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Experience vs. activity distinction in Slavic perception verbs



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Activity and experience perception verbs

'look' and 'see'

BG Погледна на запад и видя необятните пасища на Рохан.

CR **Gledao** je na zapad i **vidio** široke pašnjake Rohana.

PL **Spojrzał** na zachód: **zobaczył** szerokie łąki Rohanu i dalej Orthank

RU Он **посмотрел** на запад и **увидел** широкие пастбища Рохана и Ортханк

UK На захід **подивився** він і **побачив** розлоги пасовиська Рохана

'Westward he looked and saw the broad pastures of Rohan.' (Tolkien, Lord of the Ring 1)

'listen' and 'hear'

Terminology and semantics

	look listen	see hear
Viberg 1983, see also Viberg 2001, Nesset et al. 2008	activity "unbounded process that is consciously controlled by a human agent"	experience "state (or inchoative achievement) that is not controlled"
Divjak 2015	agentive	experiential
Wälchli 2016	explorative are like 'seek'	opportunistic are like 'find' "focus on the opportunity of perception, i.e. exposure, which is not directly controllable, but the person or animal can often provoke exposure by change of viewpoint through movement"

Proposed approach

	look listen	see hear
Direction of attention	Asserted	Unspecified
Fact of perception	Unspecified	Asserted

Directing attention without perception

The bird was looking west. Langdon tried to follow its gaze, but he could not **see** over the buildings. (Brown. Angels and demons)

Perception without directing attention

He was hurrying along with frozen hands and watering eyes when he **saw** her not ten metres away from him. (Orwell, 1984)

Variation

BG	Бих ли могъл да видя ръкописите, които той разкрасяваше?	Experience
CR	Bih li mogao vidjeti rukopise koje je ukrašavao?	Experience
CZ	Mohl bych vidět kodexy, které iluminoval?	Experience
PL	Czy mógłbym zobaczyć kodeksy, które on iluminował?	Experience
RU	Можно посмотреть его работы?	Activity
UK	Чи не міг би я подивитись на кодекси, які він ілюстрував?	Activity
EN	Could I see the codices he was illuminating? (Eco. Name of the rose)	

Outline

- Research questions
- Data
- Results
 - Overall distribution
 - Major contexts of variation
 - Other factors at work?
- Summary

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Research questions

- What are the typical conditions for variation and is there a semantic basis for it?
- Are there cross-linguistic patterns in their distribution?
- Are there any differences between verbs of experience and verbs of activity outside the variation zone?
- Are there differences between sight and hearing verbs?

 Part of the project Perception verbs in Slavic: lexicon and grammar (University of Potsdam, funded by the Alexander-von-Humboldt Foundation)

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Data

 The parallel corpus InterCorp, part of the Czech National Corpus, <u>https://www.korpus.cz</u> (Rosen et al. 2022)

