AN EVIDENTIAL MODAL IN BULGARIAN: 
THE INFERENTIAL FUTURE

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In Bulgarian, šte (FUT), used in ‘ordinary’ futures, may also signal an inference or deduction based on indirect evidence made at Speech Time, similar to epistemic will in He will (must) be in Toronto right now. Such a presumptive reading is mentioned in descriptive grammars (Nitsolova 2008; Pašov 1989, 2005; Scatton 1983, a.o.), but has not been discussed in the recent literature on Bulgarian evidentials, which mainly concerns the epistemic of the ‘Renarrative Mood’ (Arregui, Rivero, and Salanova 2014; Izvorski 1997; Koev 2011, 2014; Rivero and Slavkov 2014; Sauerland and Schenner 2007, 2013; Smirnova 2013a-b, a.o.). The aim of the present study is to examine inferential šte within the views of formal syntax and semantics.

We argue that šte, as a marker of presumptive meaning, is an evidential modal fit for deductions, not reports. It takes a tensed complement that encodes the time of the depicted event as past or present, but not future. Inferential šte often shares form with prospective (future) šte, but we argue in §2 that the two should be formally differentiated. We compare inferential šte to epistemic modals in §3, and propose that it is a degree expression without fixed quantificational force. In sum, šte is an evidential for inferences that participates in a dedicated morpho-syntactic system not shared by prospective šte, so it cannot be viewed as an ‘evidential strategy’ (Aikhenvald 2004) parasitic on prospective šte.

1. Introducing Prospective šte And Inferential šte

Let us introduce Bulgarian future constructions, which always contain šte and are thus periphrastic.

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List of abbreviations: 1SG=1st person singular (etc.), FUT=future (analytic marker), IMP=imperfective aspect, IMPERF=past imperfect tense, NEG=negation (synthetic marker), PP=past participle, PR=prefix, PRES=present tense, PRF=perfective aspect, Q=question (analytic marker). The glosses are intended to highlight the details relevant to the topic of the paper, and do not exhaust the linguistic information encoded in the data.

1 In syntax and morphology, Bulgarian futures differ from East/West Slavic futures which, when perfective, bear present morphology (i.a) and are ungrammatical with auxiliaries (i.c). By contrast, all Bulgarian futures display šte (i.b), and present perfective verbs are ungrammatical in main clauses (i.d).

(i) a. Naš poezd ot-pravit-sya v 10 časov. (Russian) our train PR-leave.PRES.PRF.3SG at 10 o’clock
‘Our train will leave at 10 o’clock.’

b. Našijat vlak šte za-mine our train FUT PR-leave.PRES.PRF.3SG at 10 o’clock
‘Our train will leave at 10 o’clock.’

c. *Naš poezd budet ot-pravit-sya v 10 časov. (Russian)
1.1 Prospective Šte

Patterns (1a-b) illustrate future readings we call ‘prospective’, which are forward-shifted with Event Time following Speech Time. They also illustrate that Šte combines with imperfective verbs, piša in (1b), and perfective verbs, na-piša in (1b).

Context: The instructor in your class asks about your final paper: (1a). You reply with (1b), pointing to the title of an article.

(1) a. *Gotov li šte ti e doklada skoro? ready Q FUT your.PRES.POSS be.PRES.IMP.3SG paper.the soon
   ‘Will your paper be ready soon?’

b. Šte piša, (šte piša) i šte FUT write.PRES.IMP.1SG (FUT write.PRES.IMP.1SG and FUT
   go na-piša.
   it.ACC PR-write.PRES.IMP.1SG
   ‘I will write and write, and I will finish it.’

1.2 Inferential/presumptive Šte

Presumptive šte is an evidential modal indicating deductions/inferences, as (2-3) illustrate (not reports).²

Context: Your friend asks you which one among 3 singers in a photo is the winner of a competition. You listen to a tape, and pointing to one singer you state:

(2) a. Tazi šte (da) e pobeditelkata. This FUT (da) be.PRES.3SG winner.the
   ‘This one must be the winner.’

