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# UNIVERSITY OF CALIFORNIA SANTA CRUZ

# IMPLICIT AGENTS IN UKRAINIAN: EVIDENCE FROM RETRIEVAL INTERFERENCE IN SENTENCE PROCESSING

A thesis submitted in partial satisfaction of the requirements for the degree of

MASTER OF ARTS

in

LINGUISTICS

by

Anelia Kudin

June 2021

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## Abstract

Implicit Agents in Ukrainian: Evidence from Retrieval Interference in Sentence Processing

#### Anelia Kudin

The main question proposed in this study concentrates on the issue of whether implicit agents trigger retrieval interference in sentence comprehension and whether this depends on their syntactic representation. In order to address this question, we examined two impersonal passive constructions in the Ukrainian language, which differ with regard to the presence of implicit causative agent. This study presents an online forced-choice acceptability and self-paced reading experiments comparing the processing of the passive constructions with syntactically represented implicit agents and passive constructions without such implicit agents. In addition, the online self-paced reading experiment compares the processing of subject extracted relative clauses (SRCs) and object extracted relative clauses (ORCs) to reveal whether parsing relative clause effects retrieval interference and test whether a widely known ORC/SRC asymmetry shown in many languages including Russian (Levy, 2013) holds for Ukrainian as well. The results of the self-paced reading experiment support a retrieval-based account of interference effects in sentence processing and the idea that sentence processing is constrained by working memory limitations. Conducting this study contributes to the existing psycholinguistic literature on retrieval interference and processing of implicit agents, and helps us gain a better understanding of the nature of the parsing mechanisms that support human language processing.

# 1 Introduction

Reading sentences involves complex mental processes. Revealing the mechanism of online reading processes is one of the big goals in psycholinguistics. Retrieval interference has been identified as a cause of major syntactic processing difficulty in various linguistic constructions. Although the nature of this kind of interference as well as the retrieval cues involved are recognized, not all conditions that give rise to retrieval interference effects are well understood (Gordon, Hendrick and Johnson, 2001, 2004; Van Dyke and Lewis, 2003; Van Dyke and McElree, 2006). The central question of this study is whether implicit agents trigger retrieval interference in sentence comprehension. We examine implicit agents specifically in Ukrainian passive constructions because in Ukrainian, unlike in other languages with impersonal passives, thematic object of the verb can appear in either nominative or accusative case (Baker et. al, 1989), and it has been proposed that the implicit agent is represented syntactically in the latter, but not the former construction (Lavine, 2013). By investigating sentences including passive constructions in Ukrainian, and testing whether implicit agents represented syntactically give rise to retrieval interference, this study aims to reveal certain aspects of the parsing mechanisms that support language processing.

## 2 Prior Research

Previous study by Van Dyke and Lewis (2003) has shown that interference is a major cause of processing difficulty in subject-verb dependencies. The researchers show that such dependencies are more difficult to process when the subject of the verb is complex and contains another subject as in (1b).

- (1) a. The student who was waiting for the exam was standing in the hallway.
  - b. <u>The student</u> who thought that <u>the exam</u> was important was standing in the hallway.

The relative difficulty of (1b) over (1a) reflects similarity between the subject constituents and the retrieval cues at the verb, which is captured with the feature "[+subject]". There are two prominent classes of theories of syntactic processing difficulty: theories based on memory limitations and theories based on expectations. According to memory-based theories of syntactic complexity, the key constraining factor is memory: some sentence structures are more difficult to process than others because they require more working memory resources. In contrast, in expectation-based theories of syntactic complexity the main constraining factor is not memory but rather experience and/or generalization: sentence structures with which people have more direct experience, or which they infer to be likely in a particular context given their linguistic and world knowledge, are easier to process in comprehension (Levy et al., 2013).

One of the expectation-based theories is Word-Order Frequency Theory. According to this theory, surface orderings of word classes which appear more frequently in the input are hypothesized to be preferred and, therefore, easier to process during comprehension (Bever, 1970; MacDonald and Christiansen, 2002). In such theory, the greater processing difficulty would be attributed to the fact that one construction's surface word order, for example, is rare in a given language comparing to another construction's surface word order which is a ubiquitous surface word order. Such theories are closely related to the Tuning Hypothesis (Mitchell, Cuetos, Corley, and Brysbaert, 1995), which states that coarse-grained structural statistics are tracked in linguistic input and used to make decisions in online comprehension, though the Tuning Hypothesis has historically been framed with respect to problems of ambiguity resolution rather

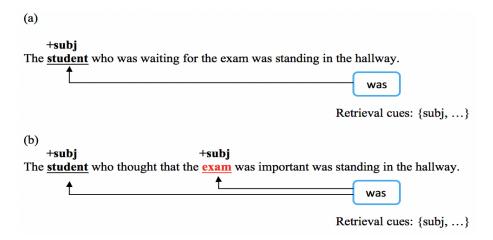
than with problems of syntactic complexity. However, the predictions of wordorder frequency theories regarding where difficulty will be observed are not word-by-word but relatively coarse-grained.

Another expectation-based theory is Entropy Reduction Hypothesis (or ERH; Hale, 2003, 2006). In the Entropy Reduction Hypothesis, the entropy (Cover and Thomas, 1991; Shannon, 1948) of the distribution of possible structural completions of the sentence at any point in incremental processing is a quantity of fundamental interest. The entropy of a random variable is the uncertainty, or missing information associated with a random variable. In this hypothesis, it is postulated that processing difficulty can be detected when a word causes a large drop in this entropy. When all outcomes are equally likely, entropy is maximal.

A third expectation-based theory is Surprisal. According to this theory, comprehenders maintain and update fine-grained expectations regarding upcoming input at multiple levels of linguistic structure (including but not limited to syntax), and the difficulty of processing an input in the context in which it appears decreases monotonically as the input's conditional probability increases (Hale, 2001; Levy, 2008; Smith and Levy, 2008, 2013). Surprisal is in some ways similar to word-by-word instantiation of the word-order theory discussed above, but does not commit to the idea that expectations are based on superficial sequences of word categories. Instead, in many models instantiating surprisal theory rich syntactic context is taken into account (Boston, Hale, Kliegl, Patil, and Vasishth, 2008; Levy, 2008).

One of the theories based on memory limitations is Dependency Locality Theory (or DLT evolving from its ancestor, the Syntactic Prediction Locality Theory, Gibson, 1998, 2000). According to this theory, the central operations in syntactic comprehension are storage and retrieval of potential elements in structural dependency relationships within a sentence, and integration of a retrieved preceding element into a structural dependency relation with the current input. In the framework of this theory, the resources involved in retrieval, integration, and maintenance of stored-element representations are limited. For this reason, dependency integrations are more difficult when more elements need to be integrated simultaneously, and when the retrieved elements have greater linear distance from the integration site.

Another closely related theory is Activation and Cue-Based Retrieval Theory (Lewis and Vasishth, 2005). According to this theory, the representation of a sentence in real-time comprehension is an incrementally extended syntactic structure. The theory's processing bottleneck is retrieval of preceding syntactic elements from this structure, with which the current input word must be integrated (Van Dyke and Lewis, 2003). Syntactic elements are integrated and stored in memory so that they could be retrieved at the later stages of processing. The fundamental idea is that each incoming word triggers retrievals to integrate that word with the preceding structure. Retrieval is accomplished by a simple type of associative access: content-based retrieval, where the retrieval cues are a subset of the features of the item to be retrieved (Vasishth and Lewis, 2006). The experiments discussed in this paper bear on the Activation and Cue-Based Retrieval Theory. Fig. 1 illustrates the cue-based retrieval triggered by the verb *student*, although retrievals are not restricted to verbs or any other word class. The main principle behind a cue-based mechanism is that when we read a sentence like in (1b) and get to the main verb was standing, we use specific cues such as +subj to retrieve the main subject of the verb, namely student. It is more difficult to retrieve the main subject in (1b) comparing to (1a) because in (1b) there are two subjects activated in memory and available for retrieval at the retrieval site while there is only one subject available for retrieval in (1a). In other words, there is an intervening subject in (1b), but there is no such subject in (1a).



**Figure 1.** (a) No interference at the main subject retrieval for the sentence *The student who was waiting for the exam was standing in the hallway.* (b) Interference at the main subject retrieval for the sentence *The student who thought that the exam was important was standing in the hallway.* The interfering subject is represented in red font.

Another study by Van Dyke and McElree (2006) has provided clear evidence that interference effects in language processing are driven by overlapping retrieval cures. This study reports data from an experiment that manipulates the possibility for retrieval interference while holding encoding conditions constant. The authors found clear support for the principle of cue-overload, wherein cues available at retrieval cannot uniquely distinguish among competitors, therefore giving rise to interference effects. The conclusion drawn from the data is that the memory system that subserves language comprehension operates according to similar principles as memory in other domains. Interference is believed to induce cue-overload where the cues needed to recover an item become associated with many different items in memory and cannot reliably elicit any single target. In their study, Van Dyke and McElree investigated whether a similar

principle was operative in processing sentences that were thought to impose high demands on memory resources. The researchers directly manipulated the verb so that nouns in the memory set were either plausible or implausible direct object of the verb. For instance, in Non-interfering/Load sentences such as (2a) none of the memory load items, table, sink or truck are plausible as the objects of the verb sailed. Nonetheless, all are plausible as the objects of the verb fixed in Interfering/Load sentences such as (2b). If the interference was due to an encoding effect, then the plausibility of the verb should not matter. However, if the interference was due to a retrieval effect, then the researchers had expected that reading times around the verb in (2a) were slower than (2b) since cues provided by the verb did not uniquely select the clefted noun phrase the boat. In order to ensure that there were no other confounding differences between the two verbs, Non-interfering/No Load conditions such as (2c) and Interfering/No Load conditions such as (2d) were included as well.

#### (2) a. TABLE-SINK-TRUCK

It was the boat that the guy who lived by the sea <u>sailed</u> in two sunny days.

#### b. TABLE-SINK-TRUCK

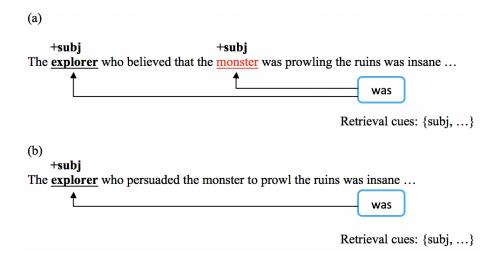
It was the boat that the guy who lived by the sea <u>fixed</u> in two sunny days.

- c. It was the boat that the guy who lived by the sea <u>sailed</u> in two sunny days.
- d. It was the boat that the guy who lived by the sea <u>fixed</u> in two sunny days.

The results of the experiment provided clear support for retrieval interference. The cues from the verb were used during retrieval, and when the distracting noun phrases matched these cues they could not be adequately discriminated from the desired target since the memory load in the experiment substantially slowed processing when the retrieval cues provided by the verb matched items in the memory set (Van Dyke and McElree, 2006).

The studies by Van Dyke and Lewis (2003) and Van Dyke and McElree (2006) identified interference to be the cause of processing difficulty in linguistic dependencies. Nevertheless, while growing evidence implicates retrieval interference in sentence processing, the nature of the retrieval cues involved (and therefore, the source of difficulty) remained mostly uninvestigated. The study by Arnett and Wagers (2017) investigated the nature of the retrieval cues and has shown that interference effects in subject retrieval are driven by syntactic information given by the retrieval context. Three experiments of the study used self-paced reading and eyetracking to examine the ways in which the retrieval cues provided at a verb characterize subjects. The authors argue that (i) retrieval cues at the verb are morphosyntactic, not thematic (thematic subjects do not give rise to interference whereas structural subjects do), (ii) subjects are retrieved based on their case. In this study, the researchers considered the examples which come from finite and infinite clauses using S-Comp, ECM and Object Control sentences. Finite clauses in S-Comp sentences contain two nominatives whereas the clauses in Object Control sentences include only one nominative. Assuming that subjects are retrieved based on their case, Object control sentences should be easier to process than S-comp sentences. Fig. 2 illustrates the cue-based retrieval of the main subject explorer (similar to the demonstration in Figure 1).

- (3) a. <u>The explorer</u> who believed that <u>the monster</u> was prowling the ruins was insane...
  - b. The explorer who persuaded the monster to prowl the ruins was insane...



**Figure 2.** (a) Expected interference at the main subject retrieval for the sentence *The explorer who believed that the monster was prowling the ruins was insane.* The interfering subject is represented in red font. (b) No interference expected at the main subject retrieval for the sentence *The explorer who persuaded the monster to prowl the ruins was insane.* 

However, there was a surprising finding: if case cues are relevant in subject retrieval, then Object Control sentences as in (3b) should have been easier to process than S-Comp sentences as in (3a) contrary to the findings in the Experiment 2 of the study by Arnett and Wagers (2017). The authors state that it might be the case that PRO receives nominative case (Landau, 2006) and this case similarity could cause interference. The potential conclusion that can be drawn from this is that implicit agents like the kind represented by PRO in the Object Control constructions can cause interference. In other words, PRO can count as an intervening subject.

# 3 Present Study

#### Motivation

The surprising finding from Arnett and Wagers (2017) raised broader questions about whether implicit agents can cause interference. In the present study, I focus on the Ukrainian language. There have been little studies on the processing of the Ukrainian language and, in particular, no studies testing whether implicit agents trigger retrieval interference, and since I am a native speaker of Ukrainian, I decided to examine this effect in such language. In Ukrainian, there are passive constructions, in which implicit agents have been argued to be represented syntactically. The main goal of the present study is to examine whether implicit agents cause interference, and whether this depends on their syntactic representation.

#### Basic facts about the Ukrainian language

Like Russian and Belorussian, Ukrainian belongs to the East Slavonic languages within the Indo-European language family. Approximately 35 million people around the world speak Ukrainian (Lewis, Simons Fenning, 2016). The biggest populations of Ukrainian speakers outside of Ukraine can be found in Russian, Moldova, Canada and the USA. Smaller populations are in Kazakhstan, Belarus, Romania, Poland, Slovakia, Argentina and Brazil.

Modern Ukraine developed from five states of Kievan Rus. Old East Slavic spoken in the Eastern Slavonic region evolved until the 14th century through the incorporation of regionalisms at various linguistic levels (phonology, morphology, etc.). Further linguistics distinctions in the regions of Belarus and Ukraine triggered further developments in the common Ruthenian language from the 15th to 18th century. It was not until the 18th century that specifically the Ukrainian language emerged. Later Tsar Alexander II prohibited the official

use of this language. However, in 1918 Ukrainian became the official language of the newly founded Ukrainian National Republic and it remained the official language (alongside Russian) during the Soviet Union. In 1991 Ukraine gained its independence from the Soviet Union (Fig. 3 shows Ukraine of the map of Europe after gaining independence) and since then Ukrainian is the only official language of the country. Three main dialects exist in Ukrainian which correspond to the territories where they are spoken: South-Eastern, South-Western and Northern dialect (qtd. in Pompino-Marschall et al., 2016).



