Preference for single events guides perception in Russian: A phonemic restoration study

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1 Introduction

Given that sentences often underdetermine event construal, how do language users associate event representations with strings? One possibility is that the human language sentence processing system constructs a single event unless the context or grammar suggests otherwise. We present evidence that the perception of complex predicates in Russian is influenced by a general preference for a single event construal. In essence, perceivers are biased to resolve distorted speech towards a single event interpretation when grammatically licensed. In this study, we used the phonemic restoration method to explore how a single event preference would affect the restoration of the conjunction morpheme, which disambiguates between two structures with different event profiles.

1.1 The single event preference

Events are widely regarded as fundamental to cognitive and linguistic systems: pre-linguistic infants appear to discriminate between unique events, and are often encoded by linguistic devices (tense, aspect, verb nominalization) dedicated to their expression (e.g., Casati & Varzi 2015). Although we adopt an intuitive understanding of eventhood, we acknowledge that many issues surrounding event identification and composition are far from settled (Davidson 1969; Pietroski 2005; Truswell in press). The individuation of entities, including events, remains a recalcitrant problem in philosophy and cognitive science. For concreteness, we will simply assume that events are space-time entities, which occupy spatial locations and can be composed of event-parts. The composition of events is usually discussed in terms of a mereological sum operation, subject to additional linguistic and perceptual constraints (see Truswell in press for discussion). For example, an event of flying across the country may be quite complex, consisting of multiple discrete subevents from taking off to touching down, to everything that happens onboard in between. Despite being composed of subevents, we can refer to the flight as a singular event object, which we may qualify in various ways: *John's flight was long and bumpy*. What constitutes a *single event* is much harder to identify, but we assume, as a rough approximation, that subevents within a single event must be spatially and temporally contiguous with a gapless running time (e.g., Harris 2009).

To illustrate, the event interpretation for even the simplest of sentences like *John and Mary took the test* can be construed in multiple ways. On a *single event construal*, the sentence above describes a scenario in which John and Mary took a test in approximately the same time and location. On a *multiple event construal*, the same sentence describes a scenario in which John took the test at a different time

and/or different location than Mary. Without an explicit adverbial to specify the time or location, like *John and Mary took the test on different days*, the sentence is compatible with either interpretation. Many factors, such as the particular context of utterance, or how likely the predicate is to be distributive or collective, are likely to influence how the situation described by the sentence is interpreted.

Nonetheless, recent experimental research suggests a relatively strong bias towards a single event construal, unless prohibited by the grammar. Evidence for such a preference has been observed in areas as diverse as collective/distributive ambiguities (Clifton & Frazier 2012), coordination (Clifton & Frazier 2013; Hoeks *et al.* 2002), quantifier domain ambiguities (Harris *et al.* 2013), and reciprocals (Fiengo & Lasnik 1973; Majewski 2014).

There are many possible origins for a single event preference, including cognitive or representational simplicity. Following comments in Fiengo & Lasnik (1973) that reciprocals tend to describe one 'general' event, Majewski (2014) proposes that sentences are typically understood as describing a single occasion.

(1) **No Extra Times (NET).** A sentence describes a single occasion (unless there is evidence to the contrary). (Majewski 2014)

Harris *et al.* (2013) propose that this preference may be understood in terms of a general conceptual economy principle, which militates against representing more complex situations, scenarios, or times of evaluation without reason. This characterization does not rule out other factors guiding interpretation, most notably grammatical or processing constraints on structures generating interpretations. We follow this line of research in assuming that there is a general, though not absolute, preference for a single event construal wherever possible. The study reported below capitalizes on two double verb constructions in Russian that promote different event interpretations.

1.2 Serial verb constructions

Serial verb constructions (SVC) appear in a whole host of languages worldwide (e.g., Aikhenvald & Dixon 2006; Bisang 2009). The term refers to a cluster of cases in which two or more verbs are roughly interpreted as a single, complex predicate. Serial verbs are usually ordered contiguously within a single clause, so that they share a subject and any other internal arguments (2), as well as inflectional features like tense and aspect. In some languages, inflectional features are expressed only on one of the verbs (3), while in others, they must be expressed on each verb (4).[1] Russian is a case of the latter (5), in that both verbs are inflected (Weiss 2012).