Hits: 2,857 i.p.m.: 17.52 (related to the whole corpus)	ARF: 208.73 Result is s	orted		
Line selection: simple 🗸				
InterCorp v16 - Bulgarian 🗸		InterCorp v16 - Croatian		InterCorp v16 - Czech 🗸
Събуди се със замаяна глава, стана, тръгна замаяно из стаята, отвори прозореца, видя един булдозер, намери чехлите си и се отправи към банята, за да се измие.	adams-stoparuv_pruvodc	Probudio se sav krmeljiv , smušeno se vrtio po sobi , otvorio prozor , <mark>ugledao</mark> buldožer , našao svoje papuče i odteturao se do kupaonice umiti .	adams-stoparuv_pruvodc	Mátožně se probudil , vstal a mátožně bloumal po pokoji , otevřel okno , uviděl buldozer , našel pantofle a odbelhal se do koupelny umýt .
След това отново го погледна и се усмихна по- сърдечно , но той вече гледаше в друга посока .	adams-stoparuv_pruvodc	Onda je za trenutak vratila pogled i toplije mu se nasmiješila - ali ovog puta on je gledao negdje drugdje .	adams-stoparuv_pruvodc	Pak se na něj znovu podívala a znovu se usmála , tentokrát vřeleji - ale to už se Zafod díval někam jinam .
Съвсем смътно <mark>видя</mark> как седналият до него Артър се люшка и мята на стола .	adams-stoparuv_pruvodc	Kao u magli vidio je ispred sebe Arthura koji se uvijao i trzao u svom sjedalu .	adams-stoparuv_pruvodc	Ve vedlejším křesle nezřetelně <mark>viděl</mark> Arthura , jak se střídavě svíjí a ochabuje .
Рекордът на пътуване на стоп по този маршрут е малко по-малко от пет години , но при такава скорост не могат да се видят много неща .	adams-stoparuv_pruvodc	Rekord stopiranja na tolikom razmaku iznosi nešto manje od pet godina , ali se na taj način uz put ne može vidjeti Bog zna što .	adams-stoparuv_pruvodc	Rekord ve stopování na tuto vzdálenost je něco pod pět let , ale fakt je , že toho po cestě moc neuvidíte .
- Моля ви , не се страхувайте от нищо - каза той , - което <mark>виждате</mark> или чувате около себе си .	adams-stoparuv_pruvodc	" Molim vas , nemojte se uzbuđivati " , kazao je , " onim što <mark>vidite</mark> ili čujete oko sebe .	adams-stoparuv_pruvodc	" Nedejte se znepokojit ničím , co $\mbox{\sc vidíte}$ nebo slyšíte kolem sebe .
А! Виж , не съм сбъркал.	adams-stoparuv_pruvodc	Pogledaj , bio sam u pravu . "	adams-stoparuv_pruvodc	Á , podívej , měl jsem pravdu ! "
- <mark>Погледнете</mark> тази врата - измърмори той Ей сега ще се отвори .	adams-stoparuv_pruvodc	" Pogledajte sad ova vrata " , promrmljao je on , " Ponovno se spremaju otvoriti . Znam to po nepodnošljivom samozadovoljstvu kojim iznenada počinju zračiti . "	adams-stoparuv_pruvodc	" Jen se na ty dveře podívejte , " mumlal . " Už se zase chystají otevřít .
Повече не я видях .	adams-stoparuv_pruvodc	Više je nikad nisam <mark>vidio</mark> . "	adams-stoparuv_pruvodc	Už jsem ji nikdy <mark>neviděl</mark> . "

Languages & queries

Two queries: sight and hearing

Language	Sight	Hearing
Bulgarian (S)	виждам, видя	чувам, чуя
Duigarian (3)	гледам, погледна	слушам
Croatian (S)	vidjeti, ugledati	čuti, začuti
Cioatian (3)	gledati, pogledati	slušati, poslušati
Czech (W)	vidět, uvidět	slyšet, zaslechnout
CZECII (VV)	dívat se, podívat se	poslouchat
Polish (W)	widzieć, zobaczyć	słyszeć, usłyszeć
Polish (vv)	patrzeć, spojrzeć	słuchać, posłuchać
Russian (E)	видеть, увидеть	слышать, услышать
Russiali (L)	смотреть, посмотреть	слушать, послушать
Ukrainian (E)	бачити, побачити	чути, почути
	дивитися, подивитися	слухати, послухати
N of hits	2857	1241

Sample

 Examples selected from fiction for each of the six types controlling for author

Language	Sight	Hearing
activity	51	50
experience	66	57
mixed	99	104
Total	216	211

• Final sample: 427 examples

Annotation

- Context type
 - PastPresentIndicative
 - Future
 - Imperative
 - Modal: infinitives and subjunctive

