

Russian Aspect in Context

Laura A. Janda

UiT The Arctic University
of Norway



Robert J. Reynolds

Brigham Young
University



CLEAR

Cognitive Linguistics: Empirical Approaches to Russian

Experimental Approach to Russian Aspect

- How do native speakers of Russian react to **aspectual choices in extended authentic context**?
- To what extent is the choice of perfective vs. imperfective **determined by context**?
- To what extent is the choice **open to construal**?
- Do **native speakers differ** in their choices?
- What **factors** are at play?
- How can we use this information to **improve instruction**?



Overview

- What motivated this experiment
- Design of experiment
- Results
- Conclusions

What motivated this experiment

- Certain lexical “triggers” are known to determine aspect
- BUT: How often are these triggers available?
- In other words, **what percentage** of verbs appear in collocation with triggers?

	Adverbials as triggers	Verbs as triggers
Perfective	<i>nakonec</i> ‘finally’, <i>vnezapno</i> ‘suddenly’, <i>srazu</i> ‘immediately’, <i>čut’ ne</i> ‘nearly’, <i>vdrug</i> ‘suddenly’, <i>uže</i> ‘already’, <i>neožidanno</i> ‘unexpectedly’, <i>sovsem</i> ‘completely’, <i>za tri časa</i> ‘in three hours’...	<i>zabyt’</i> ‘forget’, <i>ostat’sja</i> ‘remain’, <i>rešit’</i> ‘decide’, <i>udat’sja</i> ‘succeed’, <i>uspet’</i> ‘succeed’, <i>spešit’</i> ‘hurry’...
Imperfective	<i>vsegda</i> ‘always’, <i>často</i> ‘often’, <i>inogda</i> ‘sometimes’, <i>poka</i> ‘while’, <i>postojanno</i> ‘continually’, <i>obyčno</i> ‘usually’, <i>dolgo</i> ‘for a long time’, <i>každyj den’</i> ‘every day’, <i>vse vremena</i> ‘all the time’, <i>tri časa</i> ‘for three hours’... categorical negation: <i>ne nado</i> ‘should not’, <i>ne stoit</i> ‘not worth’, <i>ne razrešaetsja</i> ‘not allowed’...	Phasal verbs: <i>stat’</i> ‘start’, <i>načat’/načinat’</i> ‘begin’, <i>prodolžit’/prodolžat’</i> ‘continue’, <i>končit’/končat’</i> ‘stop’ Verbs of motion: <i>pojti</i> ‘go’, etc. Others: <i>učit’sja</i> ‘learn’, <i>umet’</i> ‘know how’, <i>ljubit’</i> ‘love’...

What motivated this experiment

- Only **2 percent** of verbs appear in collocation with triggers
- Are there other unknown triggers?
- How can we find out where aspect choice is obligatory and where it is variable?

	Adverbials as triggers	Verbs as triggers
Perfective	<i>nakonec</i> 'finally', <i>vnezapno</i> 'suddenly', <i>srazu</i> 'immediately', <i>čut' ne</i> 'nearly', <i>vdrug</i> 'sudd 'unex <i>za tri</i>	<i>zabyt'</i> 'forget', <i>ostat'sja</i> 'remain', <i>rešit'</i> 'decide', <i>udat'sja</i> 'succeed', <i>uspet'</i> 'succeed', <i>spešit'</i> 'hurry'...
Imperfective	<i>vsega</i> 'some 'conti 'for a day', 'for three hours ... categorical negation: <i>ne nado</i> 'should not', <i>ne stoit</i> 'not worth', <i>ne</i> <i>razrešaetsja</i> 'not allowed'...	... 'continue', 'go', etc. Others: <i>dat'sja</i> 'learn', <i>umet'</i> 'know how', <i>ljubit'</i> 'love'...



How do native speakers of Russian react to aspectual choices in extended authentic context?

