

Chapter 6

Mirativity and the Bulgarian evidential system

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This paper provides an account of the Bulgarian admirative construction and its place within the Bulgarian evidential system based on (i) new observations on the morphological, temporal, and evidential properties of the admirative, (ii) a critical reexamination of existing approaches to the Bulgarian evidential system, and (iii) insights from a similar mirative construction in Spanish. I argue in particular that admirative sentences are assertions based on evidence of some sort (reportative, inferential, or direct) which are contrasted against the set of beliefs held by the speaker up to the point of receiving the evidence; the speaker's past beliefs entail a proposition that clashes with the assertion, triggering belief revision and resulting in a sense of surprise. I suggest an analysis of the admirative in terms of a mirative operator that captures the evidential, temporal, aspectual, and modal properties of the construction in a compositional fashion. The analysis suggests that although mirativity and evidentiality can be seen as separate semantic categories, the Bulgarian admirative represents a cross-linguistically relevant case of a mirative extension of evidential verbal forms.

Keywords: mirativity, evidentiality, fake past

1 Introduction

The Bulgarian evidential system is an ongoing topic of discussion both with respect to its interpretation and its morphological buildup. In this paper, I focus on the currently poorly understood admirative construction. The analysis I present is based on largely unacknowledged observations and data involving the morphological structure, the syntactic environment, and the evidential meaning of the admirative.

Thus, it has largely remained unnoticed that the admirative (i) only allows for imperfect past participles which in admiratives receive a present tense interpretation, (ii) does not only encode direct evidence but may also be based on inferential and hearsay evidence, and (iii) is not only used in exclamatives but also in declaratives and is thus not tied to the exclamatory illocutionary force.

Based on these facts, I suggest an analysis of the admirative construction in terms of a semantic operator which captures the evidential, temporal, aspectual, and modal properties of the construction in a compositional fashion, combining insights from Bustamante's (2013) analysis of the mirative extension of the Spanish imperfect and Smirnova's (2011a; 2011b; 2013) analysis of the Bulgarian evidential. According to my analysis, admirative sentences are assertions based on evidence of some type (reportative, inferential, or direct) which are contrasted against the set of beliefs held by the speaker up to the point of receiving the evidence. The speaker's past beliefs entail a proposition which clashes with the assertion, triggering belief revision and resulting in a sense of surprise. The crucial idea adopted from Bustamante is related to the role of the tense and aspect morphology: the fact that the past tense morphology in admiratives is interpreted as referring to the present is accounted for by the assumption that tense is displaced and interpreted not within the assertion but under the admirative operator. The analysis distinguishes further between mirativity as a semantic category and exclamatory force as an illocutionary category and suggests that although mirativity and evidentiality can be seen as separate semantic categories, the Bulgarian admirative shows a cross-linguistically relevant case where evidential verbal forms acquire additional mirative meanings.

The paper is organized as follows. §2 provides some background on the Bulgarian evidential system, the notion of mirativity, and previous work on the Bulgarian admirative and outlines the main points of departure for my analysis of the admirative. In §3, I discuss data showing that the Bulgarian admirative differs from other related evidential categories in terms of its temporal, evidential, and modal properties. §4 presents my account of these properties in terms of their relation to the special morphology of the admirative construction based on Bustamante's analysis of the Spanish mirative and §5 discusses some consequences and residual issues related to the proposal.

2 The Bulgarian evidential system and the notion of mirativity

Traditionally, two different evidential paradigms are distinguished, morphologically and historically (see [Andrejčin 1944](#); [Aronson 1967](#)) related to the present perfect, each encoding different evidential sources: the *renarrative* expressing reportative (1) and the *conclusive* expressing inferential (2) evidence (see, e.g., [Bojadžiev et al. 1999](#); [Pašov 1999](#); [Nicolova 2008](#); and [Jakobson 1971](#), who was among the first to call these forms evidential).¹

- (1) Ivan rabotil / rabotel.
 Ivan work.AOR.PTCP work.IPF.PTCP
 ‘Ivan worked/works, it is said.’
- (2) Ivan e rabotil / rabotel.
 Ivan is work.AOR.PTCP work.IPF.PTCP
 ‘Ivan has worked, I infer.’

This view, reflected in Table 1, is based on two assumptions: (i) the two evidential paradigms and the present perfect are formally composed of the present tense form of the auxiliary *săm* ‘be’ and a past *l*-participle that may be based on both imperfect and aorist stems, and (ii) the renarrative differs formally from the conclusive and the perfect in terms of auxiliary drop in the 3rd person singular and plural. In addition to the tense marking of the *l*-participles (aorist or imperfect),² the participle stems usually encode either perfective or imperfective verbal/lexical aspect (*vid na glagola*).³

¹“Inferential” refers both to inference from observable facts and from knowledge.

²Note however that some verbs – 3rd conjugation verbs as well as verbs like *znaja* ‘know’, *săm* ‘be’ – only have one past participle, see e.g. [Nicolova \(2017\)](#).

³See (i) and (ii) respectively. Note that there exist also verbs with a single form that can be both imperfective and perfective (biaspectual verbs; see, e.g., [MacDonald & Markova 2010](#); [Rivero & Slavkov 2014](#)).

- (i) Pisal / pišel săm.
 write.AOR.IPFV write.IPF.IPFV am
 ‘I have written’ / ‘I have been writing’
- (ii) Napisal / napišel săm.
 write.AOR.PFV write.IPF.PFV am
 ‘I have finished writing’ / ‘I have been finishing writing’

Table 1: The traditional Bulgarian evidential forms and the present perfect of the verb *piša* ('write') in 1SG and 3SG

renarrative		conclusive		present perfect	
aorist	imperfect	aorist	imperfect	aorist	imperfect
pisal sām	pišel sām	pisal sām	pišel sām	pisal sām	pišel sām
pisal ∅	pišel ∅	pisal e	pišel e	pisal e	pišel e

Especially assumption (ii) above has been considered problematic, e.g. in work by [Gerdžikov \(1984\)](#), [Ivančev \(1988\)](#), [Levin-Steinmann \(2004\)](#), or [Sonnenhauser \(2013\)](#), where the different evidential forms are seen as belonging to one common paradigm (called PERFECT-LIKE COMPLEX; see [Ivančev 1988](#)), and the usage or omission of the 3rd person auxiliary (called AUXILIARY VARIATION) as guided by discourse-pragmatic factors such as the coding of the point of view of the narrator vs. some non-narrator ([Sonnenhauser 2013](#); see also [Friedman 1981](#); [Lindstedt 1994](#); [Fielder 1999](#)). Formal semantic work, on the other hand, assumes a single evidential construction called PERFECT OF EVIDENTIALITY ([Izvorski 1997](#)) or THE EVIDENTIAL MORPHEME/MARKER ([Smirnova 2011a,b; 2013](#); [Koev 2017](#)), formally uniquely characterized by a 3rd person auxiliary drop.

As far as the interpretation of the evidential forms is concerned, formal analyses range from their encoding (i) indirect (reportative, inferential) evidence (see [Izvorski 1997](#)), (ii) indirect or direct evidence depending on the context (see [Smirnova](#)), and (iii) not encoding evidence at all (see [Koev 2017](#)). Thus [Koev](#) argues that the evidential forms merely indicate a spatio-temporal distance between the event described by the sentence and the event of the speaker acquiring the evidence for his claim, from which the evidential meaning is pragmatically derived. [Smirnova](#), on the other hand, assumes that the evidential encodes a temporal relation between the EVIDENCE ACQUISITION TIME (EAT) and the SPEECH TIME (ST) that, depending on context, is that of precedence (in reportative and inferential contexts) or coincidence (in direct contexts with exclamatory intonation), thus providing a formal account of the compatibility of the evidential forms with the expression of direct evidence.

