

## **Elided Clausal Conjunction is not the Only Source of Closest Conjunct Agreement: A Picture Matching Study<sup>1</sup>**

Boban Arsenijević, Jana Willer-Gold, Nadira Aljović, Nermina Čordalija, Marijana Kresić Vukosav, Nedžad Leko, Frane Malenica, Franc Lanko Marušić, Tanja Milićev, Nataša Milićević, Petra Mišmaš, Ivana Mitić, Anita Peti-Stantić, Branimir Stanković, Jelena Tušek, & Andrew Nevins

### **Abstract:**

*A recurring hypothesis about agreement phenomena generalized as closest conjunct agreement (CCA) takes this pattern to result from reduced clausal conjunction, and to simply display the agreement of the verb with a non-conjoined subject in the clause whose content survives ellipsis (Aoun et al. 1994, 1999; see also Wilder 1997). Closest conjunct agreement is the dominant agreement pattern in the South Slavic languages Slovenian and Bosnian/Croatian/Serbian (B/C/S). A natural question is whether closest conjunct agreement in these varieties may indeed be analyzed as entirely derived from conjunction reduction. In this paper, we report on two experiments conducted on Slovenian and B/C/S to test this. The results of our experiments reject the hypothesis as far as these languages are concerned, thereby upholding the relevance of models developed to account for CCA within theories of agreement.*

### **Keywords:**

*Agreement, Conjunction, Closest Conjunct Agreement, Conjunction Reduction, Picture-Matching Experiment, South Slavic*

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<sup>1</sup> We thank Klaus Abels, Susana Béjar, Alex Drummond, Carlo Geraci, & Gary Thoms for comments. This work was partially supported by Leverhulme Trust Grants 512900 and 547735 (to A.N.) and by Slovenian Research Agency Grants P6-0382 and J6-7282 (to F.L.M.).

## 1. Introduction

In a range of typologically and genetically diverse languages, including Hindi, Arabic and different members of the Slavic family, a conjoined subject may trigger verbal agreement with one of its conjuncts, as in (1) (Munn 1999, Aoun et al. 1994, 1999, Babyonyshov 1996, Marušić et al. 2007, 2015, Bhatt & Walkow 2013, a.o).<sup>2</sup>

- (1) Qaraʔat ʕaliyaa wa ʕumar l-qışṣa. *Standard Arabic*  
read.3.F.SG Alia and Omar the-story  
'Alia and Omar read the story.' *Aoun et al (1994: 207)*

In some languages, this pattern only occurs with the first conjunct (First Conjunct Agreement, FCA), in others only with the last (Last Conjunct Agreement, LCA), and in some both options are found, additionally conditioned by the surface ordering between the subject and the verb, and can interact with either head-initial or head-final syntax (Bhatt & Walkow 2013, Polinsky 2014).

Slovenian and Bosnian/Croatian/Serbian (B/C/S) are languages in which preverbal subjects trigger both types of single conjunct agreement, while with postverbal subjects FCA is dominant, and LCA is clearly degraded, even if not fully absent (Willer-Gold et al. 2016, Arsenijević & Mitić 2016). Consider (2a), where the preverbal subject licenses FCA (neuter plural, NPI), LCA (feminine plural, FPI) and a default or resolved gender value (masculine plural, MPI), and the postverbal subject in (2b) with a strongly degraded LCA and a significantly lower production rate of the default agreement (Willer-Gold et al. 2016 argue that resolved agreement is not available postverbally). Although previous literature (e.g. Bošković 2009) has occasionally raised doubts about the availability of FCA in patterns such as (2a) below, they have been experimentally collected and statistically confirmed in Willer-Gold et al. 2016. Henceforth, LCA in (2a) and FCA in (2b) will be referred to as Closest Conjunct Agreement (CCA).

- (2) a. Ravnala i olovke su pronađena/pronađene/pronađeni.  
ruler.N.PL and pencil.F.PL AUX.PL found.N.PL/F.PL/M.PL  
b. Pronađena/?pronađene/pronađeni su ravnala i olovke.  
found.N.PL/F.PL/M.PL AUX.PL ruler.N.PL and pencil.F.PL  
'Rulers and pencils have been found.'<sup>3</sup>

Next to the given patterns available with different gender conjuncts, an additional strategy of resolution can be singled out when the conjuncts are of the same gender: agreement in a non-masculine gender shared by the conjuncts as in (3); see Arsenijević & Mitić 2016 and Willer-Gold et al. 2016 for discussion. We refer to default or resolution agreement arising from coordinations as DEF/RES.<sup>4</sup>

- (3) Majka i čerka su stajale / %stajali ispod kišobrana.  
mother.F.SG and daughter.F.SG AUX.PL stood.F.PL/M.PL under umbrella  
'Mother and daughter stood under the umbrella.'

<sup>2</sup> Single conjunct agreement of attributive, demonstrative and other elements internal to nominal expressions is not discussed in this paper.

<sup>3</sup> All the examples in the paper where not specified otherwise come from B/C/S, and are rendered in the Novi Sad variety. As the research investigated both B/C/S and Slovenian, it is important that their near counterparts were used in Slovenian, which did not differ in any aspects immediately relevant for the purposes of this research.

<sup>4</sup> Note that as pointed out by Corbett 1983 (citing Gudkov 1965), not all coordinations involving non-masculine conjuncts pattern alike in B/C/S and Slovenian. Concretely, conjoined singular neuter nouns (can) agree in masculine plural/dual and conjoined feminine nouns of the third declension can agree in masculine plural/dual. As these are all coordinations of singular nouns, they are not directly relevant for our study.

The availability of a broad spectrum of cross-linguistically attested agreement patterns with conjoined subjects makes B/C/S a fruitful ground for more detailed research of conjunct agreement, especially for single conjunct agreement. In this paper, we restrict our discussion to cases in which both conjuncts are inanimate plurals.

A number of competing analyses have been offered for single conjunct agreement phenomena and specifically CCA (e.g., Munn 1999, Aoun et al. 1994, 1999, Babyonyshov 1996, Sadler 2004, Tantalou & Badecker 2005, Soltan 2006, Marušić et al. 2007, 2015, Bhatt & Walkow 2013). Given that CCA in South Slavic has motivated a number of modifications to the theory of agreement (e.g. for South Slavic, Bošković 2009, Willer-Gold et al 2016, Murphy & Puškar 2018), one of the analyses that keeps coming back is the idea involving clausal conjunction followed by a type of ellipsis and referred to as conjunction reduction – which would essentially leave the existing agreement mechanism intact, with no need for such modifications. Aoun et al. (1994, 1999) argue that an ellipsis-type configuration is the sole source of the single conjunct agreement in Arabic, but they refrain from attributing it a universal cross-linguistic status. Wilder (1997:66) proposes that backwards and forwards deletion can handle single conjunct agreement in Russian.

Schein 2017 and Hirsch 2017 argue, based on the semantic denotation of the operator ‘and’, that coordination is always at the level of propositions, which most directly corresponds to the clausal level in syntax. This, however, does not necessarily mean that ‘and’ needs to coordinate full main clauses in the sense of Aoun, Benmamoun & Sportiche (1994) (cf. Schein 2017). A biclausal (or bipropositional) nature for every coordination would thus not directly explain CCA that we find in South Slavic. Given Schein’s analysis (e.g. for (2), *Rulers<sub>N</sub> participated, and pencils<sub>F</sub> participated, and they, these events, were events of being found*) some mechanism would be needed that would pass the features from the subject (or the predicate) of the deleted coordinated clause on to the predicate of the overt clause to yield *feminine* agreement on the verb. The principal argument of our paper is that CCA cannot always result from coordination of full main clauses, although the extra syntactic mechanism that would yield CCA on the overt predicate within clausal conjunction approaches is not fully worked out (admittedly, CCA vs DEF is not the direct concern of such approaches).

According to the outline that conjunction-reduction analyses share, a sentence like (4a) would be derived from a structure that coordinates two clauses, and then elides the material from one of them, as in (4b). The surviving verb simply agrees with its local clausal subject, yielding what looks at the surface as single conjunct agreement. Similar remarks apply for (5a,b).

- (4) a. U supi su se kuvala knedle i rezanca.  
in soup AUX.PL REFL cooked.F.PL dumpling.F.PL and noodles.N.PL  
'Dumplings and noodles simmered in the soup.'
- b. U supi su se kuvala knedle i ~~u supi~~ ~~su se~~  
in soup AUX.PL REFL cooked.F.PL dumpling.F.PL and in soup AUX.PL REFL  
~~kuvala~~ rezanca.  
cooked.N.PL noodle.N.PL  
'Dumplings simmered in the soup and noodles simmered in the soup.'
- (5) a. Knedle i rezanca su se kuvala u supi.  
dumpling.F.PL and noodle.N.PL AUX.PL REFL cooked.N.PL in soup  
'Dumplings and noodles simmered in the soup.'
- b. Knedle ~~su se~~ ~~kuvala~~ ~~u supi~~ i rezanca su se  
dumpling.F.PL AUX.PL REFL cooked.F.PL in soup and noodle.N.PL AUX.PL REFL  
kuvala u supi.  
cooked.N.PL in soup  
'Dumplings simmered in the soup and noodles simmered in the soup.'

Under an ellipsis account broadly inspired by Wilder 1997, for instance, one could imagine an underlying biclausal structure, with the subjects and the PPs moving out of the vP, followed by a gapping-operation yielding ellipsis and the appearance of only a single verb.<sup>5</sup> Although the details may differ in terms of ellipsis mechanisms adopted or indeed via more articulated ways of passing the features of one predicate's subject to the other, the central intuition in such analyses is that *the same predicate is present in both conjuncts, even when not overtly seen in one of them.*

Let us call the Type Conjunction Hypothesis (TCH) an analysis in which phrasal conjunction yields default or resolved agreement (DEF or RES), and single conjunct agreement is an epiphenomenon of conjunction reduction.

Marušič et al (2007, 2015) argue against the TCH for cases of preverbal CCA found in Slovenian, following the reasoning in Munn (1999). They offer examples demonstrating the compatibility of single conjunct agreement with collective predicates as in (6), as a crucial argument against the conjunction reduction analysis. Recall that the TCH maintains that *the same predicate is present in both conjuncts*. Marušič et al (2007, 2015) assume that if the underlying structure of the sentences with single conjunct agreement involved clausal conjunction, a violation should emerge when their predicate is collective (e.g. 'grazed together'; (6b)).

- (6) a. Krava in teleta so se pasla skupaj.  
cow.F.SG and calves.N.PL AUX.PL REFL graze.N.PL together  
'A cow and her calves were grazing together.' (*Slovenian*)
- b. \*Krava se je pasla skupaj in teleta so se pasla  
cow.F.SG REFL AUX.SG grazed.F.SG together and calves.N.PL AUX.PL REFL grazed.N.PL  
skupaj.  
together

Similarly, Bošković 2009 applies Marušič et al's diagnostic above to B/C/S, and Citko 2004, focusing on Polish, provides arguments based on number-sensitive items such as distributive *po-*phrases against a clausal reduction analysis. Further arguments against an ellipsis analysis of partial agreement in coordinations may be found in Johanesen (1998), who argues that Czech and German show patterns of CCA in configurations that otherwise disallow clausal coordination, and in Demonte & Pérez-Jimenez (2012), who show that Spanish prenominal CCA with a single, singular conjunct is followed in the same sentence by postnominal plural resolution on the verb, rendering clausal ellipsis impossible as the source for the prenominal CCA.<sup>6</sup>

In short, it would seem to be clear, both from diagnostics conducted within Slavic as well as crosslinguistic evidence that there are numerous cases of CCA that cannot plausibly be derived from ellipsis – at least from ellipsis mechanisms that are independently found within the language outside of the context of CCA. However, speakers' intuitive judgements about the possibility of CCA in the presence of collective predicates as shown in (6) are usually limited to cases where one or both conjuncts is singular. However, as the most robustly attested cases of CCA in South Slavic in the literature involve gender agreement arising when both conjuncts are *plural* (as in (2)), simply setting up a diagnostic with a collective predicate and showing that it would be incompatible with a singular

<sup>5</sup> Gary Thoms (pers. comm.) suggests that the clausal ellipsis account is not viable in languages where there is no independent process of ellipsis that deletes everything but the subject (nonetheless, it is known that some operations, e.g. Right-Node Raising, can affect constituents that ellipsis cannot). Given that eliding everything but the subject in (i) and (ii) are not grammatical independently in Slovenian and BCS respectively (e.g. in subordination environments), the clausal conjunction analysis would fail this prerequisite test:

- (i) \*Misljam, da so se tukaj pasle krave in vam, da <so se tukaj pasle> ovce. (Slo.)  
think.1.SG that AUX REFL here grazed cows and know.1.SG that sheep  
'I think that cows grazed here, and I know that sheep.'
- (ii) \*Čini mi se da su ovdje trčale krave, premda znam da <su ovdje trčale> koze. (BCS)  
Seem.3.SG to-me REFL that AUX here ran cows although know.1.SG that goats  
'It seems to me that cows ran here, although I know that goats.'

<sup>6</sup> Further relevant evidence may come from languages that display CCA and that have different coordination heads for phrasal vs. clausal coordination. Xhosa (Mitchley 2015) may turn out to be precisely such a case.

subject is not sufficient. To examine the pattern of CCA arising in where both conjuncts are plural, one needs to demonstrate that within the presence of two conjoined plurals (e.g. *sabers and spears*), a predicate like *collided* is interpreted as applying to the conjunction (e.g. collisions between sabers and spears; a mixed-event reading) as opposed to applying separately to each conjunct (e.g. collisions of sabers and collisions of spears; a split-event reading). This, however, requires more than a mere acceptability judgement along the lines of (6). Sentences like (6b), with a singular NP within the conjunction and a collective predicate, immediately trigger a reaction of unacceptability, even without context provided. Sentences with two conjoined plurals, however, ‘sound acceptable’ unless a context is provided, and as such require a richer context in order to determine whether speakers are allowing or ruling out the mixed-event or split-event reading in the presence of CCA, and precisely this context is better furnished in an experimental picture-matching task of the kind we report on below.

In this paper, we aim to experimentally test whether it is possible to maintain that the South Slavic structures outlined above, in which the verb agrees with the linearly closest conjunct (CCA), are underlyingly biclausal with a reading that corresponds to two independent events. We exploit the implication of such an analysis that underlyingly biclausal sentences will be more compatible with a reading of two separate events (a *split event* reading), with one event corresponding to the hypothesized first clausal conjunct, and the other event to the hypothesized second clausal conjunct. We report on two experiments that were designed and conducted to answer these two questions. They test the availability of one-event interpretations for sentences with conjoined subjects, depending on the pattern of agreement shown. The biclausal analysis of CCA predicts that sentences with CCA will lead speakers to strongly prefer the two-event interpretation over the one-event interpretation with a *mixed event* participation of the referents of the two conjuncts, which should correlate with DEF/RES. However, considering that a distributive interpretation of the predicate is generally available in South Slavic, no specific prediction for sentences with default or resolved agreement can be made.<sup>7</sup>

In order to measure the effect of suppressing the two-event interpretation, we introduced a two-level variable *predicate type* (with levels collective and non-collective).<sup>8</sup> Collective predicates are supposed to suppress a two-event interpretation (see also Clifton & Frazier 2012), and if Munn’s (1999) and Marušić et al’s (2007) argument is correct, such predicates will be incompatible with the biclausal underlying parse of the sentences with conjoined subjects. As an illustration, consider the sentences in (7) and the picture in Figure 1.

- (7) a. U bici su se sudarali koplja i sablje.  
       in battle AUX.PL REFL collided.M.PL spear.N.PL and saber.F.PL  
   b. U bici su se sudarala koplja i sablje.  
       in battle AUX.PL REFL collided.N.PL spear.N.PL and saber.F.PL  
       ‘Spears and sabers collided in the battle.’  
   c. U bici su se sudarala koplja i u bici su se  
       in battle AUX.PL REFL collided.N.PL spear.N.PL and in battle AUX.PL REFL  
       sudarale sablje.  
       collided.F.PL saber.F.PL  
       ‘Spears collided in the battle and sabers collided in the battle.’

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<sup>7</sup> Our claim about the availability of distributed interpretations is an empirical observation about South Slavic languages, where a sentence like (i) can receive the distributive interpretation in which each of the girls fixed a different respective car. No claim is made about the availability of distributive interpretations more generally or about the existence of a distributive operator (Heim, Lasnik and May 1991) or other means to model this fact.

(i) Ivana, Marija i Andelka su popravile automobil.  
       Ivana Marija and Andelka AUX.PL repaired.F.PL car  
       ‘Ivana, Marija and Andelka have fixed a car.’

<sup>8</sup> We acknowledge the large body of work on processing collective and distributive interpretations including work by Dotlačil & Brasoveanu (2015), Dobrovie-Sorin et al (2014), and Patson & Warren (2017), as well as various experimental studies on the acquisition of distributive and collective interpretations, but submit that these are not directly relevant to disproving the TCH as a source of CCA.

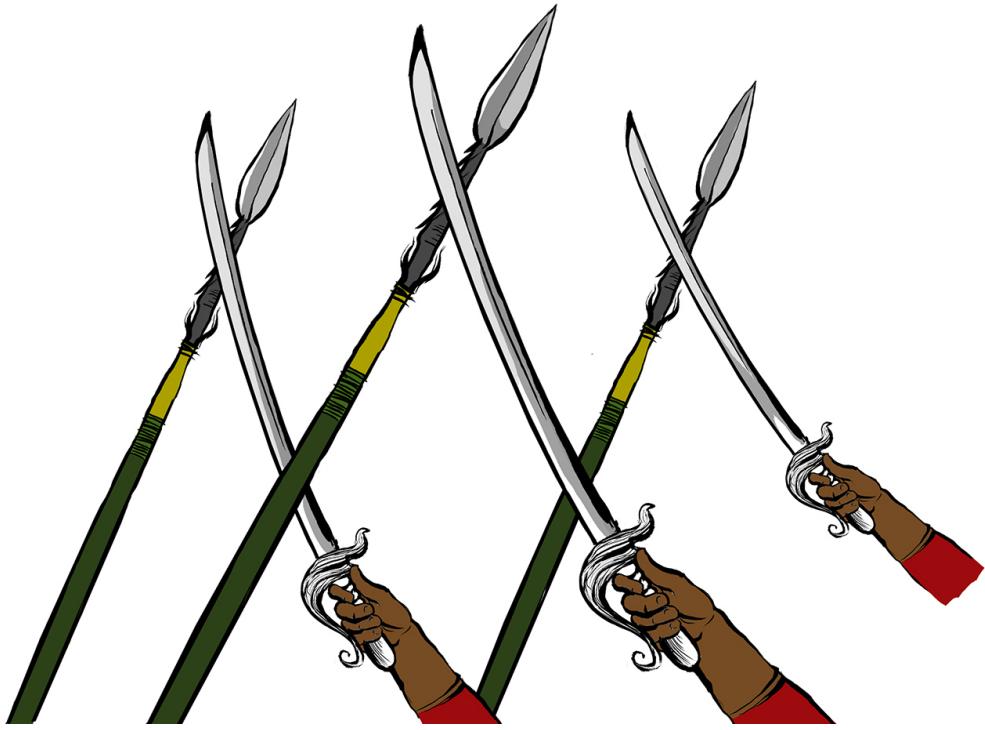


Figure 1: A mixed-event picture to match the sentences in (7)

On the TCH, the sentence with CCA in (7b), putatively deriving from a biclausal underlying structure (e.g. ‘Sabers collided, and spears collided’), is expected to be incompatible with, or at the very least to be disfavored as a match to the picture in Figure 1, which represents a mixed-event reading, and the sentence in (7a) is expected to favor the reading visually presented in this picture. Moreover, the sentence in (7b) is predicted to show the same pattern of incompatibility with the picture as the one with an overtly biclausal structure in (7c). On the other hand, under the model for CCA developed in Marušič et al. (2007, 2015), the conjoined subject is the subject of a single predicate, which is thus fully compatible with a mixed-event picture (although biases for distributive readings may also exist).

We tested these predictions in the area of South-Slavic languages in which the relevant oppositions are morphologically visible, namely in Slovenian and B/C/S, in four experiments across 7 sites where CCA has been previously attested as robust: Nova Gorica (Slovenian; NG), Sarajevo (B/C/S; SA), Zenica (B/C/S; ZE), Zadar (B/C/S; ZD), Zagreb (B/C/S; ZG), Niš (B/C/S; NI) & Novi Sad (B/C/S; NS).

## 2. Experiment 1. Sentence-picture match judgment

### 2. 1 Aim of the experiment

As the overall goal of this paper is to argue that CCA can indeed result from phrasal conjunction (plus enriched mechanisms of agreement), our aim was to investigate whether CCA is present even in cases when it should be incompatible with a biclausal underlying structure. In this experiment, we wished to test how conjoined subjects and collective predicates affect the compatibility of a sentence with a single-event interpretation, as represented by a picture. The experiment was based on two controlled variables: *predicate type* (collective vs. non-collective semantics of the predicate) and *type of subject* (2 levels: conjoined and non-conjoined), crossed in a 2x2 design to yield the following four conditions, each matched with a picture representing the respective single event interpretation. We illustrate the conditions with sentences from B/C/S, noting that the sentences in Slovenian were their equivalents.