- We conducted an experiment with over 500 native speakers and their reactions to aspectual choices for verbs in extended authentic contexts (1100-1600 words) representing various genres
- For each verb where it was morphologically possible to form both a Perfective and an Imperfective form, participants rated both the original form and the corresponding form of the opposite aspect as “Impossible” = 0, “Acceptable” = 1, or “Excellent” = 2

Stimuli and Participants

Genre	Abbreviated Title	Words	Items (pairs)	Participants
Fiction	Beetle	1459	300 (150)	83
Journalistic Prose	Summit	1116	166 (83)	84
Scientific-Technical Prose	Phages	1558	198 (99)	72
Spoken Narration	Yellow Sign	1275	160 (80)	99
Guided Spoken Narration	MSLU	1617	278 (139)	78
Radio Interview	Ivan D.	1468	244 (122)	85
<i>Totals</i>			<i>1346 (673)</i>	<i>501</i>

Stimuli were chosen based on criteria of Authenticity, Genre Balance, Length, Density of Test Items, and Appropriateness

Participants were recruited over the Internet and randomly assigned to stimuli

Number of Test Item Pairs for Each Combination of Aspect and Subparadigm

	Perfective	Imperfective	<i>Total</i>
Past	298	134	432
Future	50	7	57
Infinitive	104	60	164
Imperative	10	10	20
<i>Total</i>	462	211	673

Verb forms excluded: Present tense, forms of быть, gerunds and participles, bi-aspectual verbs (e.g. родиться, реализовать), other verbs not paired for aspect, such as –ся passives (e.g. предназначаться), and стать in the phasal meaning ‘begin’

Participants were NOT told what the original aspect was

Sample text as presented to participants:

Право выбора жизненного пути -- большой подарок судьбы. У Василия этого права не было. Он безропотно [принял / принимал] выбор, который за него [сделала / делала] судьба, и это был великий шаг.



Participants were asked to rate BOTH the Perfective and the Imperfective verb forms

What our experiment looked like:



В квадратных скобках всегда предлагается два глагола на выбор. Для каждого глагола выберите уровень приемлемости ("Отлично", "Допустимо" или "Невозможно") в данном контексте. Оба глагола в квадратных скобках могут получить одинаковую оценку. Выбор уровня приемлемости зависит от вашего личного восприятия.

По завершении задания вы получите лотерейный код. Не оставляйте никаких глаголов на голубом фоне и не отвечайте случайным образом, иначе ваш код будет исключен из лотереи.

Участие в эксперименте добровольно. Вы можете прервать эксперимент в любой момент.

Соглашаюсь / не соглашусь / не знаю, понимаю / не понимаю / не знаю. Вы понимаете и принимаете условия эксперимента.