Context: You cannot see Ivan but hear noise next door. You state:

(3) Ivan šte (da) piše pismo v Ivan FUT (da) write.PRES.IMP.3SG letter in
   sasednata staja v momenta.
   neighbor.the room in moment.the
   ‘Ivan must be writing a letter in the room next door right now.’

² Inferential šte contrasts with the evidential of the Renarrative Mood, also known as preizkazno naklonenie ‘discourse mood’ (Andrejčin 1977), enonciation médiatisée ‘mediated enunciation’ (Guentchéva 1996), Perfect of Evidentiality (Izvorski 1997), vid na izkazvaneto ‘discourse aspect’ (Kučarov 1998: 413), and Indirect (Koev 2011, 2014) (also Pašov 2005; Nitsolova 2008 for recent descriptions). Pašov (2005) considers that da in (2-3) is optional, an item we do not discuss.
Inferential šte is felicitous when the evidence is indirect, as in (2-3), and infelicitous when direct, as in (4):

**Context:** You look into the next room, identify the person there as Ivan, and his action as one of writing a letter. You state:

(4)  
#Ivan šte (da) piše pismo.  
Ivan FUT (da) write.PRES.IMP.3SG letter  
‘Ivan must be writing a letter.’

We define direct/indirect evidence in terms of propositions (Matthewson 2011, a.o.). It is direct if the event depicted by the proposition in [M [Proposition Ivan write a letter]] is ‘seen’ as it occurs. Indirect evidence concerns incomplete propositions, for example doubts on the agent’s identity (Ivan or Peter?), the activity (Writing or reading?), or results (A letter or a book?). Inferential šte participates in the two-way orientation of modals. (a) It is anchored to Speech Time/signals a present inference when in main clauses. (b) But the inference may concern present or past events. With present complement verbs, (2-3), inferences are about present events. With present perfect, (5-6), or imperfect complement verbs (7), inferences are about the past. In §2, we argue that inferential šte does not depict events that extend into the future, in contrast with prospective šte.

**Context:** You wonder why Ivan never went to Paris. Since his mom lives there, you suppose that she often told him to visit. You state:

(5)  
Tja šte (da) mu e kazvala mnogo  
she FUT (da) he.DAT be.PRES.3SG tell.PP.IMP many  
pati da ja poseti.  
times da she.ACC visit.PRES.3SG  
‘She must have told him to visit her many times.’

(6)  
Ivan šte (da) e iz-tŭrpjal mnogo  
Ivan FUT (da) be.PRES.3SG endure.PP.PRF a.lot  
prez vojnata.  
during war.the  
‘Ivan must have endured a lot during the war.’

**Context:** You went to a party but forgot the name of a guy you met there. You state:

(7)  
Maj Ivan šte da beše.  
Maybe Ivan FUT da be.IMPERF.3SG  
‘Maybe it was Ivan.’

Aspect is encoded in the verbs that complement šte. Present perfects with imperfective participles signal ongoing/repetitive events: kazvala (5). Perfective participles describe episodic/resultative events: iz-tŭrpjal (6).

In sum, the evaluation time of a modal claim with inferential šte is NOW (in Condoravdi’s 2000 terms, the ‘temporal perspective’ is fixed). The time of the depicted
event can either coincide with, or precede, Speech Time (in Condoravdi’s 2000 terms, the ‘temporal orientation’ may vary), but in the next section we see that it cannot be future.