(2) *Argument sharing in Ewe* (Collins 1997)

M-a da nu du
I.FUT cook think eat

'I will cook something and eat it'

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[1] **List of glosses**: 1,3 person, COND conditional, CONV converb, F feminine, FUT future, M masculine, PL plural, PST past, REAL realis, SG singular.

(3) *Tense expressed on only one verb in Ewe* (Collins 1997)

Me a   fo kadegbe (*a) gba
I   FUT hit lamp   FUT break

'I will hit the lamp and break it'

(4) *Tense expressed on each verb in Numbami* (Bradshaw 1993)

e   i-ma   teteu   i-ndomini   aiya
s/he 3.SG:REAL-come village 3.SG:REAL-seek you

'He came to the village and looked for you.'

(5) *Tense expressed on each verb in Russian* (Weiss 2012)

Сядем уснем

Syadem   usnem
sit.1PL.PRES fall-asleep.1PL.PRES

'We will sit down fall asleep'

Across languages, a restricted set of verbs tend to appear in SVCs, and consist primarily of light verbs that have acquired a semantically bleached usage through grammaticalization, though they usually retain both this light and a fully lexicalized use (Traugott & Dasher 2001; Anderson 2006; Butt 2010). Semantically, they are interpreted as single events (Anderson 2006; Aikhenvald 2006; Bisang 2009; Durie 1997, among many others, but see also Haspelmath 2016), so that the light verb modifies either the aspectual specification or some subprocess of the main verb. Prosodically, verbs in SVCs are contained within the same phonological phrase.

We assume that verb serialization describes a constellation of constructions that appear cross-linguistically with similar verbs, and that there is a continuum with typologically prototypical examples at the center (e.g., Aikhenvald 2006). Although there is some debate about the existence of SVCs in Russian (Aikhenvald 2006), Weiss (2012) presents a number of compelling arguments that such cases are indeed instances of verb serialization. First, the morphology of the verbs is identical in terms of features like person, number, gender, voice, and tense (6). Second, the verbs in these constructions obligatorily share the same subject, but do not permit repetition of auxiliary or inflectional morphemes, as in the conditional morpheme *by* in (6b). Examples are from Weiss (2012).

(6) a. Пойду проверю
    pojdu   proveryu
    go.1SG.PRES verify.1SG.PRES
    'I'll go [and] check'

b. Ты бы легла (*бы) спала
    ty by   legla   (*by)   spala
    you COND lie.down.3SG.F.PST (*COND) sleep.3SG.F.PST
    'You should lie down [and] sleep'

(7) Пошел бы проверил

Pošel   by   proveril
go.3SG.M.PST COND find-out.3SG.M.PST

' You should go [and] check'

Third, although serial verb sequences are string identical to a bi-clausal construction with a covert conjunction (akin to "asyndetic parataxis"), prosodic phrasing disambiguates the structures. When the two verbs are located within the same prosodic phrase, only a serial verb interpretation is possible. A prosodic break intervenes between the verbs in bi-clausal cases, where each verb contributes a distinct event. These instances are sometimes indicated with a comma, though orthographic disambiguation is unreliable in corpora (Weiss 2012).

In many languages, SVCs alternate with cases in which a conjunction intervenes between the two verbs, e.g., English *go (and) buy some whiskey*. When conjoined, the construction is also compatible with both a single and a multiple event construal. One environment that distinguishes the two interpretations comes from uses of adverbs that presuppose multiple events (e.g., *both* or *simultaneously*). As multiple event construal can be forced with the correlative adverb *both* (Johannessen 2005), only the variant with a conjunction is grammatical with the adverb (8b).

(8) a. John should go (and) buy some whiskey.
    b. John should both go *(and) buy some whiskey.

Another test case involves *wh*-extraction from the verb complex. Cases like (9a) exemplify well-known counterexamples to the Coordinate Structure Constraint, in which extraction from only one conjunct is prohibited (Ross 1967). Yet, extraction is blocked when *both* forces a multiple event construal (9b), suggesting that *both* prevents the monoclausal structure needed for the single event interpretation (see, e.g., Harris 2009 for discussion).