Figure 3. Ukraine on the map of Europe.

Brief background on the Ukrainian syntax

The basic word order is subject-verb-object (SVO). However, since the relations are marked by inflection, word order is more flexible than in English,

and all the permutations are allowed. The word order expresses the degree of definiteness and the logical stress. In terms of negation, Ukrainian permits a multiple negation and allows negative concord. Ukrainian verbs can have either imperfective or perfective aspect. The imperfective form indicates that an action is ongoing, repetitive, habitual or occurring in the present whereas the perfective form indicates that an action is completed. The example with maljuvaty (малювати) which is imperfective and namaljuvaty (намалювати) which is perfective is shown in (4) below.

- (4) a. Hlopchyk maljuvav kartynu.

  Boy-DEF.NOM.SG.M draw-PST.IPFV picture-DEF.ACC.SG.F

  'The boy drew (imperfective) the picture.'
  - b. Hlopchyk namaljuvav kartynu.
     Boy-DEF.NOM.SG.M draw-PST.PFV picture-DEF.ACC.SG.F
     'The boy drew (perfective) the picture.'

In (4a), the boy was drawing the picture whereas in (4b), the boy finished drawing the picture. In other words, in the first case, the action is ongoing (imperfective aspect) whereas in the second case, the action is completed (perfective aspect). Note, however, that in the current study, we use only perfective forms with the Ukrainian passives.

The usage and assignment of cases is quite complicated. In most cases, nominative, genitive, dative, accusative, instrumental and vocative cases are used without a preposition whereas locative case is used with a preposition. Ukrainian displays a more elaborated system of case than English. In Ukrainian, there is a general agreement in case, gender, and number between nouns and adjectives that modify them as shown in Table 1 below. The ending -yj is obligatory on the Adj in agreement with the nominative masculine singular

subject while the ending -a is obligatory on the Adj in agreement with the nominative feminine singular subject (Sobin, 1985).

 Table 1. Agreement in Ukrainian

Case	Adjective (F)	Noun (F)	Adjective (M)	Noun (M)
Nominative	tsikav <b>a</b> (цікав <b>а</b> )	knyh <b>a</b> (книг <b>a</b> )	tsikav <b>yj</b> (цікав <b>ий</b> )	pidruchnyk (підручник)
	interesting-NOM.SG.F	book-NOM.SG.F	interesting-NOM.SG.M	textbook-NOM.SG.M
	'interesting'	'book'	'interesting'	'textbook'
Genitive	tsikav <b>oji</b> (цікав <b>ої</b> )	knyh <b>y</b> (книг <b>и</b> )	tsikav <b>oho</b> (цікав <b>ого</b> )	pidruchnyka (підручника)
Dative	tsikav <b>ij</b> (цікав <b>ій</b> )	knyz <b>i</b> (книз <b>i</b> )	tsikav <b>оту</b> (цікав <b>ому</b> )	pidruchnyk <b>u</b> (підручник <b>у</b> )
Accusative	tsikav <b>u</b> (цікав <b>у</b> )	knyh <b>u</b> (книг <b>у</b> )	tsikav <b>yj</b> (цікав <b>ий</b> )	pidruchnyk (підручник)
Instrumental	tsikav <b>oju</b> (цікав <b>ою</b> )	knyh <b>оји</b> (книг <b>ою</b> )	tsikav <b>ут</b> (цікав <b>им</b> )	pidruchnyk <b>om</b> (підручник <b>ом</b> )
Locative	и (y) tsikav <b>ij</b> (цікав <b>ій</b> )	и (y) knyz <b>i</b> (книз <b>i</b> )	и (y) tsikav <b>оти</b> (цікав <b>ому</b> )	u (y) pidruchnyk <b>u</b> (підручник <b>у</b> )
(with prep)				
Vocative	tsikav <b>a</b> (цікав <b>а</b> )	knyh <b>o</b> (книг <b>о</b> )	tsikav <b>yj</b> (цікав <b>ий</b> )	pidruchnyk <b>u</b> (підручник <b>у</b> )

Note: Nominative and accusative cases are highlighted in red to draw the reader's attention to those two cases in particular since they are playing a crucial role in the present study.

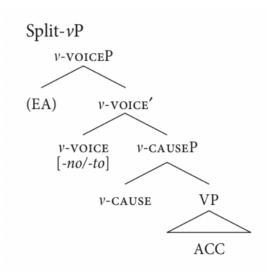
Ukrainian impersonal passive constructions

In Ukrainian, unlike in other languages with impersonal passives, thematic object of the verb can appear in either nominative or accusative case in the impersonal passive constructions (Baker et al., 1989) as in (5).

- (5) a. Cerkv-u bul-o zbudova-n-o v 1640 roc'i. church-acc/fem was-imp built-pass-imp in 1640 'The church was built in 1640.'
  - b. Cerkv-a bul-a zbudova-n-a v 1640 roc'i.
    church-nom/fem was-fem built-pass-fem in 1640
    'The church was built in 1640.'
    (Baker et al., 1989)

The study by Lavine (2013) proposed that the external argument (EA), or causative agent, in (5a) is represented syntactically, where the thematic object of the verb is assigned accusative case, but not in (5b). The author proposes that Ukrainian (unlike English, German or Lithuanian) is one of 'split-vP' languages where accusative case survives passivization only when v-voice and v-cause, two functional domains of vP, appear "unbundled" in the sense of Pylkkanen's (2008) Voice Bundling Parameter. On a compositional view of a verb meaning, in which a predicate's meaning is built up as it deploys its arguments, the non-Theme argument of any two-place predicate is freely generated either "high" (in Spec, v-voice) as its external argument (EA) or "low," in VP-internal position, as a non-volitional causer, which crucially identifies non-argument-projecting v-cause, as in the split-vP structure below.

Under this account, the accusative probe remains v, but is activated, in split-vP languages, either by a causative agent (EA) or an internal argument with causative semantics (for instance, when the non-Theme argument asserts



a causative sub-event). Lavine (2013) argues that v-cause in Ukrainian can be activated in three different ways: by merger of an Agent directly into its superordinate specifier (Spec, v-voice), by a passive by-phrase, likewise linked to an implicit Agent in Spec, v-voice, or by identification with a (potentially elided) VP-internal Causer. To summarize Lavine (2013)'s proposal, an independent v-cause head in Ukrainian is responsible for the co-occurrence of accusative and passive morphology, so long as the non-Theme argument has causative semantics. The author claims that basic unaccusatives, Experiencer predicates, and statives fail to occur with accusative in the impersonal construction due to a lack of causation (Lavine, 2013). I would like to propose a study to test the theoretical analysis suggested by Lavine (2013) in a psycholinguistic experiment.

In the present study, I conduct two experiments: an online forced-choice acceptability experiment (Experiment 1) and an online self-paced reading experiment (Experiment 2). In Experiment 1, I test whether the initial assumptions in Lavine (2013) are valid, and whether diagnostics for agenthood (from Baker et al. 1989) actually discriminate between the two passive constructions. In Experiment 2, I test whether implicit agents trigger retrieval interference (a

new effect), and whether it is harder to perform extraction from ORC than SRC (an old effect shown in many other languages).

#### Experiment 1

Before conducting the retrieval interference study to test the analysis proposed by Lavine (2013), I have conducted an online forced-choice acceptability experiment. The main goals of this experiment were to (i) test whether the initial assumptions in Lavine (2013) are valid and (ii) test whether diagnostics for agenthood (from Baker et al., 1989) actually discriminate between the two passive constructions. The reason why I decided to conduct a forced-choice acceptability experiment (as opposed to just a Likert-style rating) is that this kind of experiment would give us a clearer difference between the two constructions; since I am looking at a small effect, I decided to adopt this methodology and therefore present alternative sentences to the participants. Similarly, Ackerman and Yoshida (2018) used a forced-choice experiment in their study on resumptive pronouns and their methodology turned out to be very effective.

#### Method

#### **Participants**

144 native speakers of Ukrainian (79 female; age range: 18-21) participated in the online experiment on Ibex. All of them were undergraduate students at the National University of Life and Environmental Studies of Ukraine in Kiev, Ukraine. The participants took part in the experiment voluntarily.

#### Materials

The three diagnostics I used in my experiment are by-phrase test, rationale clauses (RatCs) test and agent-oriented (AO) adverbs test (Baker et al.,

1989). These diagnostics were designed to test whether an external argument (or causative agent) is syntactically present in a given construction. In the by-phrase test, by-phrase rules out the presence of an external argument (or an agent) given that by-phrase itself introduces an external argument; in the RatCs test, rationale clauses require the presence of an agent; in the AO adverbs test, AO adverbs also require the presence of an agent. The predictions I made were the following: if an external argument is syntactically represented in the accusative construction and not nominative construction in Ukrainian, then (i) participants would favor nominative constructions over accusative ones in by-phrase test, and (ii) participants would favor accusative constructions over nominative ones in RatCs and AO adverbs tests.

There were 4 conditions (baseline condition, by-phrase condition, RatC condition and AO adverb condition) and 5 items per condition resulting in 20 target items. The target items were mixed with 60 fillers (two types of fillers). A sample set of items used in the online forced-choice acceptability experiment is presented in Table 2 below (see Appendix A for a full set of the sentences used in Experiment 1).

Table 2. Sample set of items used in Experiment 1

Condition	Passive Construction	Ukrainian	English Translation
Baseline	NOM	Гість був пригощений під час свята.	"The guest was treated during the holiday."
	ACC	Гостя було пригощено під час свята.	"The guest was treated during the holiday."
By-phrase	NOM	Гість був пригощений господарем.	"The guest was treated by the host."
	ACC	Гостя було пригощено господарем.	"The guest was treated by the host."
RatC	NOM	Гість <b>був пригощений</b> , щоб привітати його.	"The guest was treated to welcome him."
	ACC	Гостя <b>було пригощено</b> , щоб привітати його.	"The guest was treated to welcome him."
AO Adv	NOM	Гість був люб'язно пригощений.	"The guest was graciously treated."
	ACC	Гостя було люб'язно пригощено.	"The guest was graciously treated."

Note: The passive verb is shown in bold. NOM indicates 'nominative passive construction', ACC indicates 'accusative passive construction'; baseline indicates 'baseline condition', by-phrase indicates 'by-phrase condition', RatC indicates 'RatC condition', AO Adv indicates 'AO adverb condition'.

#### Procedure

The online forced-choice acceptability experiment was run through Ibex. The participants were presented with a pair of sentences (one of which was nominative passive construction and another one was accusative passive construction) and were instructed to click on the sentence that sounded 'more natural' to them. After making their choice, they had to rate on the scale from 1-3 (1 – confident, 2 – hard to tell, 3 – not confident) how confident they were making that choice. Written instructions in Ukrainian were given at the beginning of the experiment.

#### Results

Experimental data was analyzed in the R programming environment for statistical computing (R Core Team, 2016), and modeled in a mixed-effects logistic regression model using the *lme4* package (Bates et al., 2015). Mixed effects logistic regression was used to model binary outcome variable, in which the log odds of the outcome is modeled as a linear combination of the predictor variables when there are both fixed and random effects. We could then calculate the proportion of responses for choosing accusative vs. nominative passive construction. However, our measures had to be put in perspective and the structure of the model was the following. Importantly, the values and interpretations of the coefficients in the model were defined by the change from baseline. In other words, the values of the coefficients in the output of the model had to be compared to the value for the intercept, which served as a baseline to which we compared our measures. In this way, the measures for the by-phrase condition, RatCs condition and AO adverb condition were defined as the differences from the baseline condition. Prior to analyzing the reading times, extreme observations less than 1000 ms were removed. This exclusion affected 27.41% of the

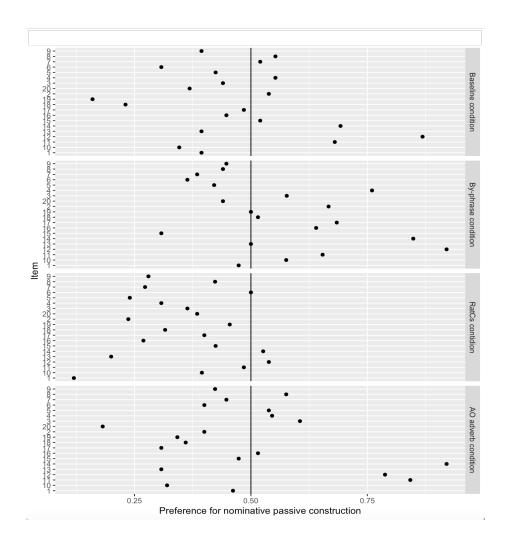
Table 3. Experiment 1 summary of the results

	Results		Prediction	
Condition	Responses (in %)		Responses (in %)	
	ACC	NOM	ACC	NOM
baseline	52	48	50	50
by-phrase	45	55	0	100
RatCs	63	37	100	0
AO adverbs	50	50	100	0

data. The confidence rating data shows that on nearly all trials participants rated being confident making their choice, thus this piece of data was not analyzed. Unless otherwise noted, all the effects reported below for both RT and accuracy models were significant at  $\alpha=0.05$  or less.

The results summarized in Table 3 above show the following. In by-phrase test, the participants strongly tend to prefer nominative to accusative passive construction ( $\beta = 0.41$ ; SE = 0.13; p = 0.001), which is consistent with my prediction above. In RatCs test, the participants have a strong preference for accusative over nominative constructions ( $\beta = -0.54$ ; SE = 0.13; p = 2.89e-05) following my predictions as well. However, in AO adverbs test, the participants did not show any preference for one construction over the other ( $\beta = 0.1$ ; SE = 0.13; p = 0.440). These results suggest that by-phrase test and RatCs tests are the two most effective diagnostics that can discriminate between the two passive constructions.

These results are also demonstrated in Figure 4 below in which the dots in the plot correspond to one item and indicate judgement with preference for nominative passive construction. This strong preference is clear in the by-phrase condition, but not in the baseline, RatCs or AO adverb conditions.



 $\begin{tabular}{ll} \textbf{Figure 4.} & \textbf{Experiment 1: Judgement with preference for nominative passive construction} \\ \end{tabular}$ 

#### Discussion

The findings reported in the table above with respect to the tests for agent-hood proposed in the study by Baker et al. (1989) are very interesting. We see that rationale clauses are preferred with the Accusative passive construction as predicted. However, the results show that the by-phrase is preferred with the Nominative passive construction while agent-oriented adverbs are not. From a syntactic point of view, this is quite a puzzling finding. We usually expect agent-oriented adverbs and RatCs to pattern together, but this is not what we observe in the results. That is very interesting, however, it is not immediately clear what to make of this, and it is certainly true that this contrast is worth exploring in more detail. It could be possible that some participants got a non-agent-oriented reading for the sentences with agent-oriented adverbs, but this might not be the only explanation.