Отлично

Допустимо

Невозможно

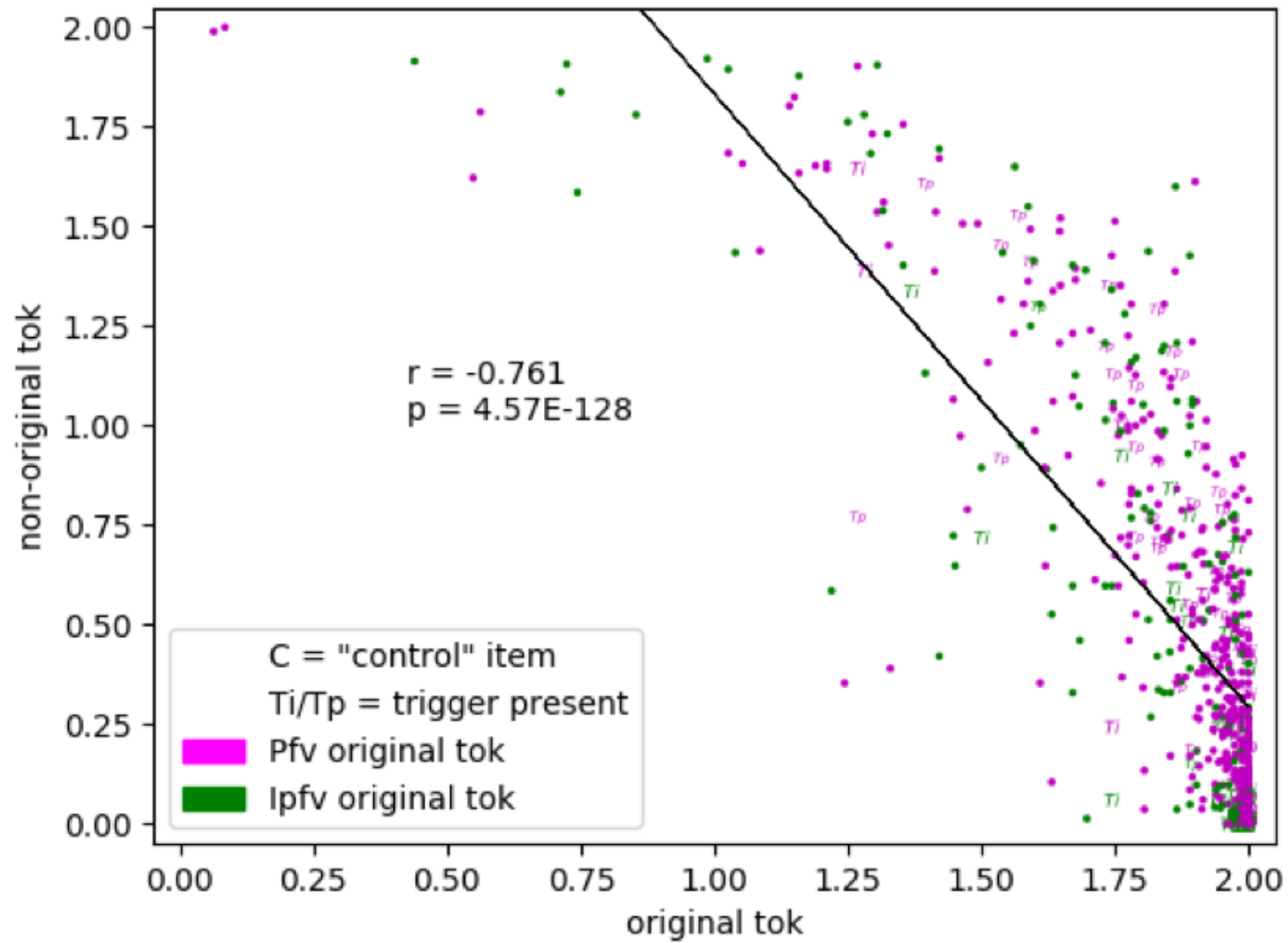
Право выбора является подарком судьбы. У Василия этого права не было. Он безропотно [принял / принимал] выбор, который за него [сделала / делала] судьба, и это был великий шаг.

Василий родился в семье зажиточного кулака в Брянской области. Когда мальчику [исполнилось / исполнялось] три года, его отец [сошелся / сходился] с работницей. Мать Василия была из семьи священника, и ничего мужу не [сказала / говорила], по-христиански [потерпела / терпела] все