(9) a. What did John go (and) buy __ ?
    b. * What did John both go (and) buy __ ?

Russian displays many of the same properties. When a conjunction intervenes between the light and the main verb, the event interpretation is compatible with both a single event or a multiple event construal. However, when there is no conjunction and the verbs are produced within the same prosodic phrase, the verbs are interpreted as contributing a single event. We capitalized on the fact that in Russian the conjunction morpheme is a single phoneme /i/, and used the phonemic restoration technique to explore how subjects interpret sentences with a phonetic mask between SVC verbs. We reasoned that, following *No Extra Times*, subjects would be tempted to interpret the constructions as single events whenever possible, and would fail to insert a conjunction between verbs if maintaining a SVC were possible. We briefly introduce the phonemic restoration technique before describing the study in detail.

1.3 Phonemic restoration

The linguistic perception of speech is so extraordinarily powerful that it sometimes creates illusory auditory percepts. Listeners routinely restore a missing or drastically distorted phonemic segment, often reporting that a word was complete when it was not. In the phonemic restoration method, an intruding sound (such as a cough, tone, or high-amplitude noise, depicted here as ⊠) masks a phoneme, which has either been excised or drastically reduced in volume (Warren 1970; Samuel 1981). For example, listeners easily restore the /s/ in *legislatures* when it is masked by an intruding segment (10). The illusion dissipates when the mask is removed, leaving only a gap in the acoustic signal, suggesting that the word recognition system actually perceives the word only when the signal is continuous.

(10) The state governors met with their respective legi⊠latures in the capitol city. (Warren 1970)

The perception of the missing segment is extremely strong in (10). Not only does the fricative /s/ share acoustic properties with an intruding mask, the lexical and sentential context are so highly constrained that few, if any, other possibilities are available.

Indeed, listeners appear to use bottom up cues from the speech signal in tandem with various top-down cues to identify the phoneme under the mask, including following sentential context (Warren & Sherman 1974), predictability of the phoneme or the word in context (Samuel 1981; Samuel 1987), lexical level properties – such as length, frequency, and lexical neighborhood – of the host word (Samuel 1981). Various kinds of masks have been employed, including coughs, tones, buzzes, and slamming doors, to name a few. Listeners appear to restore all kinds of phonemes, though acoustic similarity between the mask and the missing phoneme appears to facilitate restoration (Samuel 1996). Restoration appears both when the phoneme is acoustically present, but greatly reduced in volume, and when it is excised entirely, so long as the mask covers the gap in the speech signal.

Recent research has shown that perceivers use high-level contextual information in restoration decisions. For example, Stoyneshka *et al.* (2010) showed that perceivers used prosody in determining how to resolve a masked segment in cases of temporary ambiguity in Bulgarian. Another case is Mack *et al.* (2012) who find that subjects restored an expletive / zero subject (*It*) when previous context supported the pragmatic usage preferences for doing so, namely when the speaker was likely to have acquired evidence for the assertion at the time of utterance (Mack & Fuerst 2009).

(11) ⊠ looks like it's raining.

In general, then, these studies indicate that grammatical and pragmatic preferences, beyond the immediate linguistic context, influence how a distorted sentence is perceived and repaired by the listener. Phonemic restoration is a naturalistic, if underexplored, method for probing what interpretation the listener has assigned to a sentence.

We employ this phonemic restoration as a novel method for investigating the effect that a single event preference might exert on processing serial verb constructions in Russian. Specifically, we capitalize on the fact that conjunction in Russian

is a single phoneme /i/ to probe general, possibly extra-linguistic, event preferences in interpretation. In the study described below, a phonemic mask was placed between two serial verbs in Russian, obscuring a conjunction that would disambiguate the interpretation. We examine the rate of conjunction restoration as an indicator of how strong the single event preference is when interpreting ambiguous input.

2   Phonemic restoration experiment
2.1   Participants

Forty-two native speakers of Russian were recruited from UCLA and the greater Los Angeles area to participate in the study. Twelve subjects self-identified as heritage speakers, and were removed from the final dataset. One subject was removed for providing fewer than 75% correct answers to language compretency control items, discussed below. One subject was removed for counterbalancing purposes, leaving a total of 28 subjects evenly distributed across 4 counterbalanced lists in the final data set. Subjects were compensated with either course credit or $10 in cash.