- Person: 1,2,3
- Negation: positive, negative
- Sense: sight, hearing

Analysis

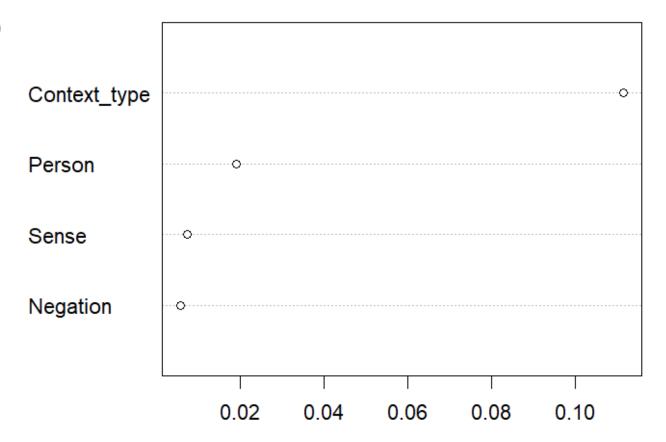
- Examining the difference between
 - contexts with activity verbs only
 - contexts with experience verbs only
 - contexts mixed between activity and experience

Outline

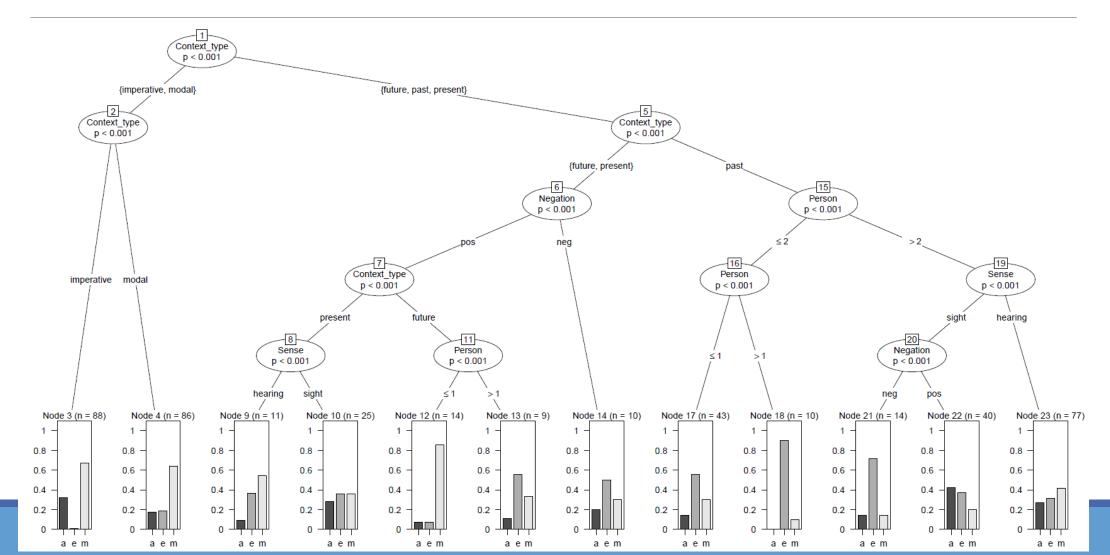
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Importance of variables

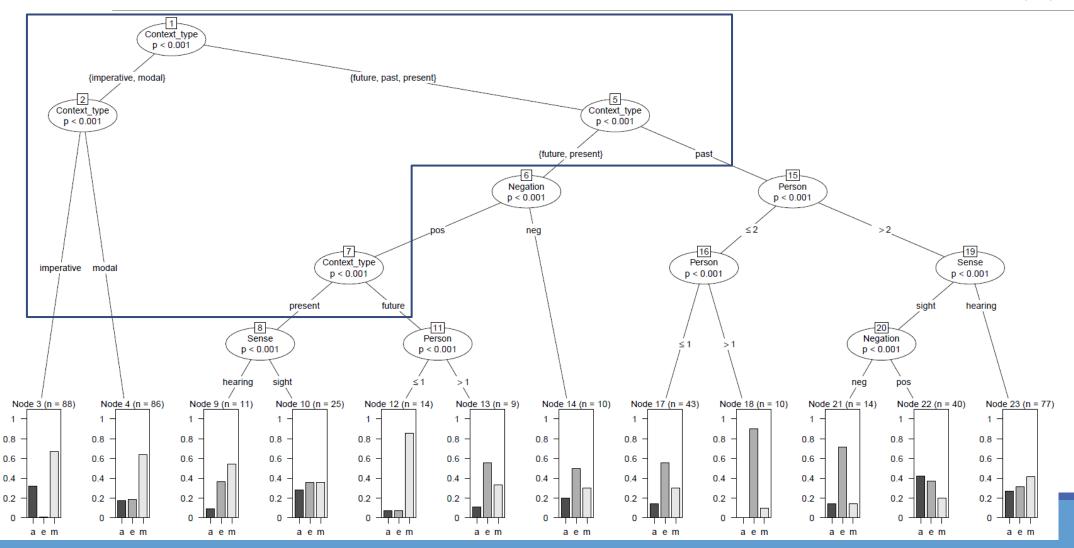
Random forest (Strobl et al. 2007)