1. *Conjoined subject with a collective predicate:*

U bici su se sudarala koplja i sablje.  
in battle AUX.PL REFL collided.N.PL spear.N.PL and saber.F.PL  
'Spears and sabers collided in the battle.'

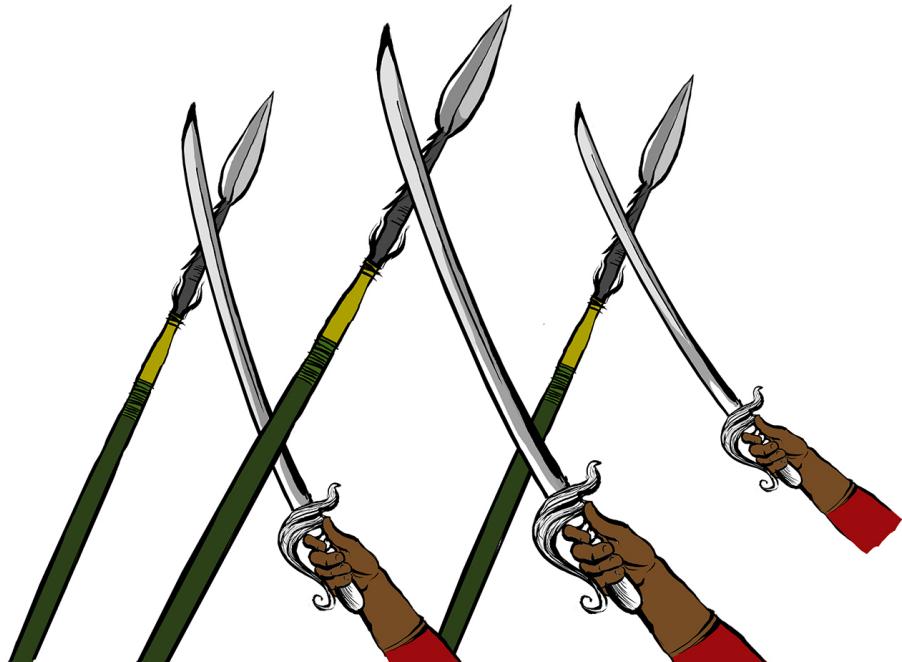


Figure 2: The picture matching the sentence with a conjoined subject and a collective predicate

2. *Single NP subject with a collective predicate:*

U bici su se sudarala koplja.  
in battle AUX.PL REFL collided.N.PL spear.N.PL  
'Spears collided in the battle.'



Figure 3: The picture matching the sentence with a single NP subject and a collective predicate

3. *Conjoined subject with a non-collective predicate*

Na	haljinu	su	zašivene	ruže	i	pera.
on	dress	AUX.PL	sewn.F.PL	rose.F.PL	and	feather.N.PL

‘Roses and feathers are sewn onto the dress.’

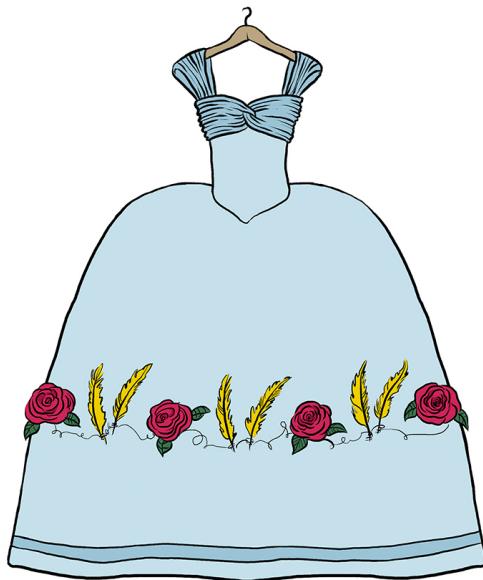


Figure 4: The picture matching the sentence in Conjoined subject with a non-collective predicate

4. *Single NP subject with a non-collective predicate*

Na	haljinu	su	zašivene	ruže.
on	dress	AUX.PL	sewn.F.PL	rose.F.PL

‘Roses are sewn onto the dress.’

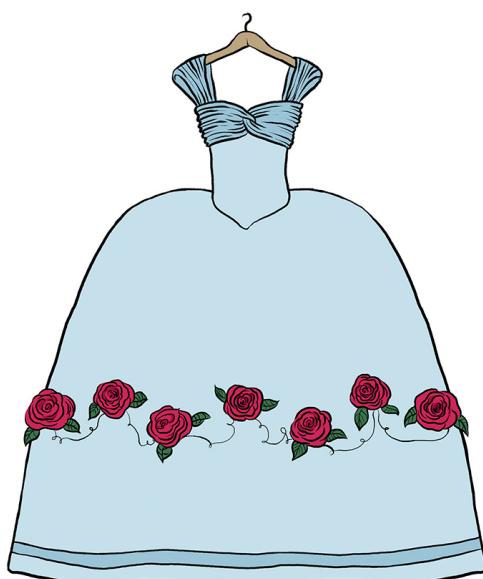


Figure 5: A picture matching the sentence with a Single NP subject with a non-collective predicate

We compared the possibility of interpreting CCA with collective predicates and the availability of a mixed-event reading with such a possibility in non-collective predicates, such as ‘are sewn on a dress’, as in Figures 4-5. This comparison is potentially informative if the TCH is valid, because a biclausal source does not predict an incompatibility with these pictures – unlike the case of a putative underlying source akin to *Sabers collided and Spears collided*, which does not match the mixed-event picture in Figure 2. In the case of a putative underlying source akin to *Roses were sewn on the dress and feathers were sewn on the dress*, there is no incompatibility per se with the mixed-event picture in Figure 4.

Finally, the TCH predicts that sentences with CCA (and hence with &P subjects) should generally show a significantly lower compatibility with a mixed-event reading than corresponding sentences with a single NP subject (as single NP subjects provide a baseline because they do not have an underlying biclausal source). On the TCH, therefore, it is expected that &P subjects with collective predicates showing the mixed-event reading should be rated the lowest, compared to either NP subjects with the same predicates or &P subjects with non-collective predicates. A full exploration of the predictions of the TCH, therefore, required a fully-crossed 2x2 design, with collective vs. non-collective predicates, and &P vs NP subjects.

## 2.2 Materials and method

### 2.2.1 Participants

In total, 210 undergraduate students participated in the Sentence picture match judgment experiment. 30 first or second year students (sex (F=67%, M=33%), age (Mean=21.6)) participated at each of the seven research institutions. They were all native speakers of the local language variety, attended the local secondary school and were not pursuing a university degree in the study of the local language. Their participation was either voluntary or they received course credits for their participation. The experiment was carried out at seven research institutions: University of Nova Gorica (tested also at University of Ljubljana), Slovenia; University of Zagreb and University of Zadar, Croatia; University of Sarajevo and University of Zenica, Bosnia and Herzegovina; University of Novi Sad and University of Niš, Serbia.

### 2.2.2 Materials and Design

The sentence picture match ellipsis experiment was designed as a version of a standard matching task in which participants are asked to mark the value of sentence-picture match on a scale from 0 to 100%. A single experimental design and procedure was implemented under equal experimental conditions across all seven research institutions. The language used in the experiment was adapted to the research institutions’ local neutral varieties. Experimental material was first created in the variety of Zagreb Croatian, and was later adapted to the target language variety, i.e. those of Niš, Novi Sad, Sarajevo, Zadar, Zenica, and Nova Gorica. The adaptations were minimal to ensure uniformity across research locations, and were mostly lexical due to variation of specific lexical items.

In the experiments a total of 64 sentential items were presented to the participants. The factors *predicate type* [Collective, Non-Collective] and *category of subject* [&P, NP<sub>PL</sub>] were used to yield a simple 2x2 design All items were monoclausal. The items all had the same structure: [Adv Aux (Refl) Pred<sub>CCA</sub> &P/NP<sub>PL</sub>] - an initial adverb followed by an inflected auxiliary, a reflexive pronoun (if needed for the verb) a predicate and finally a subject noun phrase. 8 mixed-gender &P (FN,NF) items were created for each of the two levels of *predicate type*. These 16 mixed-gender items were further manipulated to create the NP condition of *category of subject* experimental items by retaining the first NP of the conjunction (F,N) -- all monoclausal -- to create 32 items. All items in the experiment were paired with mixed-event pictures.

Filler items were created using same 2x2 design and the same number of items per condition. Subjects were nouns of all three genders or else conjuncts of two M nouns, in order to balance the item-gender ratio in the experiment. This created a total of 32 fillers. 50% of the fillers were designed as sentence-picture *mismatches* (cf. ungrammatical) yielding 16 such items; these were based on mismatches in the number of objects depicting the subject, mismatch in depiction of the NP in the

subject position and mismatch in depiction of the NP in the adverbial phrase, and were included to encourage participants' use of the full scale of unacceptability in matching. A full list of items and corresponding pictures is provided in the appendix.

### 2.2.3 Methods

Experiment 1 was conducted in May 2016, and was coded and administered using the on-line experimental platform IbexFarm<sup>9</sup>. The picture-match experiment contained an introduction with a task description, 6 practice items, then followed by 64 experimental items, each separated by a blank screen. In case of practice and experimental items, participants saw a sentence-picture pair and a slider on the screen and their task was to position the slider on the scale so as to mark their response – the value of acceptability of the match. After reading the sentence and observing the picture depicting the event that the picture describes, their task was to evaluate to what degree the picture matches the sentence by positioning the slider on the scale. By positioning the slider on the left side of the scale, they note a degree of *low match (in red)* and by positioning it on the right side of the slider, they note a degree of *high match (green)*. After marking their response they had to press a *continue button* ("NASTAVI"/"NADALJUJ") in order to proceed to the next experimental item. The duration of the blank screen between the two items was 750ms. Participants typically completed the experiment within 15 minutes. IbexFarm randomized a new list of items for each participant. Acceptability judgment responses were automatically recorded by IbexFarm and exported afterwards for statistical analysis according to the degree of value appointed to the experimental conditions [*Collective-&P*, *Collective-NP*, *Non-Collective-&P* and *Non-Collective-NP*].

### 2.3 Results and discussion

The analysis was conducted using R package lme4, a generalized linear mixed model fit by maximum likelihood (glmer (glmerControl(optimizer = "Nelder\_Mead")) with response value as dependent and *predicate type* [Collective, Non Collective] and *category of subject* [&P, NP<sub>PL</sub>] as independent variables. Experiment 1 results are shown in Figure 6. The results of monoclausal sentences paired with mixed event pictures show a statistically significant difference in *predicate type* [Collective, Non-Collective] (Estimate 0.9245, Std. Error 0.3277, z value 2.821, Pr(>|z|) 0.00479 \*\*; two-way ANOVA Fisher LDS p < .001): sentences with collective predicates were generally judged as less of a match for a mixed-event picture than those with non-collective predicates, across both subject types. However, as no statistically significant difference in *category of subject* [&P, NP<sub>PL</sub>] was found (Estimate 0.1278, Std. Error 0.3230, z value 0.396, Pr(>|z|) 0.69222; two-way ANOVA Fisher LDS, p > 0.1; Collective p > 0.05; Non Collective p > 0.1), no effect of conjunction *per se* is attested; conditions with a conjoined subject were judged equally acceptable as those with a single NP subject. Importantly, no interaction was observed between the two variables.

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<sup>9</sup> We are very grateful to Alex Drummond for both building and maintaining the platform, and for his direct help in setting up this type of experiment in the platform.

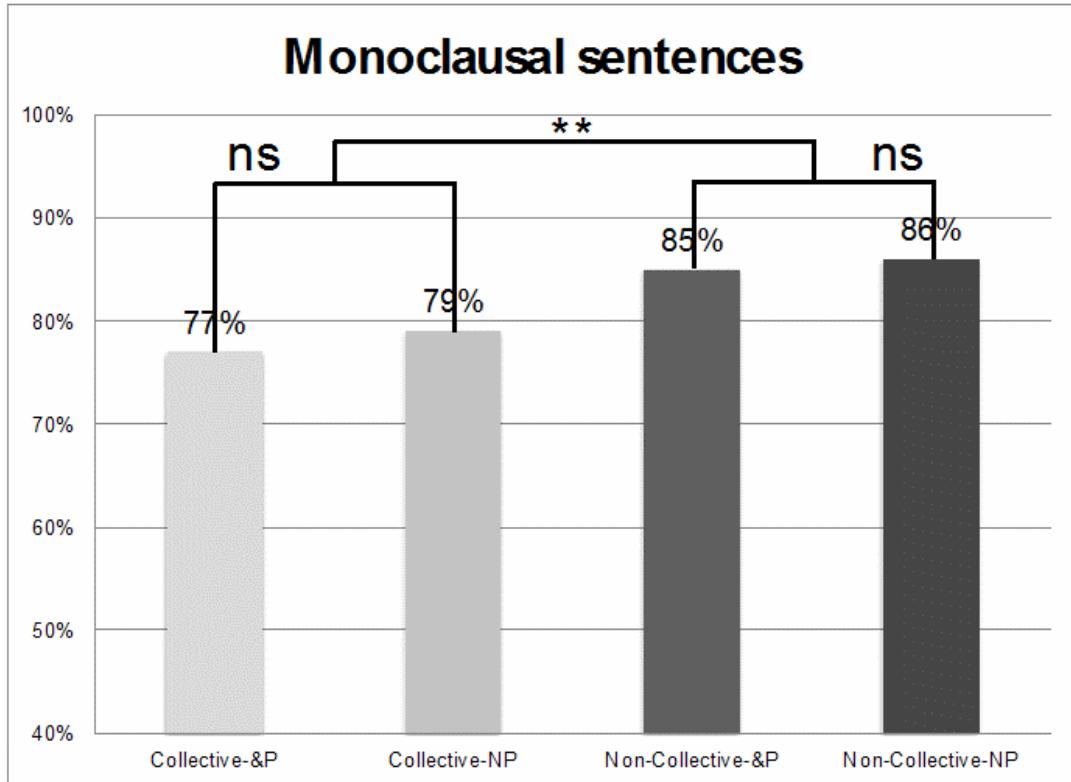


Figure 6: The rate of acceptance per condition

This is clearly the opposite of what TCH predicts, where &Ps with CCA and Collective predicates in the sentences were predicted to match mixed-event pictures the worst; they were still fairly highly rated as matches. The effect of collectivity overall, even for non-conjoined NPs, is likely a matter of processing complexity: these examples were more difficult to interpret, and yielded a lower rating – because of processing complexity or verification procedures involved in evaluating collective readings against an otherwise present distributive bias, but not because of a lower degree of matching. The lack of a difference between &P and NP as non-significant for matching and the absence of interaction demonstrate that it cannot be the case that all CCA with &Ps must come from underlying biclausal structures – if it were, one would expect a greatly lower rate of matching between &Ps and mixed-event pictures. Nonetheless, one might wonder how these same pictures would fare if matched against an explicitly, overtly biclausal sentence, which led us to Experiment 2.

### 3. Experiment 2: a forced choice picture-experiment

#### 3.1 Aim of the experiment

The aim of the experiment was similar to that of Experiment 1 in testing TCH, the hypothesis that CCA as in (8a) is a result of a biclausal structure: a conjunction at the level of the clause, reduced by ellipsis to the appearance of a phrasal conjunction – as illustrated in (8b). The task, however, was different: in Experiment 1, one sentence was matched to one picture, and its degree of match was rated by participants. In Experiment 2, on the other hand, one sentence – this time it could be biclausal – was paired with two pictures, and participants were given a forced-choice between them. Moreover, we designed the experiment in a way to increase the chances for a difference between conjoined and non-conjoined subject types.

- (8) a. U bici su se sudarala kopljia i sablje.  
       in battle AUX.PL REFL collided.N.PL spear.N.PL and saber.F.PL  
       ‘Spears and sabers collided in the battle.’

- b. U bici su se sudarala koplja i u bici su  
in battle AUX.PL REFL collided.N.PL spear.N.PL and in battle AUX.PL  
se **sudarale** sablje.  
REFL collided.F.PL saber.F.PL

'Spears collided in the battle and sabers collided in the battle.'

Experiment 2 was designed to force participants to discriminate their preferences with a choice between two pictures, which represented the one- and the two-event interpretation.

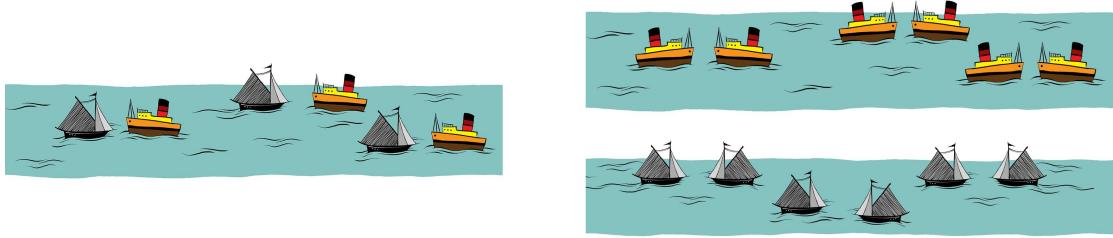


Figure 7: illustration of a pair of pictures standing for the mixed-event and split-event interpretations

Participants were asked to pick the better-matching picture for a given sentence, which either had the monoclausal CCA pattern illustrated in (9a) or the overtly biclausal one in (9b) (with both conditions embedded under a matrix verb). This variable was crossed with the variable of the *type of predicate* with the values collective (as in both examples in (9)) or non-collective, as illustrated in (10) and Figure 8.

- (9) a. Znamo da su se po nekom kanalu mimoilazile lađe  
know.1.PL that AUX.PL REFL over some canal passed\_by.F.PL ship.F.PL  
i druga plovila.  
and other vessel.N.PL

'We know that some ships and other vessels passed each other in some canal'

- b. Znamo da su se po nekom kanalu mimoilazile lađe  
know.1.PL that AUX.PL REFL over some canal pass\_by.F.PL ship.F.PL  
i da su se po nekom kanalu mimoilazila druga plovila.  
and that AUX.PL REFL over some canal passed\_by.N.PL other vessel.N.PL

'We know that some ships passed each other in some canal and that some other vessels passed each other in some other canal.'

- (10) a. Izgleda da su u nekoj trgovini na prodaju stavljena ogledala  
seems that AUX.PL in some shop on sale put.N.PL mirror.N.PL  
i lampe.  
and lamp.F.PL

'It seems that mirrors and lamps were put on sale in some shop'

- b. Izgleda da su u nekoj trgovini na prodaju stavljena  
seems that AUX.PL in some shop on sale put.N.PL  
ogledala i da su u nekoj trgovini na prodaju stavljene lampe.  
mirror.N.PL and that AUX.PL in some shop on sale put.F.PL lamp.F.PL  
'It seems that mirrors were put on sale in some shop and that lamps were put on sale in some shop'

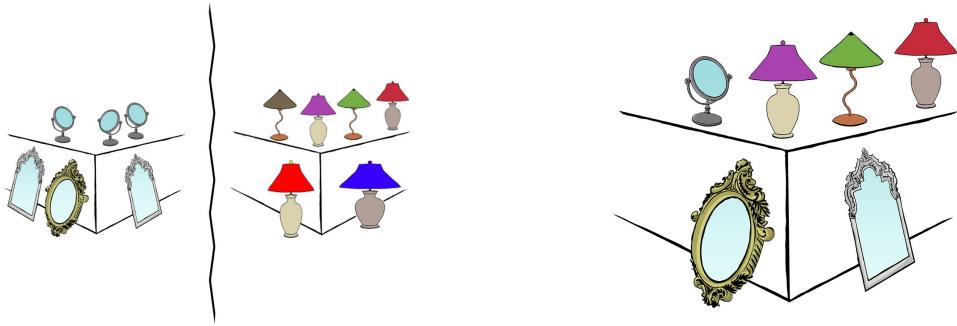


Figure 8: illustration of a pair of pictures offered for the sentences as in (10), with non-collective predicates.

In combination, this illustrates all four conditions in the experiment:

- monoclausal-collective: sentence (9a) and the two pictures in Figure 7,
- biCLAUSAL-collective: sentence (9b) and the two pictures in Figure 7,
- monoclausal-noncollective: sentence (10a) and the two pictures in Figure 8 and
- biCLAUSAL-noncollective: sentence (10b) and the two pictures in Figure 8.<sup>10</sup>

Recall that the TCH postulates the same underlying biCLAUSAL structure for both the surface-monoclausal sentences with CCA and for the surface biCLAUSAL sentences with simple subjects (the hypothesized source of CCA clauses). Therefore, it predicts that given a biCLAUSAL sentence, participants will choose the split-event picture just as much as they will for a surface monoclausal sentence with CCA. A significant difference between the levels monoclausal and biCLAUSAL, in particular one where the former as opposed to the latter has a non-marginal amount of selected mixed-event interpretations – would falsify TCH.