2.2   Materials and methods

Sixteen quartets were constructed, crossing two factors – Verb type (*Light*, *Lexical*) and Adverb (*Adverb*, *No adverb*) – in a 2×2 Latin Square design. All materials were created and produced at a normal speaking rate by a native Russian speaker; items are provided in Appendix A. All items were grammatical, with and without a conjunction where the mask was located.

(12)   *Sample quartet*

    a.   *Light verb – No Adverbial*
        Идем ⌗ слушаем радио.

idyom	⌗	slušaem	radio
walk.1PL.PRES	⌗	listen.1PL.PRES	radio

        'We *walking/going* ⌗ listening to the radio.'

    b.   *Lexical verb – No Adverbial*
        Едем ⌗ слушаем радио.

edem	⌗	slušaem	radio
drive.1PL.PRES	⌗	listen.1PL.PRES	radio

        'We are *driving* ⌗ listening to the radio.'

    c.   *Light verb – Adverbial*
        Идем не торопясь ⌗ слушаем радио.

idyom	ne	toropyasj	⌗	slušaem	radio
walk.1PL.PRES	NEG	haste.CONV	⌗	listen.1PL.PRES	radio

        'We are *walking/going* slowly ⌗ listening to the radio.'

d. *Lexical verb – Adverbial*
Едем не торопясь ⌧ слушаем радио.

edem		ne	toropyasj	⌧	slušaem	radio
drive.1PL.PRES	NEG	haste.CONV	⌧	listen.1PL.PRES	radio	

'We are *driving* slowly ⌧ listening to the radio.'

No vowels were included before the conjunction site so as to avoid coarticulation cues (Choi & Keating 1990). We predominantly used the first-person plural form of the verbs for this reason.

To account for potential low-level cues for the presence or absence of a conjunction, half of the items were produced with a conjunction in all cases, and half were produced without. An identical 200ms burst of computer-generated pink noise was placed between VPs as a mask in all conditions. Sound files were adjusted manually so that the same amount of time appeared between verbs in all conditions, in order to prevent bias towards or against the restoration of a conjunction simply by virtue of the time between words.

In addition to filler sentences, we included 20 narrowly constrained control sentences to assess speaker competence and attention to the task; sample control items are included in Appendix B. Controls were in 5 categories: (i) conjunction required, (ii) conjunction impossible, (iii) specific preposition required, (iv) number marking required, and (v) adjectival agreement. An example of an item where conjunction is required is provided in (13). One subject was removed for failing to accurately restore control items.

(13) На столе лежали яблоки ⌧ груши.

Na stole ležali   yabloki   ⌧ gruši
On table lay.3PL.PST apple.PL and pears.PL'

'There were apples and pears on the table'

Sentences were presented twice in a row, separated by 750ms of silence, over headphones in a sound-isolated anechoic chamber. Subjects repeated back what they thought the intended message was into a microphone. Subjects received four items in a guided practice session to familiarize themselves with the task. OpenSesame was used to present, record, and counterbalance materials (Mathôt *et al.* 2012). Sessions lasted no more than 30 minutes per individual session. Consent forms and instructions were delievered by four native speaking research assistants, in order to qualitatively assess language competence, and to help put subjects into a Russian speaking mode (e.g., Grosjean 2001). Subjects were instructed to imagine that their task was to repair audio recordings of one side of a telephone conversation between friends that was corrupted by a computer virus. We occasionally added other sounds to other audio files in non-critical areas to distract subjects from the manipulation. Subjects were instructed to understand speech as informal.

Four native Russian speaking research assistants annotated the resulting sound files, along the following dimensions:

(14) a. Disregarding the conjunction, is the response otherwise correct?

    b. Disregarding other parts of the sentence, did the subject insert a conjunction between the verbs?

    c. What other mistakes did the subject make, if any?