Conditional inference tree



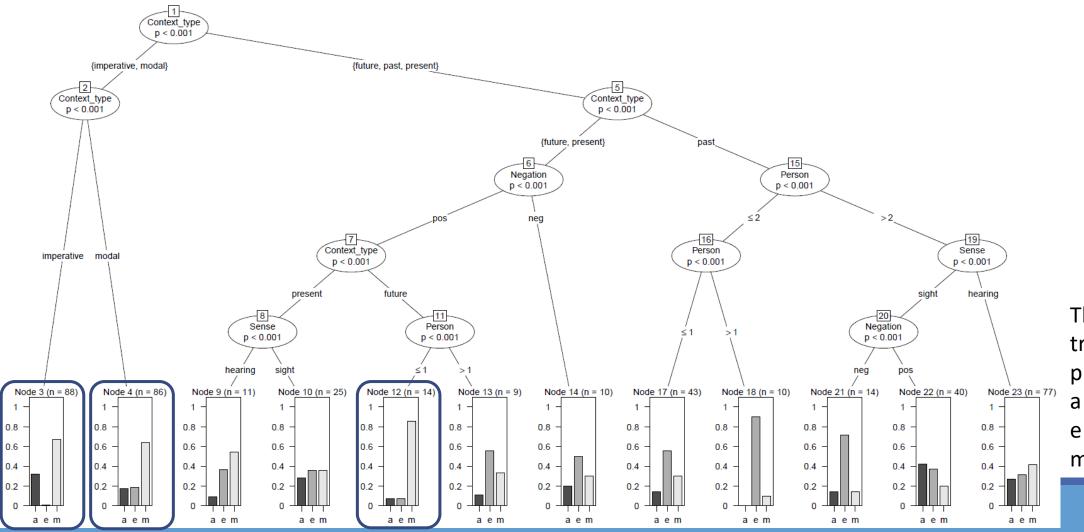
Conditional inference tree: context type



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Predominantly mixed contexts



The "leaves" of the tree show the proportions for a = activity verbs e = experience verbs m = mixed

Imperatives: example

BG Чуйте ме - възползва се Хари от изтощението на рицаря	experience
CR " Čujte ," reče mu Harry koristeći priliku da se vitezu obrati	experience
CZ " Poslyšte ," využil Harry jeho vyčerpání	activity
PL - Posłuchaj mnie, panie - powiedział Harry, wykorzystując zmęczenie rycerza	activity
RU Послушайте, - воспользовался Гарри передышкой в борьбе с мечом	activity
UK — Послухайте , — скористався Гаррі передихом у боротьбі з мечем	activity
"Listen," said Harry, taking advantage of the knight 's exhaustion'. (Rowling. Harry	Potter 3)

Imperatives: semantics

- The goal of the speaker is that the experiencer perceives something but the command can more naturally refer to the direction of their attention, which the experiencer can control
 - The distinction between directing attention and perception is neutralized
- The imperative refers either to the action which is controllable and can potentially lead to the result or to the desirable resulting state, i.e. perception

	look listen	see hear
Direction of attention	Asserted	Unspecified
Fact of perception	Unspecified	Asserted