In the grammatical tradition, uses of evidential forms in direct evidential contexts are dealt with by assuming a further evidential category or paradigm (see [Stankov 1969](#)) called the (AD)MIRATIVE, involving auxiliary drop in the 3rd person

and expressing surprise over some suddenly discovered fact or event, see (3).⁴

- (3) Ivan rabotel!
 Ivan work.IPF.PTCP
 ‘Ivan works!’

First noticed by Weigand (1925), the status of the admirative is subject to continuing debate. While Weigand considers the admirative as a special use of the present perfect, others like Aleksova (2003) and Kim & Aleksova (2003) argue that the admirative is a special, expressive use of the conclusive that indicates a mismatch between what is expected based on inference and the actual state of affairs (see also Beševliev 1928; Ivančev 1976; Guentchéva 1990). On the other hand, Andrejčin (1938) views the admirative (which he calls “inopinativus”) as a special use of the renarrative forms serving the expression of facts unexpected for the speaker (see also Nicolova 1993; Bojadžiev et al. 1999; Hauge 1999). The semantics of the admirative is described in Nicolova (2013) more specifically in terms of asserting a state of affairs *p* and expressing surprise over *p*, where *p* is discovered immediately before the speech time and the surprise stems from the fact that the speaker’s previous knowledge implies not-*p* rather than *p* (see also Guentchéva 1990). Finally, while the evidential source indicated by the admirative is generally assumed to be direct, some authors (e.g. Aleksova 2001; Kim & Aleksova 2003; Simeonova 2015) argue that other evidential sources such as hearsay and inference may also be involved; see (4), where the admirative is felicitous in all three evidential contexts:

- (4) *Context:* Ivan thought that Stojan did not work. (i) direct evidence: Ivan sees Stojan working. (ii) inference: Ivan notices that the door to Stojan’s study is closed. (iii) hearsay: Petăr tells Ivan that Stojan is working. Ivan believes it and exclaims:
- Toj rabotel!
 he work.IPF.PTCP
 ‘He works!’
- (Simeonova 2015: 3; slightly modified)

⁴In addition, a fourth evidential category is sometimes assumed, the DUBITATIVE. It involves two further forms of the auxiliary – present (*sām*) and the past participle (*bil*) – and auxiliary drop in the 3rd person. It expresses the speaker’s doubt with respect to the truth of some renarrated proposition, see, e.g., Bojadžiev et al. (1999); Pašov (1999). I assume for now that the dubitative is an additional interpretation of the renarrative in accordance with Bojadžiev et al. (1999) and do not deal with it in this paper.

Based on such evidence, Simeonova (2015) argues in favor of an account of the admirative in terms of mirativity, rather than in terms of evidentiality.

In fact, mirativity as a semantic category encoding the speaker's surprise due to new and unexpected information has been argued to be independent from evidentiality since miratives do not make claims about the source of evidence for the proposition. Rather, this source may be of any kind: direct observation, inference, or hearsay (see, e.g., Jacobsen 1964; Watters 2002). Mirativity may be expressed by various grammatical forms (DeLancey 1997; 2001; 2012), next to other means such as lexicalized adverbials, conventionalized constructions (such as English *(It) turns out (that) S*), and intonation.⁵ Aikhenvald (2012) discusses cross-linguistic evidence for a number of grammatical categories, most prominently evidential forms, tense, and aspect that can acquire mirative meanings such as sudden realization, unexpected new information, and surprise. She refers to such extensions of non-mirative grammatical categories towards mirative interpretations in certain contexts as “mirative strategies”. Differences between evidentials and miratives include the observations that miratives have an assertive force, whereas evidentials typically do not, and that some mirative constructions are restricted with respect to particular tense and/or aspect forms or combinations of tense and aspect forms, whereas evidential constructions do not obey restrictions as to tense and aspect combinations (Aikhenvald 2012: 441). In spite of these differences, in a number of languages evidential forms such as non-firsthand evidentials or dedicated inferential and reportative evidentials acquire mirative “overtones” in certain contexts which can be strengthened by additional means such as particles and interjections (ibid.).

It seems that mirativity and evidentiality are closely intertwined also in the case of the Bulgarian admirative. Although the Bulgarian admirative does not make claims about a particular evidential source, as indicated by (4), it is formally related to the renarrative paradigm in that it involves auxiliary drop, and its tense and aspect morphology is restricted to particular forms and combinations, as will be shown in §3. Further evidence that will be provided in §3 shows that the Bulgarian admirative has assertive force and involves speaker commitment, while the renarrative does not, and differs from the conclusive both in terms of aspectual restrictions and auxiliary behavior. Moreover, I show that the admirative is not only used in exclamative but also in declarative sentences, a property of mirative constructions that has been attested crosslinguistically (see, e.g., Bustamante 2013). All these facts suggest that the Bulgarian admirative can

⁵See also Bustamante (2013: 160) on the Spanish mirative verb *resultar* ‘turn out’, as well as Tatevosov & Maisak (1999: 290) on the Tsakhur mirative particle *jī* ‘it turns out that’.

be seen as a mirative extension of a specific combination of the verbal categories evidentiality, tense, and aspect.

Previous accounts of the admirative do not take these properties into consideration. This concerns first and foremost the aspectual restrictions of the admirative. Although Smirnova (2013: 505) argues that only the “present tense form of the indirect evidential” can yield a direct evidential interpretation, she does not account for this property in her analysis.⁶ On the contrary, Smirnova argues that the evidential stems do not encode aspectual difference but carry temporal information only. In addition, there is evidence that the much debated question of the aspectual properties of the imperfect and the aorist and their relation to the morphological opposition perfective/imperfective (see, e.g., Demina 1976; Sonnenhauser 2006) is highly relevant for the analysis of the Bulgarian evidential system in general and the admirative in particular.

Secondly, earlier accounts rely on the assumption that the admirative is tied to exclamatory mood. Thus, Aleksova (2003), Simeonova (2015), and Sonnenhauser (2015) treat all auxiliary-less evidential forms in exclamatives as admiratives.⁷ Similarly, Smirnova’s analysis of the interpretation of evidential forms in direct contexts relies on the assumption that the expression of direct evidence is related to exclamatory mood. Instead, I argue with Bustamante (2013) that a distinction must be made between mirativity as a semantic category encoded by various linguistic means (intonation, mirative predicates, verbal morphology) on the one hand and exclamations/exclamatives as illocutionary categories on the other: while both exclamations (declaratives with intonation marking exclamatory force) and exclamatives (special constructions with exclamatory force) can mark the speaker’s surprise due to unexpected information,⁸ there are several properties that distinguish them from mirative constructions in general, such as intonation pattern (which can both be falling and rising with miratives; see more details in Bustamante 2013: 152-153), force (declarative for miratives vs. ex-

⁶Moreover, describing the imperfect *l*-participles in the evidential forms in terms of “present tense forms” is not entirely correct, since, as will be shown in §3, the temporal contribution of the renarrative imperfect participles may, depending on the context, involve reference to the present or the past, due to the well-known syncretism between the participle forms for the present and the imperfect (e.g. *pišel sâm*), as well as present perfect and pluperfect (e.g. *bil sâm pišel*), and future perfect and past future perfect (e.g. *štjal sâm da sâm pišel*); see Andrejčin (1944: 266). This syncretism has been dealt with both in terms of homonymy (e.g. Andrejčin 1944) and polysemy or ambiguity (e.g. Demina 1959).

⁷See also Guentchéva (2017) who argues that admirative constructions are marked by exclamatory intonation and indicate discrepancy between what is expected and what is observed.

