The Bulgarian Reportative as a Conventional Implicature
Chronos 10

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The Bulgarian reportative is traditionally analyzed as marking the source of information as reported, or hearsay. An example from [Izvorski(1997)].

(1) Maria celunala Ivan
    Maria kiss-sg-PAP Ivan
    ‘Maria reportedly kissed Ivan’

In (1) the speaker wishes to convey that he knows from a third party that Maria kissed Ivan (i.e., has not witnessed or inferred the kissing event).

The reportative in Bulgarian is optional (default may be used in lack of direct evidence).
Morphologically, the reportative looks like the perfect, but it is distinguished from it by the lack of auxiliary in the 3rd person:

(2) Pročel som tazi kniga
    read-sg-PAP is-1sg-pres this book

‘I have read this book / I have reportedly read this book (but I don’t remember reading it; but I disagree with what is said about me)’

(3) Pročel si tazi kniga
    read-sg-PAP is-2sg-pres this book

‘You have read this book / You have (reportedly) read this book (so you say; so someone says about you)’

(4) a. Ivan e pročel tazi kniga
    Ivan is-3sg-pres read-sg-PAP this book

‘Ivan has read this book.’

b. Ivan pročel tazi kniga
    Ivan read-sg-PAP this book

‘Ivan (reportedly) read this book.’
Traditional view: reportative marks information source (hearsay).

A broader perspective: the reportative serves as a ‘non-committing device’. (I keep referring to the morphological form as ‘reportative’).

Motivation: speakers will bother to use the reportative, rather than the default when they wish to emphasize that they are not committing to the truth of the proposition.

Informal study, only 9 out of 30 participants found the reportative form acceptable in a matrix clause when the supporting evidence was ‘reported’ but the source reliable. (another 3 were uncertain). 32 out of 34 found the default form acceptable in the same scenario.
In This Talk:

- (Non) embedability and the speaker oriented nature of the reportative.
- Implications of being speaker oriented (the reportative is a Conventional Implicature [Potts(2005)]).
- An analysis:
  - The reportative and weak assertions: the idea of *kernels* in [von Fintel and Gillies(2010)]
  - The reportative as a non commitment device: the discourse structure in [Farkas and Bruce(2010)].
Structure:

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Interpretation of Embedded Cases

- The Bulgarian reportative can be embedded, and when embedded it must always refer to the speaker (See [Sauerland and Schenner(2007)] for a similar point).

(5) Maria kaza ĉe Ivan celunal Ana
Maria tell-3sg-aorist that Ivan kiss-sg-PAP Ana
‘Maria said that Ivan reportedly kissed Ana’

(5) has the following meaning:
1. Maria said that Ivan kissed Ana.
2. I (the speaker) do not want to commit to the proposition that Ivan kissed Ana

And (5) lacks this meaning:
1. Maria said that Ivan kissed Ana.
2. Maria does not wish to commit to the proposition that Ivan kissed Ana
Interpretation of Embedded Cases (Contd.)

- Additional evidence for speaker oriented nature:

- **Context:** Onzi den vidjah Ivan da krade pari ot kazata. Kazah na Todor, no dvamata rešihme da si məlčim zasega. Na sutrinta načalnika ni povika i ni popita otnosno lipsvaštite pari, i dali znaem koj gi e otkradnal.

‘The other day I saw Ivan stealing from the cash register. I told Todor, but the two of us decided to keep quiet for the time being. The next morning our manager called us in and asked us about the money, and whether we know who had stolen it’.

(6) Todor kaza na načalnika che Ivan e kradeca.
Todor say-3sg-aorist to manager-the that Ivan is-sg-pres thief-the.
‘Todor told the manager that Ivan is the thief’

(7) # Todor kaza na načalnika che Ivan bil
Todor say-3sg-aorist to manager-the that Ivan is-sg-PAP
kradeca.
thief-the.
‘Todor told the manager that Ivan reportedly is the thief’
If the reportative was able to refer to the subject of the matrix clause, (7) should have been felicitous under the following reading:

1. Todor told the manager that Ivan is the thief.

2. Todor did not commit himself to the proposition ‘Ivan is the thief’.

The fact that (7) is infelicitous shows that such reading in fact does not exist.
Interpretation of Embedded Cases (Contd.)

- Consider furthermore:

(8) # Maria ne mi kaza če Ivan celunal
Maria neg me tell-3sg that Ivan kiss-sg-PAP
Ana, tja mi kaza če Ivan celuna Ana
Ana, she me tell-3sg that Ivan kiss-3sg Ana
‘Intended: Maria did not tell me that Ivan
reportedly kissed Ana, she told me that Ivan kissed Ana’

- If a subject oriented reading was possible, (8) would have
been felicitous, under the following meaning:

1. Maria told me that Ivan kissed Ana
2. It is not the case that Maria is not committed to the kissing, in
   fact, she is.
Interpretation of Embedded Cases (Contd.)