Imperatives: distribution

• Imperative forms are generally associated with activity verbs, both in homogeneous and in mixed contexts

Experience and activity across Slavic

Sight

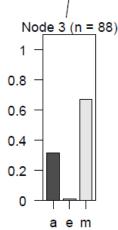
BG	PL	CR	CZ	RU	UK
activity	experience	experience	experience	experience	experience
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	experience
experience	experience	activity	experience	experience	experience
experience	experience	experience	experience	activity	activity
experience	experience	experience	activity	activity	activity
experience	activity	experience	activity	experience	activity
activity	activity	experience	activity	experience	experience
experience	activity	experience	experience	activity	activity
experience	activity	activity	experience	activity	activity
activity	experience	experience	activity	activity	NA
activity	experience	experience	activity	activity	activity
experience	experience	activity	activity	activity	activity
experience	experience	activity	activity	activity	activity
experience	activity	activity	activity	activity	activity
activity	experience	activity	activity	activity	activity
experience	activity	activity	activity	activity	activity
experience	activity	activity	activity	activity	activity
activity	activity	experience	activity	activity	activity
experience	activity	activity	activity	activity	activity
experience	activity	activity	activity	activity	activity
experience	activity	activity	activity	activity	activity
experience	activity	activity	activity	activity	activity
experience	activity	activity	activity	activity	activity
activity	experience	activity	activity	activity	activity
experience	activity	activity	activity	activity	activity
experience	activity	activity	activity	activity	activity
activity	activity	activity	activity	experience	activity
experience	activity	activity	activity	activity	activity
21	. 12	. 11	. 7	9	5 5

Hearing

CR	BG	CZ	PL	RU	UK	
experience	experience	experience	activity	activity	activity	
experience	experience	activity	activity	activity	activity	
experience	experience	activity	activity	activity	activity	
experience	experience	activity	activity	activity	activity	
activity	experience	activity	activity	activity	activity	
experience	activity	activity	activity	activity	activity	
experience	activity	activity	activity	activity	activity	
activity	experience	activity	activity	activity	activity	
experience	activity	activity	activity	activity	activity	
experience	activity	activity	activity	activity	activity	
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experience	activity	activity	activity	activity	activity	
activity	experience	activity	activity	activity	activity	
experience	activity	activity	activity	activity	activity	
activity	activity	experience	activity	activity	activity	
activity	experience	activity	activity	activity	activity	
experience	activity	activity	activity	activity	activity	
activity	experience	activity	activity	activity	activity	
20	12	3		0	0	0

South Slavic seem to use experience verbs in imperative more frequently, but the distribution is largely

complementary



imperative

Modal contexts: example

BG	им правеше особено удоволствие, когато им се удадеше случай да гледат как връзват някого	а
CR	pa su naročito uživali kad su mogli vidjeti kako nekoga vežu	е
CZ	a bylo pro ně zvláštním potěšením, když se mohli dívat , jak někoho uvazují.	а
PL	doznawali osobliwej przyjemności, widząc, że kogoś przywiązują do słupka.	е
RU	с особым удовольствием смотрели, когда солдата связывали.	а
UK	Дивитися, як когось в'яжуть, було їм особливо приємно.	е
/		1

'For these PUTZFLECKS, it was a special pleasure to stand by and watch when somebody they had snitched on was being tied up'. (Hašek. The Good Soldier Švejk)

Modal contexts: semantics

- Necessity, possibility: if perception is necessary or possible, so is the direction of attention 'If I have to/can see something I have to/can look at it'.
- Desire, purpose: the intention to direct attention is specified by the verb, the desired result is perception

'If I want to see something I want to look at it'.

	look listen	see hear
Direction of attention	Asserted	Unspecified
Fact of perception	Unspecified	Asserted