Inferential Šte always remains invariable, in contrast with future auxiliaries. Prospective Šte does not overtly encode tense/person/number in (1), but we argue in §2 that is must be paired with the future auxiliary of past futures and past future perfects that overtly inflects. In (8) we sketch a (simplified) syntactic structure for inferential Šte.

\[
\text{(8)} \quad [\text{MP} \quad [\text{M Šte}] \quad \text{TP [Tense]} \quad [\text{ASPECT} \quad \text{[Aspect]} \quad \text{[VP V]}]]
\]

Based on Rivero (1994), a.o., Šte heads a Modal Phrase (MP), which dominates both the Tense Phrase (TP) and Person/Number if independent of T. TP scopes over Aspect Phrase (AspP) for Viewpoint. Inferential Šte above T does not inflect for tense/person/number.

2. Distinguishing Between Inferential Šte And Prospective Šte

There exists a long debate on forms such as English will, which display epistemic and prospective readings. Do they share a common semantics disambiguated in context (Lyons 1977, a.o.), or do they represent two temporal/modal operators (Hornstein 1990, a.o.)? Here we argue that in Bulgarian, inferential Šte must be differentiated from prospective Šte in syntax and semantics, so the contrast is grammaticalized.

Bulgarian constructions with prospective and inferential readings may overlap in form, as (9-10) illustrate (our glosses and translations).

\[
\text{(9)} \quad \text{Kato se sreštnete s nego sled edna sedmitsa,} \quad \text{when REFLEX meet.PRES.PRF.2PL with he.ACC after one week}
\]

\[
\text{t} \quad \text{šte e razbral istinata.} \quad \text{he FUT be.PRES.3SG learn.PP.PRF truth.the (Pashov 2005)}
\]

‘When you meet with him in one week, he will have learned the truth.’

\[
\text{(10)} \quad \text{Nespokoen e nešto - šte e} \quad \text{Uneasy be.PRES.3SG something-FUT be.PRES.3SG}
\]

\[
\text{razbral istinata.} \quad \text{learn.PP.PRF truth.the (Pashov 2005)}
\]

‘He is somewhat uneasy (at present) - he must have learned the truth.’

In (9), Šte with a present perfect complement receives a forward-shifted reading: learning the truth will occur after Speech Time. By contrast, the most natural reading for the identical sequence in (10) is epistemic: learning precedes Speech Time. Sentence (10), however, is ambiguous, with a less natural forward-shifted reading, as in He will (soon) have learned the truth; from that moment on, he will no longer appear uneasy as he seems to appear now. At first sight, then, (9-10) could support the view that inferentials and prospectives share semantics, with disambiguation triggered by the (linguistic) context. However, we next argue that the grammar of Bulgarian distinguishes between inferentials and prospectives, and we develop three arguments to motivate this view.
2.1 Negation

In Bulgarian, inferentials and prospectives may be differentiated by negation. Negative inferentials contain ne before šte, (11). This sentence signals an unambiguous inference made as we speak about an event located before Speech Time.

(11) Ivan ne šte e izpratil pismo
(NEG FUT be.PRES.3SG send.PP.PRFF letter
(yesterday/#tomorrow).
‘Ivan may not have sent a letter (yesterday/#tomorrow).’

By contrast, negative prospectives contain auxiliary njama (NEG+FUT). Thus, (12) tells us about an event located after the time of the utterance.

(12) (Utre) njama da e napisala knigata.
(tomorrow) NEG+FUT da be.PRES.3SG write.PP.PRFF book.the
‘(Tomorrow) she will not have written the book.’

Given the above contrast, we can compare (9) with (13) as a prospective. Likewise, (14) corresponds to (10), with the form of an inferential and an unambiguous epistemic reading.

(13) Kato se sreštnete s nego sled edna sedmitsa,
When REFL meet.PRES.2PL with he.ACC after one week,
njama da e razbral istinata.
NEG+FUT da be.PRES.3SG learn.PP.PRFF truth.the
‘When you meet with him in one week, he will not have learned the truth (at some future time from the time of utterance).’

(14) Nespokoen e nešto - ne šte e
easy be.PRES.3SG something NEG FUT be.PRES.3SG
razbral istinata.
learn.PP.PRFF truth.the
‘He is somewhat uneasy (at present) – it must be that he has not learned the truth (at some past time before the time of utterance).’