Moreover, these results might make one wonder why despite the strong preferences discussed above, the data presented in Table 2 is continuous rather than categorical. In other words, even though there is a strong preference for the by-phrase with the Nominative passive construction and the RatCs - with the Accusative passive construction, there are still participants showing a completely reverse preference in some cases. This could be explained by interspeaker variation which might be due to the fact that in different dialects, the implicit agent is merged in identical or distinct syntactic heights in the different constructions we examine. As mentioned previously, there are three dialects spoken in Ukrainian: South-Eastern, South-Western and Northern dialect (qtd. in Pompino-Marschall et al., 2016). Although the participants in Experiment 1 were students from the university in the capital of Ukraine, Kiev, where Northern dialect is spoken, it could be the case that some of them came from other parts of Ukraine and previously spoke or grew up speaking the South-Eastern

or the South-Western dialect. According to Lavine (2013)'s analysis, Ukrainian is a "split-vP" language. However, there is evidence that other Slavic languages related to Ukrainian such as Russian and Polish are 'bundled' rather than "split-vP" languages (Lavine, 2013). The Ukrainian South-Eastern dialect might be influenced by the Russian language whereas the Ukrainian South-Western dialect might be influenced by the Polish language for historical and geographical reasons. In this case, it is possible that while Ukrainian is a "split-vP" language, the South-Western and the South-Eastern dialects of Ukrainian could be viewed not as dialects, but rather as completely different languages, which might be not "split-vP" languages. Moreover, some bilingual participants who speak Polish, Russian or other languages which do not have split-vP, might be biased. This could lead certain participants to favoring only Nominative passive constructions regardless of the tests given since in non-"split-vP" languages, Accusative passive constructions are not possible. However, this may not be the only answer, and the question needs to be further investigated.

#### Experiment 2

#### Hypotheses and Predictions

The main goal of the retrieval interference study is to test whether implicit agents represented syntactically cause retrieval interference. The study will test two competing hypotheses in (6) and (8). Hypothesis A is stated in (6) below.

(6) Hypothesis A: Implicit agents represented syntactically receive nominative case and this case similarity causes interference which leads to processing difficulty in subject-verb dependencies.

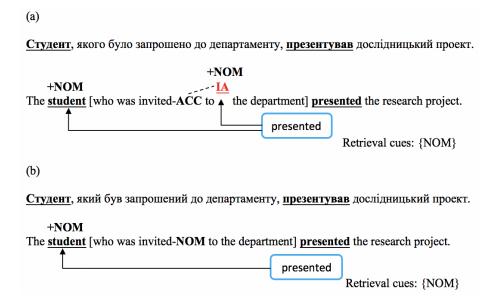
Hypothesis A makes the following prediction. If a verb uses case cue for subject retrieval, we must observe slower reading times for sentences including passive

constructions in (7a) than in (7b).

- (7) а. Студент, якого було запрошено до департаменту, презентував дослідницький проект. / The **student** [who was invited-ACC to the department] presented the research project.
  - b. Студент, який був запрошений до департаменту, презентував дослідницький проект. / The **student** [who was invited-NOM to the department] presented the research project.

In particular, we expect to see a slowdown at the verb presented in (7a) due to interference effect: both implicit agent represented syntactically and the subject student receive nominative case and the case similarity should cause interference in Ukrainian. Fig. 5 illustrates the cue-based retrieval of student (under Hypothesis A). The main idea is that when we read a sentence like in (a) and get to the main verb presented, we use case-based retrieval cues such as {+NOM} to retrieve the main subject of the verb, namely student. It is more difficult to retrieve the main subject in (a) comparing to (b) because in (a) there are two elements activated in memory and available for retrieval at the retrieval site - the main subject student and the syntactically represented implicit agent projected from the accusative passive construction, while there is only one subject available for retrieval and no implicit agent serving as an intervening element in (b). In other words, there is an intervening implicit agent in (a), but there is no such agent in (b).

The second hypothesis tested is Hypothesis B. This competing hypothesis is stated in (8) below.



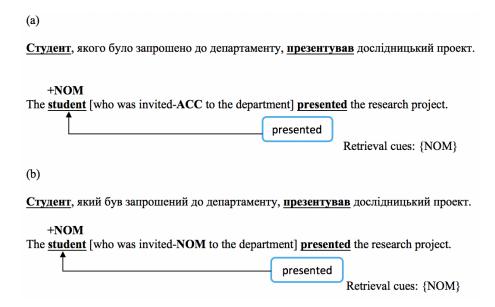
**Figure 5.** (a) Expected interference at the main subject retrieval. The interfering implicit agent is represented in red font. (b) No interference expected at the main subject retrieval.

(8) Hypothesis B: Implicit agents are not represented syntactically and do not receive nominative case, thus there is no case similarity that causes interference which leads to processing difficulty in subject-verb dependencies.

Hypothesis B makes the following prediction. If a verb uses case cue for subject retrieval, we must not observe slower reading times for sentences including passive constructions in (7a) than in (7b). In particular, we do not expect to see a slowdown at the verb *presented* in (7a) due to the absence of interference effect: there is no implicit agent represented syntactically which receives nominative case as does the subject *student*, thus this lack of case similarity should not cause interference in Ukrainian.

Fig. 6 illustrates the cue-based retrieval of *student* (under Hypothesis B). The main idea is that when we read a sentence like in (a) and get to the main verb

presented, we use case-based retrieval cues such as +NOM to retrieve the main subject of the verb, namely *student*. There is no relative difficulty in retrieval of the main subject in (a) comparing to (b) because in both (a) and (b), there is only one subject activated in memory and available for retrieval at the retrieval site. In other words, there is no intervening implicit agent in (a).



**Figure 6.** (a) No interference expected at the main subject retrieval. There is no implicit agent represented syntactically, which would trigger interference. (b) No interference expected at the main subject retrieval.

However, it is also logically possible that we could observe slower reading times for sentences including passive constructions in (7b) than in (7a). In (7a) nominatively marked element is implicit agent and in (7b) such element could be a gap. If there is no nominatively marked implicit agent (contrary to Hypothesis A) in (7a), but there is a nominatively marked element which is a gap in (7b), we could imagine a scenario, in which we would see a slowdown at the verb *presented* in (7b) due to interference effect: both nominatively marked element which is a gap and the subject *student* receive nominative case and this case similarity

causes interference in Ukrainian. Nevertheless, this does not seem to be the case (as we will see later from the results of the proposed experiment), and the explanation could be the following: Nominative gaps are part of the chain, they are the same element as the element being retrieved, and this might prevent them from serving as intervening elements. Hence, there could be something about the identity of the gaps. This is very interesting and might require further investigation.

#### Method

#### Participants

50 native speakers of Ukrainian (age range: 18-21) were tested in an online SPR experiment on Ibex. All of them were undergraduate students from the National University of Life and Environmental Studies of Ukraine in Kiev, Ukraine. They all gave consent and were be paid \$10 per hour for their participation.

#### Materials

Six conditions will comprise a 2 x 3 factorial design crossing Gap type (NOM vs. ACC) and RC type (Transitive V vs. Passive-long vs. Passive-short). There were 6 conditions and 6 experimental items per condition resulting in 36 target items, and 64 fillers included. These fillers together with the experimental items totalled 100. A sample set of experimental conditions is presented in Table 4 below (see Appendix B for a full set of the sentences used Experiment 2). SRC and ORC correspond to NOM Gap/Transitive and ACC Gap/Transitive conditions while NOM and ACC correspond to NOM Gap/Passive-short and ACC Gap/Passive-short conditions respectively. NOM/by-phrase and ACC/RatC correspond to NOM Gap/Passive-long and ACC Gap/Passive-long conditions accorrespond to NOM Gap/Passive-long conditions accorrespond to N

dingly. English translations of the experimental sentences are provided in order to give readers information about the scenarios tested. Note, however, that the translations do not always preserve the Ukrainian word order and exact phrasing, and no attempt is made to convery the detailed aspectual force of the Ukrainian predicates.

**Table 4**. Example set of items used in Experiment 2

Condition	Gap	Clause	Ukrainian	English translation	
SRC	NOM	Transitive	Студент, який запросив професора до департаменту, презентував дослідницький проект на колоквіумі.	The student who <i>invited the</i> professor to the department <b>presented</b> the research project at the colloquium.	
ORC	ACC	Transitive	Студент, якого професор запросив до департаменту, презентував дослідницький проект на колоквіумі.	The student whom the professor invited to the department presented the research project at the colloquium.	
NOM	NOM	Passive- short	Студент, який був запрошений до департаменту, презентував дослідницький проект на колоквіумі.	The student who was invited to the department <b>presented</b> the research project at the colloquium.	
ACC	ACC	Passive- short	Студент, якого було запрошено до департаменту, презентував дослідницький проект на колоквіумі.	The student who was invited to the department <b>presented</b> the research project at the colloquium.	
NOM/by- phrase	NOM	Passive- long	Студент, який був запрошений професором до департаменту, презентував дослідницький проект на колоквіумі.	The student who was invited by the professor to the department presented the research project at the colloquium.	
ACC/RatC	ACC	Passive- long	Студент, якого було запрошено, щоб познайомити його з професором у департаменті, презентував дослідницький проект на колоквіумі.	The student who was invited to introduce him to the professor in the department presented the research project at the colloquium.	

Note: The critical verb in the main clause is shown in bold. The relative clause target structures are shown in italics. NOM indicates 'nominative passive construction', ACC indicates 'accusative passive construction. SRC and ORC correspond to NOM Gap/Transitive and ACC Gap/Transitive conditions while NOM and ACC correspond to NOM Gap/Passive-short and ACC Gap/Passive-short conditions respectively. NOM/by-phrase and ACC/RatC correspond to NOM Gap/Passive-long and ACC Gap/Passive-long conditions accordingly.

There are two reasons why I decided to include conditions such as (a) and (b) which do not include passive constructions in addition to conditions such as (c) and (d) which include such constructions. First of all, the condition such as (a) and (b) would serve as a baseline condition in this experiment. Given that the NP of the object relative clause (ORC) receives nominative case while the NP of the subject relative clause (SRC) does not, we expect to see the NP of ORC serving as the intervening element between the main subject and the main verb. In other words, we predict that parsing ORC should cause the retrieval interference effect (because of the RC subject and the main subject case similarity) whereas parsing SRC should not. This would be evident from the greater processing difficulty at the main verb in the ORC but not the SRC condition. Secondly, I would like to test two effects in this experiment. By comparing the conditions like (a) which has subject relative clause (SRC) with the conditions like (b) which has object relative clause (ORC), I would like to see whether ORC is more difficult to process than SRC in Ukrainian. The ORC/SRC asymmetry has been already shown in many other languages including Russian (Levy et al., 2013) and I would like to investigate whether this old effect holds in Ukrainian as well. The Activation and Cue-Based Retrieval Theory predicts the Ukrainian SRC/ORC processing difficulty asymmetry because in the ORC case, both the main subject and the relative clause subject need to be retrieved at the relative clause verb (RCV) and associated with their relevant semantic roles, but they interfere with one another because of their similarity (for example, both are singular, animate and definite). The new effect, namely agents triggering retrieval interference, will be tested by comparing conditions like (c) and (e) which include accusative and nominative passive constructions respectively. Conditions in (d) and (f) serve as the second baseline-conditions. The reason why condition (d) includes by-phrase and condition (f) includes rationale clause is that byphrases are more acceptable with nominative passive constructions comparing to accusative ones, and rationale clauses are more acceptable with accusative passive constructions comparing to nominative ones as shown in Experiment 1.

#### Procedure

The Ukrainian native speakers participated in a self-paced reading experiment conducted on Ibex. Sentences were presented to the participants in a noncumulative word-by-word moving window self-paced reading procedure. Each sentence appeared on the screen masked by dashes that covered all words in the sentence. Each time the participant pressed the space bar a new word appeared on the screen, and the previous word was re-masked by dashes. Punctuation was displayed together with the word preceding it. The times between button presses were recorded in milliseconds. A yes/no comprehension question appeared after each sentence evaluating the participant's understanding of the content of the sentence. Written instructions in Ukrainian were given at the beginning of the experiment. Participants were instructed to read sentences carefully and respond to the comprehension questions as accurately as possible. If the question was answered incorrectly the word "Incorrect. Please wait for the next sentence." briefly appeared in the center of the screen. The testing session lasted approximately 45 minutes.

#### Results

The experiment produced two dependent measures: reading times during self-paced reading and accuracy to the comprehension questions. The results are presented below. Self-paced reading data was analyzed in the R programming environment for statistical computing (R Core Team, 2016), and was modeled in a mixed-effects linear regression model using the *lme4* package (Bates et al.,

2015). Comprehension questions accuracy data was modeled in a mixed-effects logistic regression model using the lme4 package (Bates et al., 2015). Prior to analyzing the reading times, inaccurate responses less than 70% accurate were removed. This exclusion affected 8% of the data. Unless otherwise noted, all reported effects for both RT and accuracy models were significant at  $\alpha=0.05$  or less.

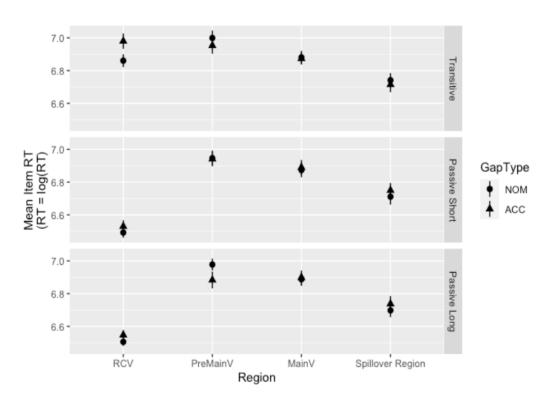
## Self-paced reading times

Reading times were analyzed for two separate regions: critical region (at the main verb) and spillover region (at the post-main verb). The measure of most interest is the reading time in the region of the main verb, as it is the region of retrieval of the subject of the main verb. Log transformation was performed on the reading times and the log-transformed data were then put into a linear mixed effects regression models.

Fig. 7 below presents the reading times results from Experiment 2. In the critical region, the effect of retrieval interference was not significant. The effect of retrieval interference was not significant by subjects, such that the conditions without interfering subjects were not faster than the conditions with interfering subjects. This effect did not reach significance by items either. In addition, there were no significant interactions.

In spillover region (e.g., $\partial ocni\partial nuu b \kappa u \ddot{u} npoe \kappa m/research project$ ), there were no significance effects at the head of the noun phrase (the object). However, we observed a significant interaction of Gap  $\times$  Clause ( $\beta$ = 82, SE = 39, t = 2.08), both by subjects and by items, such that Nominative gap conditions were read significantly faster than Accusative gap conditions in Passive-short and Passive-long conditions comparing to Transitive V conditions. No other effects were significant in this region.

The reading time results for the subject-extracted relative clause (SRC) and the object-extracted relative clause (ORC) conditions show that there is no significant effect of interference neither in the critical region, nor in the spillover region. These results provide evidence to support the claim that parsing subject-versus object-extracted relative clause does not have significant effect on interference. However, the reading time results demonstrate that there was a significant time difference ( $\beta$ = 80, SE = 21, t = 3.85) in the relative clause verb (RCV) region showing that the object-extracted RCs (ORCs) are more difficult to process than the subject-extracted RCs (SRCs), and thus providing evidence for the Ukrainian SRC/ORC asymmetry.