- No subject oriented reading is available.
- The first part of (8) entails:
  1. Maria did not tell me that Ivan kissed Ana
  2. I (the speaker) do not wish to commit myself to the kissing (I wish to distance myself)
- The second part means:
  1. Maria told me that Ivan kissed Ana
- Result: “Maria did not tell me that Ivan kissed Ana, she told me that Ivan kissed Ana, and by the way, I do not want to commit myself to Ivan kissing Ana”.
Question: *why use the reportative in embeddings in the first place?*
If the speaker is already embedding the clause under a verb of saying, then his speech act does not commit him to the proposition expressed by the embedded clause. So why the reportative?

Embedding under a verb of saying does not eliminate the possibility that the speaker is committed to the proposition in the embedded clause. Consider the English example in (9):

(9) Mommy said I can have a cookie.

Here “mommy”, is used to give the proposition “*I can have a cookie*” more strength (by appealing to someone with greater authority).

Thus it is not the case that embedding under a verb of saying eliminates any obligation that the speaker may have.
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Implications of being Speaker Oriented

- Incompatibility with a modal analysis:
  - A modal analysis predicts that the reportative should be able to refer to the subject of the matrix clause, i.e. to be semantically embedded. But the Bulgarian reportative cannot refer to the subject of the matrix clause (See [Sauerland and Schenner(2007)] for a similar point).

- Incompatibility with an analysis as a presupposition.
Incompatibility with an analysis as a presupposition

- [Potts(2005)]: a presupposition may be eliminated by context, but not a conventional implicature:

  (10) Ed said that Sue realized it was raining. (Later, we found out that Ed’s report was wrong. Sue can’t have realized it was raining, because it wasn’t)

  (11) Ed said that, as Sue predicted, it was raining. But in fact Sue didn’t predict rain.

[Potts(2005)]

- *Sue realized it was raining* presupposes that it is raining.
- (10) lacks this presupposition, because *Sue realized that it’s raining* is embedded under a verb of saying, a presupposition plug. Adding information that in fact Sue didn’t realize it was raining is felicitous.
- The same cannot be done with conventional implicatures. In (11), the as-parenthetical is entailed even when inside a plug.
Incompatibility with an analysis as a presupposition

- Applying the same reasoning to the reportative:
  - Let $\alpha$ be the inference that the speaker is not committing to the information conveyed by the embedded proposition.
  - If $\alpha$ is a presupposition, then $\alpha$ could be eliminated by embedding, like in (10). If $\alpha$ cannot be eliminated in this way, this would be evidence that the Bulgarian reportative behaves as a Conventional Implicature.

- Just like CIs, the reportative is not canceled when embedded under a verb of saying. If it was cancelled, (7), repeated here, would have been felicitous in the above context, contrary to fact.

(12)  # Todor kaza na načalnika che Ivan bil kradeca.  
       Todor say-3sg-aorist to manager-the that Ivan is-sg-PAP thief-the.  
       ‘Todor told the manager that Ivan reportedly is the thief’
A concord analysis ruled out

- Some embedded evidentials can receive a concord reading (for example in St’at’imcets in [Matthewson et al., (2006)]). Why not claim the same for the embedded reportatives in Bulgarian?
- Problem 1: Embedding under a verb of saying is not the same as not vouching for:
  - Strictly speaking embedding under a verb of saying lacks an implication that the speaker is vouching for the information expressed (i.e., from “Mary said it is raining” it does not follow that the speaker thinks it is raining)
  - This is not incompatible with the speaker not vouching for the embedded proposition. For example: “I know that it is raining, because Mary told me.”
A concord analysis ruled out

- **Problem 2**: reportatives may be embedded under other types of verbs (not just verbs of saying):

- Example: suppose that Elena is making a birthday cake for Ivan, and she asks me for advice on what kind of cake to make. I know (have direct evidence) that Ivan likes strawberries, I tell Elena this, but she forgets it, and does not put strawberries in Ivan’s cake. Then (13) felicitous, but (14) is not.

  (13) Elena zabravi che Ivan običa jagodi.
  Elena forget-3sg-aorist that Ivan like-3sg-pres strawberries.
  ‘Elena forgot that Ivan likes strawberries.’

  (14) Elena zabravi che Ivan običal jagodi.
  Elena forget-3sg-aorist that Ivan like-sg-PAP strawberries.
  ‘Elena forgot that Ivan reportedly likes strawberries.’