Negation, then, supports the hypothesis that Bulgarian grammaticalizes the contrast between inferentials and prospectives, thus arguing against their unification. The above patterns also show that inferentials specialize in locating the description of events in the past or present, but cannot extend into the future. Constructions that extend into the future should thus be viewed as ‘predictive’, not ‘inferential’.

In sum, the grammar of Bulgarian grammaticalizes prospectives and inferentials. Inferential (ne) šte specializes for epistemic information, with actual/realis-like readings that speak of (possible) present/past events, not future events. Prospective šte and njama
display readings that could be dubbed non-actual/irrealis/predictive, as they speak of events that may extend indefinitely into the future.

2.2 Tense, Person, And Number Inflections

In (1), Prospective šte does not overtly inflect. However, we earlier suggested that this form should be paired with the future auxiliary of past futures and past future perfects, which is inflected in Bulgarian.³ By contrast, we mentioned that inferential šte is invariable. Let us motivate this proposed second difference between inferentials and prospectives. We illustrate past futures in (15a-c), and past future perfects in (16).

(15) a. Štjah da na-piša kniga utre/ včera.
   FUT.IMPERF.1SG da PR-write.PRES.1SG book tomorrow yesterday
   ‘I would write a book tomorrow.’/‘I would have written a book yesterday.’

   b. Ivan šteše da platí mnogo pari.
   Ivan FUT.IMPERF.3SG da pay.PRES.PRF.3SG much money
   ‘Ivan {would pay/would have paid} a lot of money.’

   c. Utre Ivan šteše da xodi na gosti na majka si. (adapted from Rivero and Slavkov 2014)
   tomorrow Ivan FUT.IMPERF.3SG da go.PRES.IMP.3SG on visit at mother POSS
   ‘Tomorrow Ivan would/was going to go on a visit to his mother.’

(16) Do 17 časa včera štjah da sūm na-pisala knigata.
   by 17 hour yesterday FUT.IMPERF.1SG da be.PRES.1SG PR-write.PP.PRF the book.the
   ‘By 5 o’clock yesterday I would have written the book.’

In morphology and syntax, past futures (15a-c) and past future perfect (16) contain a future auxiliary inflected for the imperfect tense, person, and number. The differences are encoded in the complement. Past future complements display present verbs: xodi in (15c). Past future perfect complements contain present perfects with an auxiliary and a past participle with aspect: sūm napisala in (16).

As to interpretation, past futures and past future perfects display several (complex) meanings, which we do not survey. So-called past futures, for instance, may project into the past or the future in relation to Speech Time, (15a)⁴ (or be used for present events, not

³ Future/prospective šte was still overtly inflected for person / number in the 19th century and could be negated with ne, now obsolete but recognizable as literary, or poetic. By contrast, inferential šte has always been invariable. Interested readers are referred to (Scatton 1983) for a complete inventory and basic descriptions of Bulgarian tenses.

⁴ The sentence in (15a) illustrates that the Bulgarian past future auxiliary can project into the past without perfect have (i.e. a present perfect complement); thus, it differs from English would, which can only project
illustrated). Readings in past futures and past future perfects fall within the non-
actual/irrealis category (in Condoradvi’s 2000 terms, ‘metaphysical’ and not epistemic).
That is, (15-16) bring to mind (implicit) if-clauses, and intentions: *I intended to have
finished the book by 5 o’clock* for (16).

Negation is the factor that unifies the above inflected future auxiliary with
prospective šte, and distinguishes it from inferential šte. In parallel to (plain) šte-
prospectives, past futures and past future perfects negate with njama, which is inflected
(imperfect/person/number), (17a-c).