⁸Rett (2011) points out that exclamations and mirativity markers both refer to speaker expectations.

clamatory for exclamations/exclamatives), and embeddability under certain predicates. Moreover, while miratives indicate a clash with previous beliefs, exclamations/exclamatives express a general emotive attitude towards the proposition (surprise, admiration, amazement), which is demonstrated by the acceptability of exclamations in contexts in which the speaker already believes the information expressed but is exclaiming in order to point it out, such as *You overslept again! Which was also to be expected.* (Bustamante 2013: 149, 154–155). In contrast, miratives are not felicitous in contexts in which the speaker already knows or believes the information and are thus assertions expressing that the speaker has just discovered something unexpected, as will also be shown for the Bulgarian admirative. This property indicates that miratives are modalized propositions rather than a kind of speech act (Bustamante 2013: 159).

In addition to disregarding the use of admiratives in declarative sentences, Smirnova's account of the use of evidential forms in contexts of direct evidence is further inadequate because it is based on an operator EXCL which has no illocutionary semantics but is specifically designed to fix the desired temporal relation between the evidence acquisition time EAT and the speech time ST, which in direct evidence contexts is that of coincidence ($EAT = ST$) and in indirect evidence contexts one of precedence ($EAT < ST$).⁹ But even genuine illocutionary operators (such as E-FORCE in Rett 2011: 429) are unable to account for the relation between the morphological form and the semantic properties of the admirative that will be discussed in §3 and that distinguish the admirative from exclamatory uses of the other two evidential forms, the renarrative and the conclusive.

Finally, considering the Bulgarian evidential system as a whole, the assumption of a single evidential morpheme expressing various evidential sources is a simplification that does not account for the actual usage of the Bulgarian evidential forms. As will be shown in §3, it is far from settled that the conclusive involves auxiliary drop. The fact that the admirative is restricted with respect to the form of the *l*-participle militates against such a view as well. In addition, formal analyses like Izvorski (1997) and Koev (2017) are unable to accommodate the admirative since they are not compatible with direct evidence: Izvorski's analysis relies exclusively on indirect evidence and Koev's analysis on spatio-temporal distance between EAT and the event, which is not true for direct evidence. The auxiliary variation hypothesis is not tenable either once the admirative enters the picture: an explanation in terms of pragmatic effects related to points of

⁹In addition, applying Smirnova's analysis to admiratives in declarative sentences would falsely tie the admirative to indirect evidence, as the illocutionary operator DECL she defines would lead to an indirect evidence interpretation.

view would falsely predict that the auxiliary-less admirative forms are tied to a non-narrator.

In the next section, I provide evidence for the properties of the Bulgarian admirative discussed above which strongly suggests an analysis in terms of a mirative extension of evidential verbal forms.

3 The Bulgarian admirative

The Bulgarian admirative differs from renarrative and conclusive evidentials in a number of morphological and semantic properties:

- While the admirative (which may, similar to the conclusive, be based on inferential evidence) always involves auxiliary drop, the auxiliary of the conclusive may be omitted under certain conditions that will be discussed below.
- Whereas renarrative and conclusive evidentials both use aorist and imperfect participles, the forms of the admirative are restricted to imperfect participles.
- The admirative is not only used in exclamations but also in declarative sentences with declarative illocutionary force.
- While the admirative expresses speaker commitment to the underlying proposition, the renarrative is underspecified in this respect.¹⁰
- Whereas in the case of the admirative the past morphology expresses reference to present events, the temporal interpretation of the renarrative may vary between past and present depending on participle type and context.
- Admirative sentences are always related to a clash of beliefs, whereas renarrative and conclusive evidentials (and the present perfect for that matter) used in exclamations may express a wider range of emotive attitudes next to (or beyond) surprise.

¹⁰I do not exclude though that the renarrative expresses the commitment of the reporter towards the reported proposition; see also Smirnova (2011a; 2013).

(5) *Inferential context:* Your late aunt Maria spent the last months of her life in Paris. No one knows why. After the funeral, you found a first chapter of an unauthored manuscript about Paris in Maria's papers. You inferred that Maria was writing a book. When one of the relatives asks you how Maria spent the last months of her life, you say:

‘Maria was writing a book, [I inferred].’ (Smirnova 2013: 497; my glosses)

‘Maria was writing a book, [I inferred].’

¹²The survey involved 11 native speakers born and living in Sofia, 3 male, 8 female, aged between 20 and 80, 10 of them university graduates, 1 high-school graduate. The survey was designed as a forced-choice task, with 5 alternatives to choose from for the target utterance: the verb in its indicative present form, aorist participle with auxiliary, aorist participle without auxiliary, imperfect participle with and imperfect participle without auxiliary. As a reviewer pointed out to me, the fact that the participants could not choose more than one answer could have obscured cases where the version with the auxiliary was possible but less preferred. Still, the survey shows that the preferred forms are the ones containing the auxiliary.

- (7) Maria e pišela kniga.
 Maria is write.IPF.PTCP.IPFV book
 ‘Maria was writing a book, [I inferred].’

For two of the items – Smirnova (2013: 480, (3) and 498, (35)) – 6 informants preferred the original auxiliary-less version. Looking closer at the contexts of the examples, however, they seem to be ambiguous between inferential, renarrative, and admirative interpretations. Thus, while Smirnova’s example (3) describes a situation in which the speaker spontaneously informs her husband of a new surprising fact she just has discovered and thus allows for an admirative interpretation, example (35) draws on evidence from a calendar entry of the person the speaker talks about, which can be interpreted as a second-hand evidential source licensing auxiliary-less renarrative forms.

These observations show not only that the usage of Bulgarian evidential forms is highly sensitive to context, but also that evidential forms in inferential contexts are not necessarily auxiliary-less and are at least in those cases formally distinguishable from admiratives based on inferential evidence.¹³

At the same time, it seems that the acceptance of auxiliary-less conclusives may not merely be influenced by context but related to some aspectual properties of the evidential form. Thus it seems that the auxiliary may be omitted when the *l*-participle is based on the aorist form of a perfective verb (or a verb like *săm* ‘be’ which is underspecified with respect to aspectual distinctions), while the temporal interpretation of the form remains the same in both versions:

- (8) *Context:* Ivan, looking at his watch:
 To (e) stanalo veče mnogo kāsno.
 it is become.AOR.PTCP.PFV already very late
 ‘It has already become very late.’

For comparison, the insertion of the auxiliary into an admirative sentence changes the temporal interpretation from present to past and renders the sentence infelicitous in the mirative context:

- (9) *Inferential mirative context:* Ivan thought that Stojan was not working, but then he notices that the light in Stojan’s study is on and exclaims:
 Stojan rabotel! / #Stojan e rabotel!
 Stojan work.IPF.PTCP.IPFV Stojan is work.IPF.PTCP.IPFV
 ‘Stojan is working! / Stojan has been working!’

¹³Of course, one could say that the auxiliary-less forms are the “real” evidential forms, whereas the ones retaining the auxiliary are forms of the present perfect with a similar conclusive meaning, as Izvorski (1997) seems to suggest.

What seems to distinguish the two versions in (8) is what can be described as the emotional intensity of the utterance which is greater without the auxiliary. This effect is neutralized when the conclusive is used in an exclamation:

- (10) Ja go viž ti, kakvo (e) namislil starijat djavol!
well he.ACC look.IMP you what is plotted.AOR.PTCP.PFV old.DEF devil
(Levin-Steinmann 2004: 150)
'Look what he has plotted, the old devil!'

In contrast, the auxiliary-less evidential form in (5) which is considered problematic by my informants is based on an imperfective aorist participle. This indicates that this aspectual combination may be less acceptable without the auxiliary in non-mirative inferential contexts than an aorist perfective participle.¹⁴ Clarifying the morphological status of the conclusive goes, however, beyond the scope of the present study and must be left for future work. For my current purposes, it suffices to conclude that admiratives differ formally from conclusives in terms of both aspectual properties and auxiliary behavior.