The purpose of the variable *type of predicate* was to strengthen the within-clause interpretation of the subject in the hypothesized biCLAUSAL underlying structure. An objection is possible to the outlined design, namely that even two overtly conjoined clauses may be referring to the same event, implying that participants may still select the one-event picture while parsing the sentence into a biCLAUSAL configuration. The design of the experiment is expected to neutralize this problem at two levels. Firstly, at the level of pragmatics: even if a biCLAUSAL structure may refer to a single event, the fact that there are more economical expressions which can only have this interpretation, namely monoclausal sentences with the default or resolved agreement pattern, is supposed to give a clear advantage to the split-event reading. In a forced choice task, the TCH would expect a near 100% selection of the two-event scenario. As we still wanted to control for the possibility that the events in the two clauses are interpreted as co-referential, we included the *type of predicate* variable, relying on the tendency of certain predicates to have a collective interpretation. Such is the case, for instance, with the B/C/S verb *sresti se* and its English counterpart *to meet*. These verbs require a plurality as a participant, which can be realized by a combination of the subject and an indirect object, or by a plural subject alone. In the former case, the predicate applies to the referents of the subject and of the indirect object, and in the latter case to the members of the plurality denoted by the subject.

- (11) a. Dečak se sreo sa devojčicom.  
 boy.M.SG REFL met.M.SG with girl  
 ‘The boy met with the girl.’

<sup>10</sup> An anonymous reviewer points out that the match between the pictures and the sentences is sometimes remote, because some of the predicates used are difficult to visually represent. While the relation is not always immediate, the experiment design has balanced this for the relevant contrasts, as the picture-sentence match had the same properties for the monoclausal and for the biCLAUSAL conditions.

- b. Dečaci su se sreli.  
 boy.M.PL AUX.PL REFL met.M.PL  
 ‘The boys met (with each other).’
- c. Dečak i devojčica su se sreli.  
 boy.M.SG and girl.F.SG AUX.PL REFL met.M.PL  
 ‘The boy and the girl met (with each other).’
- d. \*Dečak se sreo.  
 boy.M.SG REFL met.M.SG  
 \*‘The boy met.’

When two clauses with identical predicates are conjoined, it is much harder to establish co-reference between the two events when the predicates are collective; compare (12a) with (12b)

- (12) a. Dečaci su se sreli i devojčice su se srele.  
 boy.MPL AUX.PL REFL met.M.PL and girl.F.PL AUX.PL REFL met.F.PL  
 ‘The boys met (with each other) and the girls met (with each other).’  
 #‘The boys participated as experiencers and themes in a meeting event, and the girls participated as experiencers and themes in the same meeting event.’
- b. Dečaci su pevali i devojčice su pevale.  
 boy.M.PL AUX.PL sung.MPL and girl.F.PL AUX.PL sung.F.PL  
 ‘The boys sang and the girls sang (separately).’  
 ‘The boys participated as agents in a singing event, and the girls participated as agents in the same singing event.’

The level *collective* of the variable predicate type is hence supposed to even more strongly block the mixed-event interpretation for any biclausal structure. Therefore, in particular the conditions represented by (9b), and under the biclausal analysis (9a) as well, cannot be linked with a reading in which ships pass by not only other ships, but also other vessels, i.e. the mixed-event picture in Figure 7. If, on the other hand, monoclausal sentences can be paired with mixed-event conditions even in these collective verbs, while biclausal sentences cannot, this strongly suggests that the TCH is on the wrong track.

In the collective conditions, we used telic verbs and those denoting processes, while in the non-collective conditions, in order to maximally bypass the issue of collectivity, we used stative verbs. We intentionally avoided strongly *distributive* predicates, that is predicates that would not allow collective interpretation, because we did not want to additionally favor the split-event level of the dependent variable given monoclausal sentences.

### 3.2 Materials and Method

#### 3.2.1 Participants

In total, 90 undergraduate students participated in this forced-choice picture experiment. 30 first or second year students (sex (F=72%, M=28%), age (mean=20) participated at three research institutions (University of Nova Gorica (tested at University of Ljubljana), Slovenia; University of Sarajevo, Bosnia and Herzegovina; University of Novi Sad, Serbia). They were all native speakers of the local language variety, attended the local secondary school and were not pursuing a university degree in the study of the local language. Their participation was either voluntary or they received course credits for their participation.

#### 3.2.1.2 Materials and Design

The experiment was designed as a version of a forced-choice task in which a participant is presented with one sentence and two different pictures and their task is to choose between the two in order to determine which one is a *better* match for the presented sentence. A single experimental design and procedure was implemented under equal experimental conditions across all research institutions. The language used in the experiment was adapted to the research institutions’ local neutral varieties.

Experimental material was first created in the variety of Zagreb Croatian, and was later adapted to the target language variety, i.e. those of Sarajevo, Novi Sad, and Nova Gorica. The adaptations were minimal to ensure uniformity across research locations. They were mostly lexical due to variation in gender of specific lexical items. In the experiment a total of 64 experimental *sentential* items were presented to the participants.

Experiment 2 used *predicate type* [Collective, Non-Collective] and *clause size* [Monoclausal, Biclausal] as factors yielding a 2x2 design, with *event picture* [one-event, two-events] as the dependent variable. 8 mixed-gender combinations of nominal expressions between the feminine (F) and the neuter (N) were matched with 8 selected predicates for each of the two levels of *predicate type*. Each of the resulting 16 matches were then manipulated into a monoclausal and a biclausal realization along the *clause size* variable, as illustrated in (9) and (10) to create a total of 32 items (8 per each of the four conditions). All items in the monoclausal condition had the same structure: [V Comp Aux (Refl) Adv Pred<sub>CCA</sub> NP<sub>NPL</sub>&NP<sub>FPL</sub>] – an matrix predicate was followed by the complementizer, an inflected auxiliary clitic, a potential reflexive clitic, an adverbial, a predicate, and a final conjoined subject phrase. All items in the biclausal condition also had the same structure: [V Comp Aux (Refl) Adv Pred<sub>CCA</sub> NP<sub>NPL</sub> & Comp Aux (Refl) Adv Pred<sub>CCA</sub> NP<sub>FPL</sub>] – a matrix predicate, followed by an inflected auxiliary clitic, a potential reflexive clitic, an adverbial, a predicate and a subject phrase that was part of the conjunction, and then the same sequence except the matrix predicate repeated in the second clause. Special attention was paid to the naturalness of the resulting examples, across all four conditions.

All items in the experiment were paired once with a one-event and once with a two-event picture. Half of the stimuli had the two-event picture on the left and the one-event picture on the right, and the other half had the opposite arrangement, and the different arrangements were randomly ordered.

A total of 32 filler items sentences were used in the experiment – involving the same fillers used in Experiment 1. New matching and mismatching pictures were created, in order to be paired with those from Experiment 1 as required by the forced choice design of Experiment 2. A full list of items and corresponding pictures is provided in the appendix.

### 3.2.1.3 Methods

Experiment 2 was coded and administered using the on-line experimental platform IbexFarm. It contained an introduction with task description, 6 practice items followed by 64 experimental items. In case of practice and experimental items, participants saw a single sentence paired with two pictures. The task, which was first practiced on the training items, was to read the sentence and observe the pictures and to choose the picture that was a *better* match for the sentence by clicking on it. After clicking on the better matching picture, they had to press a *continue button* (in the language of the participants) in order to proceed to the next experimental item. IbexFarm produced a new random ordering of items for each participant. Picture choice responses were automatically recorded by IbexFarm, exported and transcoded (left-right into one-event or two-events) afterwards for statistical analysis according to the number of matches per condition.

## 3.3 Results and discussion

The results of the experiment show that monoclausal sentences with CCA yield exactly the inverse patterns of the biclausal ones. For the biclausal conditions, the participants chose the two-event picture in over 90% of cases, and for the surface-monoclausal conditions in less than 10% of cases. The variable *predicate type* does not appear to have any effect.

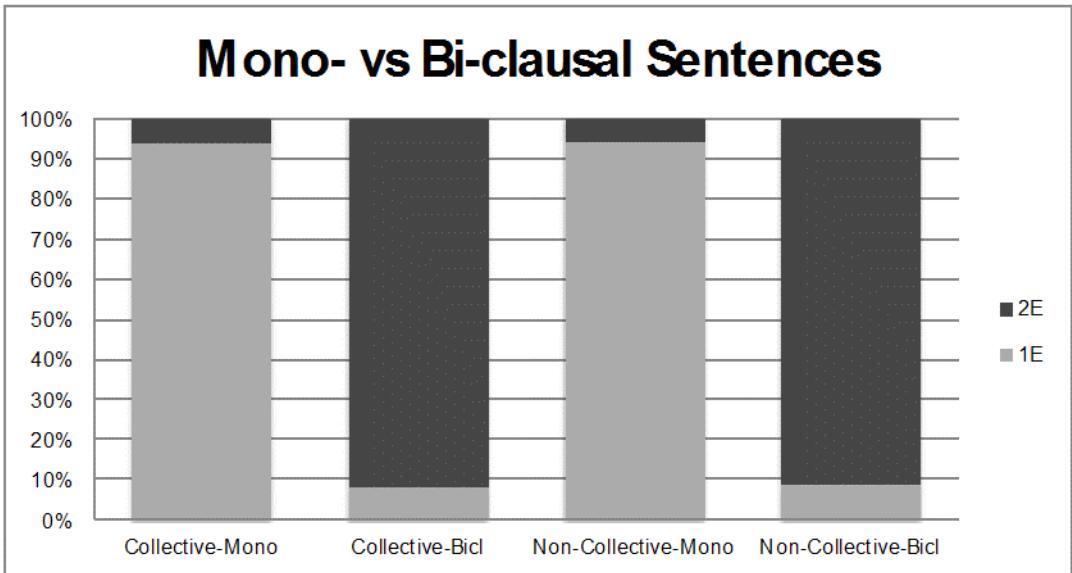


Figure 9: Picture choice per condition

A Two Factor Repeated Measure ANOVA test confirms these observations. The effect of the factor clause size is highly significant ( $p < 0.001$ ;  $F = 1880.599$ ), while the effect of the factor predicate type does not approach significance ( $p = 0.83238$ ;  $F = 0.04563$ ). No interaction between the two factors is attested either ( $p = 0.88777$ ;  $F = 0.02028$ ).

The null result for the variable *predicate type* may very likely be a consequence of the strong effect of the other variable. Namely, the collective level of the variable predicate type was intended to strengthen the within-clause interpretation of the predicate, i.e. to have a closer correspondence between the reading chosen and the underlying structure (one-event for the monoclausal underlying structure, two-events for the biclausal one). Our experiment shows that the participants selected the one-event interpretation for the monoclausal conditions and the two-event interpretation for the biclausal condition, with a very strong contrast. This contrast might have simply been so strong that the room for strengthening by the variable predicate type was too small to afford significance to this variable's effect.

The results for the surface-biclausal conditions confirm our assumption that the biclausal structure, i.e. the clausal conjunction, has a strong preference for a two-event reading represented by the two-event pictures. The fact that in a small number of cases the one-event reading is still chosen is potentially explained by the potential co-reference between the two events in the two clauses, in which case they match the one-event picture. The fact that for the monoclausal condition there were a number of cases where the two-event interpretation is chosen can be explained by the availability of the biclausal parse with a reduced clausal conjunction for this structure – but clearly not as the only structure which derives CCA, or even a dominant one.

The results reject the TCH, since as discussed in Section 2, this hypothesis predicts that the surface-biclausal and the surface-monoclausal levels of the variable *clause-size* will have identical results, both with a strong preference for the two-event pictures. Exactly the pattern that rejects the hypothesis was attested: the two levels factored the opposite extremes, with the biclausal level inducing preference for two-event interpretations, and the monoclausal level for the one-event readings. They also clearly show that the pictures in Experiment 1 do elicit distinct results for monoclausal and biclausal sentences, and hence that the degree of high match for monoclausal CCA with one-event pictures changes once the sentences themselves are overtly biclausal.

Our results do not directly address Schein 2017 - a theory of conjunction on which any coordination always targets the clausal level, and may receive the phrasal appearance only through subsequent reduction (see also Hirsch 2017). The reason is that these theories do not necessarily postulate the bisentential structure as a matter of syntax, nor even one with two event representations –

which is the hypothesis that we test, and furthermore they do not explicate a mechanism which determines the agreement pattern – so they make no specific predictions regarding agreement.<sup>11</sup>

### 3.4 Alternative accounts for the observed asymmetry between monoclausal and biclausal conditions

An anonymous reviewer points out the possibility that the strong contrast between the two conditions (monoclausal with CCA and biclausal) in our experiments may be simply due to a general tendency of surface-monoclausal expressions to prefer the single-event reading, and of the surface-biclausal to prefer the two-event interpretation, as attested for English by Clifton and Frazier (2012). While we agree that part of the observed difference may be due to the same preference already detected by Clifton and Frazier (2012), we offer a few pertinent observations here. Our experiments tested the hypothesized underlying biclausal structure of CCA agreement. Thus, according to the TCH hypothesis, all sentences in Exp 2 were (covertly) biclausal. Taking the underlying structure as the one determining interpretation, the TCH predicts that the CCA condition should pattern like the biclausal condition. Clifton and Frazier (2012) do not make a distinction between potentially two types of monoclausal phrasal conjunctions: A – those triggering default or resolved agreement which are covertly monoclausal and B – those triggering CCA which, following TCH, are covertly biclausal (cf. Schein 2017 for the claim that A and B are both covertly the same and they are both biclausal in some sense), and as they only test A-type of phrasal conjunctions, their results, as important as they may be for the study of processing distributive predicates, are not directly relevant to the question of whether *agreement* necessarily diagnoses or presupposes a biclausal structure.

It may be that the two experiments are not wholly comparable. One highly relevant difference is that in Clifton and Frazier's (2012) study, only strongly distributive predicates and those ambiguous between distributive and non-distributive readings were used. No strongly collective predicates were involved, unlike in our experiment where one of the variables was precisely that of strongly collective vs ambiguous predicates. Strongly collective predicates strengthen the tendency for a monoclausal interpretation of the sentence, which clashes with the hypothesized tendency for a biclausal underlying structure of sentences with the CCA pattern. Moreover, Clifton and Frazier's conclusions are based on reaction time results, not different levels of acceptability. The difference between the *acceptance* rates of the mono- and biclausal condition in their experiment is subtle: there was an acceptance rate of 80.7% for the bisentential realization of potentially collective predicates, while for the monoclausal expression it was 93.8%. Hence, if the surface realization was the source of asymmetries, it is not expected that the CCA surface-monoclausal condition should yield the exact inverse quantitative pattern of the surface-biclausal condition (over 90% of one-event pictures selected for the monoclausal CCA condition and below 10% for the biclausal condition). If differences were solely due to the surface mono- vs. biclausal structure, one would expect a higher rate of two-event readings for the surface-monoclausal CCA condition than the one-event readings in the surface biclausal condition.<sup>12</sup>

<sup>11</sup> For Schein (2017: 173), the difference between CCA and resolved agreement explicitly involves a logical form with a cumulative operator in the latter, and Schein (2017: 182) argues for different thematic relations for the conjunct that controls agreement and the one that does not. Relatedly, an anonymous reviewer claims that previous literature on CCA in Arabic and Slavic has documented differences in interpretation between full agreement and CCA, although these have never been subject to experimental verification and are usually left at the level of “Speakers discern some difference or other of meaning between full and partial agreement” (Schein 2017:191). We are not aware of any such claim about Slavic CCA from the literature (cf. Marušić et al 2007, 2015, Bošković 2009, Marušić and Nevins 2010, Willer Gold et al 2016, Arsenijević and Mitić 2016a,b, Murphy and Puškar 2018), and neither do we share the judgment that there is a difference in the interpretation between CCA and full agreement/default agreement in any of the varieties of South Slavic represented here. In all of the examples tested both in Slovenian and BCS, both conjuncts seem to be equally “agentive” regardless of the agreement used – thus, e.g. both ships and vessels participate in the passing-by comparably, so that neither of the two is more actively passing by while the other participant is less perspectivally anchored, or demoted to comitative status in examples such as (9). We note, however, that our experiment was designed to test mixed-event vs split-event readings and not the types of differences in perspectival anchoring outlined in Schein 2017 (p. 188).

<sup>12</sup> We conducted an additional experiment (Exp3) that we do not report on due to its null results. The experiment was identical to Experiment 2, except that the size variable was replaced with the agreement pattern variable, so that instead of the biclausal level, it included monoclausal examples with the default (DEF) agreement pattern (the contrast was thus between CCA and DEF). No significant effect was attested for the agreement pattern variable

A comparable worry is that the stark contrast is simply due to a pragmatic effect, as follows. Participants were shown two types of pictures, and specifically, as a reviewer points out “If the biclausal sentences are distributive, and mapped onto two-event pictures, then what is grammatically a fully ambiguous structure (conjoined phrases) might be taken to refer to the other (one event/collective) interpretation just because it allows the sentence to be mapped onto the other picture type.” In other words, in principle, participants could have been pragmatically biased to match the (potentially grammatically ambiguous) monoclausal sentences to the one-event pictures, simply because the biclausal sentences needed to be matched to the other type of pictures. While we agree that this could explain part of the observed contrast, it could not explain the obtained results completely. We would anticipate that the described pragmatic effect should be most clearly present in experiments where the two types of sentences were presented one before the other (especially if the first sentence of the pair would always be biclausal), but the experimental items in our experiment were randomized, so at least for the items that appeared first in the experiment, the pragmatic effect could not have played a role. We would thus have expected to find a difference between monoclausal and biclausal conditions, in that there should be more two-event responses in the monoclausal condition than there are one-event responses in the biclausal condition, but this was not the case. Instead, we obtained around 5% of two-event responses in the monoclausal condition, and around 8% one-event responses in the biclausal condition – numerically close, but the opposite of what we would expect given this particular explanation in terms of a pragmatic-effect.

#### 4. Conclusion

One hypothesis that keeps coming back when one sees the agreement phenomena generalized as CCA suggests that this pattern results from reduced clausal conjunction, and simply reflects the agreement of the verb with a non-conjoined subject in the clause whose content survives ellipsis (Aoun et al. 1994, 1999), or of a predicate that is underlyingly present in both clauses. CCA presents the dominant agreement pattern in South Slavic languages where gender marking is visible in plural forms (a requirement for a clear identification of CCA, due to the plural number yielded by conjunction). In this remark, we reported on two experiments conducted on these languages with the aim to test whether the underlying-biclausal hypothesis applies universally to CCA patterns, and more particularly whether it applies to the Slovenian and B/C/S cases that have been otherwise used to motivate complex agreement mechanisms to yield CCA (Willer-Gold et al 2016, Murphy & Puškar 2018). The results of our experiments reject the conjunction reduction hypothesis as the only source of CCA as far as these languages are concerned, and we close by noting that the experiments conducted herein were all with postverbal cases of CCA (where ellipsis of the second verb is potentially plausible hypothesis to begin with, as was originally posited for Arabic); even so, they proved inconsistent with a necessarily biclausal underlying structure. The preverbal cases of CCA by now amply documented for South Slavic in the literature are even less likely to come from an underlying elliptical source.

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Conjunct Agreement and Gender in South Slavic: From Theory to Experiments to Theory.  
*Journal of Slavic Linguistics* 24(1): 187–224.



# **Elided Clausal Conjunction is not the Only Source of Closest Conjunct Agreement: A Picture Matching Study**

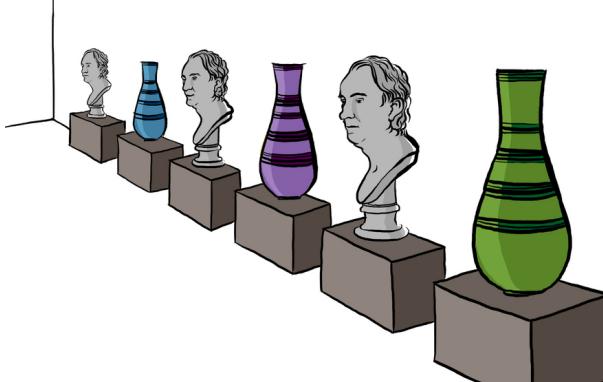
## *Appendix*

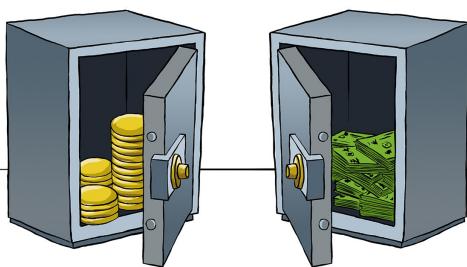
*Boban Arsenijević, Jana Willer-Gold, Nadira Aljović, Nermina Čordalija, Marijana Kresić Vukosav, Nedžad Leko, Frane Malenica, Franc Marušić - Lanko, Tanja Milićev, Nataša Milićević, Petra Mišmaš, Ivana Mitić, Anita Peti-Stantić, Branimir Stanković, Jelena Tušek & Andrew Nevins*

The full list of glossed and translated practice items, stimuli and fillers for Experiment 1 and Experiment 2 is provided in Appendix 1 and Appendix 2, respectively. The names of stimuli conditions specify predicate type [Collective, Non Collective] and category of subject [&P, NP] for Experiment 1. For Experiment 2, the conditions are predicate type [Collective, Non Collective] and clause size [Monoclausal, Biclausal]. The full list of experimental items is exemplified by the Novi Sad version below.