**Figure 7**. Experiment 2 self-paced reading times at critical main verb regions and NP spillover regions. Error bars show standard error of the mean.

## Comprehension question accuracy

Mean comprehension accuracy for each condition is reported in Table 4 as percentage correct. Grand mean accuracy was 94%. Comprehension accuracy for the conditions containing Nominative gaps was significantly higher than for the conditions containing Accusative gaps ( $\beta = -1.25$ ; SE = 0.34; p = 0.000242). Comprehension accuracy for the conditions containing Nominative short passive was significantly higher than for the conditions containing Nominative long passive ( $\beta = -1.70$ ; SE = 0.71; p = 0.017). Comprehension accuracy for the conditions containing Accusative long passive was higher than for the conditions containing Accusative short passive, but the effect was not significant ( $\beta = 0.49$ ; SE = 0.43; p = 0.25).

**Table 4**. Experiment 2 comprehension questions, mean accuracy (and standard error) by condition

Gap	Clause		
	TRANS	PASSIVE SHORT	PASSIVE LONG
NOM	94% (1%)	93% (2%)	83% (2%)
ACC	78% (3%)	87%(2%)	92%~(2%)

### General discussion

### Summary

The comprehension accuracy results confirmed that the conditions containing Accusative gaps were more difficult than the conditions containing Nominative gaps, as subjects were less accurate when there was a potential intervening subject. This is consistent with the reading time results, which show a trend for an interference effect in spillover regions for the conditions including passive con-

structions. The effect of interference in the comprehension results and reading time results accords with Hypothesis A: implicit agents represented syntactically receive nominative case and this case similarity causes interference which leads to processing difficulty in subject-verb dependencies.

Reading times for spillover region provided the critical test of our Hypothesis A. Although we did not find support for interference from the insignificant effect of interference, we found support for retrieval interference from the significant interaction in this region, which revealed that the interference effect was linked to the difference between the sentences with different Gap types (Nominative gap vs. Accusative gap) in the conditions with different RC types (Transitive V and Passive-short/Passive-long). Pairwise comparisons showed no difference between the Passive-short and Passive-long conditions. Reading was slowed in the spillover region when the potential interfering passive subjects (implicit agents) in memory matched the syntactic retrieval cues inherent in the main verb seeking its subject (Accusative gap/Passive conditions), relative to the conditions in which there were no potential interfering passive subjects (implicit agents) at all (Nominative gap/Passive conditions). There is a large spillover effect observed in the results meaning that there is most likely an overlap in the processing of adjacent words (in this case, a main verb and a following noun phrase serving as a direct object of the verb).

However, comprehension accuracy results are not consistent with the reading time results for the subject-extracted relative clause (SRC) and the object-extracted relative clauses (ORC) conditions, which show that there is no significant effect of interference neither in the critical region, nor in the spillover region. In addition, there was insignificant interaction in both regions, suggesting that ORC conditions were not more difficult than SRC conditions contrary to our prediction. As previously discussed, the NP of the object relative clause

(ORC) receives nominative case while the NP of the subject relative clause (SRC) does not, and this would lead to the NP of ORC serving as the intervening element between the main subject and the main verb. Therefore, according to our prediction, parsing ORC should cause the retrieval interference effect (because of the RC subject and the main subject case similarity) whereas parsing SRC should not. This would be evident from the greater processing difficulty at the main verb in the ORC but not the SRC condition. Nevertheless, this is not the case as the results suggest.

Although parsing subject- versus object-relative clauses does not affect interference in the main verb (MainV) region, the results do provide support for the Ukrainian SRC/ORC asymmetry in the relative clause verb (RCV) region – the object-extracted RCs (ORCs) are more difficult to process than the subject-extracted RCs (SRCs). The results also demonstrate that the processing difficulty is localized: the locus of greatest processing difficulty is detected at the ORC verb. These findings align with the evidence from the previous study by Levy et al. (2013) proving that the widely-known SRC/ORC asymmetry holds for Russian – a language closely related to Ukrainian.

#### Retrieval interference in sentence processing

The current self-paced reading experiment supports a retrieval-based account of interference effects in sentence processing, one that is consistent with the hypothesis that a cue-based retrieval mechanism mediates the creation of grammatical dependencies during parsing. Van Dyke and Lewis (2003) proposed such a mechanism, in which parsing success depends on the extent to which required constituents can be retrieved from working memory. According to this account, grammatical heads provide retrieval cues that are used to access previously stored items via a content-addressable retrieval process (McElree, 2006).

The defining characteristic of a content-addressable retrieval mechanism is that information (cues) in the retrieval context facilitates direct access to relevant memory representations, without the requirement to search through extraneous representations. Crucially, empirical measures of the dynamics of retrieval suggest that content addressability is a universal property of human memory, and that this kind of process mediates the recovery of items from both long-term and short-term memories (McElree, 2006).

In accordance with the framework outlined in Arnett and Wagers (2017), we assume that the retrieval cues used to recover a representation of the relevant item in our experimental sentences were derived from the linguistic properties of the head verb, in particular, syntactic properties. The self-paced reading experiment reported here further suggests that retrieval cues at the verb are syntactic and subjects are retrieved based on their case. Thus, the current study provides evidence to support the claim that cue-based retrieval in parsing depends on a particular set of syntactic features.

#### Future research

Although the present study sheds some light on the nature of the retrieval interference and provides further evidence to support the claim that the retrieval cues are syntactic, there might be other cues and conditions that give rise to retrieval interference. This study supports the claim that implicit agents in passive constructions in Ukrainian like the kind represented by PRO in the Object Control constructions in English can cause retrieval interference. The next steps would involve testing whether PRO ("big Pro") or other empty categories including null DPs (such as pro ("little pro"), Wh-trace and DP-trace) and null heads (such as null complementizers) can cause retrieval interference. In other words, testing whether other types of covert linguistic forms available

in the Ukrainian language can cause retrieval interference. Note, however, that Wh-traces might be problematic for testing retrieval interference effect because even though they are Nominative gaps, they are linked to the same element as the element being retrieved and are part of the chain, so it would be hard to imagine what the design might be for such a study. Therefore, testing whether null DPs such as Wh-traces could give rise to interference or not remains an open question. Nevertheless, the data from the Ukrainian language presented in the current study provides more evidence to investigate Wh-traces and other covert elements.

Here is the proposal of what the design of the experiment testing whether a covert element such as PRO ("big Pro") can cause retrieval interference in Ukrainian could look like. Researchers would compare the subject interveners of S-complement sentences as in (9a) to Object Control sentences, such as that shown in (9b) below.

- (9) а. Чоловік, який очікував, що [парубок виконував завдання], помилявся. / The man who expected that [the guy was completing the task], was mistaken.
  - b. Чоловік, який переконав  $napy 6\kappa a$  [виконати завдання], помилявся. / The man who persuaded the guy [to complete the task], was mistaken.

If subject retrieval is based on case cues, then Object Control sentences should be easier to process than S-complement sentences. However, if PRO receives nominative case and this case similarity causes retrieval interference, then Object Control sentences should not be easier to process than S-complement sentences. Moreover, this is worth examining to see whether retrieval interference effect receives support from results on some other constructions in addition to passive constructions in Ukrainian.

Interestingly, the results of the present study demonstrate that parsing subject-versus object-relative clauses does not affect interference in the Ukrainian language. Given that parsing ORC should cause the retrieval interference effect (because of the RC subject and the main subject case similarity) whereas parsing SRC should not, the results do not align with the prediction made and the cue-based retrieval account. Therefore, further investigation of this finding is required as well. It is not clear why parsing SRC/ORC does not affect interference in the Ukrainian language in particular.

The current study also provides evidence to support the claim that cuebased retrieval in parsing depends on a particular set of syntactic features, in particular, syntactic features. However, additional research is required to prove a complete specification of all the cues that may drive memory retrieval, and that requires examining all forms of information that could be computed during sentence processing. This would regard prospective sentence processing studies in the Ukrainian language as well as other languages. I leave this as an especially fruitful direction for future research.

## Data availability

The full datasets, experimental results and actual outputs of the models generated for this study are available on request to the corresponding author.

# 4 Conclusion

The main question of the proposed study concentrates on the issue of whether implicit agents trigger interference in sentence comprehension. To address this question, I investigated the two passive constructions in Ukrainian, which differ in terms of the presence of implicit causative agent. Using SPR, I revealed

that there is a retrieval interference effect caused by implicit agents leading to longer processing times in the passive constructions, in which implicit agents are represented syntactically. Moreover, I have discovered that parsing subject-versus object-relative clauses does not affect interference. Finally, conducting this study contributes to the existing psycholinguistic literature on retrieval interference and processing of implicit agents, and helps us gain a better understanding of the nature of the parsing mechanisms that support language processing.

# Acknowledgments

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## APPENDIX A

# Full list of stimuli from the forced-choice acceptability task, Experiment 1

English translations of the experimental sentences are provided in order to give readers information about the scenarios tested. Note, however, that the translations do not always preserve the Ukrainian word order and exact phrasing, and no attempt is made to convey the detailed aspectual force of the Ukrainian predicates.

The experiment contained 4 conditions (baseline condition, by-phrase condition, RatC condition and AO adverb condition) and 5 items per condition resulting in 20 target items. Each condition contained a pair of sentences one of which was nominative passive construction and another one was accusative passive construction.

Conditions	Sentence 1	Sentence 2
Condition a: Baseline condition	NOM	ACC
Condition b: By-phrase condition	NOM	ACC
Condition c: RatC condition	NOM	ACC
Condition d: AO adverb condition	NOM	ACC

Note: In a pair of sentences, a sentence containing a nominative passive construction did not always appear before a sentence with an accusative passive construction. The order varied.

(а) Церква була збудована в 1640 році./Церкву було збудовано в 1640 році.

The church was built (NOM) in 1640./The church was built (ACC) in 1640.

- (b) Церква була збудована працівниками./Церкву було збудовано працівниками.
  - The church was built (NOM) by the workers./The church was built (ACC) by the workers.
- (c) Церква була збудована, щоб виконати обітницю./Церкву було збудовано, щоб виконати обітницю.
  - The church was built (NOM) to fullfill a vow./The church was built (ACC) to fullfill a vow.
- (d) Церква була навмисно збудована./Церкву було навмисно збудовано.
  - The church was intentionally built (NOM)./The church was intentionally built (ACC).
- (a) Гість був пригощений під час свята./Гостя було пригощено під час свята.
  - The guest was treated (NOM) during the holiday./The guest was treated (ACC) during the holiday.
  - (b) Гість був пригощений господарем./Гостя було пригощено господарем.
    - The guest was treated (NOM) by the host./The guest was treated (ACC) by the host.
  - (c) Гість був пригощений, щоб привітати його./Гостя було пригощено, щоб привітати його.
    - The guest was treated (NOM) to welcome him./The guest was treated (ACC) to welcome him.
  - (d) Гість був люб'язно пригощений./Гостя було люб'язно пригощено.

    The guest was graciously treated (NOM)./The guest was graciously treated (ACC).

- (a) Сорочка була випрана в чистій воді./Сорочку було випрано в чистій воді.
  - The shirt was washed (NOM) in clean water./The shirt was washed (ACC) in clean water.
  - (b) Сорочка була випрана мамою./Сорочку було випрано мамою. The shirt was washed (NOM) by mother./The shirt was washed (ACC) by mother.
  - (c) Сорочка була випрана, щоб очистити її від бруду./Сорочку було випрано, щоб очистити її від бруду.

    The shirt was washed (NOM) to clean it from dirt./The shirt was washed (ACC) to clean it from dirt.
  - (d) Сорочка була обережно випрана./Сорочку було обережно випрано.

    The shirt was carefully washed (NOM)./The shirt was carefully washed (ACC).
- 4. (a) Калина була вирощена у садку./Калину було вирощено у садку.

  The viburnum was grown (NOM) in the garden./The viburnum was grown (ACC) in the garden.
  - (b) Калина була вирощена дівчиною./Калину було вирощено дівчиною.
    - The viburnum was grown (NOM) by the girl./The viburnum was grown (ACC) by the girl.
  - (c) Калина була вирощена, щоб зробити матусі подарунок./Калину було вирощено, щоб зробити матусі подарунок.

    The viburnum was grown (NOM) to make a gift for mom./The viburnum was grown (ACC) to make a gift for mom.

(d) Калина була показово вирощена./Калину було показово вирощено.

The viburnum was ostentaiously grown (NOM)./The viburnum was ostentaiously grown (ACC).

 (a) Білизна була висушена на подвір'ї./Білизну було висушено на подвір'ї.

The linen was dried (NOM) in the yard./The linen was dried (ACC) in the yard.

(b) Білизна була висушена прачкою./Білизну було висушено прачкою.

The linen was dried (NOM) by the washerwoman./The linen was dried (ACC) by the washerwoman.

- (c) Білизна була висушена, щоб приготуватися до приїзду гостей./Білизну було висушено, щоб приготуватися до приїзду гостей.

  The linen was dried (NOM) to get ready for the arrival of the guests./The linen was dried (ACC) to get ready for the arrival of the quests.
- (d) Білизна була спритно висушена./Білизну було спритно висушено.

  The linen was cleverly dried (NOM)./The linen was cleverly dried (ACC).
- 6. (a) Фортеця була оточена з усіх сторін./Фортецю було оточено з усіх сторін.
  - The fortress was surrounded (NOM) on all sides./The fortress was surrounded (ACC) on all sides.
  - (b) Фортеця була оточена ворогами./Фортецю було оточено ворогами.

The fortress was surrounded (NOM) by the enemies./The fortress

- was surrounded (ACC) by the enemies.
- (c) Фортеця була оточена, щоб привернути увагу./Фортецю було оточено, щоб привернути увагу.
  - The fortress was surrounded (NOM) to catch attention./The fortress was surrounded (ACC) to catch attention.
- (d) Фортеця була агресивно оточена./Фортецю було агресивно оточено.
  - The fortress was aggressively surrounded (NOM)./The fortress was aggressively surrounded (ACC).
- 7. (a) Хвіртка була зачинена на ніч./Хвіртку було зачинено на ніч. The gate was closed (NOM) for the night./The gate was closed (ACC) for the night.
  - (b) Хвіртка була зачинена сторожем./Хвіртку було зачинено сторожем.
    - The gate was closed (NOM) by the doorman./The gate was closed (ACC) by the doorman.
  - (c) Хвіртка була зачинена, щоб подбати про безпеку./Хвіртку було зачинено, щоб подбати про безпеку.
    - The gate was closed (NOM) to take care of safety./The gate was closed to take care (ACC) of safety.
  - (d) Хвіртка була грубо зачинена./Хвіртку було грубо зачинено.