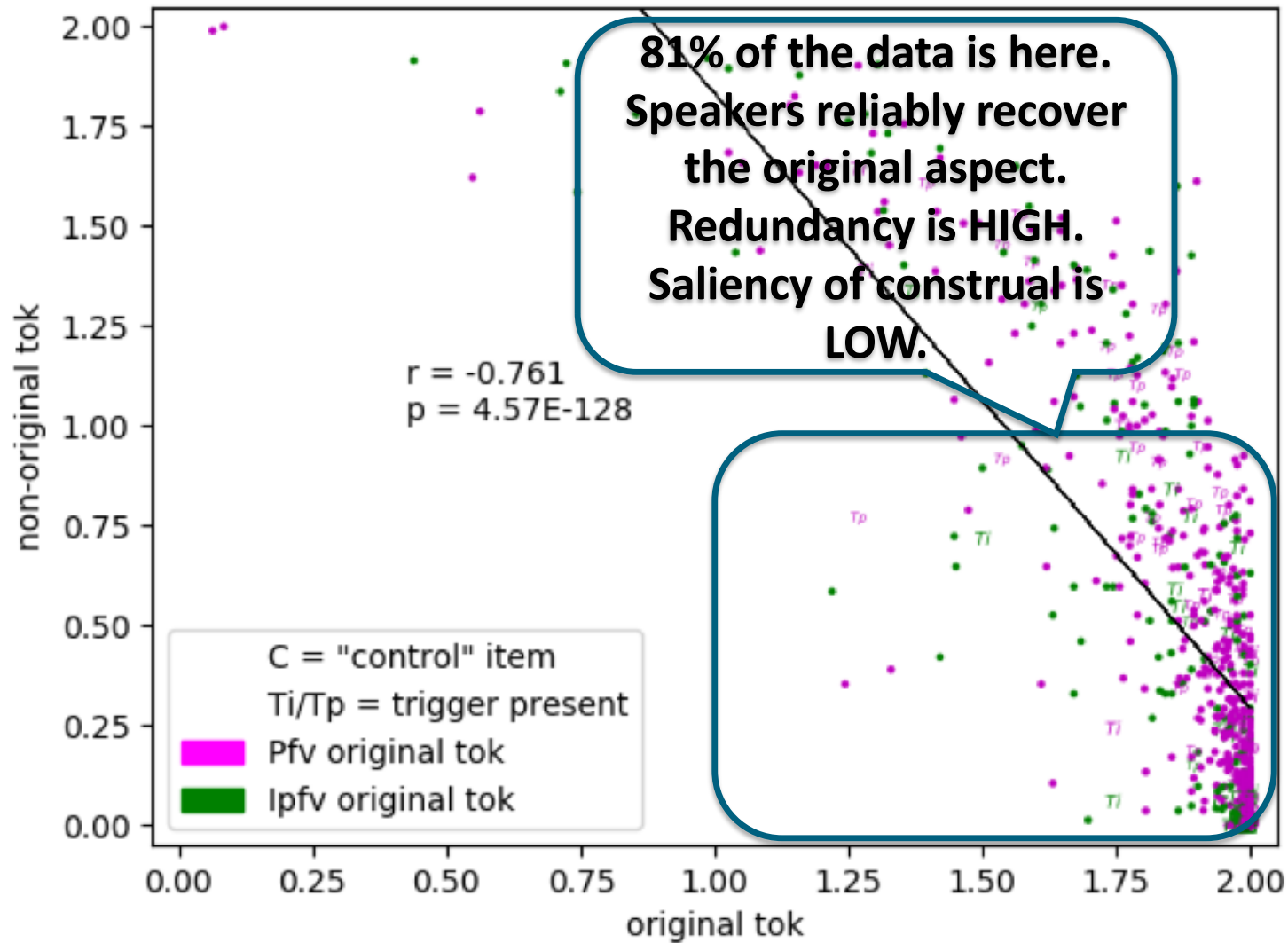
Results

- Distribution of responses
 - **81%** of items received **categorical responses**, confirming that the original aspect was much preferred over the non-original aspect: here **aspect is HIGHLY redundant**
 - **17%** of items received similar ratings for both original and non-original aspect: here **aspect is HIGHLY open to construal**
- Native speakers react very differently to original vs. non-original aspect in terms of consistency – **responses for non-original aspect are much LESS consistent**