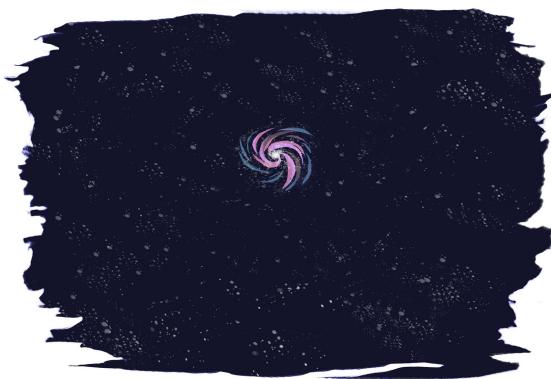
### **Appendix 1**

The list of practice and experimental items for Experiment 1 (sentence-picture matching), with pictures they were paired with, is provided with the Novi Sad version below.

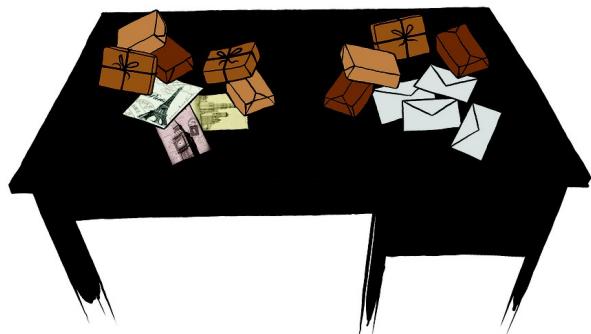
<b>Practice</b>	
	U nedogled su se nizala stabla. endlessly AUX.PL REFL lined up.N.PL tree.N.PL 'Trees were endlessly lined up.'
	Uza zid su se naizmjence redale against wall AUX.PL REFL intermittently ordered.N.PL vaze i poprsja. vase.F.PL and bust.N.PL 'Busts and vases were ordered intermittently against the wall.'



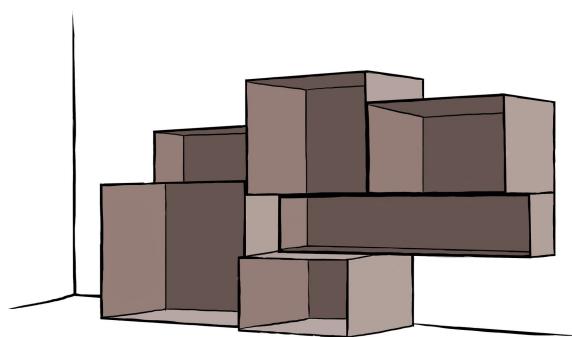
U sefovima su se čuvali zlatnici  
in safes AUX.PL REFL kept.M.PL gold coin.M.PL  
i novci.  
and money.M.PL  
'Gold coins and banknotes were kept in safes.'



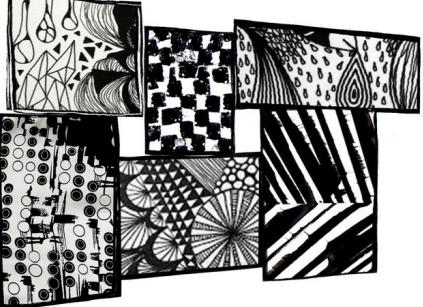
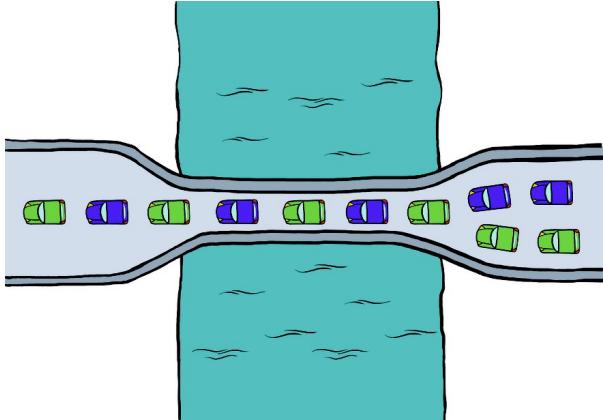
Na nebu su se vidjeli oblaci.  
on sky AUX.SG REFL see.M.PL could.M.PL  
'One could see clouds in the sky.'

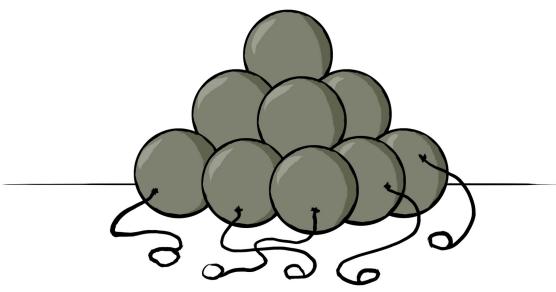
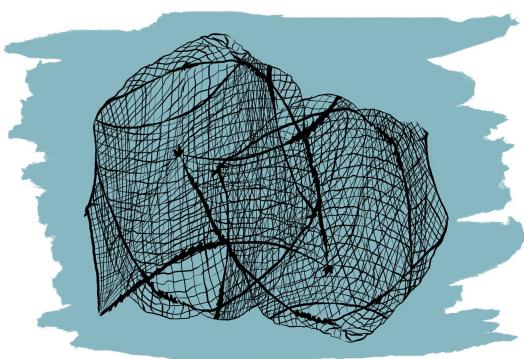


Na suprotnim stranama stola su ležale  
on opposite sides table AUX.PL lied.F.PL  
razglednice i pisma.  
postcard.F.PL and letter.N.PL  
'Postcards and letters were lying on the opposite sides  
of the table.'

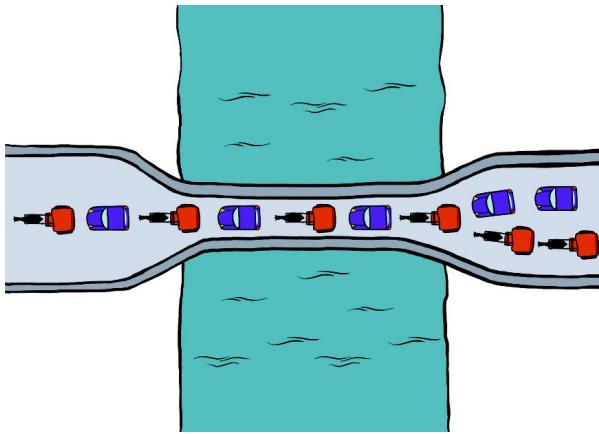
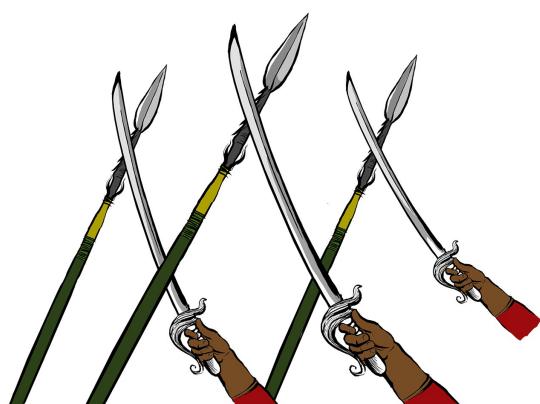


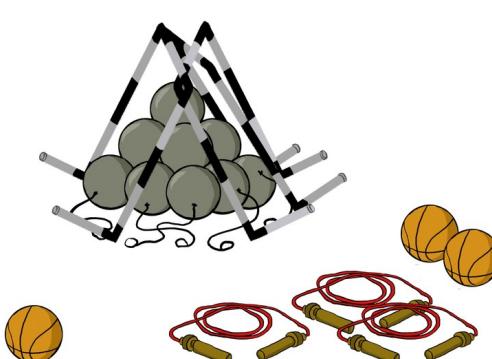
Pored zida je stavljena kutija.  
Next-to wall AUX.SG place.F.SG box.F.SG  
'A box was placed next to the wall.'

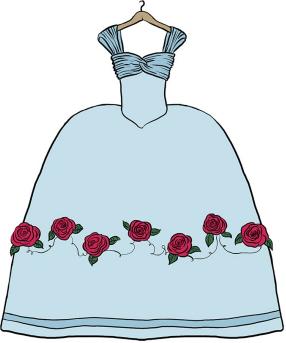
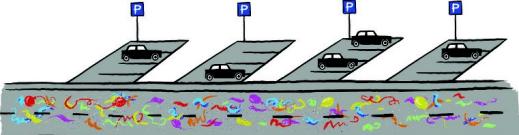
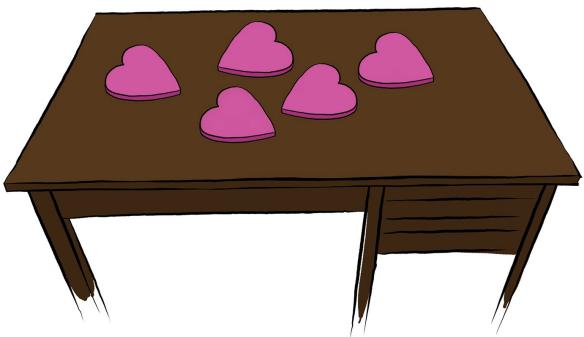
Stimuli	
<i>Collective-NP</i>	
	<p>Na zidu su se dodirivale on wall AUX.PL REFL touched.F.PL grafike. graphic.F.PL 'Graphics were touching each other on the wall.'</p>
	<p>Na mostu su se smenjivala on bridge AUX.PL REFL took-turn.N.PL vozila. vehicle.N.PL 'Vehicles were going over the bridge in turn.'</p>
	<p>Po kanalu su se susretale jedrilice. on canal AUX.PL REFL met.F.PL sailboat.F.PL 'Sailboats were passing by each other in the canal.'</p>
	<p>U bitci su se sudarala kopla. in battle AUX.PL REFL collided.N.PL spear.N.PL 'Spears collided in the battle.'</p>

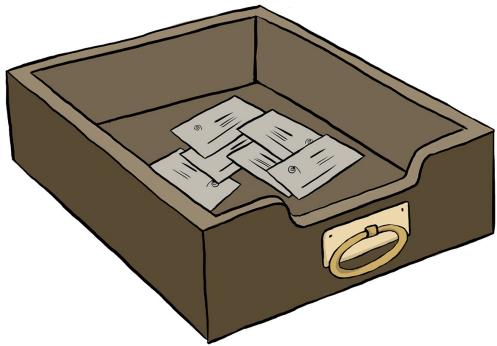
	<p>U poštanskom sandučetu su se izmešale in mailbox AUX.PL REFL intermixed.F.PL razglednice. postcard.F.PL 'Postcards were intermixed with each other in the mailbox.'</p>
	<p>Na suprotnim stranama reke su se on opposite sides river AUX.PL REFL pružala polja. extended.N.PL field.N.PL 'Fields were extending on the opposite sides of the river.'</p>
	<p>Na gomilu su bila izdvojena onto pile AUX.PL AUX.N.PL separated.N.PL kladiva. hammer.N.PL 'Hammers were separated onto a pile.'</p>
	<p>U moru su se zapetljale mreže. in sea AUX.PL REFL entangled.F.PL net.F.PL 'Nets were entangled in the sea.'</p>

**Collective-&P**

	<p>Na zidu su se dodirivale grafike on wall AUX.PL REFL touched.F.PL graphic.F.PL i ulja. and oil.painting.N.PL 'Graphics and oil paintings were touching each other on the wall.'</p>
	<p>Na mostu su se smenjivala vozila on bridge AUX.PL REFL took-turn.N.PL vehicle.N.PL i kočije. and chariot.F.PL 'Vehicles and chariots were going over the bridge in turn.'</p>
	<p>Po kanalu su se susretale jedrilice i on canal AUX.PL REFL met.F.PL sailboat.F.PL and motorna plovila. motorized vessel.N.PL 'Sailboats and motorized vessels were passing by each other in the canal.'</p>
	<p>U bitci su se sudarala kopljia in battle AUX.PL REFL collided.N.PL spear.N.PL i sablje. and saber.F.PL 'Spears and sabers collided in the battle.'</p>

	<p>U poštanskom sandučetu su se izmešale razglednice i pisma. postcard.F.PL and letter.N.PL 'Postcards and letters were intermixed in the mailbox.'</p>
	<p>Na suprotnim stranama reke su se pružala polja i gore. on opposite sides river AUX.PL REFL extended.N.PL field.N.PL and hill.F.PL 'Fields and hills were extending on the opposite sides of the river.'</p>
	<p>Na gomilu su bile izdvojene onto pile onto pile AUX.PL AUX.F.PL separated.F.PL prepone i kladiva hurdle.F.PL and hammer.N.PL 'Hammers and hurdles were separated onto a pile.'</p>
	<p>U moru su se zapetljale debla in sea AUX.PL REFL entangled.F.PL trunk.N.PL i mreže. and net.F.PL 'Nets and trunks were entangled in the sea.'</p>

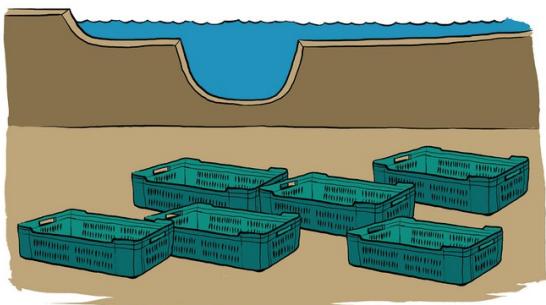
<b>Non-Collective-NP</b>	
	<p>Na haljinu su zašivene ruže.      on dress AUX.PL sewn.F.PL rose.F.PL      'Roses were sewn on the dress.'</p>
	<p>Nakon parade su počišćena parkirališta.      after parade AUX.PL cleaned.N.PL parking-lot.N.PL      'Parking lots were cleaned after the parade.'</p>
	<p>Na stolu su odložena srca.      on table AUX.PL left-aside.N.PL heart.N.PL      'Hearts were left on the table.'</p>
	<p>Na zidu su visile medalje.      on wall AUX.PL hung.F.PL medal.F.PL      'Medals were hanging on the wall.'</p>



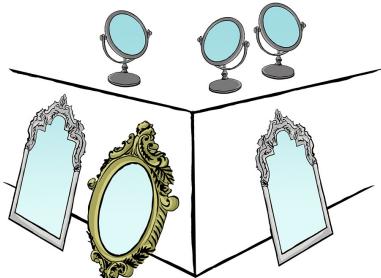
U fioku su stavljene vizitke.  
in drawer AUX.PL put.F.PL business card.F.PL  
'Business cards were put into a drawer.'



Za koncert su pripremljena violončela.  
for concert AUX.PL prepared.N.PL violincello.N.PL  
'Violincellos were prepared for the concert.'

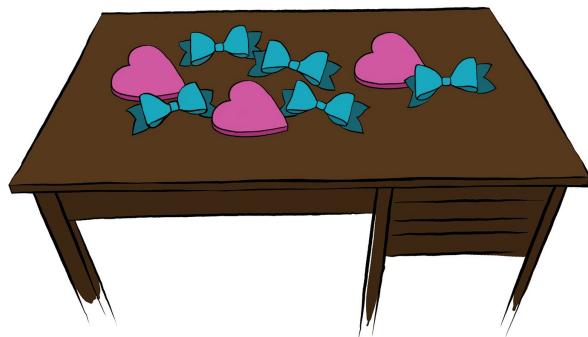
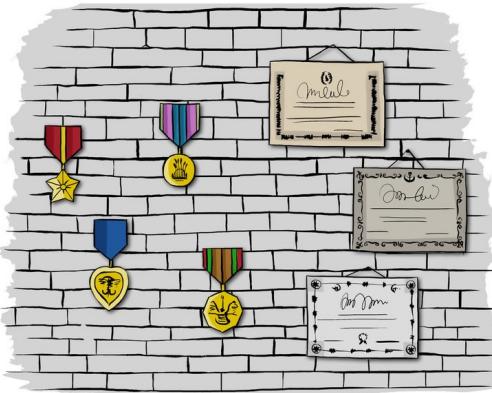


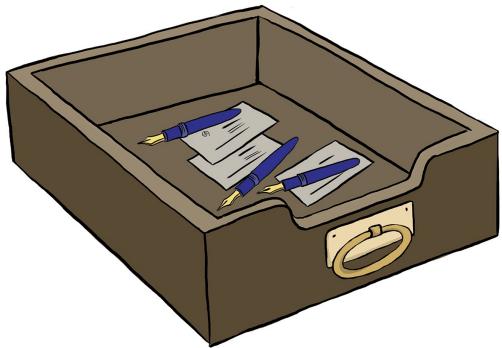
Na brod su ukrcane gajbice.  
on ship AUX.PL loaded.F.PL crate.F.PL  
'Crates were boarded onto the ship.'



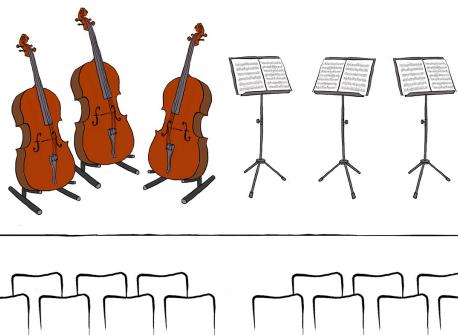
U prodavnici su izložena ogledala.  
in shop AUX.PL displayed.N.PL mirror.N.PL  
'Mirrors were displayed in the shop.'

**Non-Collective-&P**

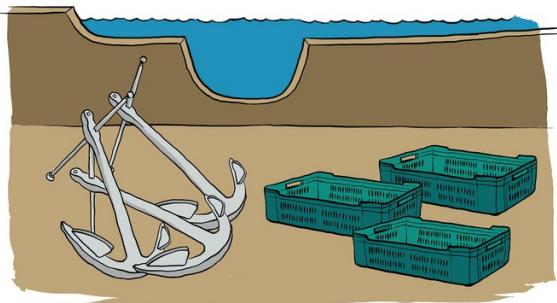
	<p>Na haljinu su zašivene ruže i pera.      on dress AUX.PL sewn.F.PL rose.F.PL and feather.N.PL      ‘Roses and feathers were sewn on the dress.’</p>
	<p>Nakon parade su počišćena parkirališta i kuće.      after parade AUX.PL cleaned.N.PL parking-lot.N.PL and house.F.PL      ‘Parking lots and houses were cleaned after the parade.’</p>
	<p>Na stolu su odložena srca i mašne.      on table AUX.PL left-aside.N.PL heart.N.PL and ribbon.F.PL      ‘Hearts and ribbons were left on the table.’</p>
	<p>Na zidu su visile medalje i priznanja.      on wall AUX.PL hung.F.PL medal.F.PL and award.N.PL      ‘Medals and awards were hanging on the wall.’</p>



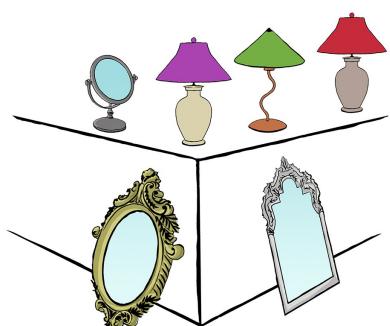
U fioku su stavljene vizitke  
in drawer AUX.PL put.F.PL business card.F.PL  
i penkala.  
and pen.N.PL  
'Business cards and pens were put into a drawer.'



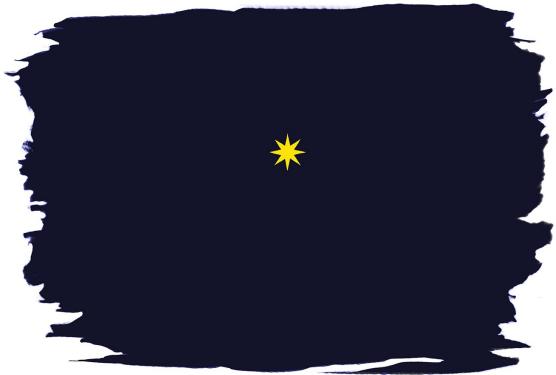
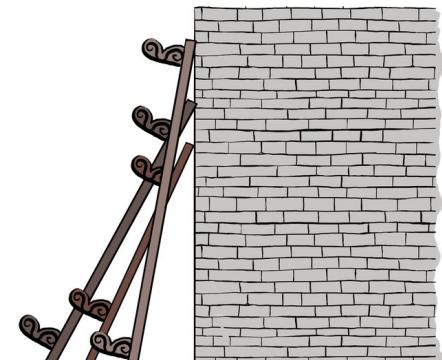
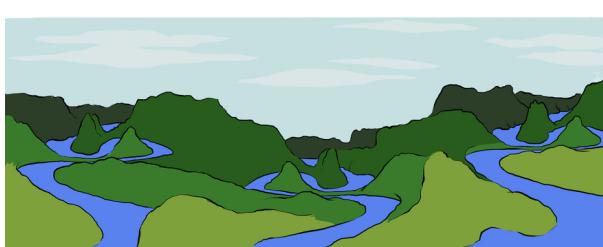
Za koncert su pripremljena violončela  
for concert AUX.PL prepared.N.PL violincello.N.PL  
i note.  
and music-score.F.PL  
'Violincellos and music scores were prepared for the concert.'