3.2 Admiratives and declaratives

As already pointed out, mirative constructions are not tied to exclamatory illocutionary force crosslinguistically. This applies to the Bulgarian admirative as well. As the examples below show, sentences containing admirative forms with auxiliary drop and imperfect past participles with present tense interpretation can be used in declarative sentences with non-exclamative, declarative intonation, where they express commitment to the asserted proposition as well as a clash between the proposition and the speaker's past beliefs.

- (11) Ne bjah prava, kogato pisah, če Košlukov ne raboti. To se
NEG was right when wrote that Košlukov NEG work.PRS it REFL
okaza ošte po-lošo – toj rabotel.
turned.out more worse he work.IPF.PTCP
'I was not right when I wrote that Košlukov wasn't working. It turned out to be worse – he obviously IS working.'

In (11), the admirative sentence is semantically embedded under the mirative predicate *okazva se* 'it turns out' which already makes the mirative meaning of

¹⁴See also Levin-Steinmann (2004: 33) who discusses an auxiliary-less "reduced perfect" ascertaining the existence of some state and mainly involving the perfective aspect.

the admirative sentence salient: the speaker indicates that, prior to the discovery of facts suggesting the opposite, her belief base contained the proposition “Košlukov is not working”.¹⁵ Since the admirative sentence asserts that Košlukov is working, it suggests that the speaker’s belief base has been revised as a result of receiving some evidence. The evidence which causes the belief clash may be of any kind: reported, inferred, or directly observed. Note that neither the presence nor the form (past aorist) of the mirative predicate *okaza se* have an impact on the mirative interpretation: it does not change if *okaza se* is dropped. A sequence of tenses effect can be excluded here since neither the interpretation nor the acceptability of the sentence change when the predicate of the admirative sentence is set to present tense (*raboti* ‘works’). A past generic reading can also be excluded, since this reading requires the use of the auxiliary.

A close example is (12) where the admirative is used in a belief revision context similar to the one in (11). This example stems from Andrejčin (1938: 68) and is used to illustrate what he calls the “inopinative” use of the forms of the renarrative for the purpose of expressing facts unexpected to the speaker.

- (12) Misleh, če e zlato, a to ne bilo.
 think.1SG.IPF that be.3SG.PRS gold, but it NEG be.IPF/AOR.PTCP
 ‘I thought it was gold, but it isn’t.’

Here, the assertion of the admirative sentence that the object in question is not made of gold is contrasted with an earlier opposite belief of the speaker embedded under the epistemic predicate *mislja* ‘believe’ in the past (imperfect) tense. The evidence that causes the belief change may again be of any sort: direct observation, but also inference or hearsay. Note that the verb *sām* ‘be’ belongs to the rather small group of verbs which do not have different participle forms for the imperfect and the aorist. However, a similar example can be constructed where it can be shown that only the imperfect form is appropriate in such contexts:

¹⁵Entire example: *Ne bjah prava, kogato pisah, če programnijat direktor v BNT Emil Košlukov ne raboti, zaštoto godinata veče si teče, a vse ošte njama programna shema. To se okaza ošte pološo – toj rabotel. I kato ne moža da “izraboti” dobroto predavane “Denjat započva s kultura”, kompensira s drugi dve predavanija.* ‘I was not right when I wrote that the program director of the Bulgarian National Television Emil Košlukov wasn’t working, since the year has already begun and yet no program plan exists. It turned out to be worse – he obviously IS working. And since he did not manage to ruin the good show “The day begins with culture”, he did it to two other shows instead.’
 (<http://e-vestnik.bg/27704/>)

- (13) Misleh, če raboti, a toj ne rabotel / *rabotil.
 think.1SG.IPF that work.3SG.PRS but he NEG work.IPF.PTCP AOR.PTCP
 ‘I thought he was working, but he isn’t.’

Moreover, a past tense interpretation is only achieved by putting not only the embedded verb in the present perfect, but also its second occurrence, which requires the use of the auxiliary; see (14).

- (14) Misleh, če e rabotel / rabotil, a toj ne
 think.1SG.IPF that be.3SG.PRS work.IPF.PTCP AOR.PTCP, but he NEG
 *(e) rabotel / rabotil.
 be.3SG.PRS work.IPF.PTCP AOR.PTCP
 ‘I thought he was/has been working, but he was not/has not been working.’

Here, the sentence suggests that the belief revision has occurred further back in the past and does not have any bearing on the present. In order for a construction to express mirativity, the evidence causing the belief revision must have been acquired recently and have bearing on the present.¹⁶

3.3 Admiratives and renarratives in exclamations

As already pointed out in §2, most researchers assume that admirative forms and/or mirative interpretations are only licensed when the forms are used in exclamative sentences. I showed in the previous section that this assumption does not correspond to the linguistic facts. In this section, I argue that it is possible to distinguish between admirative forms having mirative (i.e. clash of beliefs) interpretations, on the one hand, and uses of renarrative forms with renarrative semantics used in exclamations where they indicate surprise or other emotive attitudes, on the other. I pointed earlier at evidence suggesting that mirative constructions differ from exclamations/exclamatives with regard to a number of properties. Thus, exclamatory force is not merely related to surprise in terms of clash of beliefs but covers a wider range of emotive attitudes. Consequently, a renarrative form used in an exclamation or exclamative should be expected to have a greater range of meanings than surprise. Another difference is that while the admirative forms (imperfect evidential forms with auxiliary drop and present

¹⁶See also Rett & Murray’s (2013) RECENCY RESTRICTION according to which “mirative interpretations are only available relatively recently after the speaker’s learning that *p*.” (Rett & Murray 2013: 464).

tense interpretation) indicate that the speaker is committed to the proposition expressed, exclamative renarratives do not necessarily express such a commitment. Finally, whereas imperfect renarrative forms in exclamative sentences are ambiguous between present and past interpretation, imperfect admirative forms receive only a present interpretation. Consider (15) where the context only allows the imperfect participle.

- (15) *Context:* Ivan thought that Stojan was not working. (i) direct evidence: Ivan sees Stojan working. (ii) inference: Ivan notices that the door to Stojan's study is closed. (iii) hearsay: Petăr tells Ivan that Stojan is working. Ivan believes it and exclaims:

Toj rabotel / *rabotil! #Tova ne e vjarno. / #Tova se
he work.IPF.PTCP AOR.PTCP this NEG is true this REFL
očakvaše.
expected

'He is working! This is not true. / This was to be expected.'

The temporal interpretation of the form in this context is not past but present. In order to get a past interpretation, it is not only necessary to adjust the context (Petăr tells Ivan that Stojan was/has been working), but also the auxiliary must be used, which changes the admirative into a conclusive (or present perfect) sentence with exclamatory intonation.¹⁷

In addition, the admirative sentence cannot be continued by an utterance like "This is not true", which indicates that the speaker is committed to the information expressed, nor by a sentence like "This was to be expected", which indicates that the speaker's beliefs prior to receiving the evidence have been revised to accommodate the new information. Now consider the case of the exclamative use of the renarrative in (16). Here, depending on the tense used in the report, the imperfect participle may refer to a present or past eventuality.¹⁸ In addition, the exclamative renarrative may express not only surprise and thus commitment to

¹⁷The example would be modified as follows:

- (i) *Context:* Ivan thought that Stojan was not working. (i) direct evidence (not possible). (ii) inference: Ivan notices a pile of newly printed paper on Stojan's desk. (iii) Petăr tells Ivan that Stojan was working. Ivan believes it and exclaims:

Toj e rabotel / rabotil!
he is work.IPF.PTCP AOR.PTCP
'He was/has been working!'