Modal contexts: distribution

 In modal contexts, experience verbs are used more frequently, especially in mixed contexts

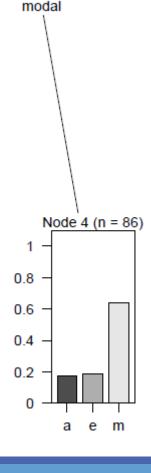
Sight

BG RU UK xperience experience experience experience experience activity xperience experience experience experience activity experience activity xperience activity activity experience activity activity experience activity activity activity activity activity 28 23 22 17 16

Hearing

CZ	RU	PL	UK	BG	CR
experience	experience	experience	activity	experience	experience
experience	activity	experience	experience	experience	experience
experience	activity	experience	experience	experience	experience
experience	experience	experience	experience	experience	activity
experience	experience	experience	experience	experience	activity
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	experience	activity
experience	experience	experience	experience	experience	activity
activity	experience	experience	experience	experience	experience
experience	activity	activity	experience	experience	experience
experience	experience	experience	experience	activity	activity
experience	activity	experience	activity	experience	experience
experience	experience	activity	experience	activity	experience
experience	activity	experience	activity	experience	experience
experience	experience	activity	activity	experience	experience
experience	experience	experience	activity	activity	experience
experience	experience	experience	experience	activity	activity
experience	experience	experience	experience	NA	activity
experience	experience	activity	experience	activity	activity
experience	activity	activity	activity	experience	experience
experience	experience	experience	activity	activity	activity
activity	experience	activity	experience	activity	experience
experience	experience	activity	experience	activity	activity
experience	activity	activity	activity	activity	activity
22	17	16	16	13	13

No discernible pattern wrt languages



Positive 1st person future contexts: example

BG Ex, ще видим какво ще стане по-натам. experience

CR Neka, neka, **vidjet** ćemo što će dalje biti. experience

CZ No, no, **uvidíme**, co bude dál. experience

PL No, **zobaczymy**, co będzie dalej. experience

RU Ну, ну, **посмотрим**, что дальше будет. activity

UK Ну, ну, **побачимо**, що далі буде. experience

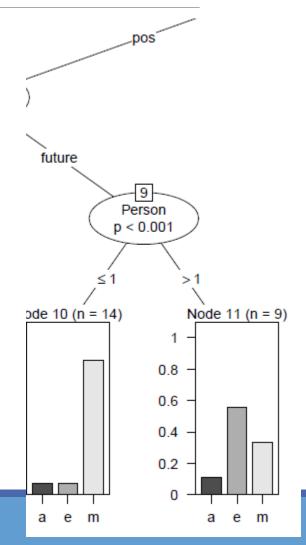
EN Well, now we'll see what comes next. (Ostrovsky. How the steel was tempered)

Positive 1st person future contexts: distribution

- Future contexts in general: mostly sight, mostly experience verbs
- 1st person (plural) future consistently expressed by an activity sight verb only in Russian

Sight

BG	CR	CZ	PL	RU	UK
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	experience
experience	experience	experience	experience	activity	activity
experience	activity	activity	experience	activity	activity



Predominantly mixed contexts: summary

- Imperatives, modals, positive 1st person future the distinction between directing attention and the fact of perception is neutralized
 - the fact of perception cannot be asserted
 - the intention of directing attention is specified by the context type (wish, necessity, plan, etc.)
- The proportion of these context types among the mixed contexts

	Sight		Hearing	
	N	Proportion	N	Proportion
Imperative	29		30	
Modal	31	0,72	24	0,53
Positive 1 st p. future	11		1	
Total mixed contexts	99		104	