In terms of overall accuracy (14a), subjects performed well on controls (M = 87%) and filler items (M = 87%). Most importantly, subjects performed particularly well on the experimental items (M = 96%), showing that they were highly proficient and accurate, regardless of the restoration of conjunction.

    We made two predictions regarding restoration rates (14b). The central prediction was that a conjunction would be restored less often between critical verbs when a serial verb construction was possible, that is, when following a light verb without an intervening adverb. The second was that restoration rates should not differ in conditions with an intervening adverbial, as a monoclausal, single event structure is less likely. In effect, we predicted an interaction in which restoration rates would only be modulated by verb type when there was no adverbial intervening.

2.3 Results

Means and standard errors are presented in the top panel of Figure 1, with the normalized data (presented as centered difference scores from the grand mean) in the bottom panel illustrate the effect size. The data were analyzed as a generalized logistic linear mixed effect regression model (Jaeger 2008) with Verb type, Adverb, and their interaction as predictors, and by-subjects and by-items random intercepts as random effects. Deviation coding was used, so that the Lexical verb and the Adverb conditions as the baseline levels for their respective factors; see Table 1.

    In general, light verbs (M = 47%, SE = 3) elicited fewer restorations of the conjunction between the verb than lexical verbs (M = 57%, SE = 3), $p < 0.01$. As predicted, the factors of Verb type and Adverb interacted: while the presence of an adverb had no effect on restoration rates (diff = 1%), subjects were less likely to restore a conjunction following a Light verb than a Lexical verb in items without an intervening adverb (diff = 20%), $p < 0.05$.

Parameter	Estimate	Std. Error	Wald Z	p-estimate
(Intercept)	0.20	0.41	0.48	0.63
Verb	-0.32	0.12	-2.67	< 0.01
Adverb	-0.04	0.12	-0.34	0.73
Verb × Adverb	-0.30	0.12	-2.50	< 0.05

Table 1: Phoneme restoration rates. Linear mixed effects regression model.

2.4 Post-hoc naturalness rating task

Fifteen speakers of Russian were recruited through snowballing techniques at UCLA and in the greater Los Angeles area. Two subjects self-identified as non-native

	Presence of adverb	
Verb	No adverb	Adverb
Light	41% (5)	53% (5)
Lexical	61% (5)	54% (5)
Difference	20%	1%

(a) Mean restoration rates with standard errors by condition.

Conjunction restoration rates
Centered difference scores
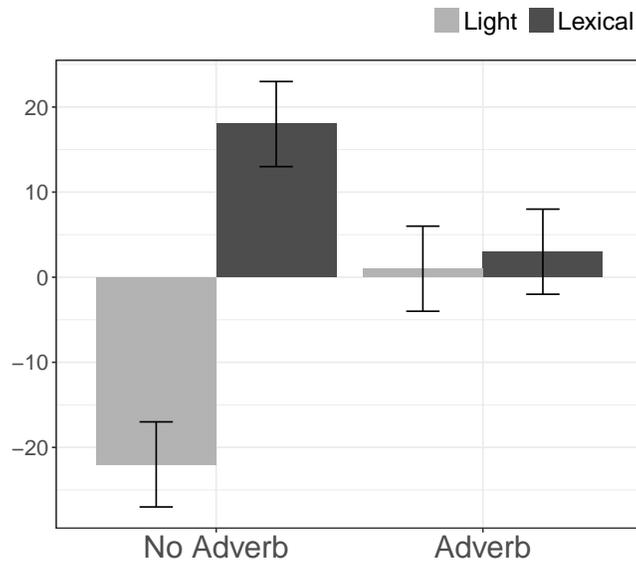
(b) Restoration rates depicted as centered difference scores from grand mean.

Figure 1: Results from the phonemic restoration experiment

speakers and were removed from the data set. Language competency control sentences were included as before in order to identify speakers with insufficient knowledge of Russian. Four ungrammatical sentences were also included to ensure that subjects were paying attention to the task. No subjects were removed for their performance on the controls.

Sixteen quartets were constructed on the basis of (13) above. The 2×2 design crossed the Verb type (*Light*, *Lexical*) and whether a conjunction intervened between the two verbs (*Conjunction*, *No Conjunction*).