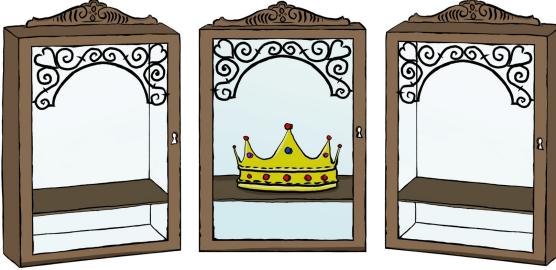
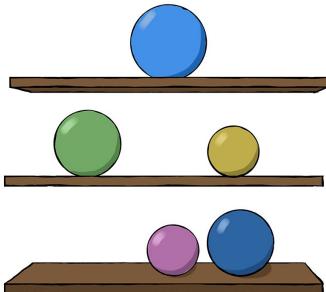
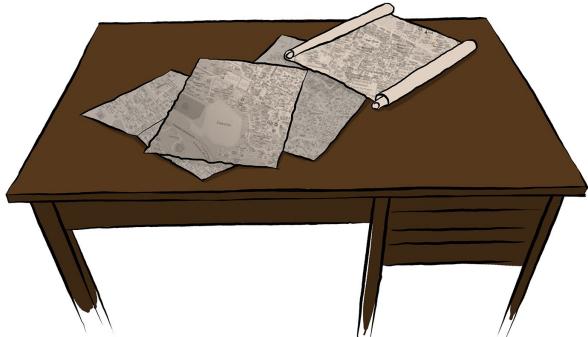
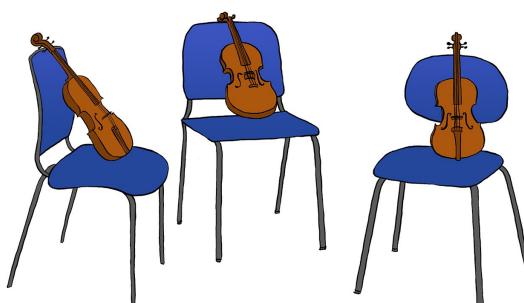


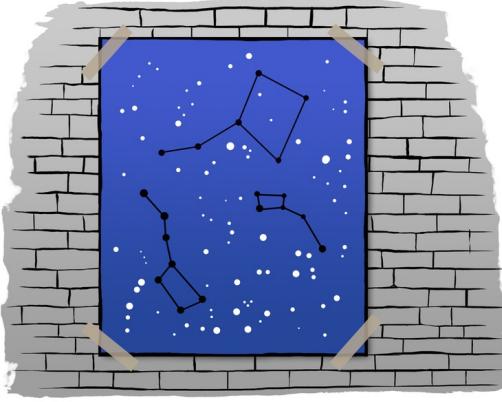
Na brod su ukrcane gajbice i  
on ship AUX.PL loaded.F.PL crate.F.PL and  
sidra.  
anchor.N.PL  
'Crates and anchors were loaded onto the ship.'



U prodavnici su izložena ogledala  
in shop AUX.PL displayed.N.PL mirror.N.PL  
i lampe.  
and lamp.F.PL  
'Mirrors and lamps were displayed in the shop.'

<b>Fillers</b>	
	<p>Na nebu su se sjajale zvezde. on sky AUX.PL REFL shining.F.PL star.F.PL 'Stars were shining on the sky.'</p>
	<p>U frižideru su se sušile kobasice. In freezer AUX.PL REFL dried.F.PL sausage.F.PL 'Sausages were drying in the freezer.'</p>
	<p>Na zid su se naslanjale police. on wall AUX.PL REFL leaned.F.PL shelf.F.PL 'Shelves were leaning against the wall.'</p>
	<p>Kroz brda su se provlačile reke. through mountains AUX.PL REFL wriggled.F.PL river.F.PL 'Rivers were wriggling through the mountains.'</p>

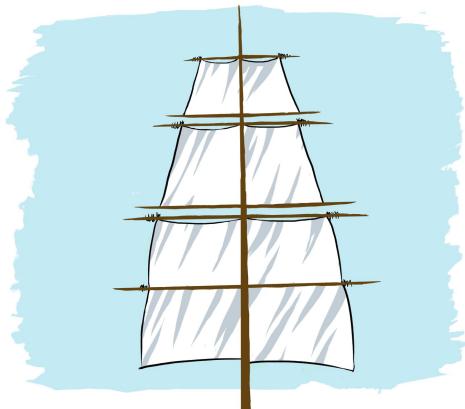
	<p>U vitrini su izložene krune. in cabinet AUX.PL displayed.F.PL crown.F.PL 'Crowns were displayed in the cabinet.'</p>
	<p>Na polici su stajale knjige. on shelf AUX.PL standing.F.PL book.F.PL 'Books were on the shelf.'</p>
	<p>Na stolu su otvorene karte. on table AUX.PL opened.F.PL map.F.PL 'Maps were opened on the table.'</p>
	<p>Na stolicama su čekale violine. on chairs AUX.PL waiting.F.PL violin.F.PL 'Violins were waiting on the chairs.'</p>



Kroz ključaonicu su se videla  
through keyhole AUX.PL REFL see.N.PL  
sazvežda.  
constellation.N.PL  
'Constellations could be seen through the keyhole.'



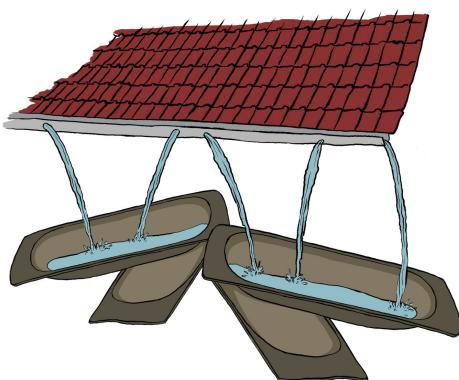
Na lutkama su se vetrila krvna.  
on mannequins AUX.PL REFL aired.N.PL fur.N.PL  
'Furs were airing on the mannequins.'



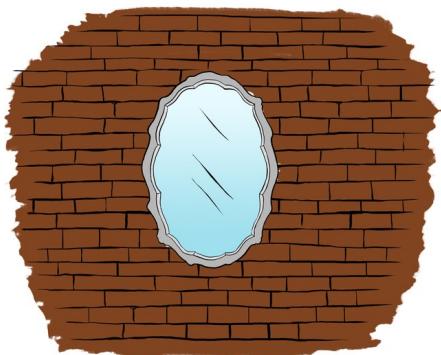
Na jarbolu su se sušila jedra.  
on mast AUX.PL REFL dried.N.PL sail.N.PL  
'Sails were drying on the mast.'



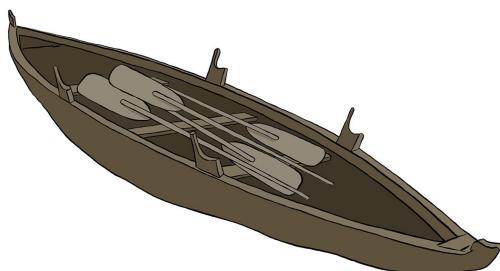
U peći su se pekla peciva.  
in oven AUX.PL REFL baked.N.PL bun.N.PL  
'Buns were baking in the oven.'



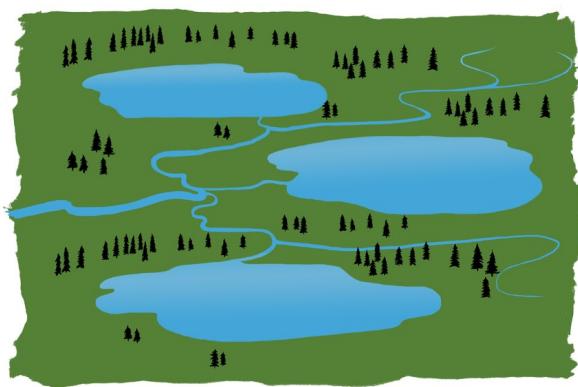
Vodu iz slavine su hvatala korita.  
water from tap AUX.PL caught.N.PL trough.N.PL  
'Troughs were catching the water from the tap.'



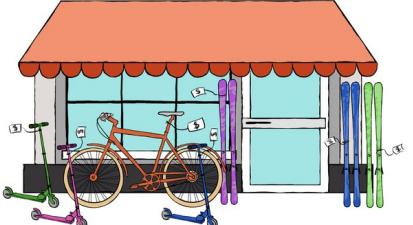
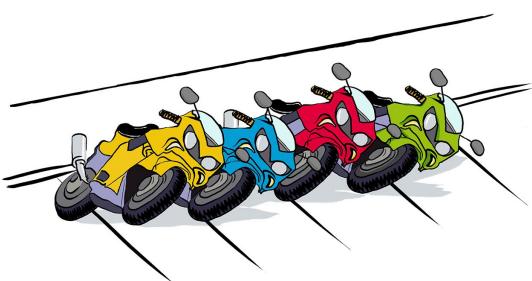
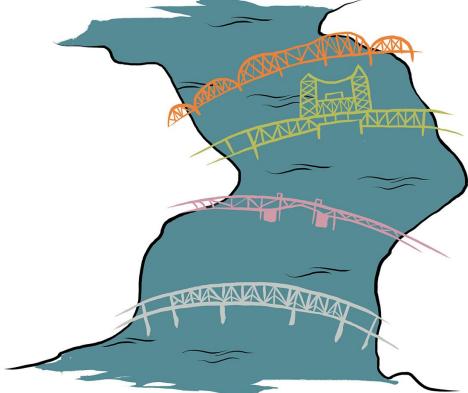
Na zid su obešena ogledala.  
on wall AUX.PL hooked.N.PL mirror.N.PL  
'Mirrors were hooked onto the wall.'

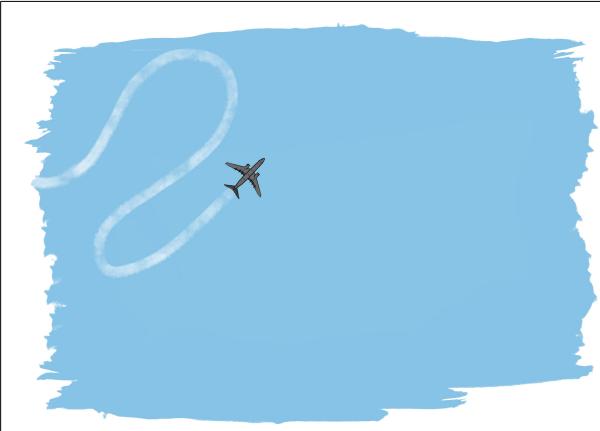


U čamcu su ostavljena vesla.  
in boat AUX.PL left.N.PL paddle.N.PL  
'Paddles were left in the boat.'

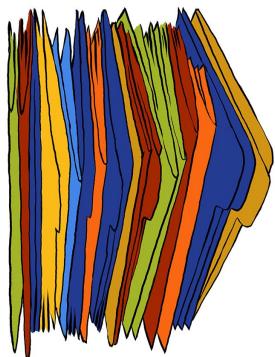


Potocima su povezana jezera.  
streams AUX.PL connected.N.PL lake.N.PL  
'Lakes were connected by streams.'

	<p>Jedan nasuprot drugog su se parkirali one against other AUX.PL REFL parked.M.PL kamioni. truck.M.PL 'Trucks were parked one opposite one another.'</p>
	<p>Ispred prodavnice su se prodavali bicikli. in-front shop AUX.PL REFL sold.M.PL bike.M.PL 'Bikes were sold in front of the shop.'</p>
	<p>Na parkiralištu su se prevrnuli on parking AUX.PL REFL tipped-over.M.PL motori. motorcycle.M.PL 'Motorcycles have tipped over on the parking lot.'</p>
	<p>Preko reke su se uzdizali mostovi. over river AUX.PL REFL raised.M.PL bridge.M.PL 'Bridges were spanning over the river.'</p>



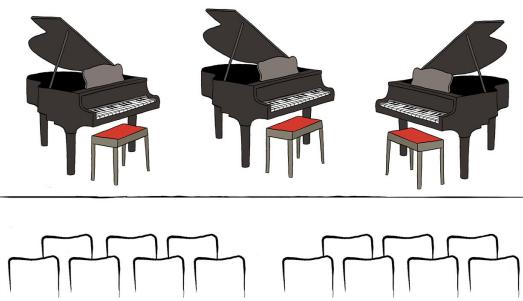
Po nebu su vijugali avioni.  
on sky AUX.PL zigzagged.M.PL plane.M.PL  
'Planes zigzagged in the sky.'



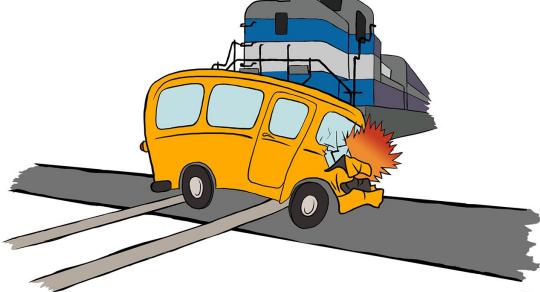
Jedan pored drugog su složeni  
one next-to other AUX.PL arranged.M.PL  
kompjuteri.  
computer.M.PL  
'Computers were placed next to each other.'

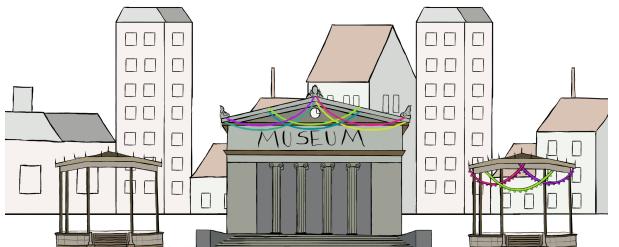
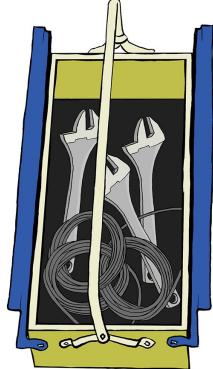


Na stolu su stajali telefoni.  
on table AUX.PL standing.M.PL telephone.M.PL  
'Telephones were on the table.'



Na bini su postavljeni klaviri.  
on stage AUX.PL place.M.PL piano.M.PL  
'Pianos were placed on the stage.'

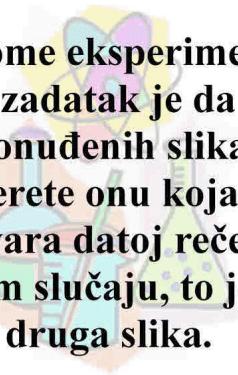
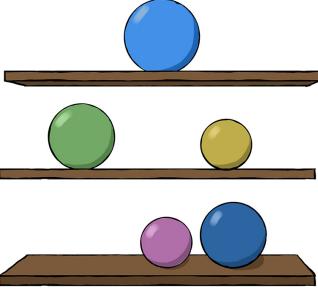
	<p>Na raskrsnici su se sudarili vozovi on crossing AUX.PL REFL collided.M.PL train.M.PL i autobusi. and bus.M.PL 'Trains and buses collided on the crossing.'</p>
	<p>U selidbi su se polomili klarineti in move AUX.PL REFL broken.M.PL clarinet.M.PL i kontrabasi. and double bass.M.PL 'Clarinetts and double basses were broken during the move.'</p>
	<p>Na zgradi su se pojavili grafiti on building AUX.PL REFL appeared.M.PL grafitti.M.PL i grbovi. and coats of arm.M.PL 'Grafitti and coats of arms appeared on the building.'</p>
	<p>Od hladnoće su se smrznuli from cold AUX.PL REFL frozen.M.PL prsti i nokti. finger.M.PL and nail.M.PL 'Fingers and nails were frozen from the cold.'</p>

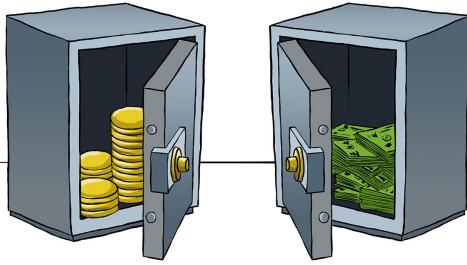
	<p>Za proslavu su ukrašeni for celebration AUX.PL decorated.M.PL muzeji i paviljoni. museum.M.PL and pavilion.M.PL 'Museums and pavilions were decorated for the celebration.'</p>
	<p>U kutijama su dovezeni kaktusi in trolley AUX.PL brought.M.PL pineapple.M.PL i kokosi. and coconut.M.PL 'Pineapples and coconuts were brought in the trolley.'</p>
	<p>Na lutku su zašiveni rukavi i on mannequin AUX.PL sewed.M.PL sleeve.M.PL and dugmići. button.M.PL 'Sleeves and buttons were sewn onto the mannequin.'</p>
	<p>U kutiju su odloženi ključevi i in box AUX.PL placed.M.PL wrench.M.PL and kablovi. cable.M.PL 'Wrenches and cables were placed into the box.'</p>

## Appendix 2

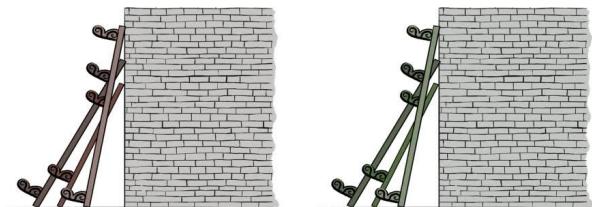
### Forced-choice picture experiment

The list of practice and experimental items for the forced-choice picture experiment is exemplified by the Novi Sad version below. As the biclausal and the monoclausal conditions used the same type of sentences (except that one was monoclausal and the other one biclausal), they were also presented with the same pair of pictures. Thus in the table below, sentences of the two conditions are given after the corresponding pair of visual stimuli. (*COLLECTIVE-MONO* = collective predicate with noun phrase coordination; *COLLECTIVE-BICL* = collective predicate with clausal coordination; *NON-COLLECTIVE-MONO* = non-collective predicate with noun phrase coordination; *NON-COLLECTIVE-BICL* = non-collective predicate with clausal coordination)

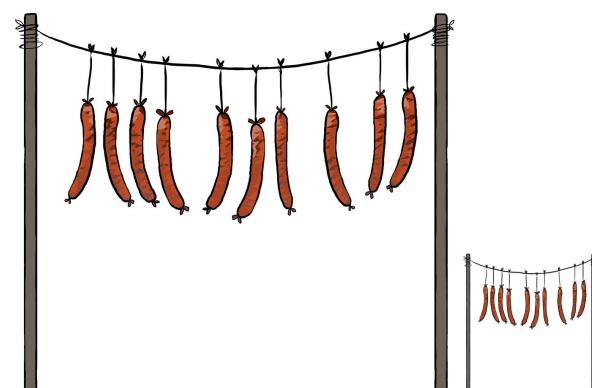
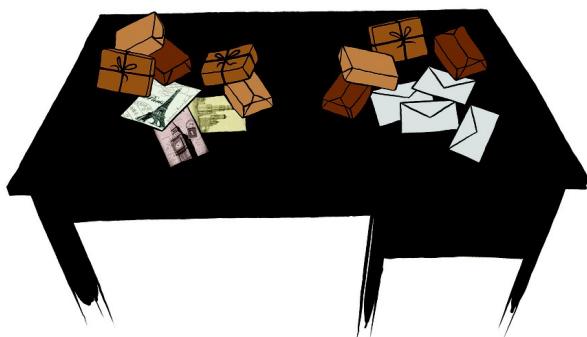
<i>Practice</i>	
<i>1-event picture</i>	<i>2-event picture</i>
	<p><b>U ovome eksperimentu, Vaš zadatak je da od ponuđenih slika odaberete onu koja više odgovara dатoj rečenici. U ovom slučaju, то je она druga slika.</b></p> 
U nedogled su se nizala stabla. endlessly AUX.PL REFL lined up.N.PL tree.N.PL 'Trees were endlessly lined up.'	'In this experiment your task is to choose the picture that best matches the given sentence. For this case, this is the other picture.'
	
Uza zid su se naizmenično redala poprsja i vase. against wall AUX.PL REFL intermittently ordered.N.PL bust.N.PL and vase.F.PL 'Busts and vases were ordered intermittently against the wall.'	



