed. This account of factual IPFVs predicts that factual IPFVs should have a strong association with the result state, since they share semantics with the PFV. Grønn's account of factual IPFVs additionally predicts that once context has assigned PFV semantics to the IPFV form, there is no remaining ambiguity with the process reading of a true IPFV.

There is little existing experimental work on factual IPFVs. Klimek-Jankowska (2020) investigates the production rates of factual IPFVs in Polish; however, the interpretation of factual IPFVs has not been experimentally studied. The present study fills this gap by examining the interpretation of IPFV verb forms using a picture-selection task [4, 5, 7]. 40 native Russian speakers, recruited in Moscow, read 20 test scenarios—each consisting of two to three sentences. I manipulated two variables in a 2x2 design: preceding context and word order of the target sentence. Preceding context was one or two sentences before the target sentence, which were in either IPFV or PFV aspect. The target sentence was either in OVS or SVO word order. After reading the contexts, participants were asked to select either one or both pictures, depending on what best fit the scenario immediately following the provided context. The prompting question was designed to help participants adopt a retrospective viewpoint [6].

Results largely verified Grønn (2004) (Figure 1). A logistic mixed effects regression model revealed that target sentences with OVS word order ($\beta = 0.366$, $z = 3.413$, $p < .001$) and preceding context with PFV aspect significantly increased result responses ($\beta = 0.467$, $z = 4.292$, $p < .001$). Results diverged from Grønn by revealing that at least a small subset of native Russian speakers allowed for factual IPFV readings to be ambiguous with a process reading (Figure 2).

The outcome of this experiment verifies the descriptions provided in Grønn (2004) with experimental evidence. However, the results also demonstrate more variability both within and across Russian speakers than Grønn predicts. Although Grønn states that native Russian speakers largely agree on which contexts assign factual IPFV readings, participants disagreed about where factual IPFV readings were available. For any given context, some speakers allowed for a true IPFV reading, while others selected the factual IPFV interpretation. Finally, a subset of native Russian speakers allowed for factual IPFV readings to remain ambiguous with a process reading, suggesting that the relationship factual IPFVs have to event completion semantics is weaker than that of PFVs.

SAMPLE PRECEDING CONTEXT

PERFECTIVE	IMPERFECTIVE
V XIII veke naš gorod byl okružen krepostnoj stenoj s pjat'ju dozornymi bašnjami. Odnu iz nix **soorudili** bliže vsego k reke.	V XIII veke naš gorod byl okružen krepostnoj stenoj s pjat'ju dozornymi bašnjami. Odnu iz nix **sooružali** bliže vsego k reke.
'In the 13th century, our city was surrounded by a fortified wall with five watchtowers. One of them was **erected.PFV** closest to the river.'	'In the 13th century, our city was surrounded by a fortified wall with five watchtowers. One of them was **erected.IPFV** closest to the river.'

SAMPLE TARGET SENTENCES

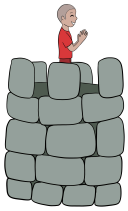
OVS

(2) Bašnju stroil Ivan.
tower.ACC build.IPFV.PST.M Ivan
'Ivan built the tower.'

SVO

(3) Ivan stroil bašnju.
Ivan build.IPFV.PST.M tower.ACC
'Ivan built the tower.'

SAMPLE PICTURE RESPONSE CHOICES

Process	Result
	

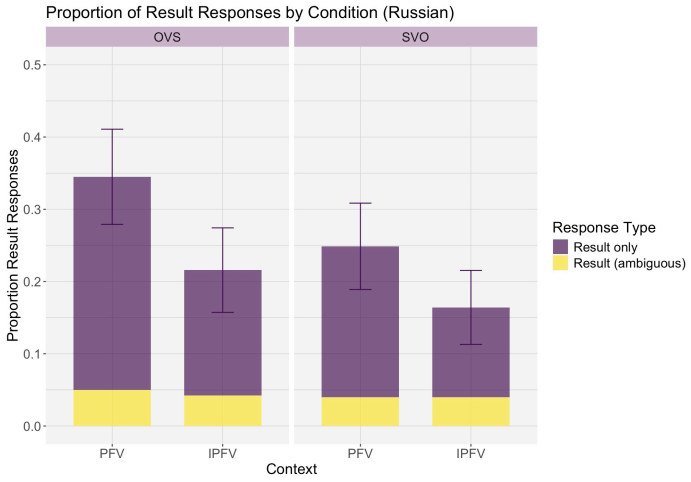


Figure 1: Proportion of result responses by word order and context.

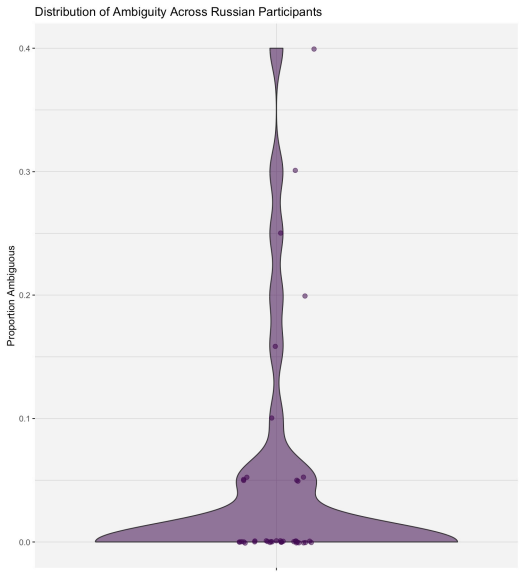


Figure 2: Violin plot showing the probability density of ambiguity rates, with individual participant data points overlaid.

Selected References

[1] M. J. Glovinskaja. "Obščefaktičeskoe značenie nesoveršennogo vida (formy prošedšego vremeni)". In: *Problemy strukturnoj lingvistiki 1978*. Moscow: Nauka. 1981, pp. 108–125. [2] A. Grønn. "The semantics and pragmatics of the Russian factual imperfective". PhD thesis. University of Oslo, 2004. [3] D. Klimek-Jankowska. "Factual Imperfective Contexts in Polish". In: *Studies in Polish Linguistics* 15.3 (2020), pp. 103–127. [4] S. Minor, N. Mitrofanova, and G. Ramchand. "Fine-grained time course of verb aspect processing". In: *PLOS ONE* 17.2 (Feb. 2022), pp. 1–20. DOI: 10.1371/journal.pone.0264132. [5] S. Minor et al. "Aspect processing across languages: A visual world eye-tracking study". In: *Frontiers in Language Sciences* 1 (Jan. 2023). [6] E. Padučeva. "Semantika vremeni i vida v russkom jazyke". In: *Jazyki russkoj kul'tury, Moscow*. 1996. [7] Z. Vendler. "Verbs and Times". In: *The Philosophical Review* 66 (1957), pp. 143–160.