(15) *Sample items*

    a. *Light verb*
      Идем (и) слушаем радио.

idyom	(i)	slušaem	radio
walk.1PL.PRES	(and)	listen.1PL.PRES	radio

      'We are *walking/going* (and) listening to the radio.'

    b. *Lexical verb*
      Едем (и) слушаем радио.

edem	(i)	slušaem	radio
drive.1PL.PRES	(and)	listen.1PL.PRES	radio

      'We are *driving* (and) listening to the radio.'

In half of the items, a comma separated the two verbs included as a planned, non-orthogonal experimental factor. Also included in the materials were 16 items from another experiment on question formation, 4 ungrammatical catch items, 20 grammatical catch items, and 20 non-experimental fillers, for a total of 74 sentences presented to subjects in each experimental session. Items were counterbalanced and presented in an individually randomized order.

Subjects rated items for naturalness on a 7-point Likert scale with the lowest endpoint labeled (*sovsem neyestestvenno* / altogether unnatural) and the highest point (*ochen estestvennyj* / highly natural). Means and standard errors for the ratings are presented below.

	Conjunction	No Conjunction
Light	5.79 (0.23)	5.19 (0.27)
Lexical	5.27 (0.27)	5.35 (0.27)

Table 2: Means and standard errors of natualness ratings

The ratings data were analyzed as a linear mixed effects regression model with deviation coding, treating the Lexical verb and the Conjunction conditions as the baseline levels for their respective factors. No significant differences between conditions were detected. There was a non-significant trend towards an interaction in which the No Conjunction was considered less natural in the Light verb conditions,

t = -1.79, p = 0.08. However, there were no differences in naturalness ratings between cases with and without conjunction for either Light verbs or Lexical verbs in by-subject and by-item paired t-test comparisons.

In a model with the presence of a comma included as an interactive predictor, commas elicited lower ratings for Light verbs (diff = 0.44), but higher ratings for Lexical verbs (diff = 0.92), *t = -3.16, p < 0.01*, which could be interpreted as an aversion to light verbs as stand-alone events. Items without a conjunction were also marginally improved by the presence of a comma after the first verb, *t = 1.81, p = 0.07*, regardless of Verb type, possibly suggesting an overall preference for coordination, expressed covertly or overtly.

Overall, the results indicate that the interactive effect between Verb type and Adverb observed in the main restoration study cannot simply be attributed to differences in naturalness between the conditions. That is, the differences in restoration rates were not driven by independent preferences governing the combination of Verb type and conjunction.

2.5 Discussion

In all, the results of the phonemic restoration study supports the central predictions of the experiment: subjects avoided restoring a conjunction when doing so would prevent an SVC, and, as a consequence, an unambiguous single event construal. Results from the naturalness rating task cast doubt on the possibility that conjunctions are avoided in general following light verbs, as conjunction improved naturalness more in these cases. The results of the restoration and naturalness ratings tasks may appear to conflict with each other, as we might have expected that structures that unambiguously express a single event would have been preferred. However, we speculate that subjects may have been influenced by prescriptive rules prohibiting SVCs when rating the written materials.

3 Concluding remarks

We presented evidence that comprehenders consult a general, potentially extra-linguistic, preference for single event construals of sentences in restoring distorted linguistic signals. We exploited serial verb constructions (SVCs), a construction in which a sequence of verbs is interpreted as a single event (e.g., *idu slushaju* 'I walk/go listen'). In Russian, as well as in other languages, a conjunction may appear between the two verbs (e.g., *idu i slushaju* 'I walk/go and listen'). However, cases with conjunction permit both single event and multiple event interpretations. In our manipulation, a phonemic mask appeared between two verbs, and subjects could decide to repeat the sentence with our without an intervening conjunction (e.g., *idu* ⊠ *slushaju* 'I walk/go ⊠ listen').

We hypothesized that subjects would preserve a single event construal whenever possible, thereby failing to restore the conjunction when a SVC a grammatically viable option. Indeed, subjects inserted a conjunction between verbs far more often when an serial verb configuration was blocked lexically or by an intervening adverbial, which, by hypothesis, either prohibited or biased against a monoclausal interpretation.