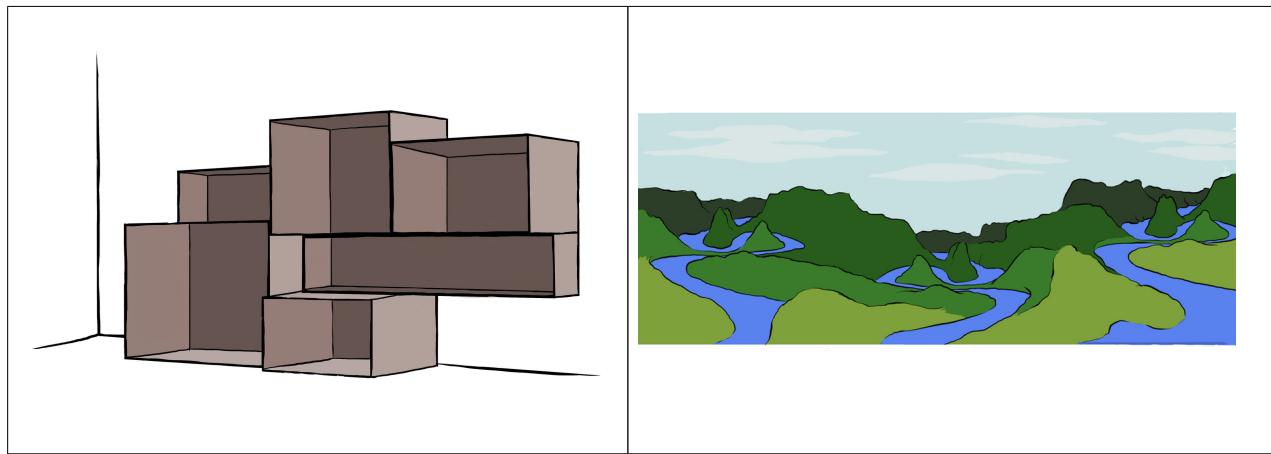
U sefovima su se čuvali zlatnici i novci.  
in safes AUX.PL REFL kept.M.PL gold coin.M.PL and money.M.PL  
'Gold coins and banknotes were kept in safes.'



Na nebu su se videli oblaci.  
on sky AUX.SG REFL see.M.PL could.M.PL  
'One can see clouds in the sky.'



Na suprotnim stranama stola su ležale razglednice i pisma.  
on opposite sides table AUX.PL lied.F.PL postcard.F.PL and letter.N.PL  
'Postcards and letters were lying on the opposite sides of the table.'



Uza zid je stavljena kutija.  
next.to wall AUX.SG place.F.SG box.F.SG  
'The box was placed next to the wall.'

<i>Stimuli</i>	
<i>Collective</i>	
<i>1-event picture</i>	<i>2-event picture</i>
<b>POMNLT</b> <b>0123456</b> <b>KIGJKLP</b> <b>5678912</b>	<b>POMNLT</b> <b>0123456</b> <b>ABCDEF</b> <b>8912345</b> <b>CDEFGH</b> <b>5678912</b> <b>HIGJKLP</b> <b>7654321</b>

#### COLLECTIVE-MONO

Očito je da su neki kvadrat činile brojke i slova.  
obvious AUX.SG that AUX.PL some square made.F.PL number.F.PL and letter.N.PL  
'It is obvious that a square was made out of numbers and letters.'

#### COLLECTIVE-BICL

Očito je da su neki kvadrat činile brojke  
obvious AUX.SG that AUX.PL some square made.F.PL number.F.PL  
i da su neki kvadrat činila slova.  
and that AUX.PL some square made.N.PL letter.N.PL  
'It is obvious that a square was made out of numbers and that a square was made out of letters.'

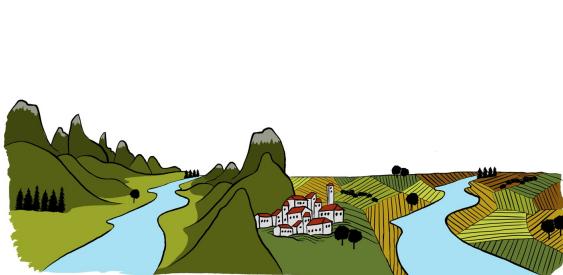


#### COLLECTIVE-MONO

Nezgodno je da su se u nekoj sobi na podu zapetljale žice i vlakna.  
unfortunate AUX.SG that AUX.PL REFL in some room on floor entangled.F.PL wire.F.PL and fiber.N.PL  
'It is unfortunate that wires and fibers got entangled on the floor in some room.'

#### COLLECTIVE-BICL

Nezgodno je da su se u nekoj sobi na podu zapetljale žice  
unfortunate AUX.SG that AUX.PL REFL in some room on floor entangled.F.PL wire.F.PL  
i da su se u nekoj sobi na podu zapetljala vlakna.  
and that AUX.PL REFL in some room on floor entangled.N.PL fiber.N.PL  
'It is unfortunate that wires got entangled on the floor in some room and that fibers got entangled on the floor in some room.'



#### COLLECTIVE-MONO

Videli smo da su se na suprotnim stranama neke reke pružala polja  
saw AUX.PL that AUX.PL REFL on opposite sides some river extended.N.PL field.N.PL  
i planine.  
and hill.F.PL  
'We saw that fields and hills were extending on the opposite sides of some river.'

#### COLLECTIVE-BICL

Videli smo da su se na suprotnim stranama neke reke pružala polja  
saw AUX.PL that AUX.PL REFL on opposite sides some river extended.N.PL field.N.PL  
i da su se na suprotnim stranama neke reke pružale planine.  
and that AUX.PL REFL on opposite sides some river extended.F.PL hill.F.PL  
'We saw that fields were extending on the opposite sides of some river and that hills were extending on the opposite sides of some river.'

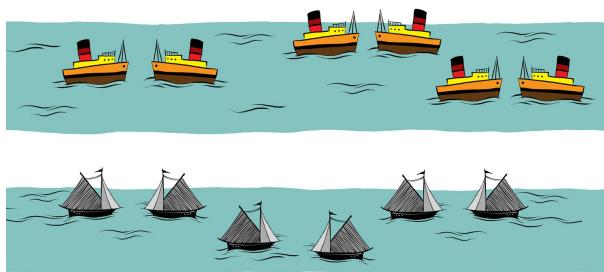


#### COLLECTIVE-MONO

Lepo je videti da su se na nekom zidu dodirivale grafike i ulja.  
nice AUX.SG see that AUX.PL REFL on some wall touched.F.PL graphic.F.PL and oil painting.N.PL  
'It is nice to see that graphics and oil paintings were touching each other on a wall.'

#### COLLECTIVE-BICL

Lepo je videti da su se na nekom zidu dodirivale grafike  
nice AUX.SG see that AUX.PL REFL on some wall touched.F.PL graphic.F.PL  
i da su se na nekom zidu dodirivala ulja.  
and that AUX.PL REFL on some wall touched.N.PL oil painting.N.PL  
'It is nice to see that graphics were touching each other on a wall and that oil paintings were touching each other on a wall.'

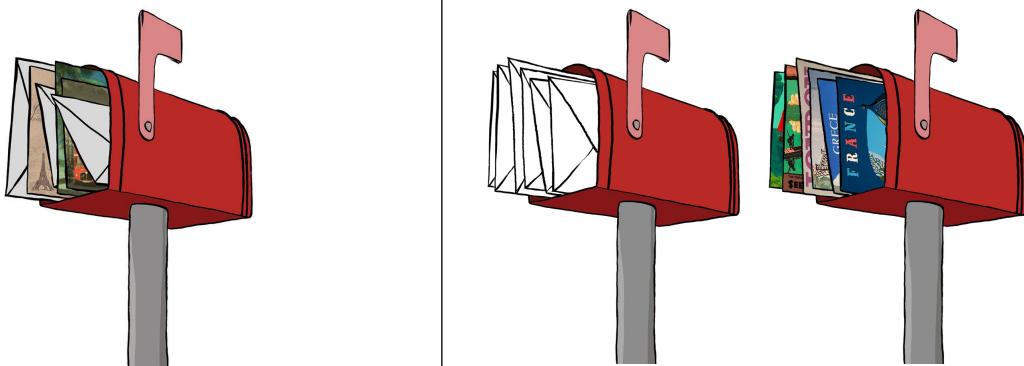


#### COLLECTIVE-MONO

Znamo da su se po nekom kanalu mimoilazile lađe i druga plovila.  
know that AUX.PL REFL on some canal pass.F.PL liner.F.PL and other vessel.N.PL  
'We know that liners and other vessels were passing by each other in a canal.'

#### COLLECTIVE-BICL

Znamo da su se po nekom kanalu mimoilazile lađe  
know that AUX.PL REFL on some canal pass.F.PL liner.F.PL  
i da su se po nekom kanalu mimoilazila druga plovila.  
and that AUX.PL REFL on some canal pass.N.PL other vessel.N.PL  
'We know that liners were passing by each other in a canal and that other vessels were passing by each other in a canal.'



#### COLLECTIVE-MONO

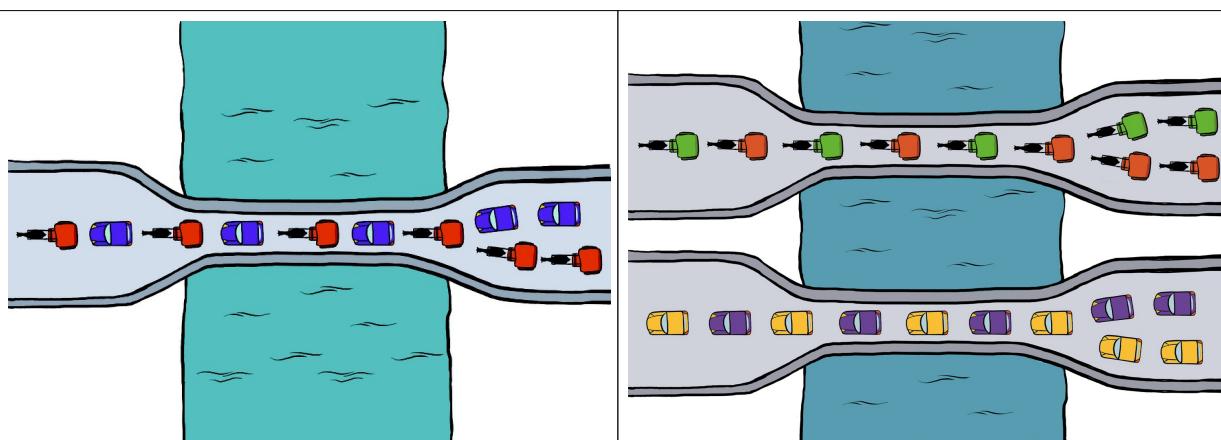
Opet se dogodilo da su se u nekom sandučiću izmešala pisma i razglednice.  
again REF happened that AUX.PL REFL in some mailbox intermixed.N.PL letter.N.PL and razglednice.

postcard.F.PL

'It happened again that letters and postcards were intermixed in a mailbox.'

#### COLLECTIVE-BICL

Opet se dogodilo da su se u nekom sandučiću izmešala pisma  
again REF happened that AUX.PL REFL in some mailbox intermixed.N.PL letter.N.PL  
i da su se u nekom sandučiću izmešale razglednice.  
and that AUX.PL REFL in some mailbox intermixed.F.PL postcard.F.PL  
'It happened again that letters were intermixed in a mailbox and that postcards were intermixed in a mailbox.'

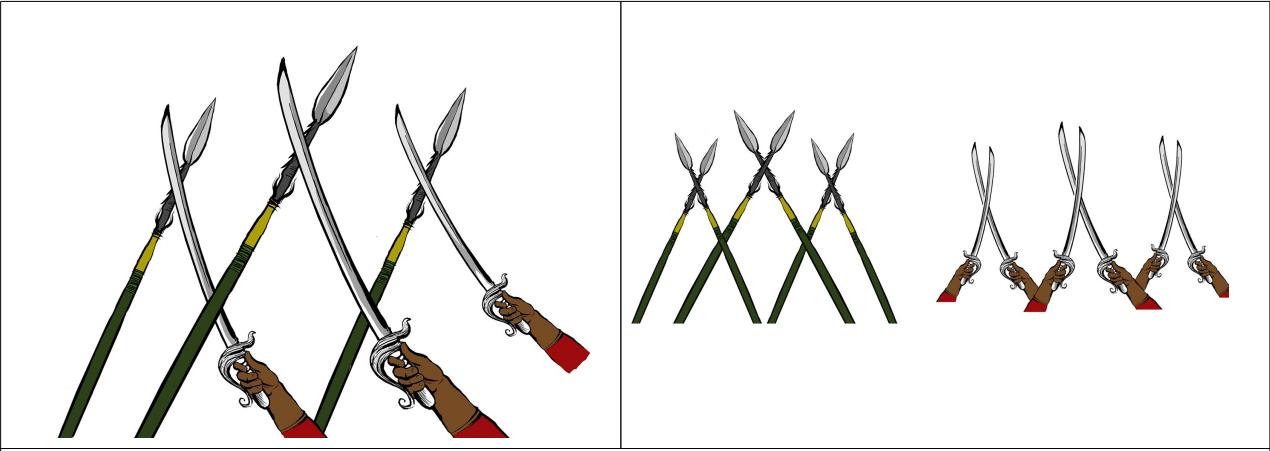


#### COLLECTIVE-MONO

Izgleda da su se na nekom prelazu smenjivala vozila i kočije.  
seems that AUX.PL REFL on some crossing took-turn.N.PL vehicle.N.PL and chariot.F.PL  
'It seems that vehicles and chariots were going over a crossing in turn.'

#### COLLECTIVE-BICL

Izgleda da su se na nekom prelazu smenjivala vozila  
seems that AUX.PL REFL on some crossing took-turn.N.PL vehicle.N.PL  
i da su se na nekom prelazu smenjivale kočije.  
and that AUX.PL REFL on some crossing took-turn.F.PL chariot.F.PL  
'It seems that vehicles were going over a crossing in turn and that chariots were going over a crossing in turn.'

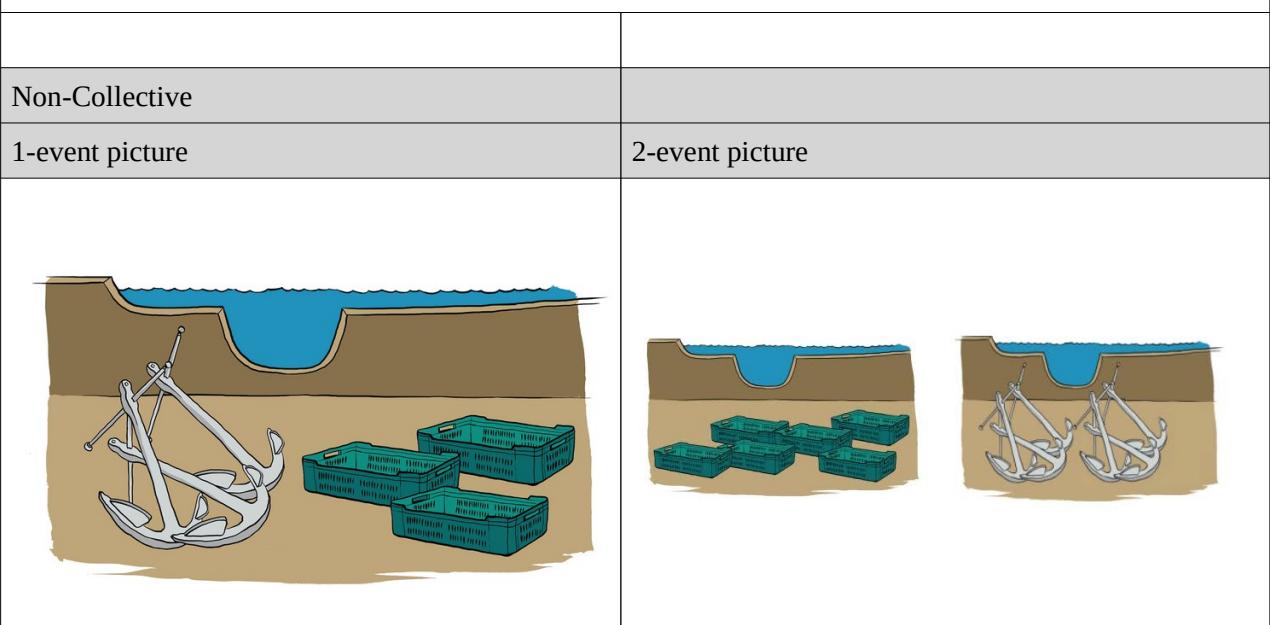


#### COLLECTIVE-MONO

Očekivano je da su se u nekoj bici sudarala koplja i sablje.  
expected AUX.SG that AUX.PL REFL in some battle collided.N.PL spear.N.PL and saber.F.PL  
'It is expected that spears and sabers collided in a battle.'

#### COLLECTIVE-BICL

Očekivano je da su se u nekoj bici sudarala koplja  
expected AUX.SG that AUX.PL REFL in some battle collided.N.PL spear.N.PL  
i da su se u nekoj bici sudarale sablje.  
and that AUX.PL REFL in some battle collided.F.PL saber.F.PL  
'It is expected that spears collided in a battle and that sabers collided in a battle.'

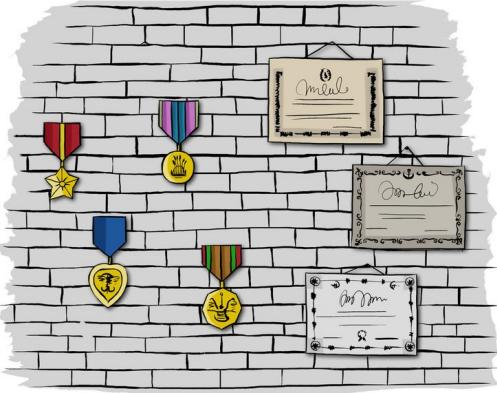


#### NON-COLLECTIVE-MONO

Očito je da su na neki brod ukrcane gajbe i sidra  
obvious AUX.SG that AUX.PL on some ship loaded.F.PL crate.F.PL and anchor.N.PL  
'It is obvious that crates and anchors were boarded onto a ship.'

#### NON-COLLECTIVE-BICL

Očito je da su na neki brod ukrcane gajbe i da su na neki brod  
obvious AUX.SG that AUX.PL on some ship loaded.F.PL crate.F.PL and that AUX.PL on some ship  
ukrcana sidra.  
loaded.N.PL anchor.N.PL  
'It is obvious that crates were boarded onto a ship and that anchors were boarded onto a ship.'

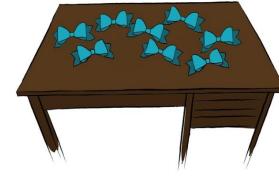
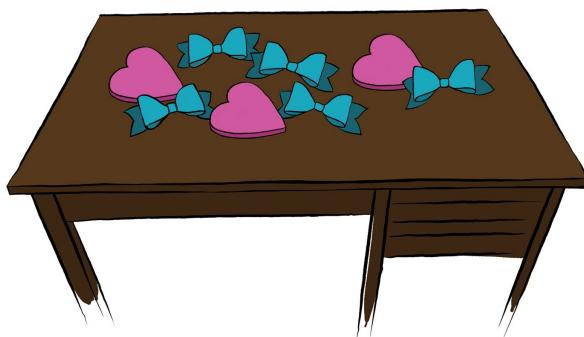


#### NON-COLLECTIVE-MONO

Naravno da su na nekom zidu visile medalje i priznanja.  
of.course that AUX.PL on some wall hung.F.PL medal.F.PL and award.N.PL  
'Of course, medals and awards were hanging on a wall.'

#### NON-COLLECTIVE-BICL

Naravno da su na nekom zidu visile medalje i  
of course that AUX.PL on some wall hung.F.PL medal.F.PL and  
da su na nekom zidu visila priznanja.  
that AUX.PL on some wall hung.N.PL award.N.PL  
'Of course, medals were hanging on a wall and awards were hanging on a wall.'

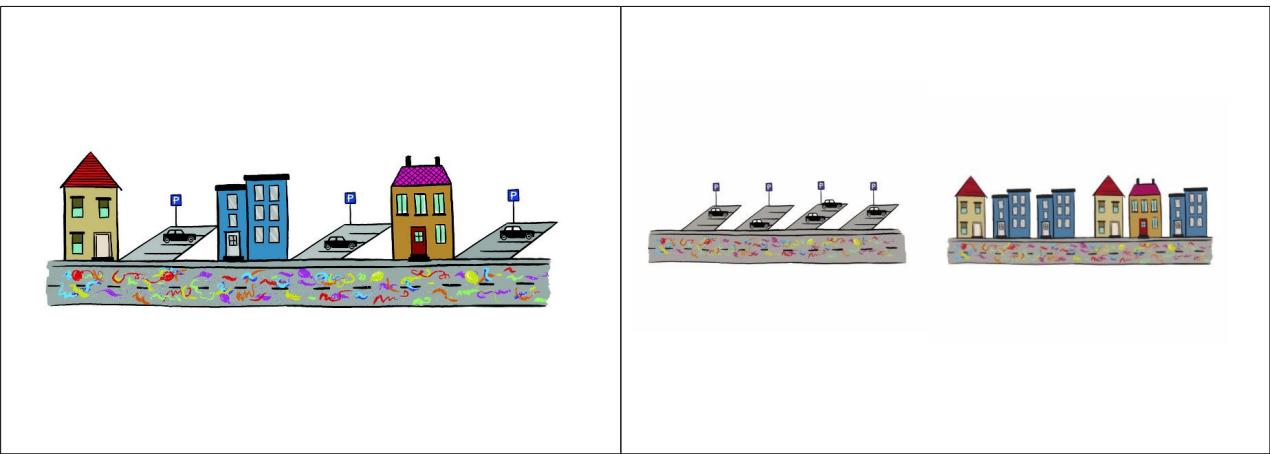


#### NON-COLLECTIVE-MONO

Pohvalno je da su nakon neke predstave na sto posložena srca  
commendable AUX.SG that AUX.PL after some show on table left-aside.N.PL heart.N.PL  
i mašne.  
and ribbon.F.PL  
'It is commendable that hearts and ribbons were left on a table after a show.'