    The gate was rudely closed (NOM)./The gate was rudely closed (ACC).
- (a) Кінь був заспокоєний в конюшні./Коня було заспокоєно в конюшні.
  - The horse was calmed down (NOM) in the stalls./The horse was calmed down (ACC) in the stalls.

- (b) Кінь був заспокоєний його володарем./Коня було заспокоєно його володарем.
  - The horse was calmed down (NOM) by its owner./The horse was calmed down (ACC) by its owner.
- (c) Кінь був заспокоєний, щоб уникнути шуму./Коня було заспокоєно, щоб уникнути шуму.
  - The horse was calmed down (NOM) to avoid noise./The horse was calmed down (ACC) to avoid noise.
- (d) Кінь був цілеспрямовано заспокоєний./Коня було цілеспрямовано заспокоєно.
  - The horse was purposefully calmed down (NOM)./The horse was purposefully calmed down (ACC).
- (a) Книга була відкрита перед уроком./Книгу було відкрито перед уроком.
  - The book was opened (NOM) before class./The book was opened (ACC) before class.
  - (b) Книга була відкрита учнем./Книгу було відкрито учнем.

    The book was opened (NOM) by the pupil./The book was opened

    (ACC) by the pupil.
  - (c) Книга була відкрита, щоб підготуватись до уроку./Книгу було відкрито, щоб підготуватись до уроку.

    The book was opened (NOM) to get prepared for class./The book was opened (ACC) to get prepared for class.
  - (d) Книга була навмисно відкрита./Книгу було навмисно відкрито.

    The book was deliberately opened (NOM)./The book was deliberately opened (ACC).

- (a) Ялинка була прикрашена напередодні Нового Року./Ялинку було прикрашено напередодні Нового Року.
  - The fir tree was decorated (NOM) on the New Year's Eye./The fir tree was decorated (ACC) on the New Year's Eye.
  - (b) Ялинка була прикрашена хлопцями./Ялинку було прикрашено хлопцями.
    - The fir tree was decorated (NOM) by the boys./The fir tree was decorated (ACC) by the boys.
  - (c) Ялинка була прикрашена, щоб відсвяткувати Новий Рік./Ялинку було прикрашено, щоб відсвяткувати Новий Рік.

    The fir tree was decorated (NOM) to celebrate the New Year./The fir
  - (d) Ялинка була весело прикрашена./Ялинку було весело прикрашено.

tree was decorated (ACC) to celebrate the New Year.

- The fir tree was cheerfully decorated (NOM)./The fir tree was cheerfully decorated (ACC).
- (a) Студент був підготовлений завчасно./Студента було підготовлено завчасно.
  - The student was prepared (NOM) beforehand./The student was prepared (ACC) beforehand.
  - (b) Студент був підготовлений репетитором./Студента було підготовлено репетитором.
    - The student was prepared (NOM) by the tutor./The student was prepared (ACC) by the tutor.
  - (c) Студент був підготовлений, щоб налаштувати його на успішну здачу іспиту./Студента було підготовлено, щоб налаштувати його здачу іспиту.

The student was prepared (NOM) to set him for passing the exam successfully./The student was prepared (ACC) to set him for passing the exam successfully.

(d) Студент був тактовно підготовлений./Студента було тактовно підготовлено.

The student was tactfully prepared (NOM)./The student was tactfully prepared (ACC).

 (a) Наречена була вражена перед весіллям./Наречену було вражено перед весіллям.

The bride was impressed (NOM) before the wedding./The bride was impressed (ACC) before the wedding.

(b) Наречена була вражена подругами./Наречену було вражено подругами.

The bride was impressed (NOM) by the friends./The bride was impressed (ACC) by the friends.

- (c) Наречена була вражена, щоб видати її заміж за магната./Наречену було вражено, щоб видати її заміж за магната.
  - The bride was impressed (NOM) to marry her to tycoon./The bride was impressed to marry (ACC) her to tycoon.
- (d) Наречена була розумно вражена./Наречену було розумно вражено.

The bride was intelligently impressed (NOM)./The bride was intelligently impressed (ACC).

(a) Актор був загримирований за кулісами./Актора було загримировано за кулісами.

The actor was tinted (NOM) backstage./The actor was tinted (ACC)

back stage.

- (b) Актор був загримирований візажистом./Актора було загримировано візажистом.
  - The actor was tinted (NOM) by the makeup artist./The actor was tinted (ACC) by the makeup artist.
- (c) Актор був загримирований, щоб підготувати його до виходу на сцену./Актора було загримировано, щоб підготувати його до виходу на сцену.
  - The actor was tinted (NOM) to prepare him for the stage./The actor was tinted (ACC) to prepare him for the stage.
- (d) Актор був старанно загримирований./Актора було старанно загримировано.
  - The actor was studiously tinted (NOM)./The actor was studiously tinted (ACC).
- (a) Спортсмен був налаштований на перемогу на змаганні./Спортсмена було налаштовано на перемогу перед змаганням.
  - The sportsman was set (NOM) to win at the competition./The sportsman was set (ACC) to win before the competition.
  - (b) Спортсмен був налаштований тренером на перемогу./Спортсмена було налаштовано тренером на перемогу.
    - The sportsman was set (NOM) to win by the coach./The sportsman was set (ACC) to win by the coach.
  - (с) Спортсмен був налаштований на перемогу, щоб допомогти йому виграти змагання./Спортсмена було налаштовано на перемогу, щоб допомогти йому виграти змагання.
    - The sportsman was set (NOM) for the victory to help him win the

- competition./The sportsman was set (ACC) for the victory to help him win the competition.
- (d) Спортсмен був енергійно налаштований на перемогу./Спортсмена було енергійно налаштовано на перемогу.

  The sportsman was vigorously set (NOM) to win the competition./The
  - sportsman was vigorously set (ACC) to win the competition.
- (a) Страва була остужена на столі перед сніданком./Страву було остужено на столі перед сніданком.
  - The dish was cooled (NOM) on the table before breakfast./The dish was cooled (ACC) on the table before breakfast.
  - (b) Страва була остужена на столі кухарем./Страву було остужено на столі кухарем.
    - The dish was cooled (NOM) on the table by the cook./The dish was cooled (ACC) on the table by the cook.
  - (c) Страва була остужена на столі, щоб підготуватися до вечері./Страву було остужено на столі, щоб підготуватися до вечері.
    - The dish was cooled (NOM) on the table in order to prepare for dinner./The dish was cooled (ACC) on the table in order to prepare for dinner.
  - (d) Страва була безросудно остужена на столі./Страву було безросудно остужено на столі.
    - The dish was recklessly cooled (NOM) on the table./The dish was recklessly cooled (ACC) on the table.
- (a) Хазяйка була розбужена на світанку./Хазяйку було розбужено на світанку.
  - The hostess was awakened (NOM) at dawn./The hostess was awak-

- ened (ACC) at dawn.
- (b) Хазяйка була розбужена прислугою./Хазяйку було розбужено прислугою.
  - The hostess was awakened (NOM) by the servants./The hostess was awakened (ACC) by the servants.
- (c) Хазяйка була розбужена, щоб прочитати їй терміновий лист./Хазяйку було розбужено, щоб прочитати їй терміновий лист.

  The hostess was awakened (NOM) to read the urgent letter to her./The hostess was awakened (ACC) to read the urgent letter to her.
- (d) Хазяйка була неохоче розбужена./Хазяйку було неохоче розбужено.
  - The hostess was reluctantly awakened (NOM)./The hostess was reluctantly awakened (ACC).
- (a) Ваза була підсунута до підвіконня у вітальні./Вазу було підсунуто до підвіконня у вітальні.
  - The vase was slid (NOM) to the windowsill in the living room./The vase was slid (ACC) to the windowsill in the living room.
  - (b) Ваза була підсунута прибиральницею до підвіконня./Вазу було підсунуто прібіральницею до підвіконня.
    - The vase was slid (NOM) to the windowsill by the maid./The vase was slid (ACC) to the windowsill by the maid.
  - (c) Ваза була підсунута до підвіконня, щоб допомогти бабусі полити квіти./Вазу було підсунуто до підвіконня, щоб допомогти бабусі полити квіти.
    - The vase was slid (NOM) to the windowsill to help the grandma water the flowers./The vase was slid (ACC) to the windowsill to help the grandma water the flowers.

(d) Ваза була нерішуче підсунута до підвіконня./Вазу було нерішуче підсунуто до підвіконня.

The vase was hesitantly slid (NOM) to the windowsill./The vase was hesitantly slid (ACC) to the windowsill.

 (a) Колісниця була підпалена вночі./Колісницю було підпалено вночі.

The chariot was set (NOM) on fire at night./The chariot was set (ACC) on fire at night.

(b) Колісниця була підпалена розбійніками./Колісницю було підпалено розбійніками.

The chariot was set (NOM) on fire by robbers./The chariot was set (ACC) on fire by robbers.

(c) Колісниця була підпалена, щоб відвернути увагу людей від пограбування./Колісницю було підпалено, щоб відвернути увагу людей від пограбування.

The chariot was set (NOM) on fire to distract people from the robbery./The chariot was set (ACC) on fire to distract people from the robbery.

(d) Колісниця була спеціально підпалена./Колісницю було спеціально підпалено.

The chariot was purposely set (NOM) on fire./The chariot was purposely set (ACC) on fire.

 (a) Рослина була збережена в теплі взимку./Рослину було збережено в теплі взимку.

The plant was kept (NOM) in warmth in winter./The plant was kept (ACC) in warmth in winter.

- (b) Рослина була збережена дівчинкою в теплі./Рослину було збережено дівчинкою в теплі.
  - The plant was kept (NOM) in warmth by the girl./The plant was kept (ACC) in warmth by the girl.
- (c) Рослина була збережена в теплі, щоб виростити її до весни./Рослину було збережено в теплі, щоб виростити її до весни.

  The plant was kept (NOM) in warmth to grow it before spring./The plant was kept (ACC) in warmth to grow it before spring.
- (d) Рослина була розумно збережена в теплі./Рослину було розумно збережено в теплі.
  - The plant was reasonably kept (NOM) in warmth./The plant was reasonably kept (ACC) in warmth.
- (a) Свічка була погашена в темряві./Свічку було погашено в темряві.
  - The candle was extinguished in the darkness./The candle was extinquished in the darkness.
  - (b) Свічка була погашена чаклуном./Свічку було погашено чаклуном.
    - The candle was extinguished (NOM) by the magician./The candle was extinguished (ACC) by the magician.
  - (c) Свічка була погашена, щоб заховати секрет./Свічку було погашено, щоб заховати секрет.
    - The candle was extinguished (NOM) to hide the secret./The candle was extinguished (ACC) to hide the secret.
  - (d) Свічка була нерозумно погашена./Свічку було нерозумно погашено.

The candle was foolishly extinguished (NOM)./The candle was foolishly extinguished (ACC).

# APPENDIX B

# Full list of stimuli (including comprehension questions) from the self-paced reading task, Experiment 2

English translations of the experimental sentences are provided in order to give readers information about the scenarios tested. Note, however, that the translations do not always preserve the Ukrainian word order and exact phrasing, and no attempt is made to convey the detailed aspectual force of the Ukrainian predicates.

The experiment contained 6 conditions which comprised a 2 x 3 factorial design crossing Gap type (NOM vs. ACC) and RC type (Transitive V vs. Passive-long vs. Passive-short), and 6 items per condition resulting in 36 target items.

Conditions	Gap type	RC type
Condition a: SRC	NOM	Transitive
Condition b: ORC	ACC	Transitive
Condition c: NOM	NOM	Passive-short
Condition d: NOM/by-phrase	NOM	Passive-long
Condition f: ACC	ACC	Passive-short
Condition e: ACC/RatC	ACC	Passive-long

 (а) Студент, який запросив професора до департаменту, презентував дослідницький проект на колоквіумі.

Чи студент презентував проект?

The student who invited the professor to the department presented the research project at the colloquium. (b) Студент, якого професор запросив до департаменту, презентував дослідницький проект на колоквіумі.

Чи професор презентував проект?

The student whom the professor invited to the department presented the research project at the colloquium.

(c) Студент, який був запрошений до департаменту, презентував дослідницький проект на колоквіумі.

Чи був студент запрошений на вечірку?

The student who was invited (NOM) to the department presented the research project at the colloquium.

(d) Студент, який був запрошений професором до департаменту, презентував дослідницький проект на колоквіумі.

Чи студент презентував проект на колоквіумі?

The student who was invited (NOM) by the professor to the department presented the research project at the colloquium.

(e) Студент, якого було запрошено до департаменту, презентував дослідницький проект.

Чи запросили професора до департаменту?

The student who was invited (ACC) to the department presented the research project at the colloquium.

(f) Студент, якого було запрошено, щоб познайомити його з професором у департаменті, презентував дослідницький проект на колоквіумі.

Чи це студента було запрошено?

The student who was invited (ACC) to introduce him to the professor in the department presented the research project at the colloquium.

2. (а) Гість, який похвалив хазяїна під час вечері, приніс дорогий по-

дарунок з пляшкою шампанського.

Чи це хазяїна було похвалено?

The guest who praised the host at the dinner brought the expensive gift with a bottle of champagne.

(b) Гість, якого хазяїн похвалив під час вечері, приніс дорогий подарунок з пляшкою шампанського.

Чи це хазяїна було похвалено?

The guest whom the host praised at the dinner brought the expensive gift with a bottle of champagne.

(c) Гість, який був похвалений під час вечері, приніс дорогий подарунок з пляшкою шампанського.

Чи це гість приніс подарунок?

The guest who was praised (NOM) at the dinner brought the expensive gift with a bottle of champagne.

(d) Гість, який був похвалений хазяїном під час вечері, приніс дорогий подарунок з пляшкою шампанського.

Чи був гість похвалений під час вечері?

The guest who was praised (NOM) by the host at the dinner brought the expensive gift with a bottle of champagne.

(e) Гість, якого було похвалено під час вечері, приніс дорогий подарунок з пляшкою шампанкього.

Чи гість приніс пляшку шампанського?

The guest who was praised (ACC) at the dinner brought the expensive gift with a bottle of champagne.

(f) Гість, якого було похвалено, щоб привернути його увагу під час вечері, приніс дорогий подарунок з пляшкою шампанського.

Чи намагалися привернути увагу хазяїна?

The guest who was praised (ACC) to get his attention at the dinner brought the expensive gift with a bottle of champagne.

3. (a) Співак, який запросив танцівника на сцену, здивував шалених глядачів під час виступу.

Чи це танцівник здивував глядачів?

The singer who invited the dancer to the stage surprised the wild audience during the performance.

(b) Співак, якого танцівник запросив на сцену, здивував шалених глядачів під час виступу.

Чи це співака танцівник запросив на сцену?

The singer whom the dancer invited to the stage surprised the wild audience during the performance.

(c) Співак, який був запрошений на сцену, здивував шалених глядачів під час виступу.

Чи співак здивував продюсерів під час виступу?

The singer who was invited (NOM) to the stage surprised the wild audience during the performance.