Weighted average ratings



Weighted average ratings



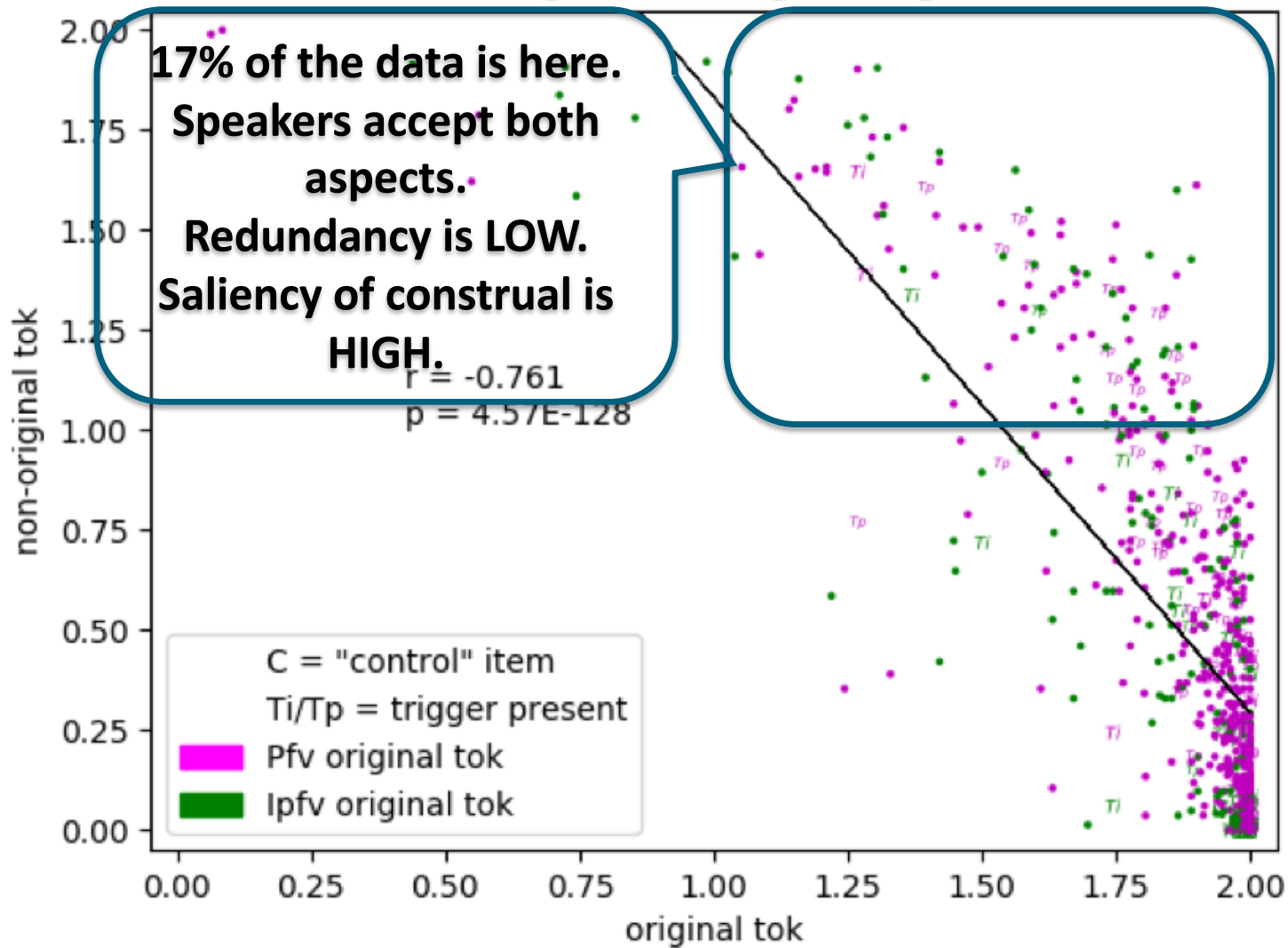
Examples of test items where redundancy of aspect is HIGH and construal is LOW

В восемь лет мальчик [сбежал / сбегал] из дома.

Богомольная женщина никогда не [обругала / ругала] его, но...

	Impossible = 0	Acceptable = 1	Excellent = 2	Average
Perfective сбежал (original aspect)	0	0	82	2.0
Imperfective сбегал (non-original aspect)	68	12	2	0.195
Perfective обругала (non-original aspect)	79	3	0	0.037
Imperfective ругала (original aspect)	0	0	82	2.0

Weighted average ratings



Examples of test items where redundancy of aspect is LOW and construal is HIGH

Он умел незаметно [вытащить / вытаскивать] деньги из кармана зеваки.

Выжившую из ума старуху никто всерьез не [принял / принимал], но...

	Impossible = 0	Acceptable = 1	Excellent = 2	Average
Perfective вытащить (original aspect)	10	40	32	1.268
Imperfective вытаскивать (non-original aspect)	2	25	55	1.646
Perfective принял (non-original aspect)	9	30	43	1.415
Imperfective принимал (original aspect)	4	25	53	1.598