(17) a. Ivan njamaše da plati mnogo
Ivan NEG+FUT.IMP.3SG da pay.PRES.PRF.3SG much
pari.
money
‘Ivan would not pay a lot of money.’

b. Utre Ivan njamaše da xodi na
tomorrow Ivan NEG+FUT.IMP.3SG da go.PRES.IMP.3SG on
gosti na majka si.
visit at mother POSS
‘Tomorrow Ivan would not/was not going to go on a visit to his mother.’

c. Do 17 časa včera Ivan njamaše da
by 17 hour yesterday Ivan NEG+FUT.IMP.3SG da
e na-pisal knigata.
be.PRES.3SG PR-write.PP.PRF book.the
‘By 5 o’clock yesterday Ivan would not have written the book.’

In sum, prospective šte and the inflected future auxiliary of past futures and past
future perfects pattern together. By contrast, inferential (ne) šte may also depict past
events, as we saw in (5-7b) and (11), but remains invariable. In conclusion, prospectives
inflect while inferentials do not.⁵

2.3 Conditionals

Conditionals can also be used to support the idea that inflected šteše patterns with
prospective šte, and is unlike inferential šte. First consider contrary-to-fact conditionals.
Those display a past perfect in the antecedent clause, and a future auxiliary in the
imperfect in the consequent clause, as in (18a-b).

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⁵ The syntactic structure proposed in (8) for inferentials may not be suitable for Bulgarian prospectives. Due
to their inflectional properties, prospectives could be in T or lower, but are unlikely to be in M; in view of §3,
they resemble root modals, not epistemics.
Counterfactuals may project into the past, or the future. Past (18a) is felicitous if the 
speaker knows both that Ivan did not buy a house last year when prizes were high, and 
that house prizes came down. Future (18b) is felicitous as a comment on what could have 
happened at some future time if instead of buying the house Ivan purchased, he had 
waited to buy. Both (18a-b) speak of events that did not/will not take place.

A second conditional with a future marker is (19). It parallels Greek constructions 
that Iatridou (2000) labels ‘future less vivid conditionals’, which contemplate future 
possibilities. The antecedent has an imperfect verb, and the consequent the imperfect 
auxiliary of counterfactuals.

(19)  Ako Ivan *kupeš* tazi kŭšta utre, toj
     if Ivan buy.IMPERF.3SG this house tomorrow he
     *šteš* da plati
     FUT.IMPERF.3SG da pay past.the
     mnogo pari.
     much money
     ‘If Ivan bought/were to buy this house tomorrow (an open possibility), he
     would pay a lot of money.’

A conditional with *šte* in antecedent and consequent clauses is (20).

(20)  Ako *šte* xodiš utre, az sašto *šte*
     if FUT go.PRES.IMP.2SG tomorrow I also FUT
     otida.
     go.PRES.1SG
     ‘If you (will) go tomorrow, I will also go.’

We do not discuss differences in the readings of the above conditionals, which 
depend on the form of both the antecedent and the complement of the auxiliary. We 
instead concentrate on negation, which formally unifies the three types: they are negated
with njama. In counterfactuals (21a-b) and the ‘future less vivid conditional’ (21c), the negative auxiliary is inflected. ‘Bare’ njama in (21d) is not overtly inflected.

(21) a. Ako Ivan beše kupil tazi kăšta
    if Ivan be.IMPERF.3SG buy.PRF this house
minalata godina, toj njamaše da e
past.the year he NEG+FUT.IMPERF.3SG da be.PRES.3SG
platil mnogo pari.
pay.PRF much money
‘If Ivan had bought this house last year, he would NOT have paid a lot of money.’

b. Ako Ivan beše kupil tazi kūšta {a. minalata godina/ b. utre toj njamaše da e
    if Ivan be.IMPERF.3SG buy.PRF this house past.the year tomorrow he NEG+FUT.IMPERF.3SG da be.PRES.3SG
platil/ plati mnogo pari.
pay.PRF pay.PRES.PRF.3SG much money
‘If Ivan had bought this house {a. last year/b. tomorrow}, he would NOT have paid a lot of money.’

c. Ako Ivan kupeše tazi kūšta utre, toj njamaše da plati mnogo pari.
    if Ivan buy.IMPERF.3SG this house tomorrow he NEG+FUT.IMPERF.3SG da pay.PRES.PRF.3SG much money
‘If Ivan bought this house tomorrow, he would not pay a lot of money.’

d. Ako njama da xodiš utre, az sašto njama da otida.
    if NEG+FUT da go.PRES.IMP.2SG tomorrow I also NEG+FUT da go.PRES.PRF.1SG
‘If you do not go tomorrow, I will not go.’