(d) Співак, який був запрошений танцівником на сцену, здивував шадених глядачів під час виступу.

Чи це співак був запрошений на сцену?

The singer who was invited (NOM) by the dancer to the stage surprised the wild audience during the performance.

(e) Співак, якого було запрошено на сцену, здивував шалених глядачів під час виступу.

Чи співак здивував глядачів перед виступом?

The singer who was invited (ACC) to the stage surprised the wild audience during the performance.

(f) Співак, якого було запрошено, щоб почути його голос на сцені, здивував шалених глядачів під час виступу.

Чи хотіли почути голос співака?

The singer who was invited (ACC) to hear his voice at the stage surprised the wild audience during the performance.

4. (a) Чоловік, який помітив юриста у залі, обвинуватив таємного злочинця під час судового розгляду.

Чи чоловік помітив поліцейського?

The man who noticed the lawyer in the hall accused the secret criminal during the trial.

(b) Чоловік, якого юрист помітив у залі, обвинуватив таємного злочинця під час судового розгляду.

Чи юрист помітив чоловіка у залі?

The man whom the lawyer noticed in the hall accused the secret criminal during the trial.

(c) Чоловік, який був помічений у залі, обвинуватив таємного злочинця під час судового розгляду.

Чи чоловік обвинуватив злочинця?

The man who was noticed (NOM) in the hall accused the secret criminal during the trial.

(d) Чоловік, який був помічений юристом у залі, обвинуватив таємного злочинця під час судового розгляду.

Чи чоловік обвинуватив жертву?

The man who was noticed (NOM) by the lawyer in the hall accused the secret criminal during the trial.

(e) Чоловік, якого було помічено у залі, обвинуватив таємного злочинця під час судового розгляду.

Чи було помічено чоловіка?

The man who was noticed (ACC) in the hall accused the secret criminal during the trial.

(f) Чоловік, якого було помічено, щоб запросити його до лавки присяжних у залі, обвинуватив таємного злочинця під час судового розгляду.

Чи хотіли запросити чоловіка до ресторану?

The man who was noticed (ACC) to invite him to the jury box in the hall accused the secret criminal during the trial.

(a) Моряк, який помітив капітана на борту корабля, врятував маленького хлопчика під час шторму.

Чи моряк помітив капітана?

The sailor who noticed the captain aboard the ship rescued the little boy during the storm.

(b) Моряк, якого капітан помітив на борту корабля, врятував маленького хлопчика під час шторму.

Чи моряк помітив капітана?

The sailor whom the captain noticed aboard the ship rescued the little boy during the storm.

(c) Моряк, який був помічений на борту корабля, врятував маленького хлопчика під час шторму.

Чи був хлопчик врятований моряком?

The sailor who was noticed (NOM) aboard the ship rescued the little boy during the storm.

(d) Моряк, який був помічений капітаном на борту корабля, врятував маленького хлопчика під час шторму.

Чи був хлопчик врятований капітаном?

The sailor who was noticed (NOM) by the captain aboard the ship rescued the little boy during the storm.

(e) Моряк, якого було помічено на борту корабля, врятував маленького хлопчика під час шторму.

Чи був хлопчик врятований під час шторму?

The sailor who was noticed (ACC) aboard the ship rescued the little boy during the storm.

(f) Моряк, якого було помічено, щоб відправити його до капітана на борту корабля, врятував маленького хлопчика під час шторму. Чи був чоловік врятований моряком? The sailor who was noticed (ACC) to send him to the captain aboard

6. (a) Актор, який вразив продюсера на кастингу, змінив свою зовнішнісь перед зйомками.

Чи актор вразив партнера на кастингу?

the ship rescued the little boy during the storm.

The actor who impressed the producer at the casting changed his appearance before the shooting.

(b) Актор, якого продюсер вразив на кастингу, змінив свою зовнішність перед зйомками.

Чи актор був вражений продюсером?

The actor whom the producer impressed at the casting changed his appearance before the shooting.

(c) Актор, який був вражений на кастингу, змінив свою зовнішність перед зйомками.

Чи це каскадер змінив свою зовнішність?

The actor who was impressed (NOM) at the casting changed his appearance before the shooting.

(d) Актор, який був вражений продюсером на кастингу, змінив свою зовнішність перед зйомками.

Чи це актор змінив свою зовнішність?

The actor who was impressed (NOM) by the producer at the casting changed his appearance before the shooting.

(e) Актор, якого було вражено на кастингу, змінив свою зовнішність перед зйомками.

Чи актора було вражено у гримувальній кімнаті?

The actor who was impressed (ACC) at the casting changed his appearance before the shooting.

(f) Актор, якого було вражено, щоб підбадьорити його перед виступом на кастингу, змінив свою зовнішність перед зйомками.

Чи хтось змінив свою зовнішність?

The actor who was impressed (ACC) to cheer him up at the casting changed his appearance before the shooting.

7. (a) Учень, який похвалив однокласника під час перерви, вирішив нову задачу біля дошки.

Чи учень вирішив задачу?

The pupil who praised the classmate during the break solved the new problem at the blackboard.

(b) Учень, якого одноклассник похвалив під час перерви, вирішив нову задачу біля дошки.

Чи учень розказав вірш?

The pupil whom the classmate praised during the break solved the new problem at the blackboard.

(c) Учень, який був похвалений під час перерви, вирішив нову задачу біля дошки.

Чи був похвалений учень після перерви?

The student who was praised (NOM) during the break solved the new problem at the blackboard.

(d) Учень, який був похвалений однокласником під час перерви, вирішив нову задачу біля дошки.

Чи це однокласник похвалив учня?

The student who was praised (NOM) by the classmate during the break solved the new problem at the blackboard.

(e) Учень, якого було похвалено під час перерви, вирішив нову задачу біля дошки.

Чи це вчитель похвалив учня?

The student who was praised (ACC) during the break solved the new problem at the blackboard.

(f) Учень, якого було похвалено, щоб підбадьорити його під час перерви, вирішив нову задачу біля дошки.

Чи хтось намагався підбадьорити учня?

The student who was praised (ACC) to cheer him up during the break solved the new problem at the blackboard.

 (a) Спортсмен, який вразив тренера на стадіоні, виконав складну вправу під час тренування.

Чи тренер був вражений спортсменом?

The sportsman who impressed the coach at the stadium performed the hard exercise during the training.

(b) Спортсмен, якого тренер вразив на стадіоні, виконав складну вправу під час тренування.

Чи спортсмен вразив тренера на стадіоні?

The sportsman whom the coach impressed at the stadium performed

the hard exercise during the training.

(c) Спортсмен, який був вражений на стадіоні, виконав складну вправу під час тренування.

Чи виконав спортсмен складну вправу?

The sportsman who was impressed (NOM) at the stadium performed the hard exercise during the training.

(d) Спортсмен, який був вражений тренером на стадіоні, виконав складну вправу під час тренування.

Чи виконав спортсмен вправу перед тренуванням?

The sportsman who was impressed (NOM) by the coach at the stadium performed the hard exercise during the training.

(e) Спортсмен, якого було вражено на стадіоні, виконав складну вправу під час тренування.

Чи було вражено спортсмена?

The sportsman who was impressed (ACC) at the stadium performed the hard exercise during the training.

(f) Спортсмен, якого було вражено на стадіоні, щоб дати йому сильну мотивацію, виконав складну вправу під час тренування.

Чи виконав спортсмен легку вправу?

The sportsman who was impressed (ACC) to give him a strong motivation at the stadium performed the hard exercise during the training.

9. (a) Робітник, який покликав колегу до офісу, написав детальний звіт для начальника.

Чи покликав робітник колегу до кав'ярні?

The worker who called the colleague to the office wrote a detailed report for the boss.

(b) Робітник, якого колега покликав до офісу, написав детальний звіт для начальника.

Чи був написаний звіт для начальника?

The worker whom the colleague called to the office wrote a detailed report for the boss.

(c) Робітник, який був покликаний до офісу, написав детальний звіт для начальника.

Чи був покликаний таксист?

The worker who was called (NOM) to the office wrote a detailed report for the boss.

(d) Робітник, який був покликаний колегою до офісу, написав детальний звіт для начальника.

Чи покликав колега робітника?

The worker who was called (NOM) by the colleague to the office wrote a detailed report for the boss.

(e) Робітник, якого було покликано до офісу, написав детальний звіт для начальника.

Чи було написано звіт для комісії?

The worker who was called (ACC) to the office wrote a detailed report for the boss.

(f) Робітник, якого було покликано до офісу, щоб попросити його пораду, написав детальний звіт для начальника.

Чи мав хтось намір попросити пораду в офісі?

The worker who was called (ACC) to ask him for advice at the office wrote a detailed report for the boss.

 (a) Боксер, який налякав суперника під час змагання, виграв перший раунд без втрат. Чи виграв боксер другий раунд?

The boxer who scared the opponent during the competition won the first round without any loss.

(b) Боксер, якого суперник налякав під час змагання, виграв перший раунд без втрат.

Чи налякав боксера суперник?

The boxer whom the opponent scared during the competition won the first round without any loss.

(c) Боксер, який був наляканий під час змагання, виграв перший раунд без втрат.

Чи був наляканий боксер під час змагання?

The boxer who was scared (NOM) during the competition won the first round without any loss.

(d) Боксер, який був наляканий суперником під час змагання, виграв перший раунд без втрат.

Чи був наляканий спортсмен тренером?

The boxer who was scared (NOM) by the opponent during the competition won the first round without any loss.

(e) Боксер, якого було налякано під час змагання, виграв перший раунд без втрат.

Чи було виграно змагання без втрат?

The boxer who was scared (ACC) during the competition won the first round without any loss.

(f) Боксер, якого було налякано, щоб відволікти його під час змагання, виграв перший раунд без втрат.

Чи це тенісиста було налякано?

The boxer who was scared (ACC) to distract him during the compe-

tition won the first round without any loss.

 (a) Лікар, який покликав медсестру до кімнати, допоміг молодому пацієнту під час операції.

Чи допоміг лікар паціенту?

The doctor who called the nurse to the room helped the young patient during the surgery.

(b) Лікар, якого медсестра покликала до кімнати, допоміг молодому пацієнту під час операції.

Чи покликав лікар медсестру?

The doctor whom the nurse called to the room helped the young patient during the surgery.

(c) Лікар, який був покликаний до кімнати, допоміг молодому пацієнту під час операції.

Чи був покликаний лікар?

The doctor who was called (NOM) to the room helped the young patient during the surgery.

(d) Лікар, який був покликаний медсестрою до кімнати, допоміг молодому пацієнту під час операції.

Чи був покликаний лікар пацієнтом?

The doctor who was called (NOM) by the nurse to the room helped the young patient during the surgery.

(е) Лікар, якого було покликано до кімнати, допоміг молодому пацієнту під час операції.

Чи допоміг хтось пацієнту під час операції?

The doctor who was called (ACC) to the room helped the young patient during the surgery.

(f) Лікар, якого було покликано, щоб показати йому рентгенівський звіт у кімнаті, допоміг молодому пацієнту під час операції.

Чи допоміг лікар старому пацієнту?

The doctor who was called (ACC) to show him the x-ray report at the room helped the young patient during the surgery.

 (a) Грабіжник, який налякав сусіда за парканом, поламав бокове вікно під час втечі.

Чи поламав грабіжник переднє вікно?

The burglar who scared the neighbor behind the fence broke the side window during the escape.

(b) Грабіжник, якого сусід налякав за парканом, поламав бокове вікно під час втечі.

Чи поламав грабіжник вікно?

The burglar whom the neighbor scared behind the fence broke the side window during the escape.

(c) Грабіжник, який був наляканий за парканом, поламав бокове вікно під час втечі.

Чи був наляканий грабіжник перед парканом?

The burglar who was scared (NOM) behind the fence broke the side window during the escape.

(d) Грабіжник, який був наляканий сусідом за парканом, поламав бокове вікно під час втечі.

Чи це сусід налякав грабіжника?

The burglar who was scared (NOM) by the neighbor behind the fence broke the side window during the escape.

(e) Грабіжник, якого було наляканаю за парканом, поламав бокове вікно під час втечі.

Чи поламав грабіжник бокові двері?

The burglar who was scared (ACC) behind the fence broke the side window during the escape.

(f) Грабіжник, якого було наляканаю, щоб збентежити його за парканом, поламав бокове вікно під час втечі.

Чи намагався хтось збентежити грабіжника?

The burglar who was scared (ACC) to embarrass him behind the fence broke the side window during the escape.

 (а) Батько, який підготував сина до риболовлі, покинув заміський будинок рано вранці.

Чи підготував батько сина?

The dad who prepared the son for fishing left the country house early in the morning.

(b) Батько, якого син підготував до риболовлі, покинув заміський будинок рано вранці.

Чи підготував батько сина?

The dad whom the son prepared for fishing left the country house early in the morning.

(c) Батько, який був підготовлений до риболовлі, покинув заміський будинок рано вранці.

Чи був підгтовлений батько до полювання?

The dad who was prepared (NOM) for fishing left the country house early in the morning.

(d) Батько, який був підготовлений сином до риболовлі, покинув заміський будинок рано вранці.

Чи підготував син батька?

The dad who was prepared (NOM) by his son for fishing left the country house early in the morning.

(e) Батько, якого було підготовлено до риболовлі, покинув заміський будинок рано вранці.

Чи залишився батько у будинку рано вранці?

The dad who was prepared (ACC) for fishing left the country house early in the morning.

(f) Батько, якого було підготовлено, щоб надати йому впевненості на риболовлі, покинув заміський будинок рано вранці.

Чи покинув батько будинок рано вранці?

The dad who was prepared (ACC) to give him more confidence for fishing left the country house early in the morning.

 (a) Парубок, який врятував охоронця від вогню, заспокоїв стривожену матір після пожежі.

Чи заспокоїв парубок матір?

The guy who saved the bodyguard from the fire calmed down the worried mom after the fire.

(b) Парубок, якого охронець врятував від вогню, заспокоїв стривожену матір після пожежі.

Чи це сестру заспокоїв парубок?

The guy whom the bodyguard saved from the fire calmed down the worried mom after the fire.

(c) Парубок, який був врятований від вогню, заспокоїв стривожену матір після пожежі.

Чи був врятований парубок?

The guy who was saved (NOM) from the fire calmed down the worried mom after the fire.

(d) Парубок, який був врятований охоронцем від вогню, заспокоїв стривожену матір після пожежі.

Чи був парубок врятований матір'ю?

The guy who was saved (NOM) by the bodyguard from the fire calmed down the worried mom after the fire.

(е) Парубок, якого було врятовано від вогню, заспокоїв стривожену матір після пожежі.

Чи була заспокоєна матір після пожежі?

The guy who was saved (ACC) from the fire calmed down the worried mom after the fire.

(f) Парубок, якого було врятовано, щоб захистити його від вогню, заспокоїв стривожену матір після пожежі.

Чи була заспокоєна матір під час пожежі?

The guy who was saved (ACC) to protect him from the fire calmed down the worried mom after the fire.