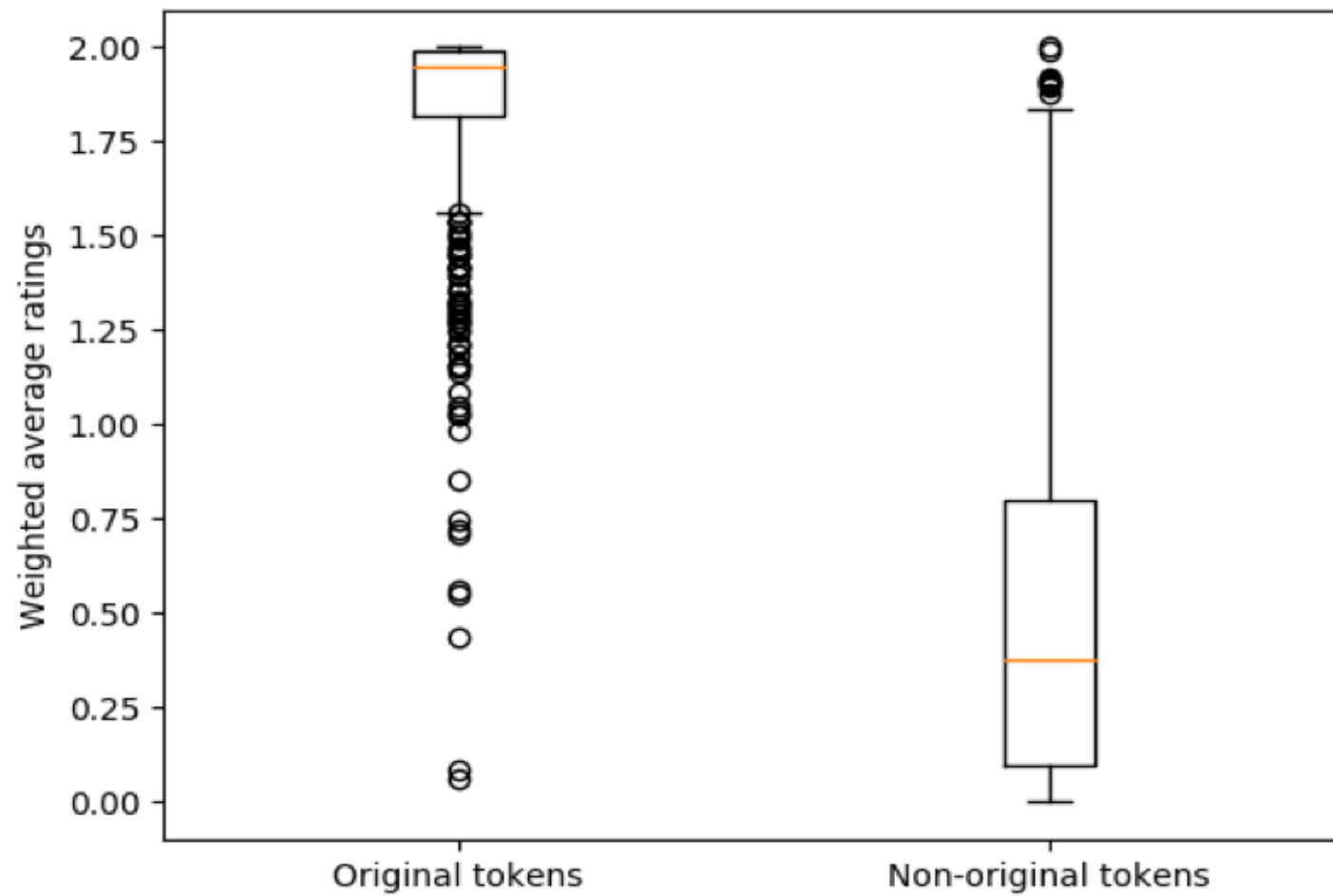
Presence/Absence of Triggers Doesn't Seem to Matter to Native Speakers