#### NON-COLLECTIVE-BICL

Pohvalno je da su nakon neke predstave na sto posložena  
commendable AUX.SG that AUX.PL after some show on table left aside.N.PL  
srca i da su nakon neke predstave na sto posložene mašne.  
heart.N.PL and that AUX.PL after some show on table left aside.F.PL ribbon.F.PL  
'It is commendable that hearts were left on the table after a show and that ribbons were left on a table  
after a show.'



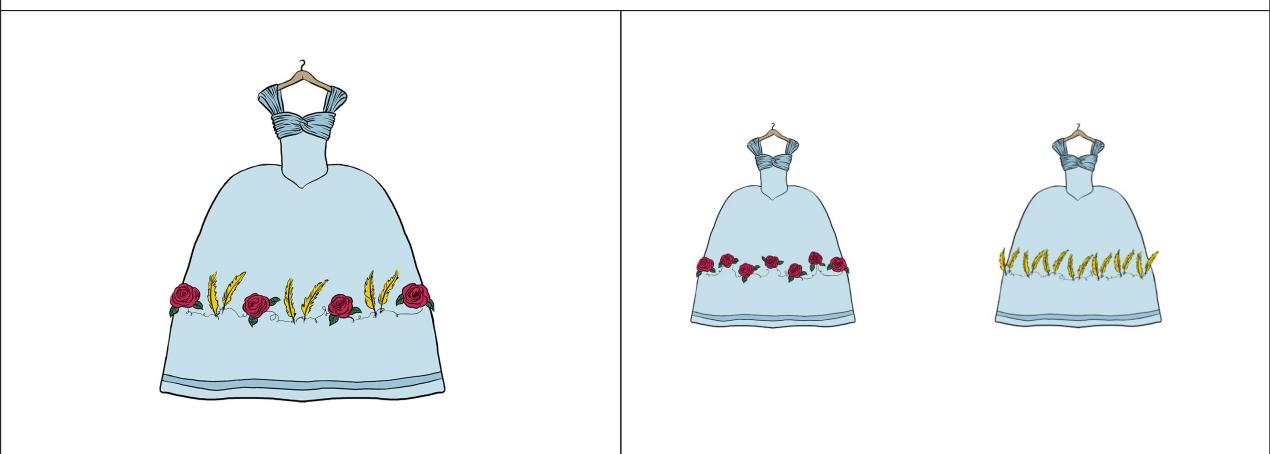
#### NON-COLLECTIVE-MONO

Pohvalno je da su nakon neke parade očišćena parkirališta i kuće.  
commendable AUX.SG that AUX.PL after some parade cleaned.N.PL parking lot.N.PL and house.F.PL

'It is commendable that parking lots and houses were cleaned after a parade.'

#### NON-COLLECTIVE-BICL

Pohvalno je da su nakon neke parade očišćena parkirališta i da su nakon neke parade očišćene kuće.  
commendable AUX.SG that AUX.PL after some parade cleaned.N.PL parking lot.N.PL and that AUX.PL after some parade cleaned.F.PL house.F.PL  
'It is commendable that parking lots were cleaned after a parade and that houses were cleaned after a parade.'

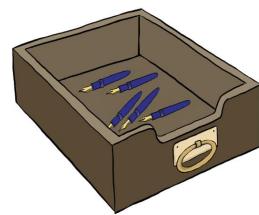
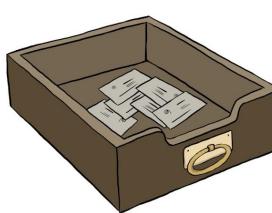
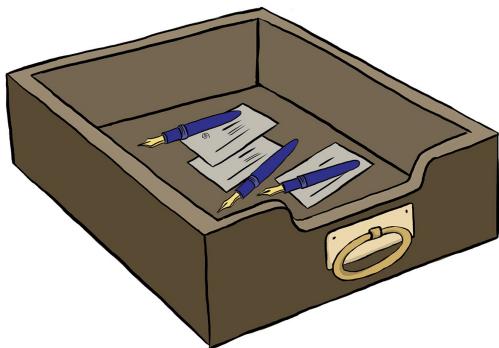


#### NON-COLLECTIVE-MONO

Potrudili su se da su od nekih ukrasa zašivene ruže i pera.  
effort-made AUX.PL REFL that AUX.PL from some decorations sewn.F.PL rose.F.PL and feather.N.PL  
'They made an effort that out of some decorations, roses and feathers were sewn on.'

#### NON-COLLECTIVE-BICL

Potrudili su se da su od nekih ukrasa zašivene ruže i da su od nekih ukrasa zašivena pera.  
effort-made AUX.PL REFL that AUX.PL from some decoration sewn.F.PL rose.F.PL and that AUX.PL from some decorations sewn.N.PL feather.N.PL  
'They made an effort that out of some decorations, roses were sewn on and that from some decoration feathers were sewn on.'

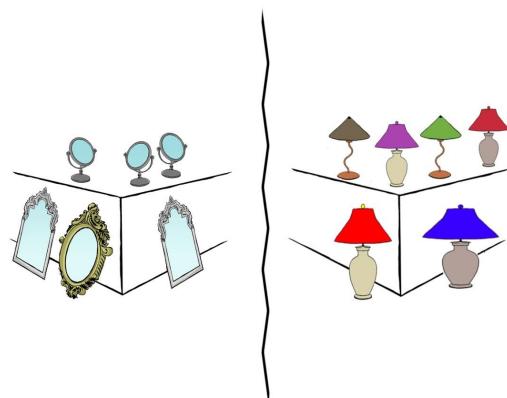
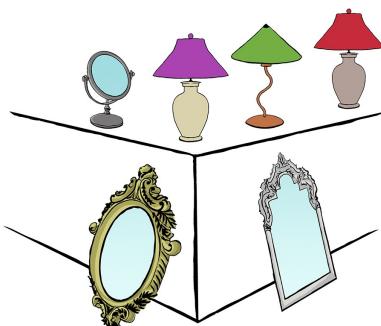


#### NON-COLLECTIVE-MONO

Očito je da su u nekoj fioci ostavljene vizitke i nalivpera.  
obvious AUX.SG that AUX.PL in some drawer put.F.PL business card.F.PL and pen.N.PL  
'It is obvious that business cards and pens were put into a drawer.'

#### NON-COLLECTIVE-BICL

Očito je da su u nekoj fioci ostavljene vizitke  
obvious AUX.SG that AUX.PL in some drawer put.F.PL business card.F.PL  
i da su u nekoj fioci ostavljena nalivpera.  
and that AUX.PL in some drawer put.N.PL pen.N.PL  
'It is obvious that business cards were put into a drawer and that pens were put into a drawer.'

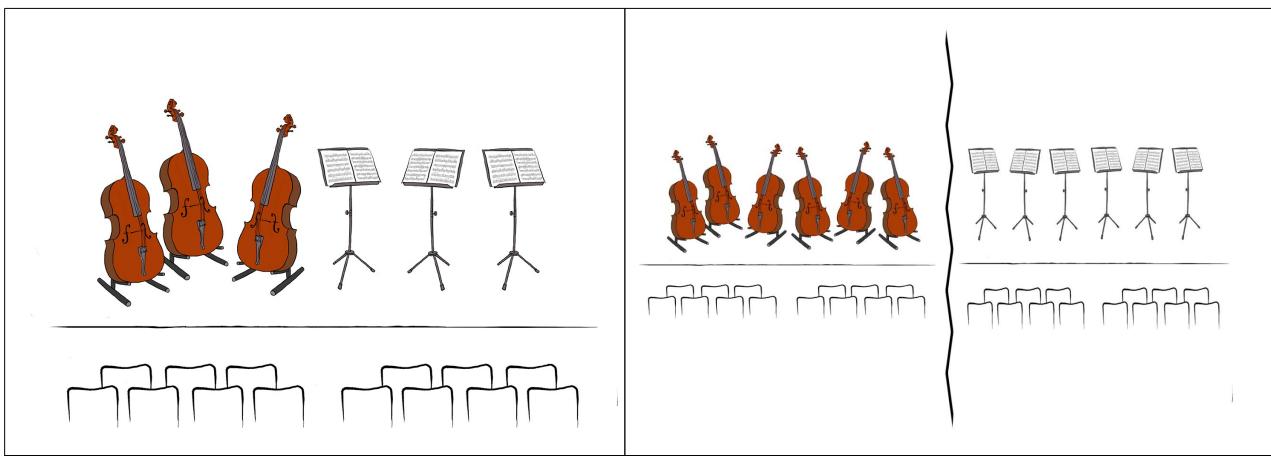


#### NON-COLLECTIVE-MONO

Izgleda da su u nekoj prodavnici na prodaju stavljenog ogledala i lampe.  
looks like that AUX.PL in some shop on sale put.N.PL mirror.N.PL and lamp.F.PL  
'It looks like mirrors and lamps were sold in a shop.'

#### NON-COLLECTIVE-BICL

Izgleda da su u nekoj prodavnici na prodaju stavljenog ogledala  
looks-like that AUX.PL in some shop on sale put.N.PL mirror.N.PL  
i da su u nekoj prodavnici na prodaju stavljenog lampe.  
and that AUX.PL in some shop on sale put.F.PL lamp.F.PL  
'It looks like mirrors were sold in a shop and lamps were sold in a shop.'



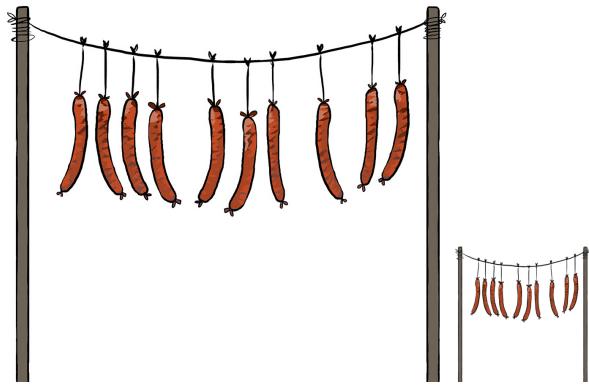
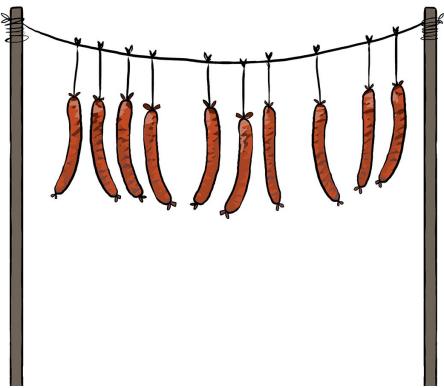
#### NON-COLLECTIVE-MONO

Naravno da su za neki koncert pripremljena violončela i note.  
of course that AUX.PL for some concert prepared.N.PL violoncello.N.PL and music-score.F.PL  
'Of course, violincellos and music scores were prepared for some concert.'

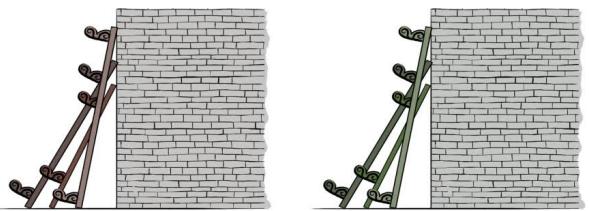
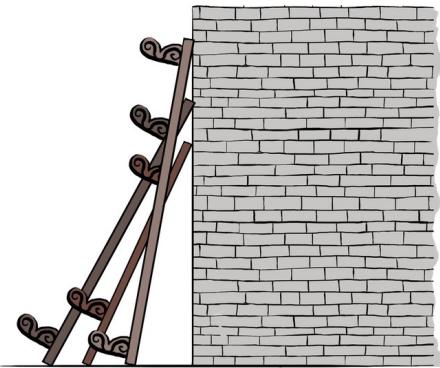
#### NON-COLLECTIVE-BICL

Naravno da su za neki koncert pripremljena violončela  
of course that AUX.PL for some concert prepared.N.PL violoncello.N.PL  
i da su za neki koncert pripremljene note.  
and that AUX.PL for some concert prepared.F.PL music-score.F.PL  
'Of course, violincellos were prepared for some concert and music scores was prepared for some concert.'

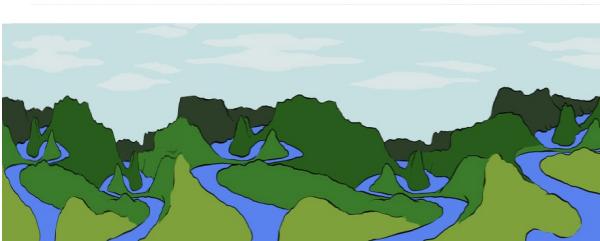
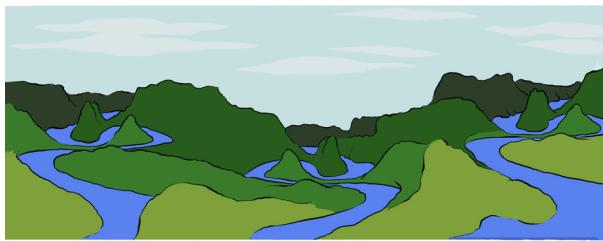
Fillers	
1-event picture	2-event picture
Na nebu su sjajale zvezde. on sky AUX.PL shining.F.PL star.F.PL 'Stars were shining in the sky.'	



Na vazduhu su se sušile kobasice.  
on fresh air AUX.PL REFL dried.F.PL sausage.F.PL  
'Sausages were drying in the fresh air.'



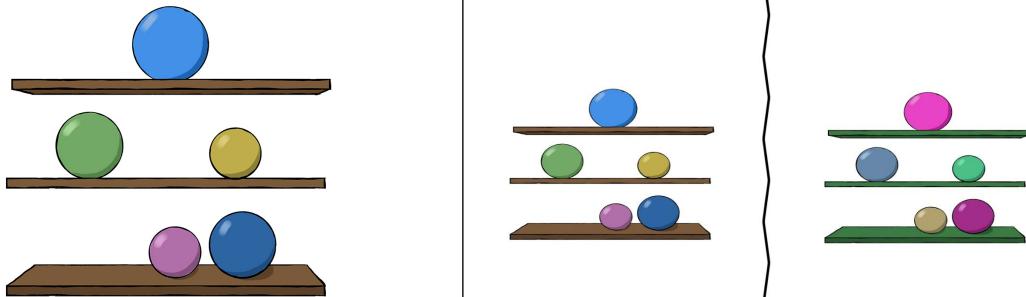
Na zid su se naslanjale police.  
on wall AUX.PL REFL leaned.F.PL shelf.F.PL  
'Shelves were leaning against the wall.'



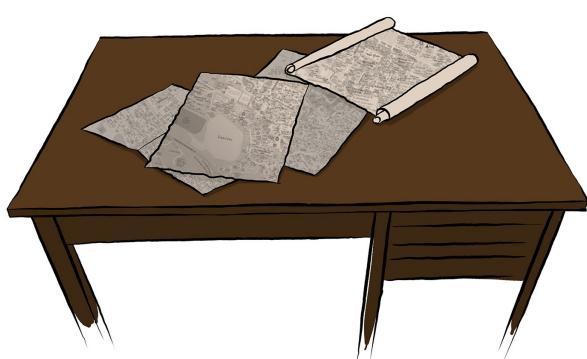
Kroz brda su se provlačile reke.  
through mountains AUX.PL REFL wriggled.F.PL river.F.PL  
'Rivers were wriggling through the mountains.'



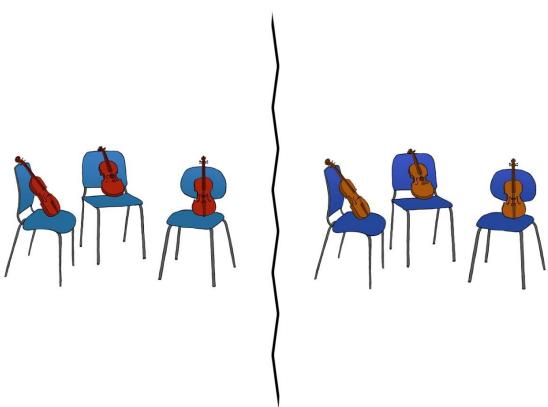
U vitrini je izložena kruna.  
in cabinet AUX.SG displayed.F.SG crown.F.SG  
'A crown was displayed in the cabinet.'



Na policama su stajale kugle.  
on shelves AUX.PL standing.F.PL ball.F.PL  
'Balls were on the shelves.'



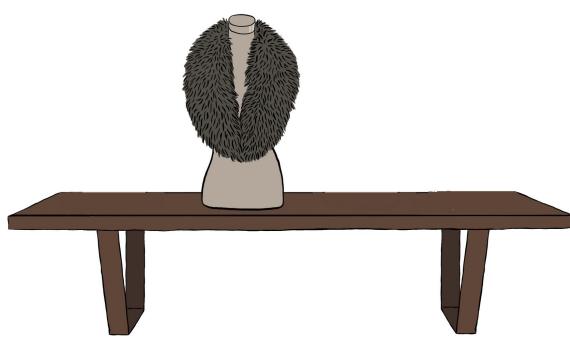
Na stolu su otvorene karte.  
on table AUX.PL opened.F.PL map.F.PL  
'Maps were opened on the table.'



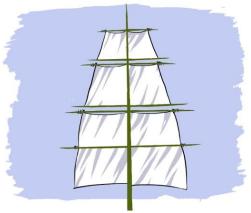
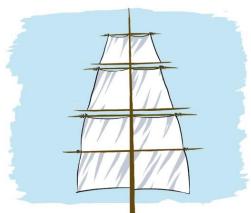
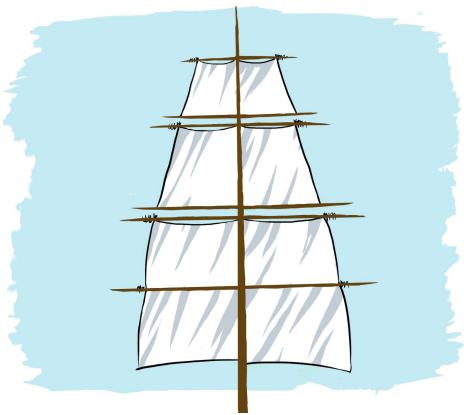
Na stolicama su čekale violine.  
on chairs AUX.PL waiting.F.PL violin.F.PL  
'Violins were waiting on the chairs.'



Kroz ključaonicu su se videla sazvežda.  
through keyhole AUX.PL REFL see.N.PL constellation.N.PL  
'Constellations could be seen through the keyhole.'



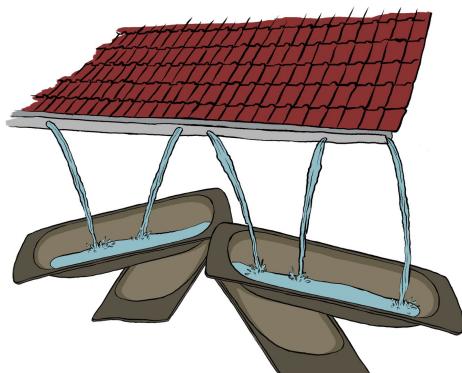
Na lutki se vetrilo krzno.  
on mannequin REFL aired.N.SG fur.N.SG  
'A fur was airing on the mannequin.'



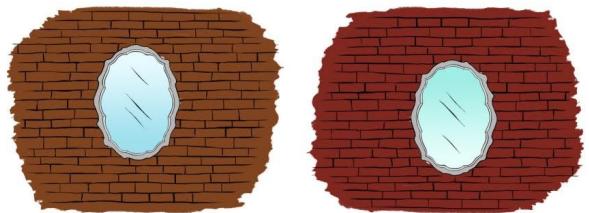
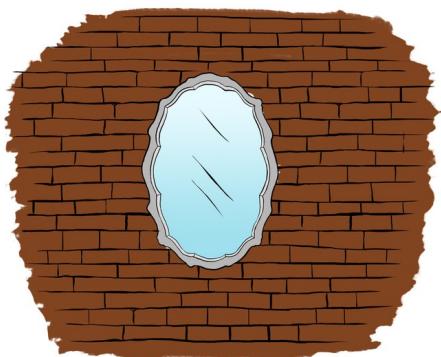
Na jarbolu su se sušila jedra.  
on mast AUX.PL REFL dried.N.PL sail.N.PL  
'Sails were drying on the mast.'