 (a) Начальник, який обвинуватив працівників в офісі, написав велику скаргу заступнику міністра.

Чи це міністра обвинуватив начальник?

The boss who accused the worker at the office wrote a big complaint to the deputy minister.

(b) Начальник, якого пацівник обвинуватив в офісі, написав велику скаргу заступнику міністра.

Чи це працівник обвинуватив начальника?

The boss whom the worker accused at the office wrote a big complaint to the deputy minister.

(c) Начальник, який був обвинувачений в офісі, написав велику скаргу заступнику міністра. Чи це міністр був обвинувачений?

The boss who was accused (NOM) at the office wrote a big complaint to the deputy minister.

(d) Начальник, який був обвинувачений працівником в офісі, написав велику скаргу заступнику міністра.

Чи це заступнику міністра була написана скарга?

The boss who was accused (NOM) by the worker at the office wrote a big complaint to the deputy minister.

(e) Начальник, якого було обвинувачено в офісі, написав велику скаргу заступнику міністра.

Чи було начальника обвинувачено в готелі?

The boss who was accused (ACC) at the office wrote a big complaint to the deputy minister.

(f) Начальник, якого було обвинувачено, щоб звільнити його з роботи в офісі, написав велику скаргу заступнику міністра.

Чи хотів хтось звільнити начальника з роботи?

The boss who was accused (ACC) to fire him at the office wrote a big complaint to the deputy minister.

 (a) Велосипедист, який обвинуватив водія на перехресті, подзвонив офіцеру поліції зразу після аварії.

Чи це пішохід обвинуватив водія?

The bicyclist who accused the driver at the crossroads called the police officer right after the accident.

(b) Велосипедист, якого водій обвинуватив на перехресті, подзвонив офіцеру поліції зразу після аварії.

Чи це велосипедиста обвинуватив водій?

The bicyclist whom the driver accused at the crossroads called the

police officer right after the accident.

(c) Велосипедист, який був обвинувачений на перехресті, подзвонив офіцеру поліції зразу після аварії.

Чи подзвонив велосипедист офіцеру поліції?

The bicyclist who was accused (NOM) at the crossroads called the police officer right after the accident.

(d) Велосипедист, який був обвинувачений водієм на перехресті, подзвонив офіцеру поліції зразу після аварії.

Чи подзвонив водій офіцеру поліції?

The bicyclist who was accused (NOM) by the driver at the crossroads called the police officer right after the accident.

(e) Велосипедист, якого було обвинувачено на перехресті, подзвонив офіцеру поліції зразу після аварії.

Чи було обвинувачено велосипедиста на перехресті?

The bicyclist who was accused (ACC) at the crossroads called the police officer right after the accident.

(f) Велосипедист, якого було обвинувачено, щоб змусити його платити штраф на перехресті, подзвонив офіцеру поліції зразу після аварії.

Чи було обвинувачено пішохода на перехресті?

The bicyclist who was accused (ACC) to make him pay the fine at the crossroads called the police officer right after the accident.

 (а) Гід, який попередив іноземця до екскурсії, заборонив усім відвідувачам торкати експонати.

Чи це гід попередив іноземця?

The tour guide who warned the foreigner before the excursion forbade all the visitors to touch the exhibits. (b) Гід, якого іноземець опередив до екскурсії, заборонив усім відвідувачам торкати експонати.

Чи це гід попередив іноземця?

The tour guide whom the foreigner warned before the excursion forbade all the visitors to touch the exhibits.

(c) Гід, який був попереджений до екскурсії, заборонив усім відвідувачам торкати експонати.

Чи був гід попереджений?

The tour guide who was warned (NOM) before the excursion forbade all the visitors to touch the exhibits.

(d) Гід, який був попереджений іноземцем до екскурсії, заборонив усім відвідувачам торкати експонати.

Чи це іноземець був попереджений?

The tour guide who was warned (NOM) by the foreigner before the excursion forbade all the visitors to touch the exhibits.

(e) Гід, якого було попереджено до екскурсії, заборонив усім відвідувачам торкати експонати.

Чи заборонив гід торкати експонати?

The tour guide who was warned (ACC) before the excursion forbade all the visitors to touch the exhibits.

(f) Гід, якого було попереджено, щоб підготувати його до розмови з туристами під час екскурсії, заборонив усім відвідувачам торкати експонати.

Чи це гіду заборонили торкати експонати?

The tour guide who was warned (ACC) to prepare him for addressing the tourists during the excursion forbade all the visitors to touch the exhibits. (a) Солдат, який попередив генерала перед боєм, направив великий танк на суперника.

Чи це генерал попередив солдата?

The soldier who warned the general before the battle directed the big tank towards the opponent.

(b) Солдат, якого генерал попередив перед боєм, направив великий танк на суперника.

Чи це генерал попередив солдата?

The soldier whom the general warned before the battle directed the big tank towards the opponent.

(c) Солдат, який був попереджений перед боєм, направив великий танк на суперника.

Чи був солдат попереджений після бою?

The soldier who was warned (NOM) before the battle directed the big tank towards the opponent.

(d) Солдат, який був попереджений генералом перед боєм, направив великий танк на суперника.

Чи направив солдат танк на суперника?

The soldier who was warned (NOM) by the general before the battle directed the big tank towards the opponent.

(e) Солдат, якого було попереджено перед боєм, направив великий танк на суперника.

Чи це гвинтівку направив солдат на суперника?

The soldier who was warned (ACC) before the battle directed the big tank towards the opponent.

(f) Солдат, якого було попереджено, щоб виграти йому час перед боєм, направив великий танк на суперника.

Чи було попереджено солдата?

The soldier who was warned (ACC) to gain time for him before the battle directed the big tank towards the opponent.

(a) Менеджер, яка заспокоїла директора вранці, підготувала усіх працівників до приходу комісії.

Чи це директора заспокоїла менеджер?

The manager who calmed down the director in the morning prepared all the workers for the commission arrival.

(b) Менеджер, яку директор заспокоїв вранці, підготувала усіх працівників до приходу комісії.

Чи це гостя заспокоїла директор?

The manager whom the director calmed down in the morning prepared all the workers for the commission arrival.

(c) Менеджер, яка була заспокоєна вранці, підготувала усіх працівників до приходу комісії.

Чи підготувала менеджер окремих працівників?

The manager who was calmed down (NOM) in the morning prepared all the workers for the commission arrival.

(d) Менеджер, яка була заспокоєна директором вранці, підготувала усіх працівників до приходу комісії.

Чи підготувала менеджер усіх працівників?

The manager who was calmed down (NOM) by the director in the morning prepared all the workers for the commission arrival.

(e) Менеджер, яку було заспокоєно вранці, підготувала усіх працівників до приходу комісії.

Чи було заспокоєно працівників?

The manager who was calmed down (ACC) in the morning prepared

all the workers for the commission arrival.

(f) Менеджер, яку було заспокоєно, щоб налаштувати її на роботу вранці, підготувала усіх працівників до приходу комісії.

Чи було заспокоєно менеджера?

The manager who was calmed down (ACC) to get her to work in the morning prepared all the workers for the commission arrival.

 (a) Дівчина, яка відвідала подругу перед виступом, заспівала красиву пісню на конкурсі.

Чи це родича відвідала дівчина?

The girl who visited the friend before the performance sang a beautiful song during the contest.

(b) Дівчина, яку подруга відвідала перед виступом, заспівала красиву пісню на конкурсі.

Чи це подругу відвідала дівчина?

The girl whom the friend visited before the performance sang a beautiful song during the contest.

(с) Дівчина, яка була відвідана перед виступом, заспівала красиву пісню на конкурсі.

Чи була відвідана дівчина після виступу?

The girl who was visited (NOM) before the performance sang a beautiful song during the contest.

(d) Дівчина, яка була відвідана подругою перед виступом, заспівала красиву пісню на конкурсі.

Чи була відвідана дівчина перед виступом?

The girl who was visited (NOM) by the friend before the performance sang a beautiful song during the contest.

(e) Дівчина, яку було відвідано перед виступом, заспівала красиву пісню на конкурсі.

Чи заспівала дівчина пісню перед конкурсом?

The girl who was visited (ACC) before the performance sang a beautiful song during the contest.

(f) Дівчина, яку було відвідано, щоб підготувати її перед виступом, заспівала красиву пісню на конкурсі.

Чи це дівчина заспівала красиву пісню?

The girl who was visited (ACC) to prepare her before the performance sang a beautiful song during the contest.

 (a) Староста, яка вислухала учня в аудиторії, зробила важливе оголошення після лекції.

Чи це професор вислухала учня?

The monitor who heard out the student at the lecture hall made an important announcement after the lecture.

(b) Староста, яку учень вислухав в аудиторії, зробила важливе оголошення після лекції.

Чи це учень вислухав старосту?

The monitor whom the student heard out at the lecture hall made an important announcement after the lecture.

(c) Староста, яка була вислухана в аудиторії, зробила важливе оголошення після лекції.

Чи була староста вислухана у коридорі?

The monitor who was heard out (NOM) at the lecture hall made an important announcement after the lecture.

(d) Староста, яка була вислухана учнем в аудиторії, зробила важливе оголошення після лекції.

Чи це староста зробила оголошення?

The monitor who was heard out (NOM) by the student at the lecture hall made an important announcement after the lecture.

(е) Староста, яку було вислухано в аудиторії, зробила важливе оголошення після лекції.

Чи це професора було вислухано?

The monitor who was heard out (ACC) at the lecture hall made an important announcement after the lecture.

(f) Староста, яку було вислухано, щоб дати їй час розповісти про нараду в аудиторії, зробила важливе оголошення після лекції.

Чи зробила староста оголошення?

The monitor who was heard out (ACC) to give her time to talk about the meeting at the lecture hall made an important announcement after the lecture.

 (a) Кухар, яка вислухала допоміжницю у магазині, приготувала смачну страву на Різдво.

Чи це офіціант вислухала допоміжницю?

The cook who heard out the assistant at the groceries store prepared a tasty dish for Christmas.

(b) Кухар, яку допоміжниця вислухала у магазині, приготувала смачну страву на Різдво.

Чи це кухар вислухала допоміжницю?

The cook whom the assistant heard out at the groceries store prepared a tasty dish for Christmas.

(c) Кухар, яка була вислухана у магазині, приготувала смачну страву на Різдво.

Чи приготувала кухар смачну страву?

The cook who was heard out (NOM) at the groceries store prepared a tasty dish for Christmas.

(d) Кухар, яка була вислухана допоміжницею у магазині, приготувала смачну страву на Різдво.

Чи приготувала кухар жахливу страву?

The cook who was heard out (NOM) by the assistant at the groceries store prepared a tasty dish for Christmas.

(e) Кухар, яку було вислухано у магазині, приготувала смачну страву на Різдво.

Чи це на Різдво кухар приготувала страву?

The cook who was heard out (ACC) at the groceries store prepared a tasty dish for Christmas.

(f) Кухар, яку було вислухано, щоб дати їй час розповісти про спеціальні інгрідієнти у магазині, приготувала смачну страву на Різдво.

Чи це допоміжницю кухара було вислухано?

The cook who was heard out (ACC) to give her time to talk about the special ingredients at the groceries store prepared a tasty dish for Christmas.

 (a) Керівник, яка звільнила приятеля у готелі, знайшла нову роботу після свят.

Чи це курівник звільнила приятеля?

The manager who fired the friend at the hotel found a new job after the holidays.

(b) Керівник, яку приятель звільнив у готелі, знайшла нову роботу після свят.

Чи це керівник звільнила приятеля?

The manager whom the friend fired at the hotel found a new job after the holidays.

(c) Керівник, яка була звільнена у готелі, знайшла нову роботу після свят.

Чи керівник знайшла нову роботу?

The manager who was fired (NOM) at the hotel found a new job after the holidays.

(d) Керівник, яка була звільнена приятелем у готелі, знайшла нову роботу після свят.

Чи курівник знайшла нову роботу до свят?

The manager who was fired (NOM) by the friend at the hotel found a new job after the holidays.

(e) Керівник, яку було звільнено у готелі, знайшла нову роботу після свят.

Чи це курівника було звільнено?

The manager who was fired (ACC) at the hotel found a new job after the holidays.

(f) Керівник, яку було звільнено, щоб замінити її у готелі, знайшла нову роботу після свят.

Чи це приятеля керівника було звільнено?

The manager who was fired (ACC) to replace her at the hotel found a new job after the holidays.

 (a) Дівчинка, яка відвідала сестру вранці, пішла на другий урок після сварки.

Чи це брата відвідала дівчинка?

The girl who visited the sister in the morning went to the second class after the argument.

(b) Дівчинка, яку сестра відвідала вранці, пішла на другий урок після сварки.

Чи це сестра відвідала дівчинку?

The girl whom the sister visited in the morning went to the second class after the argument.

(c) Дівчинка, яка була відвідана вранці, пішла на другий урок після сварки.

Чи була дівчинка відвідана ввечері?

The girl who was visited (NOM) in the morning went to the second class after the argument.

(d) Дівчинка, яка була відвідана сестрою вранці, пішла на другий урок після сварки.

Чи була дівчинка відвідана вранці?

The girl who was visited (NOM) by the sister in the morning went to the second class after the argument.

(е) Дівчинка, яку було відвідано вранці, пішла на другий урок після сварки.

Чи пішла дівчинка на перший урок?

The girl who was visited (ACC) in the morning went to the second class after the argument.

(f) Дівчинка, яку було відвідано, щоб привести її до здорового глузду вранці, пішла на другий урок після сварки.

Чи пішла дівчинка на другий урок?

The girl who was visited (ACC) to lead her to common sense in the morning went to the second class after the argument.

 (a) Дівчинка, яка виправдала друга після бійки, попросила батьківське пробачення після конфлікту. Чи це дівчинка попросила пробачення?

The girl who justified the friend after the fight asked for parents' forqiveness after the conflict.

(b) Дівчинка, яку друг виправдав після бійки, попросила батьківське пробачення після конфлікту.

Чи це друг дівчинки попросив пробачення?

The girl whom the friend justified after the fight asked for parents' forgiveness after the conflict.

(c) Дівчинка, яка була виправдана після бійки, попросила батьківське пробачення після конфлікту.

Чи дівчинка попросила пробачення друга?

The girl who was justified (NOM) after the fight asked for parents' forgiveness after the conflict.

(d) Дівчинка, яка була виправдана другом після бійки, попросила батьківське пробачення після конфлікту.

Чи дівчинка попросила батьківське пробачення?

The girl who was justified (NOM) by the friend after the fight asked for parents' forgiveness after the conflict.

(е) Дівчинка, яку було виправдано після бійки, попросила батьківське пробачення після конфлікту.

Чи було дівчинку виправдано під час бійки?

The girl who was justified (ACC) after the fight asked for parents' forgiveness after the conflict.

(f) Дівчинка, яку було виправдано, щоб захистити її після бійки, попросила батьківське пробачення після конфлікту.

Чи було дівчинку виправдано після бійки?