¹⁸In this case, the tense forms in the report can be *rabóti* (present tense), *rabóteše* (imperfect), or *rabotí* (aorist).

the content uttered but alternatively disbelief ('This is not true!') or some emotive attitude other than surprise ('This was to be expected').

(16) *Context:* Petăr tells Ivan that Stojan is/was working. Ivan exclaims:

Toj rabotel! Kakva iznenada! / Tova ne e vjarno! / Tova se
he work.IPF.PTCP what surprise this NEG is true this REFL
očakvaše!
expected

'He is/was working! What a surprise! / This is not true! / This was to be expected!'

Also the aorist participle can be used within an exclamative renarrative, as shown in (17). Here, however, the aorist participle unambiguously shows that the report on which the evidence is based refers to a past eventuality. Apart from this, the observations from the imperfect participle case hold: the attitude expressed may be surprise (and thus commitment), disbelief, or some other emotive attitude:

(17) *Context:* Petăr tells Ivan that Stojan worked (yesterday). Ivan exclaims:

Toj rabotil! Kakva iznenada! / Tova ne e vjarno! / Tova se
he work.AOR.PTCP what surprise this NEG is true this REFL
očakvaše!
expected

'He worked! What a surprise! / This is not true! / This was to be expected!'

The different behavior of the imperfect participle forms in the case of the admirative as compared to the renarrative shows that a simple explanation in terms of a mere ambiguity of forms does not suffice, and an account of the admirative needs to capture these facts. Furthermore, it was shown in (16) and (17) that the speaker may use renarrative forms even though she does not believe the reported information, or when she already believes that the proposition is true. This contradicts earlier accounts like Smirnova (2013) and Koev (2017). Thus, Smirnova argues that her evidential operator *Ev* has a modal component because *Ev* is infelicitous in reportative contexts when the speaker knows that the proposition *p* is true or when the speaker knows that *p* is false.¹⁹ However, she does not consider renarratives used in exclamatives. Contrary to Smirnova, Koev argues that

¹⁹Smirnova assumes more specifically that in inferential and direct evidential contexts the speaker must be committed to the truth of *p*, where the commitment is weaker than in non-modals.

the evidential commits the speaker to *p*, explaining dubitative cases in terms of pragmatic weakening through perspective shift (see *Koev 2017*: 20-25). As shown in the above examples, renarrative forms used in exclamations do not require a perspective shift in order to be interpreted as non-committing, nor are they infelicitous in contexts where the speaker already knows that *p* is false. Moreover, it can be shown that also in declaratives, the renarrative is felicitous in contexts where *p* is considered false and where no perspective shift is suggested. Thus, the renarrative can be embedded under the predicate *znaja* ‘know’ with the sole interpretation that the speaker knows of the existence of the claim made by some reporter, either without taking a stance as to the truth of the claim, or in a context in which the speaker knows that the reported proposition is false, as shown by the felicitous continuations of the renarrative sentence in (18). If the speaker knows that a reported proposition is true, the renarrative is indeed infelicitous and an indicative form must be used.

- (18) *Znaja, če Petăr pušel. No ne znam dali naistina*
 know.1SG.PRS that Petăr smoke.IPF.PTCP but NEG know if really
 puši. / No toj văobšte ne puši.
 smoke.3SG.PRS but he at all NEG smoke.3SG.PRS
 ‘I know that it is claimed that Petăr smokes/smoked. But I don’t know if
 he really does. / But he doesn’t smoke at all.’

Similarly, if the renarrative is embedded under the negation of the predicate *znaja* ‘know’ in its past tense form, the only possible interpretation is that the speaker didn’t know about the existence of such a claim made by some reporter. At the same time, the sentence is felicitous when the speaker is ignorant with respect to the truth of *p* or when she knows that *p* is false.

- (19) *Ne znaeh, če Petăr pušel. Az lično njamam*
 NEG know.1SG.AOR that Petăr smoke.IPF.PTCP I personally do.not.have
 predstava dali puši / e pušil ili ne. / Az lično
 idea if smoke.3SG.PRS is smoke.AOR.PTCP OR NEG I personally
 znam, če ne puši / ne e pušil.
 know that NEG smoke.3SG.PRS NEG is smoke.AOR.PTCP
 ‘I didn’t know that Petăr supposedly smokes/smoked. I personally have
 no idea if he does/did or not. / I personally know that he doesn’t/didn’t
 smoke.’

Renarratives behave the same way in exclamatory sentences: they are felicitous both in contexts in which the speaker believes the reported information and is

surprised, as in (20) which can be continued by an utterance like ‘Can you imagine, this lazy guy!’, and in contexts like (21) where the speaker is rather outraged by a claim she knows doesn’t correspond to the truth and where the sentence with the renarrative can be continued by an utterance like ‘What a lie!’.

- (20) *Context:* A learns from B that Ivan worked the previous day which happens to be a Sunday. A is surprised over this fact (+BELIEF CLASH, +COMMITMENT) and later tells C:

Ivan rabotil včera!
 Ivan work.AOR.PTCP yesterday
 ‘Ivan worked yesterday!’

- (21) *Context:* A learns from B that Ivan worked the previous day. A does not believe it because she knows the truth but finds the commitment of the reporter B surprising (–BELIEF CLASH, –COMMITMENT) and later tells C:

Ivan rabotil včera!
 Ivan work.AOR.PTCP yesterday
 ‘Ivan worked yesterday!’

These uses of the Bulgarian renarrative evidential form suggest that it merely indicates that the speaker has hearsay evidence for *p*, without committing the speaker to its truth.²⁰

Table 2 summarizes the findings in this section.²¹

Table 2: Properties of the admirative by comparison

	auxiliary	participle		evidential source			speaker	belief	time reference	
		AOR	IPF	report	infer.	dir.	commitment	clash	present	past
renarr.	–	+	+	+	–	–	–	–	+	+
concl.	+/–	+	+	–	+	–	+	–	?	+
admir.	–	–	+	+	+	+	+	+	+	–

²⁰Additional evidence that needs to be examined is that there is a slight difference in intonation pattern, as also observed in Bustamante (2013: 152–153) for the Spanish mirative as compared to Spanish exclamations: L or H-L in admiratives, H in exclamations.

²¹Since auxiliary-less conclusives are difficult to distinguish from inference-based admiratives, I leave the question open whether the former may express reference to the present.

4 The admirative operator

In this section, I account for the properties of the Bulgarian admirative discussed in the preceding section in terms of the modal evidential operator *ADMIR*(*p*) which captures the following facts:

1. The proposition *p* is asserted, the speaker is committed to the truth of *p*.
2. *p* is based on evidence of some sort (direct, inferential, reportative).
3. *p* clashes with the speaker's beliefs up to the point of getting the evidence.
4. The asserted eventuality is ongoing at speech time.
5. The evidence acquisition time immediately precedes or coincides with the speech time.

To this end, I adopt *Bustamante's* (2013) analysis of a Spanish mirative construction that involves past imperfect morphology as in (22).²² Here, the past imperfect does not have its usual temporal meaning expressing reference to a past eventuality but refers to a present eventuality and expresses that *p* clashes with the speaker's previous beliefs. In addition, this use of the past imperfect indicates that the speaker is committed to *p* and is felicitous in both direct and inferential evidential contexts.

- (22) Juan fum-aba.
 Juan smoke-PAST.IPFV.3SG
 'Juan smokes!' (Spanish, *Bustamante* 2013: 34)

Examples like this are taken to suggest that the mirative use of the past imperfective involves "a shifting of time reference for the eventuality described in the proposition, leaving the past as 'fake'", while the (imperfective) aspect retains its usual interpretation (*Bustamante* 2013: 6). *Bustamante* interprets such cases of 'fake' past interpretations of past tense morphology and imperfective aspectual morphology as an example of mirative extension of the imperfect (and pluperfect) tense in Spanish.

