

Evidentiality as a Link between Speakers, Times, and Events

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1. Phenomenon and Research Question

- (1)a. Ivan pobedi-Ø b. Ivan pobedi-**I**
 Ivan won-**DIR** Ivan won-**REP**
 'I saw that) Ivan won.' '(I was told that) Ivan won.'

⇒ What is the semantics of DIR and REP in Bulgarian?

2. Empirical Properties of the Bulgarian Evidential System

Property #1: DIR and REP cannot take the same proposition in their scope.

- (2) Ivan pristigna-**I** #Toj naistina pristigna-Ø.
 Ivan arrived-**REP** he really arrived-**DIR**
 '(I was told that) Ivan arrived. (I saw that) he really arrived.'

Property #2: REP cannot be used with two contradictory propositions.

- (3) #Ivan pristigna-**I** i Ivan ne pristigna-**I**.
 Ivan arrived-**REP** and Ivan NEG arrived-**REP**
 '(I was told that) Ivan arrived and (I was told that) Ivan didn't arrive.'

Property #3: Evidential markers are always speaker-oriented (Sauerland & Schenker 2007).

- (4)a. *Maria saw Todor's hair and told me that he has red hair. I believe her.*
 Maria kaza-Ø che Todor ?ima-Ø / ima-**I** chervena kosa.
 Maria said-**DIR** that Todor has-**DIR** has-**REP** red hair
 'Maria said that Todor has red hair.'
- b. *Milena told Maria that Todor has red hair and Maria believes her. Maria says to me that Todor has red hair. I saw Todor's red hair with my own eyes.*
 Maria kaza-Ø che Todor ima-Ø *ima-**I** chervena kosa.
 Maria said-**DIR** that Todor has-**DIR** has-**REP** red hair
 'Maria said that Todor has red hair.'

Property #4: The evidential import cannot be directly challenged.

- (5)A: Ivan pobedi-**I** B: #Tova nikyde ne si go chu-**I**.
 Ivan won-**REP** that nowhere NEG REFL. CL heard-**REP**
 '(I was told that) Ivan won.' 'You weren't told that.'

Property #5: Evidentials always scope outproject through propositional operators.

- (6) Ivan **ne** izkara-**I** izpit-a. (Izvorski 1997)
 Ivan **NEG** passed-**REP** exam-DEF
 - 'It is said that John didn't pass the exam.'
 ≠ 'It is not true that it is said that John passed the exam.'

⇒ A presuppositional account is less likely than a CI account because plugs (e.g. verbs of saying) do not plug the evidential import (4).

Property #6: REP does not create intensional contexts.

- (7) #Ivan naprav-**I** torta, no torta-ta ne syshststvuv-a-Ø.
 Ivan made-**REP** cake but cake-DEF NEG exists-**DIR**
 '(I was told that) Ivan made a cake but there isn't any cake.'

Conclusions

- DIR and REP have contradictory meanings (property 1).
- DIR and REP have some kind of projective meaning (properties 2-5).
- Evidentiality does not involve modality (property 6).

3. The Single-Event Account (Faller 2004)

Evidential types

- propositional-level evidentials:* express a relation between speaker and proposition
- event-level evidentials:* express a relation between speaker and event

Applying (a simplified version of) Faller (2004) to Bulgarian:

- (8)a. Ivan pobedi-Ø ⇒ ∃e(win(e,ivan) ∧ exp(speaker,e)) ✓
 Ivan won-**DIR**
 '(I saw that) Ivan won.'
- b. Ivan pobedi-**I** ⇒ ∃e(win(e,ivan) ∧ ¬exp(speaker,e)) ✓
 Ivan won-**REP**
 '(I was told that) Ivan won.'
- (9)a. Ivan **ne** pobedi-Ø ⇒ ¬∃e(win(e,ivan) ∧ exp(speaker,e)) ×
 Ivan **NEG** won-**DIR** ⇔ ∀e(win(e,ivan) → ¬exp(speaker,e))
 '(I saw that) Ivan didn't win.'
- b. Ivan **ne** pobedi-**I** ⇒ ¬∃e(win(e,ivan) ∧ ¬exp(speaker,e)) ×
 Ivan **NEG** won-**REP** ⇔ ∀e(win(e,ivan) → exp(speaker,e))
 '(I was told that) Ivan didn't win.'

Diagnosing the problem:

- main proposition and evidential import too symmetric (conjoined)
- e* might not be the right second argument of *see* (or the relevant predicate)

4. The Double-Event Account

4.1 Main Ideas

- There are always two events involved in Bulgarian sentences: A verbal event (*e*) introduced by the verb and a learning event (*e'*) introduced by the evidential morpheme.
- The learning event is related to the speaker and the (main) proposition by means of a LEARN predicate.
- The difference between DIR and REP is a difference between temporal overlap/non-overlap of *e'* and RT (reference time).