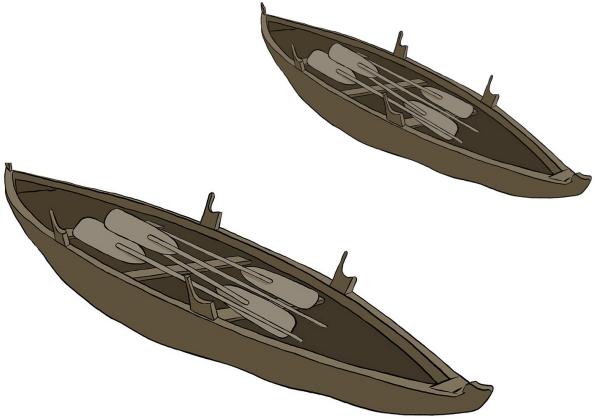
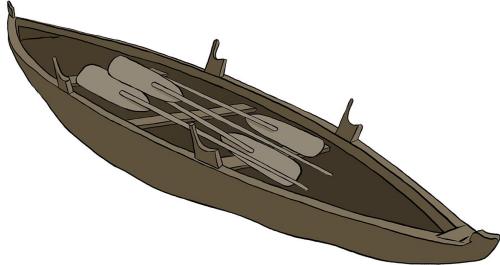
U rerni su se pekla peciva.  
in oven AUX.PL REFL baked.N.PL bun.N.PL  
'Buns were baking in the oven.'



Vodu iz oluka su hvatala korita.  
water from gutter AUX.PL caught.N.PL trough.N.PL  
'Troughs were catching the water from the gutter.'



Na zid je okačeno ogledalo.  
on wall AUX.SG hooked.N.SG mirror.N.SG  
'A mirror was hooked onto the wall.'



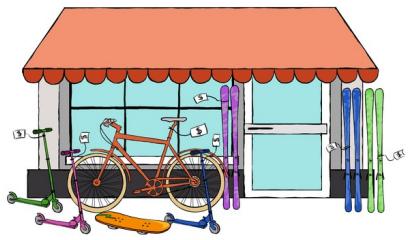
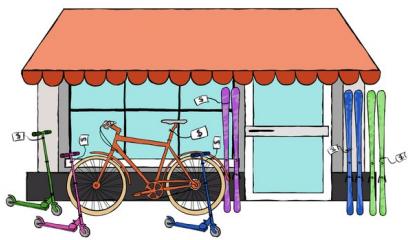
U čamcu su ostavljena vesla.  
in boat AUX.PL left.N.PL paddle.N.PL  
'Paddles were left in the boat.'



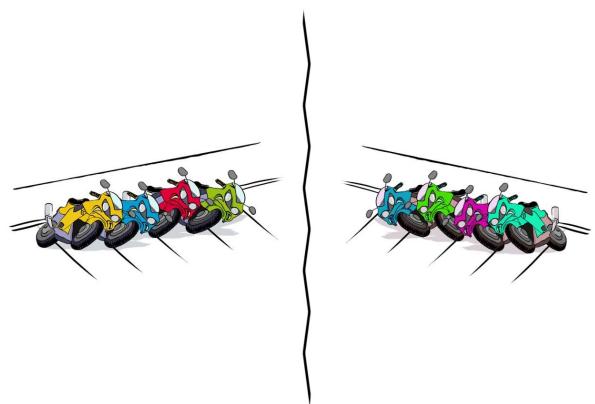
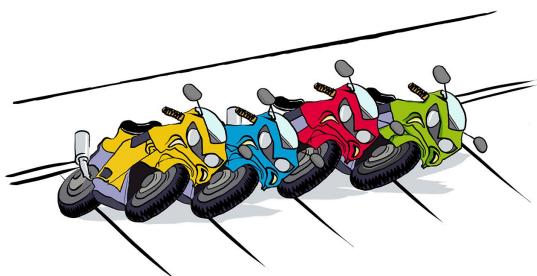
Potocima su povezana jezera.  
streams AUX.PL connected.N.PL lakes.N.PL  
'Lakes were connected by streams.'



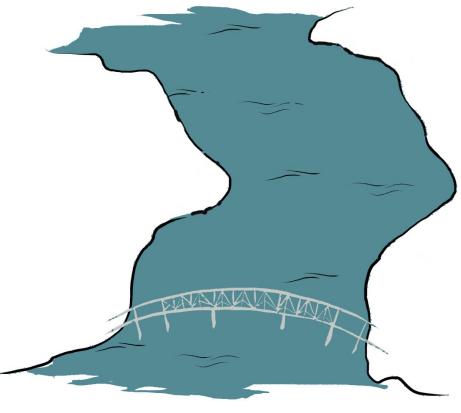
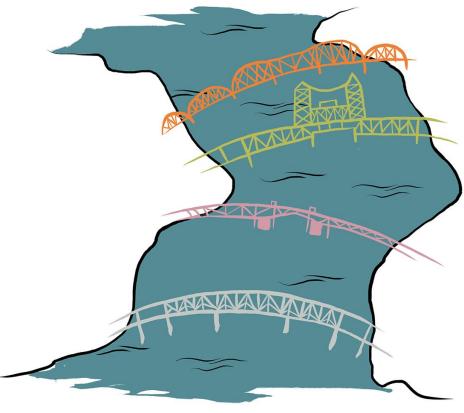
edan nasuprot drugog su se parkirali kamioni.  
one opposite other AUX.PL REFL parked.M.PL truck.M.PL  
'Trucks were parked opposite one another.'



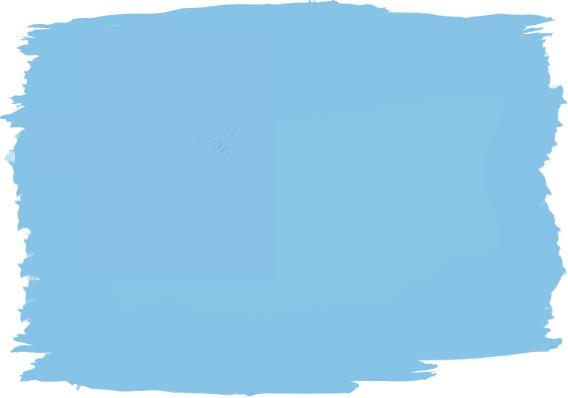
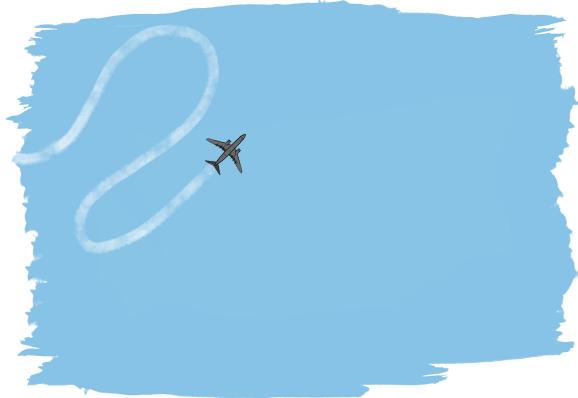
Ispred prodavnice su se prodavali skejtboardovi.  
in-front shop AUX.PL REFL sold.M.PL skateboards.M.PL  
'Skateboards were sold in front of the shop.'



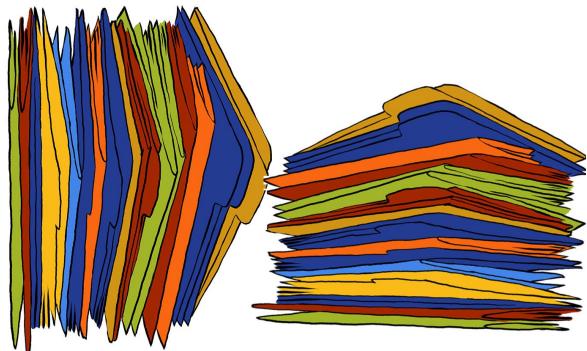
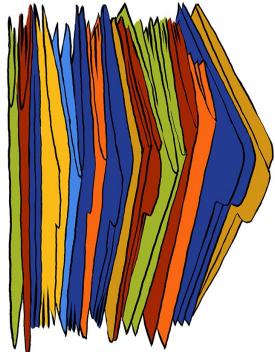
Na parkingu su se prevrnuli motori.  
on parking AUX.PL REFL tipped-over.M.PL motorcycle.M.PL  
'Motorcycles have tipped over in the parking lot.'



Preko reke su se uzdizali mostovi.  
over river AUX.PL REFL raised.M.PL bridge.M.PL  
'Bridges were spanning over the river.'



Po nebu je vijugao avion.  
on sky AUX.SG zigzagged.M.SG plane.M.SG  
'A plane zigzagged in the sky.'



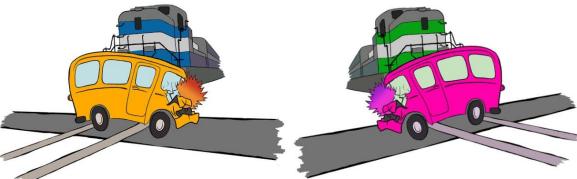
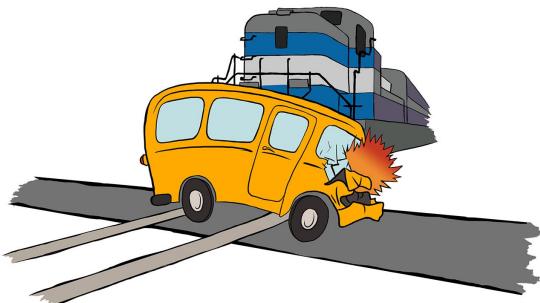
Zbijeno su poslagane fascikle.  
tightly AUX.PL arranged.F.PL folder.F.PL  
'Folders were tightly arranged.'



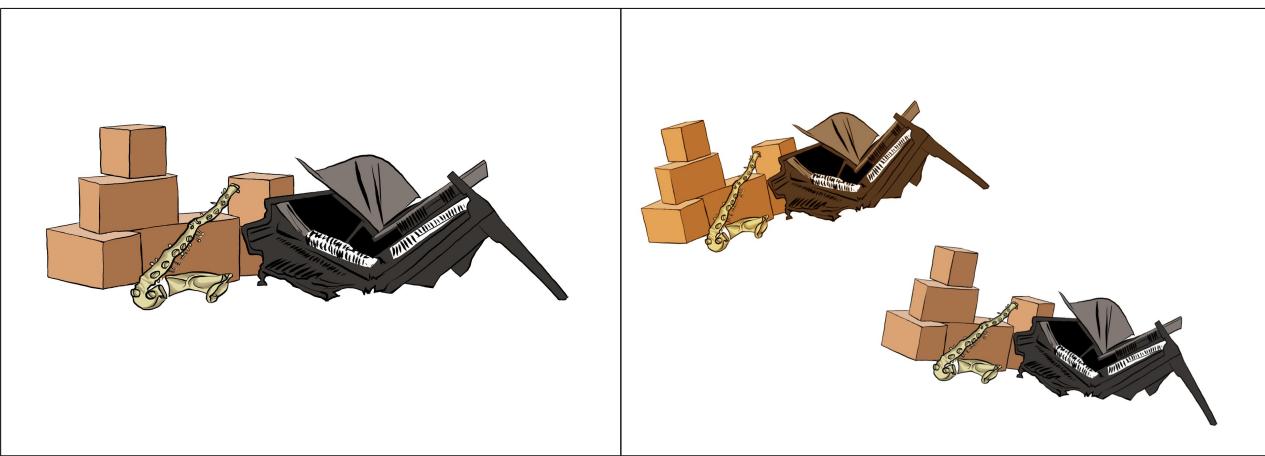
Na stolu su stajali telefoni.  
on table AUX.PL standing.M.PL telephone.M.PL  
'Telephones were on the table.'



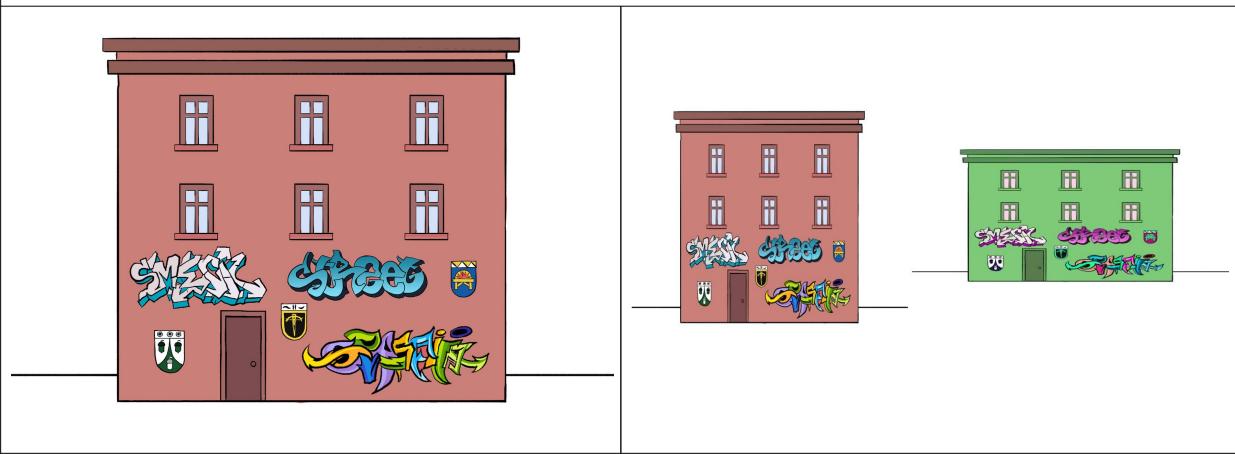
Na pozornicu su postavljeni klaviri.  
on stage AUX.PL place.M.PL piano.M.PL  
'Pianos were placed on the stage.'



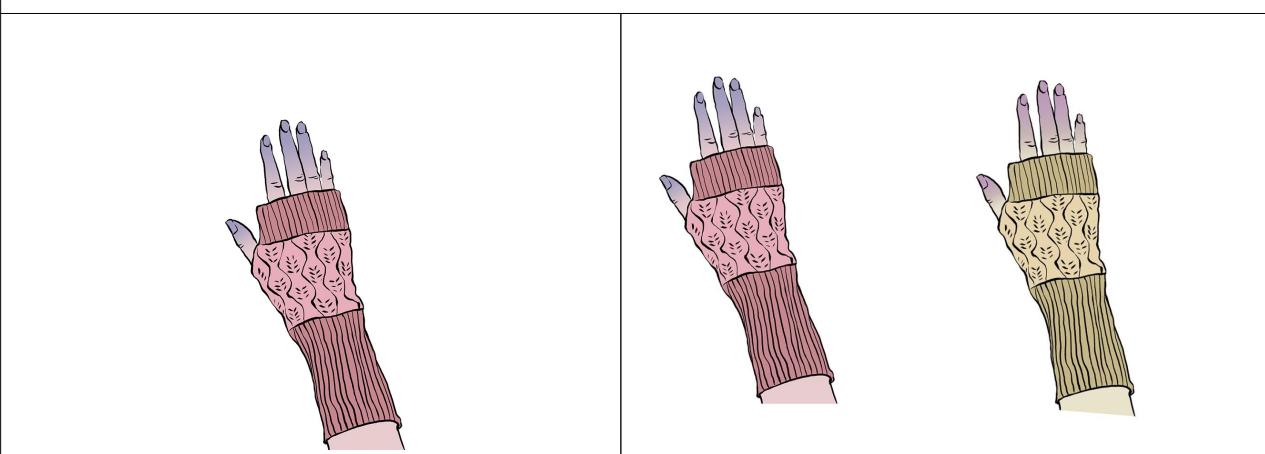
U sudaru su se razbili autobusi i vozovi.  
in collision AUX.PL REFL smashed.M.PL bus.M.PL and train.M.PL  
'Buses and trains got smashed in the collision.'



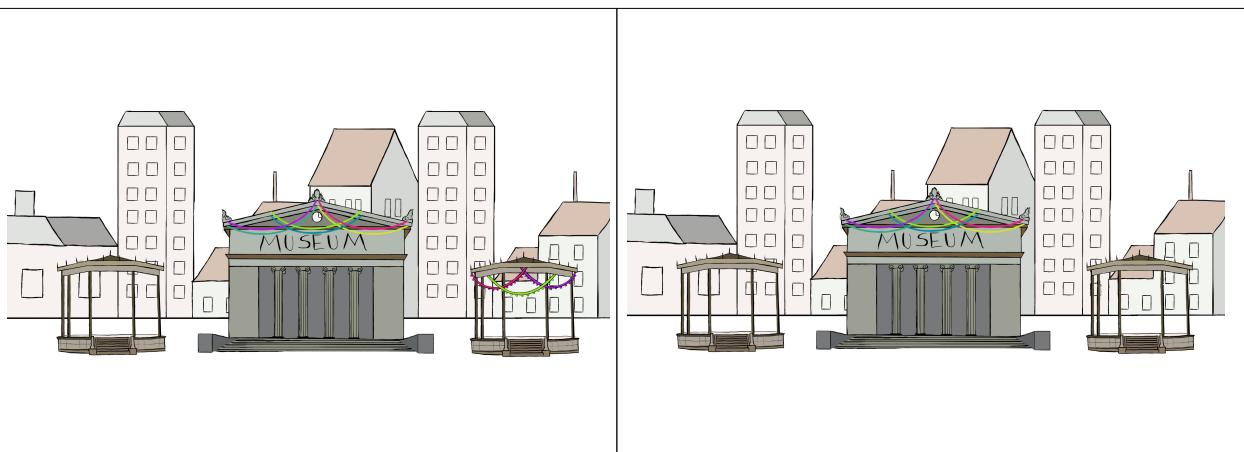
U selidbi su se polomili klaviri i saksofoni.  
In move AUX.PL REFL broken.M.PL piano.M.PL and saxophone.M.PL  
'Pianos and saxophones were broken during the move.'



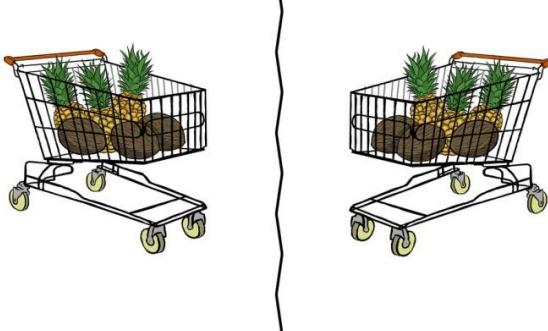
Preko noći su se pojavili grafiti i pojavili su se grbovi.  
over night AUX.PL REFL appeared.M.PL grafitti.M.PL and appeared.M.PL AUX.PL REFL coat-of-arms.M.PL  
'Graffiti has appeared overnight and coats of arms have appeared overnight.'



Od zime su se smrzli prsti i smrzli su se nokti.  
from cold AUX.PL REFL frozen.M.PL finger.M.PL and frozen.M.PL AUX.PL REFL nail.M.PL  
'From the cold, fingers were frozen and nails were frozen.'



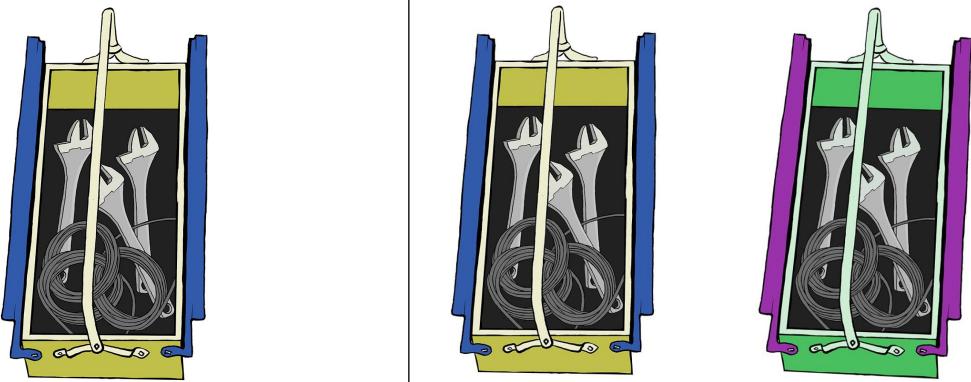
Za proslavu su ukrašeni muzeji i ukrašeni su paviljoni.  
for celebration AUX.PL decorated.M.PL museum.M.PL and decorated.M.PL AUX.PL pavilion.M.PL  
'Museums were decorated and pavilions were decorated for the celebration.'



U kolicima su dovezeni ananasi i dovezeni su kokosi.  
in trolley AUX.PL brought.M.PL pineapple.M.PL and brought.M.PL AUX.PL coconut.M.PL  
'Pineapples were brought and coconuts were brought in the trolley.'



Na lutku su zašiveni rukavi i dugmići.  
on mannequin AUX.PL sewed.M.PL sleeve.M.PL and button.M.PL  
'Sleeves and buttons were sewn onto the mannequin.'



U kutiju su odloženi ključevi i kablovi.  
in box AUX.PL placed.M.PL wrench.M.PL and cable.M.PL  
'Wrenches and cables were placed into the box.'