In contrast to approaches to fake past morphology such as *Iatridou* (2000), *Bustamante* does not assign a special semantics to this past tense but assumes a

²²The glosses are as in the original example.

regular meaning in terms of Kratzer (1998: 10).²³ The crucial assumption concerns the locus of interpretation of the past tense morpheme which seems displaced, since it does not contribute its temporal meaning to the proposition: instead of it being interpreted in TP (the domain of the assertion), the feature [past] is interpreted in CP, which is the domain of the mirative operator.

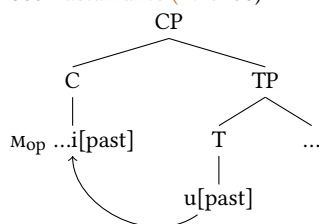
The second crucial assumption is that the main contribution of the mirative operator is to relate the assertion to the speaker's beliefs prior to the discovery of facts leading to the assertion where the newly discovered facts are such that they clash with the past beliefs. The speaker's past beliefs are introduced by the mirative operator M_{op} , the first argument of which is a modal base representing the locus at which the displaced [past] feature is interpreted (Bustamante 2013: 12): The modal base has a time argument that is saturated by the displaced [past] feature, which results in a representation of the speaker's past beliefs holding in an interval that precedes the utterance time, where the utterance time usually coincides with the "discovery time", i.e. the time at which the evidence is received (Bustamante 2013: 12–13).

The syntactic assumptions capturing the displacement of the tense morpheme include a feature-checking relationship between interpretable features of functional projections that need to be checked against the corresponding uninterpretable features of lexical projections (via Agree, following Chomsky 2000; 2001; see details in Bustamante 2013: Ch. 3). In miratives, the tense feature is displaced such that T (or V) bears the morphologically realized but uninterpretable $u[past]$ feature, whereas C bears the interpretable $i[past]$ feature.²⁴ In addition, Bustamante (2013: 50–51) assumes the structure in Figure 1, where "VP denotes a property of events and combines with Aspect to yield a property of times (AspectP)", and Tense combines with AspectP and yields a proposition (TP).

The modal mirative operator M_{op} is defined below, where P represents the set of the speaker's beliefs and Q represents the assertion:

²³ $\llbracket \text{past} \rrbracket^{g,c}$ is only defined if c provides an interval t that precedes t_0 . If defined, then $\llbracket \text{past} \rrbracket^{g,c} = t$. This definition corresponds to the neo-Reichenbachian past defined in terms of a relation between reference time and speech time ($RT < ST$); see, e.g., Klein (1994).

²⁴ See Bustamante (2013: 38):



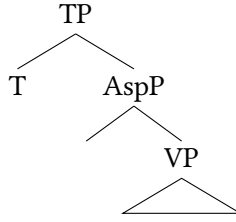


Figure 1: Tense and aspect in the TP (Bustamante 2013: 51)

$$(23) \quad m_{OP} = \lambda P \lambda Q \lambda t_1 \lambda w_1 [[P(w_1)(t_1) \subseteq \lambda w \neg Q(w)(t_1)] \wedge Q(w_1)(t_1)]$$

(Bustamante 2013: 54)

The appropriate modal base is provided by the accessibility relation R defined below, where R takes as its first argument the time t and is thus restricted by a time of evaluation:²⁵

$$(24) \quad R = \lambda t \lambda w \lambda w' [w' \text{ is compatible with speaker's beliefs in } w \text{ at } t]$$

The derivation of the mirative meaning under the assumption of the displaced tense feature $i[\text{past}]$ and the mirative operator m_{op} applied to the assertion (TP) is shown in Figure 2 and Figure 3 below.²⁶

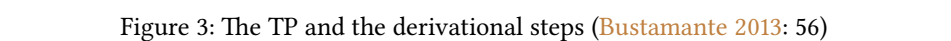
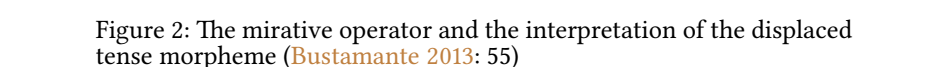
In Figure 2, R is applied to the displaced past feature $i[\text{past}]$, yielding the first argument of m_{op} , the set of the speaker's past beliefs P , i.e. the beliefs holding at an interval up to the speech time. Then, the m -operator is applied to the assertion (TP), which gets a present reading: the tense feature $u[\text{past}]$ in T is uninterpretable (see Figure 3), i.e. no interpretation of the feature takes place at this point, and the denotation of AspP percolates to TP . There, m_{op} is applied to the assertion, the time argument of which is bound by λt_1 in (23) and gets the value of the speech time.²⁷ Hence, the content of the mirative sentence, the proposition Q , gets interpreted “in the present and with respect to the actual world”, i.e.

²⁵The idea to impose a temporal restriction on the accessibility relation is adopted from Ippolito's (2002) approach to counterfactuals and accounts for the fact that beliefs change over time.

²⁶Bustamante (2013: 61-62) suggests an alternative version of m_{op} where the meaning of $i[\text{past}]$ is incorporated into the operator and m_{op} combines directly with the accessibility relation R :

$$(i) \quad m_{OP} = \lambda R \lambda Q \lambda t_1 \lambda w_1 [\lambda t_1 [\underset{\text{PAST}}{R(t_2)t_2} \wedge \underline{t_2 < t_1}] (w_1)(t_1) \subseteq \lambda w \neg Q(w)(t_1) \wedge Q(w_1)(t_1)]$$

²⁷Which for (22) has the form $\lambda t \lambda w$ [Juan smokes in w at t].



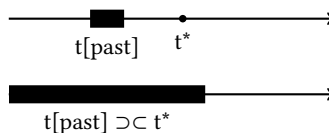
Concerning the precedence relation between the past beliefs and the speech/discovery time, *Bustamante* (2013: 58) notes that it is better accounted for in terms of immediate precedence by means of the abut-relationship $\supset\subset$ indicating a common boundary between these times.²⁹

Crucially, *Bustamante* (2013: 112–114) uses this immediate precedence relation also to explain why only past tenses such as the past imperfect (and the present perfect) but not the past perfective in Spanish can have mirative extensions: “We need a [past] tense feature that makes reference to an interval whose right boundary is the discovery time.” She argues that only the [past] tense associated with imperfective (and some perfect) forms is able to do so, due to the properties of events it is associated with, such as durative, continuous, and indefinite, in contrast to the perfective which is associated with properties like terminative, punctual, and definite (see also *Cipria & Roberts* 2000: 300). With the perfective, the event is seen as a subset of the reference time and thus completed or punctual, hence the perfective does not provide the right interval for the modal base to hold.³⁰

Bustamante (2013: 115) implements this “aspectual requirement on the past tense” in the Spanish mirative in terms of the set of syntactic features such that C asks for a $i[\text{past}, \text{unbounded}]$ feature, where the [unbounded] feature is the contribution of the imperfective aspect, following *Pancheva* (2003) who defines [unbounded] as setting up the event time as a superset of the reference time ($RT \subseteq ET$). In contrast, [bounded], the feature of the perfective, is defined as setting up the event time as a subset of the reference time ($ET \subseteq RT$). Given this

²⁹The abut-operator is adopted from *Kamp & Reyle* (1993: 573) where it is used to represent the temporal relation between the result state and the event in the perfect and where “the state starts at the very moment the event ends.”