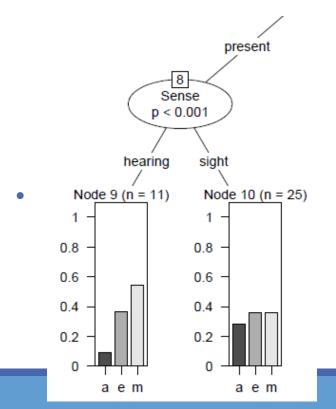
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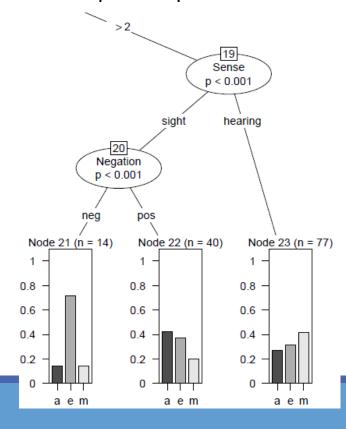
Sight and hearing: statistical difference

Higher proportion of mixed contexts for hearing in real clauses

positive present



• past 3rd person



Mixed real contexts for hearing

BG —	тия негодници грабнаха парите и отидоха да ги изиграят на зарове, като псуваха Бога, а той, дето бе дал, слушаше и не се червеше.	activity
CR	a ti lopovi pokupe novac i odu ga proigrati huleći Boga, a on koji im je novac dao to je slušao i nije pocrvenio.	activity
CZ	a zlosynové si vzali peníze a hráli o ně , proklínali Boha živého a Gherardo je slyšel a nezrudnul hanbou.	experience
PL	łotrzy zaś wzięli pieniądze i poszli grać o nie w kości, i bluźnili przeciwko Bogu żywemu, a on, który wszak pieniądze dał, słyszał , a nie zarumienił się.	experience
RU	И мошенники взяли деньги и пошли проигрывать их в кости, и промотали их, и хулили вечносущего Владыку, а тот, кто дал им, все слышал и не стыдился.	experience
UK	і ярижники взяли гроші і пішли грати на них у кості, і зводили хулу на Бога живого, а він, що дав їм гроші, чув це і навіть не почервонів.	experience
EN	and those rogues took the money and went off to gamble it away, and they blaspheme who had given to them <u>heard</u> and did not blush. (Eco. Name of the rose)	d the living God, and he

Sight and hearing: semantics

- For hearing, directing attention and perceiving may be not as distinct as for sight
 - Hearing less frequently necessitates changing of position
 - For auditory stimuli, the object of directed attention and the object of perception cannot be normally distinguished
- 'listen' and 'hear' are less similar to 'seek' and 'find' than 'look' and 'see'

Stimulus type: video and audio objects

• The perception of stimulus is typically intentional, the stimulus is easily accessible, so directing attention and perception are identical

	Sight	Hearing
BG	Гледах новините.	Витория вече беше слушала лекциите на Кьолер за науката като Бог
CR	Vidio sam vijesti.	Vittoria je već čula Kohlerova predavanja u kojima izjednačuje znanost s Bogom
CZ	Viděl jsem zprávy.	Vittoria už Kohlerovu přednášku s názvem" Věda jako Bůh" jednou slyšela
PL	Widziałem wiadomości.	Vittoria już wcześniej miała okazję słyszeć wykład Kohlera na temat "nauki jako boga"
RU	Я видел выпуск новостей.	Виттории и раньше доводилось слышать лекции Колера, в которых тот обожествлял науку.
UK	Я дивився новини.	Вітторія вже не раз чула лекцію Колера про епохальну роль науки
EN	I <u>saw</u> the news.	Vittoria had <u>heard</u> Kohler's Science-as-God lecture before.

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Summary

- Activity verbs describe the process of directing attention, which is typically but not necessarily successful
- Experience verbs describe the (entry into the) state of perceiving something, which is typically but not necessarily intentional
- The variation in the choice of the verb type arises if the distinction between these situations is neutralized
 - Irreal contexts (imperative, modality, intention) the context specifies that directing attention is necessary/desirable and perception is in the scope of modality
 - Stimuli that are typically perceived intentionally and without effort: movies, news, story
 - For auditory stimuli, the distinction between directing attention and perceiving is arguably less relevant than for visual stimuli

Thank you!