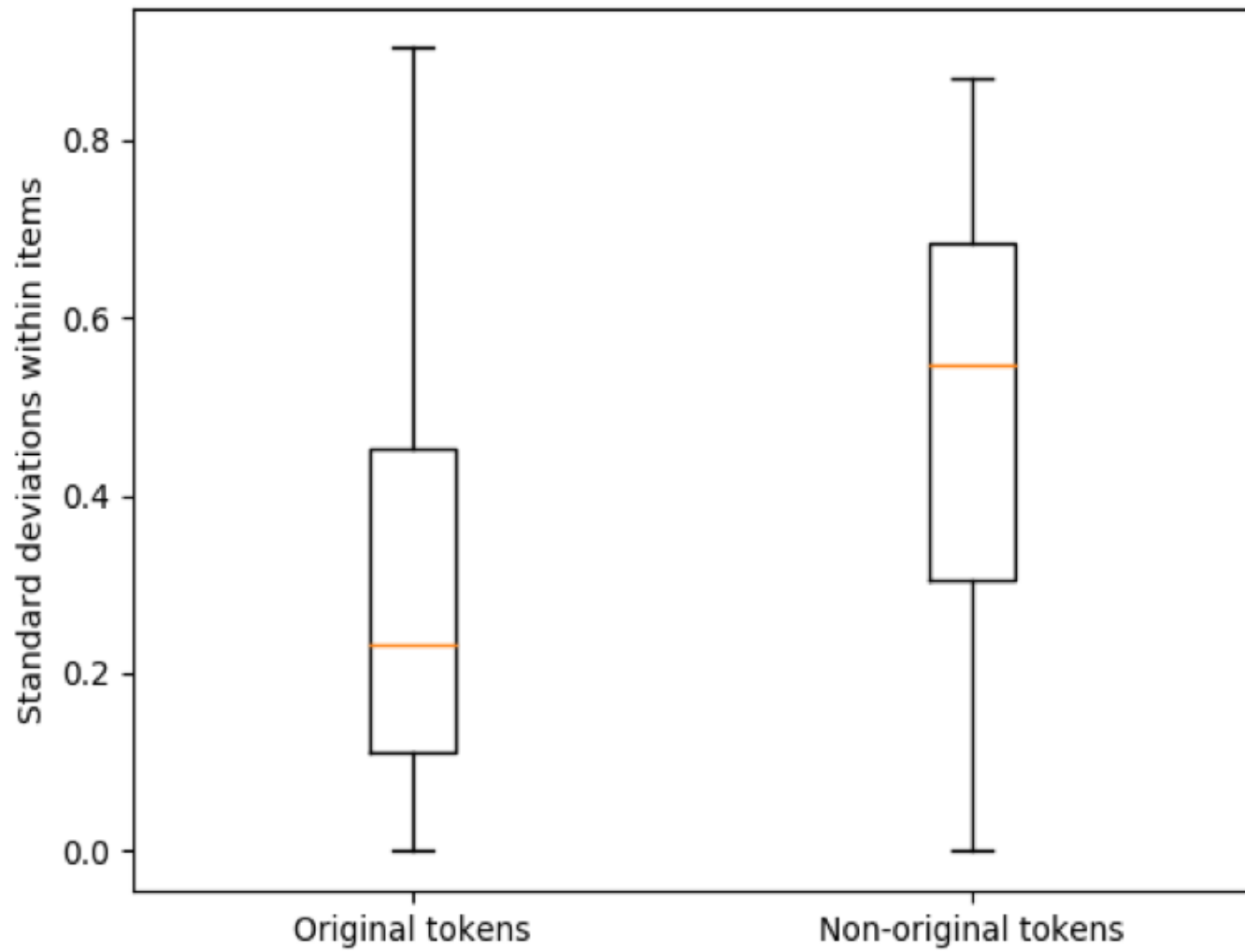
	Number of test item pairs	Mean rating (original aspect)	Mean rating (non-original aspect)
Triggers associated with Perfective	55	1.8658	0.5985
Triggers associated with Imperfective	57	1.9158	0.2570
Triggers (total)	112	1.8912	0.4247
Remaining test items	561	1.8414	0.5453

Native speakers are less consistent in rating of the non-original aspect

Фагов [подвергли / подвергали] полногеномному секвенированию

	Impossible = 0	Acceptable = 1	Excellent = 2	Average
Perfective подвергли (non-original aspect)	24	24	23	0.986
Imperfective подвергали (original aspect)	2	13	56	1.761





Native Speakers Differ in Their Choices, Especially When Reacting to Non-Authentic Language

- This data gives evidence of divergence in the grammars of speakers
- Native speakers are more reliable in reacting to authentic language, than in reacting to language that has been manipulated (here, by suggesting an aspectual form that does not match the original text)
- This result may also have implications for how much linguists can rely on the intuitions of native speakers in reaction to constructed “examples” as opposed to authentic ones



Conclusions

- Contextual triggers listed in grammars co-occur with only 2% of verbs
- Native speakers generally agree on the original aspect (81%)
- In some contexts native speakers accept both aspects (17%)
- Presence vs. absence of “triggers” does not change distribution
- Native speakers are more consistent in rating the original aspect
- There is a lot of variation!
- There are no clear groups in this data!

What's next:

- Corpus data, experiments, and machine learning to ferret out and model the way that native speakers use context to select aspect
- Discover differences between contexts where aspect is determined and where it is open to construal
- Build effective resources for language learners



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