³⁰As an additional argument *Bustamante* (2013: 112–113) points out the observation made in *Iatridou* (2000) that the ‘fake’ past in counterfactuals is accompanied by imperfective aspect and that putting perfective aspect in counterfactuals makes the past become real. From this *Bustamante* concludes that “there is an incompatibility between ‘fake’ past tense or, in our terms, displaced real tense and perfective aspect.” The aspectual properties of the two tenses and the requirement of the modal base on the right interval for the past beliefs are shown below (where t^* is the utterance time); see *Bustamante* (2013: 114):



constraint on the aspectual morphology of the participle, Bustamante (2013: 51) assumes that aspect contributes its usual interpretation to the assertion.³¹

Finally, Bustamante (2013: 14) points out that the Spanish mirative is not a direct expression of surprise in that the mirative operator does not encode surprise by itself. Instead, surprise is pragmatically derived from the clash between the recently discovered facts and what the past beliefs imply. This distinguishes the Spanish mirative from exclamations and exclamatives which can express a wider range of speaker emotions. Being compatible with the expression of surprise, though, the mirative can be embedded under an exclamatory illocutionary operator (EXC; defined in Gutiérrez-Rexach 1996), assuming the structure in Figure 4.

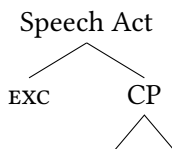


Figure 4: Embedding CP under an exclamatory operator (Bustamante 2013: 162)

As compared to the Spanish mirative, the Bulgarian admirative has not only modal, temporal, and aspectual, but also evidential properties that need to be accounted for. I therefore suggest that in addition to a modal base of past beliefs, the Bulgarian admirative explicitly introduces an evidential component in terms of (i) the evidence acquisition time (EAT) that precedes (in inferential and reportative contexts) or coincides with (in direct evidence contexts) the speech time ($EAT \leq ST$) and (ii) the requirement that the speaker's belief base at discovery time entails the asserted proposition, i.e. the speaker has some evidence for the assertion prior to or at the time the assertion is made.³² Although Spanish miratives do not have evidential morphology, the evidential meaning component of the Bulgarian admirative fits naturally with the mirative semantics defined

³¹ Bustamante (2013: 51–52) claims that the aspectual contribution of the imperfect is the imperfective aspect. Following Kratzer (1998), she assumes the latter to locate the reference time within the event time ($RT \subseteq ET$); see (i):

(i) $\llbracket \text{imperfective} \rrbracket = \lambda P. \lambda t. \lambda w. \exists e [t \subseteq \tau(e) \wedge P(e)(w) = 1]$.

³²Idea (i) is adopted from Smirnova's (2011b) definition of the evidential modal operator EV.

for the Spanish construction: the belief clash the admirative expresses is caused by some evidence and the existence of such evidence is suggested by the admirative itself, not merely by context.³³ It also fits with Bustamante's (2013: 57) observation that while the discovery time usually coincides with ST, there are cases where the discovery time precedes ST, like reporting news by means of miratives as well as miratives embedded under predicates like *to turn out*. This accounts also for the Bulgarian data discussed in §3. Although the admirative operator employs the usual temporal precedence relation, the relation between EAT and ST is best captured in terms of an immediate precedence (the abut-relation $\supset\subset$), which accounts for Rett & Murray's (2013) recency requirement mentioned in §3.2.

Similar to the Spanish mirative, the mirative interpretation of the Bulgarian admirative involves reference to a present eventuality, speaker commitment to the truth of p , and can be seen as the result of a displaced interpretation of the temporal feature of the past imperfect participle within the domain of the admirative operator ADMIR. The operator introduces a modal base of past beliefs that implies a proposition contradicting the asserted proposition, and binds the temporal variable of the assertion in TP to ST. The clash of old and new beliefs is caused by evidence for the asserted proposition. The operator is defined in (25), where P is the modal base specified by the accessibility relation R defined in (24) above, t' is the EAT introduced by the admirative, and Q represents the assertion.

$$(25) \quad \text{ADMIR} = \lambda P \lambda Q \lambda t_1 \lambda w_1 \exists t' [(t' \leq t_1) \wedge [P(w_1)(t_1) \subseteq \lambda w \neg Q(w)(t_1)] \wedge Q(w_1)(t_1)] \\ \wedge [\lambda w' [w' \text{ is compatible with speaker's beliefs in } w_1 \text{ at } t'] \subseteq Q(w_1)(t')]$$

When applied to the assertion, the operator ADMIR yields the following interpretation of the admirative construction: admirative sentences are assertions based on evidence of some sort (reportative, inferential, direct) contrasted against the speaker beliefs that hold up to the speech time which may coincide with the discovery time or succeed it. The speaker's past beliefs entail a conclusion that clashes with the assertion, which triggers belief revision, while the actual current beliefs at t' entail the assertion. I further assume that, similar to the Spanish mirative, the Bulgarian admirative does not encode surprise itself, but the sense of surprise associated with it is rather a result of the clash between what the past beliefs imply and the recently acquired new belief. Its compatibility with the expression of surprise makes the exclamatory environment especially suit-

³³Note that similar to the Spanish operator M_{op} , the Bulgarian admirative operator is covert, since its morphology is not unambiguous enough to trigger a mirative interpretation independently of context.

able for the admirative, which is accounted for by assuming a structure like the one presented in Figure 4 for the Spanish mirative.

In terms of the aspectual makeup of the participle and the reason why it is restricted to unbounded eventualities, similar assumptions can be made for the Bulgarian admirative as for the Spanish mirative. However, additional assumptions are needed for the distinction between MORPHOLOGICAL ASPECT related to the opposition imperfect : aorist and SITUATION or VIEWPOINT ASPECT related to the distinction between imperfective and perfective lexical forms in Bulgarian. With Rivero & Slavkov (2014) I distinguish between morphologically imperfect past participles like, e.g., *pišel* and morphologically perfective (aorist) past participles like *pisal*. In addition, I adopt their assumption that “the morphological contrast between imperfect tense and aorist tense inflections (imperfect *-še* vs. aorist *-a*) systematically encodes imperfective vs. perfective Viewpoints in the semantics” (Rivero & Slavkov 2014: 235). This applies to both indicative imperfects and aorists and their participles, where I assume the same semantics for the imperfective and perfective as in Bustamante (see fn. 31). Consequently, Bulgarian imperfect imperfective participles have the two features [past] and [unbounded], which is the required combination to feed the temporal argument of the modal base, as shown above. The ban on aorist and perfective forms in admirative sentences is explained by the introduction of the feature [bounded] by the aorist and perfective participles which always entails a past eventuality and disallows the displacement of the [past] feature.

A further reason why the Bulgarian admirative construction is restricted to morphologically imperfect and lexically imperfective participles seems to be related to the fact that a participle combining perfective aspect with imperfect tense like *napišel* in (26) is restricted to specific, repetitive contexts.

- (26) Vseki păt kogato napišel edno izrečenie, Petăr
 every time when write.IPF.PFV.PTCP one sentence Petăr
 otival da puši.
 go.IPF.IPFV.PTCP PTCL smoke.3SG.PRS
 ‘Each time Petăr wrote a sentence he went to smoke, it is said.’

The use of perfective aorist participles seems in general less restricted; however, this combination can only be used in conclusives and renarratives (like the present perfect), as the aorist is banned in admiratives; see (27) and (28).

- (27) *Context:* I see a picture of my good old friend Maria on a book in a window of a book shop and conclude that Maria has published a book. I say to myself:

Maria *(e) napisala kniga!
 Maria is write.AOR.PFV.PTCP book
 ‘Maria has written a book!’

- (28) *Context:* Ivan tells me that Maria has written a book. I find this exciting and later tell Petăr:

Ti ču li? Maria napisala kniga!
 you hear.AOR.2SG Q Maria write.AOR.PFV.PTCP book
 ‘Did you hear? Maria has written a book, they say!’