Inferential šte may also appear in consequent clauses in conditionals, where it may speak of past events, (22a), so partially resembles classical counterfactuals such as (18a). However, inferential šte is negated with ne, so (22b) displays the form and meaning of an epistemic.

(22) a. Ako Ivan e kupil tazi kūšta minalata godina, šte da e platil mnogo pari.
    if Ivan be.PRES.3SG buy.PRF this house past.the year FUT da be.PRES.3SG pay.PRF much money
‘If Ivan (has) bought this house last year, he must have paid a lot of money.’
b. Ako Ivan e kupil tazi kūšta minalata
if Ivan be.PRES.3SG buy.PPF this house past.the
godina, toj ne šte da e platil mnogo
year he NEG FUT da be.PRES.3SG pay.PPF much
pari.
money
‘If Ivan (has) bought this house last year, he must/will NOT have paid a lot
of money.’

In sum, negation formally divides conditionals. Conditionals with inferentials contrast with conditionals with (a) counterfactuals, (b) less vivid futures, and (c) ordinary futures, which all pattern together.  

Bulgarian distinguishes between epistemic (ne) šte and prospective štel/njama. In agreement with Pašov (2005), we conclude that inferentials and prospectives may often overlap in form, but represent two different paradigms. In Bulgarian, then, prospectives and inferentials are grammaticalized, and prospectives specialize for future events.

3. Comparing Inferential šte And Epistemic Modals

Bulgarian has two modals with both epistemic and root readings: trjabva ‘must’ and može ‘may, can’. When such modals overtly inflect for tense (imperfect), person, and number, they are restricted to root readings, (23a-b), but they remain invariable under epistemic readings, (25), etc.

(23) a. Ivan trjabvaše da otide do pazara.
Ivan must.IMPERF.3SG da go.PRES.PRFF.3SG to market.the
‘Ivan had the obligation to go to the market.’

b. Predi možeh da bjagam burzo, a sega
before can.IMPERF.1SG da run.PRES.IMP.3SG fast but now
veče ne.
already NEG
‘Before I was able to run fast but not anymore.’

We next show that inferential šte and epistemic trjabva and može share four similarities. However, in 3.2, we show that they also differ: trjabva is universal, može is existential, and inferential šte is a degree expression.

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6 Thus, when events depicted in consequent clauses (compositionally) count as (possibly) ‘actual’ (i.e. inferentials), negation must be ne. By contrast, events depicted in counterfactuals, in future less vivid conditionals, and in future conditionals require njama, which could suggest that a ‘non-actual’ item unifies their semantics.
3.1 Similarities

Inferential šte, epistemic trjabva ‘must’, and epistemic može ‘may’ are invariable (no tense, person, number inflection), they are anchored to Speech Time in main clauses, they take parallel complements, (24-26), and embed under propositional attitude verbs, (27).

(24) Ivan trjabva/može da piše pismo.
Ivan must/may da write.PRES.IMP.3SG letter
‘Ivan must/may be writing a letter.’
(compare with (3): Ivan šte (da) piše pismo.)

(25) Az trjabva/može da mu süm kazvala
I must/may da he.DAT be.PRES.1SG say.PP.IMP
mnogo pati.
many times
‘I must/may have told him many times.’
(see (5): Tja šte (da) mu e kazvala mnogo pati.)