In general, our findings support the hypothesis that an independently supported preference for *single events* plays a critical role in the comprehension of sentences (Majewski 2014), even to the point of biasing the perception of ambiguous or distorted input. The study also complements previous phonemic restoration studies that explore subtle biases in structuring online interpretation (Stoyneshka *et al.* 2010; Mack *et al.* 2012).

One important issue in logic of the design is the assumption that subjects would prefer the SVCs because they are unambiguously single events. However, their coordinated counterparts may also be interpreted as single events, and so we cannot rule out instances in which subjects produced conjoined verbs with a single event construal in mind. Crucially, this possibility *under represents* the possibility of a single event preference. The fact that restoration rates differed just when a SVC was available indicates that the preference is robust enough to emerge from a great deal of statistical noise. Of course, it is highly implausible that a single study would conclusively rule out potential confounds, and there are many important avenues for future studies on how a very interpretive principles guide the resolution of perceptual ambiguity in linguistic input. Although there is surely a great deal more to say on this topic, the findings lend strong support to the growing body of literature suggesting that general preferences on event interpretation guide ambiguity resolution in language comprehension.

Acknowledgments

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A   Appendix A

The 16 quartets presented to subjects in the order of light / lexical verb with the adverbial in parentheses.

1. Идем / Едем (не торопясь) ⊠ слушаем радио
   We're walking / driving (slowly) ⊠ listening to the radio
2. Идем / Путешествуем (пешком) ⊠ наслаждаемся пейзажем
   We are going / walking (on foot) ⊠ enjoying the view
3. Мы пойдём / поедем (в парк) ⊠ посмотрим на павлинов
   We'll go / drive (to the park) ⊠ watch peacocks.
4. Дети пойдут / поедут (в зоопарк) ⊠ увидят белого медведя
   The children will walk / go (to the zoo) ⊠ see a polar bear
5. Сидим / Плывём (задумавшись) ⊠ разговариваем
   We are sitting / drifting (lost in thoughts) ⊠ talking.
6. Сидим /Гуляем (порознь) ⊠ ждем результатов
   We're sitting / taking a stroll (apart) ⊠ waiting for the results
7. Сядем / Упадем (on the bed) ⊠ уснем
   We will sit down / sink (on the bed) ⊠ fall asleep
8. Сядем / Поедем (вперёд) ⊠ позвоним Маше
   We'll sit down / drive (ahead) ⊠ call Masha.
9. Лежим / Бродим (укутавшись) ⊠ думаем о своём
   We're lying / wandering around (in something cozy) ⊠ daydreaming
10. Лежим / Бежим (рядом) ⊠ вспоминаем стихи
    We're lying / running (along side each other) ⊠ recalling poems
11. Ляжем / Погуляем (вечером) ⊠ отдохнем
    We'll lie down / take a stroll (in the evening) ⊠ get some rest
12. Ляжем / Залезем (под кровать) ⊠ спрячемся
    We'll lie / climb (under the bed) ⊠ hide
13. Стоим / Шагаем (строем) ⊠ молчим
    We are standing / marching (aligned) ⊠ keep silent
14. Стоим / Болтаем (за углом) ⊠ ждем трамвая
    We are standing / chatting (around the corner) ⊠ waiting for the tram
15. Аня встанет / заглянет (на чуть-чуть) ⊠ выпьет чая
    Ania will get up / come over (for a short time) ⊠ drink some tea
16. Встанем / Перекусим (второпях) ⊠ пойдём на улицу
    We'll get up / grab food (hastily) ⊠ go outside

B Appendix B

Example competency check items used to evaluate Russian proficiency. The correct phonemes to restore are listed in the parentheses.

1. *Agreement:*
   Глобальн⊠ (ое) потепление опасно для всех
   Global warming is dangerous for everyone

2. *Case:*
   Мы заметили тр⊠ (и) медвежат
   We noticed three bear cubs

3. *Preposition:*
   Машина скрылась ⊠ (за) поворотом.
   The car disappeared around the corner

4. *Conjunction impossible:*
   Я хочу ⊠ спать
   I want to sleep

5. *Conjunction required:*
   На столе лежали яблоки ⊠ (и) груши
   There were apples ⊠ pears on the table