As a matter of fact, admiratives allow for the combination of secondary imperfective verbs and imperfect participle, as shown in (29).

- (29) *Context:* Ivan tells me that Maria has written a bestseller. Later, I meet Maria who denies that she has ever written a book. I suddenly realize that Ivan may have acquired a bad habit of making things up and exclaim:

Znači toj si izmisljal!
 mean.3SG.PRS he REFL make.up.IPF.PFV.PTCP
 ‘So he is making up things!’

Here, the temporal interpretation is that of a present (habitual) eventuality, which however carries over to the past event of Ivan telling the speaker a lie. This shows that the interplay of morphological and viewpoint aspect in the case of the Bulgarian admirative may be more complex than what has been assumed above. However, spelling out this contribution in detail is an issue that must be left to future work.

5 Summary and discussion

In this paper, I provided an analysis of the Bulgarian admirative in terms of a modal operator that captures the evidential, temporal, and aspectual properties of the construction. In this section, I discuss some consequences and residual issues related to the analysis presented above.

First of all, assuming that the admirative indicates a clash of beliefs accounts for the sense of epistemic uncertainty observed in, e.g., Smirnova (2013: 510)

who argues that “the evidential in direct contexts expresses commitment that is weaker than knowledge”.³⁴

Second, in order to fully account for the place of the admirative in the evidential system, operators for the renarrative and the conclusive need to be defined that adequately capture their properties discussed in the previous sections:

- Concerning the renarrative, such relevant properties are:
 - It can be formed by both imperfect and aorist participles of both imperfective and perfective verbs, where imperfect participles in renarrative forms get either past or present interpretation depending on context.
 - It does not commit the speaker (but possibly the reporter) to the proposition.
 - It indicates that the evidence is acquired before the speech time ($EAT < ST$).
 - It can be embedded under an illocutionary exclamative operator with interpretations ranging from surprise or disbelief to a number of further emotive attitudes.
- As for the forms of the conclusive:
 - They exhibit both types of past participles and aspectual forms.
 - They relate the assertion to the speaker’s beliefs (thus involving a modal base).
 - They indicate that the evidence is acquired before the speech time ($EAT < ST$).
 - They are embeddable under an illocutionary exclamative operator.

In addition, appropriateness conditions need to be specified that govern the application of one or the other evidential operator.

Third, allowing the temporal relation between discovery time and speech time to be one of either precedence or coincidence accounts for the fact that admiratives can be based not only on direct but also inferential and reportative evidence where the discovery time temporally precedes the speech time ($EAT < ST$). This

³⁴See a similar claim in Friedman (1981: 25) saying that Bulgarian evidential forms in direct contexts express “some state of ignorance or disbelief”.

is the case in (29) above. A further example illustrating this is Koev's (2017) deferred realization example cited in (30), where the speaker "has direct evidence for the described event but the realization that she does comes at a later time" (Koev 2017: 4):³⁵

- (30) *Context:* One of Nixon's aides vividly recalls walking into the Oval Office and seeing the President erase some tapes. She later learns about the Watergate scandal from the media and makes sense of what she had seen. When asked what happened on that day, she says:

Kogato vljazo-x, Niksān trie-še njakakv-i zapis-i. Toj zaličava-l
when enter-PAST Nixon erase-PAST some-PL tape-PL. he remove-EV
ulik-i-te.

clue-PL-DEF

'When I walked in, I saw Nixon erase some tapes. He was covering up the clues, as I learned later.' (Koev 2017: 4)

Koev (2017: 4) argues that this is not an example of mirativity, but a "truly evidential interpretation", since miratives are, according to him, conventionally accompanied by exclamative intonation and the speaker need not be surprised that Nixon was covering up the clues, as she may have heard about the Watergate scandal before uttering the sentence. There are, however, some arguments in favor of treating such cases of late realization in terms of mirativity. As already pointed out, mirativity is not necessarily accompanied by exclamative intonation and involves (sudden) discovery or realization typically related to a clash of beliefs. Besides, the direct evidence the speaker in (30) has is that of Nixon erasing some tapes, rather than of Nixon covering up clues. It is therefore more plausible to assume that at the time of obtaining this direct evidence, the speaker did not have information about the Watergate scandal, since otherwise she would have realized (inferred) that the event of tape-erasing she had witnessed was in fact/at the same time an event of covering up clues, or that the tape-erasing was done with the aim of covering up clues. The use of the zero-auxiliary form can thus be interpreted in terms of deferred realization and clash of old and new beliefs, which is the content of the admirative: the speaker's past beliefs entail the belief 'Nixon was erasing some tapes' acquired through direct observation; upon acquiring information about the scandal, the speaker realizes that Nixon was not just erasing some tapes, but by doing this was actually covering up clues, which runs against what the speaker believed earlier.

³⁵Koev's glosses are kept.

The analysis of late realization cases like (30) in terms of mirativity is also supported by typological evidence, see, e.g., Aikhenvald (2012: 441) who discusses mirative statements that are based on visual evidence or inference and “post-factum interpretation of the action judged by the results”. The main argument that Koev uses to rule out a mirative interpretation is related to the fact that the discovery time in the example temporally precedes the speech time, which is incompatible with direct evidential sources. This temporal relation is, however, compatible with the meaning of the admirative defined in (25), as well as with the clash of old and new beliefs based on some evidence that it encodes. Besides, it could be argued that the evidence leading to the mirative interpretation is not the directly observed event of tape-erasing, but the realization of the fact that the tape-erasing was in fact an act of covering up clues.

On the other hand, the eventuality referred to by the utterance is located in the past, not in the present, as was assumed for admirative sentences, which poses a problem for the analysis of (30) in terms of mirativity. One possible solution would be to assume that the past interpretation follows from the precedence relation between the discovery time and the speech time ($EAT < ST$) and the fact that the contextually salient time that is relevant for the interpretation of the assertion is the time of the originally observed evidence, rather than ST ($RT = EAT$), which results in $RT < ST$ (= past). Interestingly, the form of the participle in (30) is the same as in (29): a combination of imperfect participle and secondary imperfective verbal aspect. Figuring out how exactly cases of deferred realization with this morphology fit the analysis presented here must be left to future work.

Finally, a residual question that needs to be addressed in future work concerns the origin of the admirative. Nicolova (2013) argues that the admirative originated from the perfect in its function to ascertain the existence of results from non-observed actions. This fits the crosslinguistic observation in Bybee & Dahl (1989: 73–74) of indirect evidential uses licensed by the perfect due to its property of expressing past actions with present results: The indirect evidential uses can be viewed as extensions of “known by its results” to “action known by inference/reports” (see also Lau & Rooryck (2017) who talk about knowledge of an event by indirect means). However, this path would immediately explain the emergence of the inferential and hearsay uses of the admirative out of the present perfect, but not the direct evidence uses. To shed more light on this issue, diachronic and typological data need to be thoroughly examined.

Abbreviations

ADMIR	admirative operator	M _{op}	mirative operator
AOR	aorist	NEG	negation
ACC	accusative	PFV	perfective aspect
DEF	definite	PL	plural
EXC	exclamative operator	PRS	present tense
EV	evidential (operator)	PTCL	particle
IMP	imperative	PTCP	participle
INF	infinitive	Q	question particle
IPF	imperfect	REFL	reflexive pronoun
IPFV	imperfective aspect	SG	singular

Acknowledgements

I would like to thank the participants of the *13th European Conference on Formal Description of Slavic Languages* in Göttingen for discussing an earlier version of this work, as well as Torgir Solstad and two anonymous reviewers for valuable comments and suggestions. A special thanks goes to my informants for their native speaker judgements.

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