(26) Ivan trjabva/može da e iz-türpjal
Ivan must/may da be.PRES.3SG PR-endure.PP.PRF
mnogo prez vojnata.
a.lot during war.the
‘Ivan must have endured a lot during the war.’
(see (6): Ivan šte (da) e iz-türpjal mnogo prez vojnata.)

Context: We are watching a crime movie: a woman’s body is discovered. We discuss the identity of the killer, and you state:

(27) Mislja, če Ivan šte/trjabva/može da ja think.PRES.IMP.1SG that Ivan FUT/must/may da she.ACC e ubil.
be.PRES.3SG kill.PP.PRF
‘I think that Ivan must /may have killed her.’

Thus, inferential šte is an evidential with formal modal properties, not illocutionary properties.

3.2 A difference: Quantificational Flavor

Often, inferential šte is reminiscent of universal modals, but there are both declarative and interrogative contexts, where it seems closer to može ‘may’, as the comparison of (28) and (29) suggests. In our view, inferential šte is a degree modal without fixed quantificational force, as we argue next when we identify some of its characteristics.
To motivate the force variability of šte, and thus its distinction from trjabva ‘must’ and može ‘may’, we are inspired by Kratzer (2012:41), and notions such as ‘at least as good a possibility of’ and ‘better possibility’, which holds when \( p \) is at least as good a possibility as \( q \) but not vice versa. In our view, inferential šte identifies an option that is better that some other option, but not necessarily the best option. Thus, the gradability of šte shines through in comparing possibilities, where this modal participates in patterns that are in principle excluded for universals such as trjabva ‘must’, as we show next. In spite of appearances, then, inferential šte should not be identified with fixed force modals. To develop our argument, we recall the scenario in (27), adding more than one suspect to the discussion of possible killers, and first note contrasts between može ‘may’ (30), and trjabva ‘must’ (31).

(30) Može da e bil Ivan, ili može da be.PRES.3SG be.PP.ACT Ivan or may da e bil Boris. be.PRES.3SG be.PP.ACT Boris

It may have been Ivan, or it may have been Boris.’

(31) #Trjabva da e bil Ivan, ili/no trjabva da be.PRES.3SG be.PP.ACT Ivan or/but must da e bil Boris be.PRES.3SG be.PP.ACT Boris

#‘It must have been Ivan, or/but it must have been Boris.’

Sentence (30) is fine, but (31) is not felicitous because a true necessity modal like trjabva ‘must’ needs to report on an option that is better than all other options in all accessible worlds. In other words, in comparing two options \( p \) and \( q \), (31) states that each one of them is the best, i.e. better than every other option. Now consider inferential šte in comparisons with either može ‘may’, (32), or trjabva ‘must’, (33). These sentences are both felicitous, and their different readings serve to highlight the flexibility/gradability we attribute to inferential šte.
On the one hand, both Ivan and Boris are possible options in (32), but Boris is the better or more likely option - the suspect with the more dubious alibi, for instance -, as in our free translation into English. On the other hand, (33) opposes a best to a ‘better’ or less likely option (a better alibi) without a clash, as in our free translation. Sentence (33), then, differs from (31), which constitutes an attempt to contrast two ‘best’ options. Finally, (34) involves a comparison with two šte, and is not felicitous. We suggest that its infelicity derives from setting up two options that are equal or ‘undefined’ as to which one is to be chosen as better or more likely.

(34) #šte da e bil Ivan, ili/no šte (da)
    FUT da be.PRES.3SG be.PP.IMP Ivan or/but FUT da
    e bil Boris
    be.PRES.3SG be.PP.IMP Boris
    ‘It must (degree modal) have been Ivan, or/but it must have been Boris.’

The comparison with existential može in (32), then, increases the ‘strength’ of inferential šte, which goes on to identify the better/more likely option (the suspect with a bad alibi). A comparison with the universal modal in (33) weakens šte, which then goes on to identify the less preferred/less likely option (the suspect with the better alibi). Both trjabva and može offer the compositional means to provide appropriate but nevertheless different standards of comparison.