4.2 Pictorial Representations and Translations (Hamblin 1973, Murray 2009)

A. Plain sentences

- (8')a. Ivan pobedi-Ø ⇒
 Ivan won-**DIR**
 '(I saw that) Ivan won.'

$$\lambda p \lambda p = \lambda w [\underbrace{\exists e [\exists e' (\text{LEARN}_{w_0}(e', SP, p) \wedge \tau(e') \subseteq RT)]}_{\text{evidential import}} \wedge \underbrace{p(v_0) \leq p(v_1)}_{\text{direct}}]_{\text{illocutionary relation}}$$

- b. Ivan pobedi-**I** ⇒
 Ivan won-**REP**
 '(I was told that) Ivan won.'

$$\lambda p \lambda p = \lambda w [\exists e (\text{win}_{w_0}(e, ivan) \wedge \tau(e) \subseteq RT)] \wedge \underbrace{\exists e' (\text{LEARN}_{w_0}(e', SP, p) \wedge \tau(e') \not\subseteq RT)}_{\text{evidential}} \wedge \underbrace{p(v_0) \leq p(v_1)}_{\text{epistemic}}$$

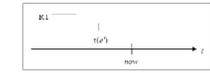
B. Negated sentences

- (9')a. Ivan **ne** pobedi-Ø ⇒
 Ivan **NEG** won-**DIR**
 '(I saw that) Ivan didn't win.'



$$\lambda p \lambda p = \lambda w [\underbrace{\neg \exists e (\text{win}_{w_0}(e, ivan) \wedge \tau(e) \subseteq RT)}_{\text{evidential}} \wedge \underbrace{\exists e' (\text{LEARN}_{w_0}(e', SP, p) \wedge \tau(e') \subseteq RT)}_{\text{direct}} \wedge p(v_0) \leq p(v_1)]$$

- b. Ivan **ne** pobedi-**I** ⇒
 Ivan **NEG** won-**REP**
 '(I was told that) Ivan didn't win.'



$$\lambda p \lambda p = \lambda w [\underbrace{\neg \exists e (\text{win}_{w_0}(e, ivan) \wedge \tau(e) \subseteq RT)}_{\text{evidential}} \wedge \underbrace{\exists e' (\text{LEARN}_{w_0}(e', SP, p) \wedge \tau(e') \not\subseteq RT)}_{\text{epistemic}} \wedge p(v_0) \leq p(v_1)]$$

4.3 Semantics

(10) Def 1 (evidential update)

$$c_i [P] = \{w \in c_i \mid \exists g : \lambda v_0 [P]^{w, g}(w) \neq \emptyset\} =: c_{i,1}$$

$c_0[\text{Ivan won-DIR}] = \dots =$

$$\{w \in c_0 \mid \exists e' ([\text{LEARN}]^{w'}(w)(e')([\text{SP}]^{w'})([\lambda w [\exists e (\text{win}_{w_0}(e, ivan) \wedge \tau(e) \subseteq RT)]^{w, g}(w) \neq \emptyset]) \& [\tau]^{w'}(e') \subseteq [\text{RT}]^{w'})\}$$

(11) Def 2 (illocutionary relation)

$$w \leq_{c_i, P} w' \Leftrightarrow w, w' \in c_{i,1} \& [\lambda v_0 [\lambda v_1 [P]^{w, g}(w)(v_0, v_1) \neq \emptyset]]$$

$w \leq_{c_i, P} w'$ iff ... iff

$$w, w' \in c_i \& \exists e ([\text{win}]^{w'}(w)(e)([\text{IVAN}]^{w'}(e) \& [\tau]^{w'}(e) \subseteq [\text{RT}]^{w'}(e)) \Rightarrow \exists e' ([\text{win}]^{w'}(w')(e)([\text{IVAN}]^{w'}(e) \& [\tau]^{w'}(e) \subseteq [\text{RT}]^{w'}(e))$$

5. Unanswered Questions

- Generic sentences?
- Why is DIR preferred over REP in contexts where either is motivated?

6. The Bigger Picture: Evidentiality Crosslinguistically

Types of evidential systems (empirically):

- committing type:* Bulgarian (Izvorski 1997), Lillooet (Matthewson et al 2007)
- non-committing type:* Cuzco Quechua (Faller 2002), Cheyenne (Murray 2009)

Types of evidentials system (theoretically):

- event-level*
- propositional-level*

- (12) *Hypothesis*
 committing type - event-level evidentials
 non-committing type - propositional-level evidentials

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