- Assume a different context: Elena is again making a cake for Ivan, and consults me again, but now I only have “hearsay” information about what Ivan likes. Then (14) is felicitous.
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von Fintel and Gillies’ *Kernels*

- [von Fintel and Gillies(2010)]: an alternative analysis of epistemic *must*:
  - Sentences containing epistemic *must* are not really weak.
  - Instead, they contain a presupposition that the evidence on which the proposition is based is indirect (i.e., requires inference).
- A kernel is a set of privileged (‘direct enough’) propositions.
- *must* $p$ is used when the kernel entails but does not directly settle $p$.
- Intuition: $K$ (the kernel) can entail $p$ without settling it.
- Two ways of implementing ‘settles $p$’. The simpler one: $K^c$ directly settles whether $p$ iff for some $q \in K^c$ either:
  - $q$ entails $p$ ($q \subseteq p$) or
  - $q$ entails $\neg p$ ($q \cap p = \emptyset$)
- I define **positively settles** as entailing $p$: $K^c$ positively settles whether $p$ iff for some $q \in K^c$ $q \subseteq p$. 
von Fintel and Gillies’ *Kernels*

- $B_k$, the base for the kernel $K$ is defined as $B_K = \cap K$ (meaning $B_K = \{w | \forall p \in K : p(w) = 1\}$)

- *must* is defined as follows, for a fixed $c$-relevant kernel $K^c$:
  1. $[\text{must } \phi]^c.w$ is defined only if $K^c$ does not directly settle $[\phi]^c$
  2. $[\text{must } \phi]^w.c = 1$ iff $B_k^c \subseteq [\phi]^c$ (the Kernel entails $\phi$)
The Reportative, Non-commitments and Kernels:

- Same line of analysis for the Bulgarian reportative: instead of involving an inference process, the ‘secondary’ status is defined by a less reliable information source.
- A weak kernel for a speaker A in context c, \(WK^A,c\), is the set of all propositions for which the speaker has only evidence which he considers unreliable (such as hearing from someone non trustworthy).
- Intuitively, the reportative is used when \(p \in WK^A,c\).
- Difference between \(p \in WK^A,c\) and saying that there is reported evidence for \(p\): when there is only reported evidence for \(p\), but the evidence source is trustworthy enough (for example, a history or science book), the speaker may choose to place \(p\) in the kernel, rather than in \(WK^A,c\).
The Reportative, Non-commitments and Kernels:

- A two part meaning:
  - assertion: assert \( p \)
  - CI: speaker is not committed to \( p \)
- Define a **basic knowledge set** for an agent \( A \) in context \( c \) to consist of the two kernels (the kernel and the weak kernel), and exclude all deductions.
- The **basic knowledge set** only includes propositions which are either positively settled by the kernel or the weak kernel (The weak kernel positively settles \( p \) iff for some \( q \in WK^{A,c} \) \( q \) entails \( p \)).
- \( BKS^{A,c} \), the **basic knowledge set** for an agent \( A \) in context \( c \) is defined as follows:
  1. if \( p \) is positively settled by \( K^{A,c} \) then \( p \in BKS^{A,c} \)
  2. if \( p \) is positively settled by \( WK^{A,c} \) then \( p \in BKS^{A,c} \)
  3. nothing else is in \( BKS^{A,c} \)
The Reportative, Non-commitments and Kernels:

- For a fixed context $c$ and a speaker $A$ kernel $K^{A,c}$ and basic knowledge set $BKS^{A,c}$, define the reportative as: $[[R(p)]]^{A,c} = 1$ iff
  1. Assertion part: $p \in BKS^{A,c}$
  2. Conventional implicature part: $B_k^{A,c} \not\models p$

- The first part amounts to $p$ being something the speaker has either direct or reported evidence for, but excluding inferences.
- The second, CI part amounts to placing $p$ in the ‘set complement to the (strong) kernel and what is entailed by it’.
The Reportative, Non-commitments and Kernels:

- The CI part is separate from the assertion part, thus in embedded cases the CI part can be about the proposition in the embedded clause, while the matrix clause gets asserted.
- It is always the matrix clause that is asserted, but the CI can be about the embedded clause.
- Let $q$ be the proposition expressed by the entire utterance, and $p$ the proposition corresponding to the embedded clause (in which the reportative is used).
- The meaning derived is:
  1. Assertion part: $B_{BKS} \subseteq q$
  2. Conventional implicature part: $B_{k}^{A,c} \not\subseteq p$
- The assertion part is different than the one for the matrix clause.
- By default, if nothing further is specified about $q$, the hearer is free to assume that $q$ is entailed by the (strong) kernel.
- Compatible with the fact that the reportative is optional.
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Reportative Assertions: *Hey, take that p back!*

- Consider the following piece of discourse:

  (15) A: Ivan bil bolen
  Ivan is-sg-PAP sick
  ‘Ivan is reportedly sick’

  (16) B: Ne e vjarno. Sega go vidjah i nikak ne
  Neg is-3sg-pres true. Now him see-1sg-aorist and not-at-all neg
  e bolen.
  is-3sg-pres sick
  ‘That is not true. I just saw him and he is not sick at all.