The above situation suggests that a variable force modal is one that can associate with flexible rankings in comparisons - something that fixed universal modals cannot do. A variable force modal, then, need not be equated with either one of the fixed force modals. Therefore, contra a first impression, šte is not a universal modal in cases where only one suspect may be involved, (35).

(35) Ivan šte da e bil.
    Ivan FUT da be.PRES.3SG be.PP.IMP
    ‘It must (degree modal) have been Ivan.’

Inferential šte brings to mind expressions with a hidden degree structure such as tall (a.o. Kennedy and MacNally 2005). We understand sentences such as Mary is a tall lady by providing some scale of tallness where Mary is above average without the need of
being the tallest (universal). Similarly, we suggest that inferential šte in (35) brings to mind a scale of suspects where the chances of Ivan being the killer are better than, say, those of the average possible suspect in a pool of contextually relevant possible suspects. On this view, the universal-like reading of inferential šte is a consequence of its comparative properties. To conclude, inferential šte is a degree modal without fixed quantificational force, which should not be identified with trjabva or with može.

4. Conclusions

Our views on inferential šte in Bulgarian impinge on long debated issues concerning futures, modals, and evidentials in both general linguistics and Balkan linguistics. We conclude by relating our proposals on šte to some of those issues within the framework of recent theoretical views.

We argued in favor of a grammaticalized distinction between inferential šte and prospective šte in modern Bulgarian. Thus, we joined the long debate on the unity/diversity of futures, opting for a position where inferential and ‘ordinary’ futures are not unified in Bulgarian. This is in contrast with, for instance, some recent views on closely related languages in the Balkans including Greek (see Giannakidou and Mari 2013) and Rumanian (see Mihoc 2012).

Indirectly, we touched on the traditional debate about whether ordinary futures are modal or temporal. We concluded that in Bulgarian both inferential and ordinary futures are modal, but must be nevertheless distinguished from one another, which suggests that their modality may not be of the same type. Bulgarian ‘ordinary’ futures formally pattern with counterfactuals and ‘less vivid futures’, so are undoubtedly modal, but their agreement characteristics pair them with circumstantial modals, not epistemic modals. We may then ask if the morphological connection with circumstantials as opposed to epistemics could also hide a semantic connection.

We argued that inferential šte behaves like a ‘tenseless’ modal anchored to Speech Time, and takes tensed complements. By contrast, prospective šte should be paired to past future auxiliaries, which may project into the past ‘on their own’ (i.e. without a present perfect complement). Such an opposition between inferential and prospective markers may shed light on the proper characterization of modals for the present and those for the past, which display crosslinguistic variation (Condoravdi 2002 on English and the effect of have, Giannakidou and Mari 2013 on Greek and Italian, Rivero 2014 on Spanish, a.o). The distinctions in Bulgarian may also shed light on the much-debated topic of the relation between counterfactuals and inferentials.

We added inferential šte to the inventory of evidential markers in Bulgarian, and placed it into the modal class, not the illocutionary class. Thus inferential šte may shed additional light on ongoing debates on contrasts between modal and illocutionary evidentials (a.o. Davis, Potts, and Speas 2007; Faller 2002, 2011; von Fintel and Gillies 2010; Matthewson 2011; Matthewson, Davis, and Rullmann 2008; Yalcin 2007).

We proposed that evidential šte differs from other epistemics in Bulgarian because it is a degree expression with comparative properties that distinguish it both from universal and existential modals. Thus, we added it to the inventory of forms that participate on ongoing debates on the proper definition of gradable modals (a.o. Deal 2011; Kratzer 2012; Lassiter 2010; Rullmann, Matthewson, and Davis 2008; Yalcin 2007).
References


Davis, Christopher, Christopher Potts, and Margaret Speas. 2007. The pragmatic values of evidential sentences. *SALT* 17: 71-88.