The girl who was justified (ACC) to protect her after the fight asked

for parents' forgiveness after the conflict.

 (a) Хореограф, яка виправдала танцівника після виступу, попросила запис танцю для перегляду.

Чи це хореограф виправдала танцівника?

The choreographer who justified the dancer after the performance asked for the dance videorecording for viewing.

(b) Хореограф, яку танцівник виправдав після виступу, попросила запис танцю для перегляду.

Чи це хореограф виправдала танцівника?

The choreographer whom the dancer justified after the performance asked for the dance videorecording for viewing.

(c) Хореограф, яка була виправдана після виступу, попросила запис танцю для перегляду.

Чи була виправдана хореограф після виступу?

The choreographer who was justified (NOM) after the performance asked for the dance videorecording for viewing.

(d) Хореограф, яка була виправдана танцівником після виступу, попросила запис танцю для перегляду.

Чи була хореограф виправдана під час виступу?

The choreographer who was justified (NOM) by the dancer after the performance asked for the dance videorecording for viewing.

(e) Хореограф, яку було виправдно після виступу, попросила запис танцю для перегляду.

Чи попросила хореограф запис танцю?

The choreographer who was justified (ACC) after the performance asked for the dance videorecording for viewing.

(f) Хореограф, яку було виправдно, щоб залишити її у студії після виступу, попросила запис танцю для перегляду.

Чи це подруга хореографа попросила запис танцю?

The choreographer who was justified (ACC) to leave her at the studio after the performance asked for the dance videorecording for viewing.

 (a) Тенісистка, яка підготувала партнера до змагання, запропонувала додаткове тренування на канікулах.

Чи це акробат підготував партнера?

The tennis player who prepared the partner for the competition suggested additional training during the break.

(b) Тенісистка, яку партнер підготував до змагання, запропонувала додаткове тренування на канікулах.

Чи це тенісистка підготувала партнера?

The tennis player whom the partner prepared for the competition suggested additional training during the break.

(с) Тенісистка, яка була підготовлена до змагання, запропонувала додаткове тренування на канікулах.

Чи відмінила тенісистка тренування на канікулах?

The tennis player who was prepared (NOM) for the competition sugqested additional training during the break.

(d) Тенісистка, яка була підготовлена партнером до змагання, запропонувала додаткове тренування на канікулах.

Чи запропонувала тенісистка додаткове тренування на канікулах?

The tennis player who was prepared (NOM) by the partner for the competition suggested additional training during the break.

(е) Тенісистка, яку було підготовлено до змагання, запропонувала

додаткове тренування на канікулах.

Чи це гімнастку було підготовлено до змагання?

The tennis player who was prepared (ACC) for the competition suggested additional training during the break.

(f) Тенісистка, яку було підготовлено, щоб побачити її блискучий виступ на змаганні, запропонувала додаткове тренування на канікулах.

Чи це тенісистку було підготовлено до змагання?

The tennis player who was prepared (ACC) to see her brilliant performance at the competition suggested additional training during the break.

 (a) Актриса, яка врятувала режисера від папараці, відвідала церемонію вручення нагород після інтерв'ю.

Чи це режисер врятував актрису?

The actress who saved the director from paparazzi attended the awards ceremony after the interview.

(b) Актриса, яку режисер врятував від папараці, відвідала церемонію вручення нагород після інтерв'ю.

Чи це режисер врятував актрису?

The actress whom the director saved from paparazzi attended the awards ceremony after the interview.

(c) Актриса, яка була врятована від папараці, відвідала церемонію вручення нагород після інтерв'ю.

Чи відвідала актриса церемонію?

The actress who was saved (NOM) from paparazzi attended the awards ceremony after the interview.

(d) Актриса, яка була врятована режисером від папараці, відвідала

церемонію вручення нагород після інтерв'ю.

Чи відвідала актриса церемонію до інтерв'ю?

The actress who was saved (NOM) by the director from paparazzi attended the awards ceremony after the interview.

(e) Актриса, яку було врятовано від папараці, відвідала церемонію вручення нагород після інтерв'ю.

Чи це актрису було врятовано?

The actress who was saved (ACC) from paparazzi attended the awards ceremony after the interview.

(f) Актриса, яку було врятовано, щоб попередити її про небажану розмову з папараці, відвідала церемонію вручення нагород після інтерв'ю.

Чи це продюсера було врятовано?

The actress who was saved (ACC) to warn her about undesired conversation with paparazzi attended the awards ceremony after the interview.

 (а) Юрист, яка звільнила консультанта після конференції, запропонувала новий контракт представникам компанії.

Чи це юрист звільнила консультанта?

The lawyer who fired the consultant after the conference proposed the new contract to the company's representatives.

(b) Юрист, яку консультант звільнив після конференції, запропонувала новий контракт представникам компанії.

Чи це юрист звільнила консультанта?

The lawyer whom the consultant fired after the conference proposed the new contract to the company's representatives.

(с) Юрист, яка була звільнена після конференції, запропонувала но-

вий контракт представникам компанії.

Чи запропонувала юрист новий контракт?

The lawyer who was fired (NOM) after the conference proposed the new contract to the company's representatives.

(d) Юрист, яка була звільнена консультантом після конференції, запропонувала новий контракт представникам компанії.

Чи була юрист звільнена представниками компанії?

The lawyer who was fired (NOM) by the consultant after the conference proposed the new contract to the company's representatives.

(e) Юрист, яку було звільнено після конференції, запропонувала новий контракт представникам компанії.

Чи було юриста звільнено?

The lawyer who was fired (ACC) after the conference proposed the new contract to the company's representatives.

(f) Юрист, яку було звільнено, щоб не бачити її непрофесіоналізм після конференції, запропонувала новий контракт представникам компанії.

Чи було юриста звільнено під час конференції?

The lawyer who was fired (ACC) not to see her unprofessionalism after the conference proposed the new contract to the company's representatives.

 (а) Онучка, яка заспокоїла бабусю після заходу, приготувала улюблену страву на вечерю.

Чи це бабуся приготувала улюблену страву?

The granddaughter who calmed the grandmother down after the event prepared the favourite dish for dinner.

(b) Онучка, яку бабуся заспокоїла після заходу, приготувала улюбле-

ну страву на вечерю.

Чи це онучка приготувала улюблену страву?

The granddaughter whom the grandmother calmed down after the event prepared the favourite dish for dinner.

(c) Онучка, яка була заспокоєна після заходу, приготувала улюблену страву на вечерю.

Чи це онук приготував улюблену страву?

The granddaughter who was calmed down (NOM) after the event prepared the favourite dish for dinner.

(d) Онучка, яка була заспокоєна бабусею після заходу, приготувала улюблену страву на вечерю.

Чи заспокоїла онучку бабуся?

The granddaughter who was calmed down (NOM) by the grandmother after the event prepared the favourite dish for dinner.

(e) Онучка, яку було заспокоєно після заходу, приготувала улюблену страву на вечерю.

Чи це кузину було заспокоєно?

The granddaughter who was calmed down (ACC) after the event prepared the favourite dish for dinner.

(f) Онучка, яку було заспокоєно, щоб зробити її щасливою після заходу, приготувала улюблену страву на вечерю.

Чи це онучку було заспокоєно?

The granddaughter who was calmed down (ACC) to make her happy after the event prepared the favourite dish for dinner.

(а) Модель, яка знайшла спонсора під час конкурсу, поїхала на фотозйомку до Мілану.

Чи це модель поїхала до Мілану?

The model who found the sponsor during the contest travelled to the photo shoot to Milan.

(b) Модель, яку спонсор знайшов під час конкурсу, поїхала на фотозйомку до Мілану.

Чи це модель знайшла спонсора?

The model whom the sponsor found during the contest travelled to the photo shoot to Milan.

(c) Модель, яка була знайдена під час конкурсу, поїхала на фотозйомку до Мілану.

Чи була модель знайдена після конкурсу?

The model who was found (NOM) during the contest travelled to the photo shoot to Milan.

(d) Модель, яка була знайдена спонсором під час конкурсу, поїхала на фотозйомку до Мілану.

Чи була модель знайдена під час конкурсу?

The model who was found (NOM) by the sponsor during the contest travelled to the photo shoot to Milan.

(e) Модель, яку було знайдено під час конкурсу, поїхала на фотозйомку до Мілану.

Чи це на кокурс поїхала модель?

The model who was found (ACC) during the contest travelled to the photo shoot to Milan.

(f) Модель, яку було знайдено, щоб провести її до журі під час конкурсу, поїхала на фотозйомку до Мілану.

Чи поїхала модель на фотозйомку?

The model who was found (ACC) to bring her to the judges during the contest travelled to the photo shoot to Milan.  (а) Перекладачка, яка знайшла співробітинка на заході, передала важливий документ для начальника.

Чи знайшла перекладачка співробітника?

The translator who found the co-worker during the event passed the important document to the boss.

(b) Перекладачка, яку співробітник знайшов на заході, передала важливий документ для начальника.

Чи знайшла перекладачка співробітника?

The translator whom the co-worker found during the event passed the important document to the boss.

(с) Перекладачка, яка була знайдена на заході, передала важливий документ для начальника.

Чи передала перекладачка важливий документ?

The translator who was found (NOM) during the event passed the important document to the boss.

(d) Перекладачка, яка була знайдена співробітником на заході, передала важливий документ для начальника.

Чи порвала перекладачка важливий документ?

The translator who was found (NOM) by the co-worker during the event passed the important document to the boss.

(е) Перекладачка, яку було знайдено на заході, передала важливий документ для начальника.

Чи це перекладачку було знайдено?

The translator who was found (ACC) during the event passed the important document to the boss.

(f) Перекладачка, яку було знайдено, щоб представити її іншим гостям на заході, передала важливий документ для начальника.

Чи це начальника було знайдено?

The translator who was found (ACC) to introduce her to other guests during the event passed the important document to the boss.

 (a) Мати, яка записала дочку до перукаря, передала адміністратору оплату.

Чи це дочка передала оплату адміністратору?

The mother who made an appointment to the hairdresser for the daughter passed the fee to the administrator.

(b) Мати, яку дочка записала до перукаря, передала адміністратору оплату.

Чи це дочка записала мати до перукаря?

The mother for whom the daughter made an appointment to the hairdresser passed the fee to the administrator.

(c) Мати, яка була записана до перукаря, передала адміністратору оплату.

Чи була мати записана до стоматолога?

The mother who was made an appointment for (NOM) to the hairdresser passed the fee to the administrator.

(d) Мати, яка була записана дочкою до перукаря, передала адміністратору оплату.

Чи була мати записана до перукаря?

The mother who was made an appointment for (NOM) by the daughter to the hairdresser passed the fee to the administrator.

(e) Мати, яку було записано до перукаря, передала адміністратору оплату.

Чи мати передала оплату дочці?

The mother who was made an appointment for (ACC) to the hairdresser passed the fee to the administrator.

(f) Мати, яку було записано до перукаря, щоб зробити їй зачіску, передала адміністратору оплату.

Чи мати передала оплату адміністратору?

The mother who was made an appointment for (ACC) to make her a hairdo at the hairdresser passed the fee to the administrator.

 (а) Жінка, яка записала подругу на йогу, спробувала перше пробне заняття для задоволення.

Чи жінка спробувала друге пробне заняття?

The woman who made an appointment for yoga for the friend tried the first class for fun.

(b) Жінка, яку подруга записала на йогу, спробувала перше пробне заняття для задоволення.

Чи подруга записала жінку на йогу?

The woman whom the friend made an appointment for for yoga tried the first class for fun.

(c) Жінка, яка була записана на йогу, спробувала перше пробне заняття для задоволення.

Чи жінка спробувала перше пробне заняття?

The woman who was made an appointment for (NOM) for yoga tried the first class for fun.

(d) Жінка, яка була записана на йогу подругою, спробувала перше пробне заняття для задоволення.

Чи жінка спробувала третє пробне заняття?

The woman who was made an appointment for (NOM) by the friend for yoga tried the first class for fun. (e) Жінка, яку було записано на йогу, спробувала перше пробне заняття для задоволення.

Чи жінку було записано на йогу?

The woman who was made an appointment for (ACC) for yoga tried the first class for fun.

(f) Жінка, яку було записано, щоб покращити її стан здоров'я на йозі, спробувала перше пробне заняття для задоволення.

Чи жінку було записано на балет?

The woman who was made an appointment for (ACC) to improve her health condition at yoga tried the first class for fun.

(a) Аніматор, яка найняла асистента на корпоратив, здивувала гостей під час програми.

Чи це аніматор здивувала гостей?

The animator who hired the assistant for the corporate party surprised the guests during the program.

(b) Аніматор, яку асистент найняла на корпоратив, здивувала гостей під час програми.

Чи це асистент здивувала гостей?

The animator whom the assistant hired for the corporate party surprised the quests during the program.

(c) Аніматор, яка була найнята на корпоратив, здивувала гостей під час програми.

Чи була найнята аніматор на корпоратив?

The animator who was hired (NOM) for the corporate party surprised the guests during the program.

(d) Аніматор, яка була найнята асистентом на корпоратив, здивувала гостей під час програми.

Чи була аніматор найнята подругою?

The animator who was hired (NOM) by the assistant for the corporate party surprised the quests during the program.

(e) Аніматор, яку було найнято на корпоратив, здивувала гостей під час програми.

Чи це аніматора було найнято?

The animator who was hired (ACC) for the corporate party surprised the guests during the program.

(f) Аніматор, яку було найнято, щоб привезти її на корпоратив, здивувала гостей під час програми.

Чи це асистента здавувала аніматор під час програми?

The animator who was hired (ACC) to bring him to the corporate party surprised the guests during the program.

 (а) Клоун, яка найняла помічника на свято, здивувала іменинника на Дні Народження.

Чи це мати іменинника була здивована клоуном?

The clown who hired the helper for the celebration surprised the birthday boy during the birthday party.

(b) Клоун, яку помічник найняв на свято, здивувала іменинника на Дні Народження.

Чи це іменинник був здивований клоуном?

The clown whom the helper hired for the celebration surprised the birthday boy during the birthday party.

(с) Клоун, яка була найнята на свято, здивувала іменинника на Дні Народження.

Чи це співачку найняли на свято?

The clown who was hired (NOM) for the celebration surprised the

birthday boy during the birthday party.

(d) Клоун, яка була найнята помічником на свято, здивувала іменинника на Дні Народження.

Чи це клоуна найняли на свято?

The clown who was hired (NOM) by the helper for the celebration surprised the birthday boy during the birthday party.

(е) Клоун, яку було найнято на свято, здивувала іменинника на Дні Народження.

Чи клоун здивувала гостей на Дні Народження?

The clown who was hired (ACC) for the celebration surprised the birthday boy during the birthday party.

(f) Клоун, яку було найнято, щоб сфотографувати її з дітьми на святі, здивувала іменинника на Дні Народження.

Чи клоун здивувала іменинника на Дні Народження?

The clown who was hired (ACC) to take a picture of her with children at the celebration surprised the birthday boy during the birthday party.

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