  (17) A: Taka li? E dobre, az samo taka čuh
  So Q? Oh okay, I just that hear-1sg-aoris
  ‘Is that right? Well okay, I only heard that.’

- Using the reportative in (15) allows A to easily retract the statement.

- Conversational effect of the reportative: ‘*p, but I am willing to take it back, since I have weak evidence*’.
Farkas and Bruce’s discourse structure

- A discourse structure \( \mathcal{H} \) contains:
  - A set of propositions for each participant, \( DC_X \): the propositions that \( X \) has publicly committed to in the conversation up to the relevant time, and to which the other speakers have not yet agreed.
  - \( cg \), a set of propositions, containing all propositions that have been confirmed by all speakers.
  - A Table, used for recording the questions under discussion

- If an agent \( A \) asserts a proposition \( p \):
  1. Add \( p \) to the \( DC_A \)
  2. Update the table by adding \( p \) to the top.

- Another discourse participant \( B \) can accept \( p \) (by adding \( p \) to \( DC_B \)).

- If all discourse participants accept \( p \), it is added to \( cg \) and removed from the table and from the \( DC \) sets of each participant.
Reportative Assertions: *Hey, take that p back!*

- Formalization in the current framework: make $DC$ richer.
- Expand $DC_A$ to contain two sets of propositions (corresponding to the weak verses strong kernel distinction): the vouched for (strong) set $DC_A^S$, and the non vouched for (weak) set $DC_A^W$.
- If the speaker uses the reportative, $p$ is added to $DC_A^W$, otherwise to $DC_A^S$.
- Add $p$ to the top of the stack, since now it is the QUD.
- Each of the other discourse participants can add $p$ to their $DC$ (to their $DC^W$, they have no reason to make a stronger commitment than the person ‘proposing’ $p$).
- If all speakers add $p$ to their $DC$ then $p$ is added to $cg$. 
Let $q$ be the proposition expressed by the entire utterance, and $p$ the proposition corresponding to the embedded clause (in which the reportative is used).

Both $p$ and $q$ are added to the table and to $DC_X$: $p$ is added to $DC_W$, and $q$ to $DC_S$

Motivation for adding both:

(18) A: Mary said that John is sick.

(19) B: That’s not true! Mary said no such thing/ John is not sick.

$q$ is added to $DC_S$, since if speaker $X$ did not ‘bother’ with explicitly using the reportative in the matrix clause, he is taking responsibility for it.
Conclusion

- The reportative in Bulgarian is a CI rather than a presupposition, it can be syntactically but not semantically embedded.
- An analysis in terms of kernels, rather than modality.
- A sketch of a discourse analysis, as a non committing device.
Many thanks to my adviser Prof. Florian Schwarz!
The reportative morphology may be used to express surprise. Example:

(20) Gledaj ti, Ivan bil tuk!
    See-imp you, Ivan is-sg-PAP here
    ‘Look, Ivan is here! (surprise)’

(20) is felicitous even if the speaker is standing right in front of Ivan, as long as the fact that Ivan is present is surprising.

Are surprise usages speaker oriented?
Appendix: Other Usages of the Reportative and Open Issues

- Can be analyzed along the lines of the ‘non commitment’ reportative and in the same framework.
  - The surprise reportative can be used when the proposition expressed is unlikely given the other propositions in the speaker’s kernel, but does not have an implication that the speaker is not committing.
  - In other words, using the idea of thresholds in [Davis et al.(2007)] when the probability of $p$, given $K^{A,c}$ is lower than some contextually supplied threshold.
The Dubitative: and by \( p \) I mean \( \neg p \)

- Used when the speaker expresses doubt, in addition to uncertainty about the proposition expressed.
- Formed by adding another *be* auxiliary, in the PAP. If such auxiliary is already present, nothing is added.

(21) Ivan bil kupil nova kəšta
Ivan is-sg-PAP buy-PAP-sg new house.

‘Ivan reportedly bought a new house (but I doubt it)’
The Dubitative: and by \( p \) I mean \( \neg p \)

- Can connect the non commitment reportative and the surprise one:
  - The speaker not wishing to commit to the proposition expressed
  - The speaker signaling that furthermore, this proposition is unlikely, given what he knows (other propositions in kernel).
  - The assertion part is like for the non commitment reportative, and the CI consists of two parts: the unlikelihood of \( p \) (the probability of \( p \) given the kernel being smaller than some constant), and \( p \) not being entailed by the kernel.
  - Since the assertion is weak, there is no contradiction between asserting \( p \) and doubting \( p \) at the same time.
  - Conversationally, the dubitative amounts to weakly asserting \( p \) and signaling that really, \( \neg p \) is the case (since \( p \) is unlikely).
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