

Evidentiality in East Caucasian on the map

Samira Verhees

Linguistic Convergence Laboratory, HSE University, Russian Federation

ABSTRACT

Languages spoken in contiguous areas tend to have similar systems of evidentiality marking. The Caucasus is part of a large area where systems centered on marking events as not witnessed by the speaker are widespread among genealogically unrelated languages. It is often suggested that Turkic languages could be the source of diffusion in this case, because evidentiality is an old and prominent feature of Turkic grammar. This paper explores the areal dimension of evidentiality in languages of the East Caucasian family, which are spoken on a relatively compact territory in the eastern Caucasus. It provides an overview of the most common types of marking and their geographical distribution among the East Caucasian languages and their Turkic neighbors. The spread of evidentiality as part of the tense system shows a peculiar pattern in the eastern Caucasus, which suggests that it could be a contact-induced feature. However, a number of factors prevent the reconstruction of a specific borrowing scenario. Based on the currently available data the Turkic contact hypothesis cannot be confirmed nor refuted. The paper proposes an alternative scenario for a mixed language-internal and contact-induced development that can possibly be verified with data from oral narratives.

Keywords

evidentiality, East Caucasian languages, Turkic languages, language contact, areal typology, perfect

This is a contribution from *Languages of the Caucasus*, Vol. 5:1-68.

ISSN 2375-2068

© Samira Verhees 2021.

This Portable Document Format (PDF) file may not be altered in any way.

Tables of contents, abstracts, and submission guidelines are available at escholarship.org/uc/languagesofcaucasus

Evidentiality in East Caucasian on the map

Samira Verhees¹

Linguistic Convergence Laboratory, HSE University, Russian Federation

1. Introduction

Evidentiality is usually defined as the (grammatical) encoding of information source. More precisely, evidentials determine the relationship between a speaker and an event in terms of the speaker's access to information about the event (Plungian 2001; Tournadre & LaPolla 2014; Bergqvist 2018). Access can be direct (through personal experience or direct observation) or indirect (e.g. hearsay, inference from results or general knowledge).² The languages of the East Caucasian (or Nakh-Daghestanian) language family commonly feature a perfect tense that can function as a general indirect marker covering (among other things) inference from results and hearsay.

- (1) Bagvalal: Kvanada (Tatevosov 2001: 448)
- | | | | |
|------------------|------|-----------------|--------------|
| ʃali-r | sĩ: | k'wa-b-o | ek'wa |
| Mohammed-OBL-ERG | bear | kill-N-CVB | AUX.PRS |

¹ The article was prepared within the framework of the HSE University Basic Research Program. I am indebted to Michael Daniel and Timur Maisak, who commented on earlier drafts of this paper and helped me with advice and ideas throughout my PhD project on this topic. I would also like to thank the anonymous reviewers and the editor for their patience and helpful comments. Special thanks go out to the many colleagues who took the time to answer my questions about the languages of their expertise, in alphabetical order: Gilles Authier, Oleg Belyaev, Anna Dybo, Konstantin Filatov, Zarina Molochieva, Johanna Nichols, Jérémy Pasquereau, Monika Rind-Pawłowski, Murad Suleymanov, Jesse Wichers Schreur and Matthew Zaslansky. I also thank Chiara Naccarato for proofreading a near-final version of the text, and George Moroz for his help with anything R. And last but not least I am grateful to my native speaker consultants for the invaluable data they provided and for their boundless hospitality. Any inaccuracies or oversights in this paper are mine alone.

² Inference from results technically indicates partial access, since the speaker witnessed at least part of the event (i.e. some obvious result). In the present paper I will maintain the common binary opposition of direct vs. indirect, where all types of inference are categorized as indirect, because the languages dealt with in this paper feature a general indirect form that combines (among other things) inference from results with hearsay. Inference from results can also pattern with direct access, but this seems much rarer cross-linguistically (see Verhees 2019a:121).

'[I see] Ali **killed** a bear.'
 '[I heard] Ali **killed** a bear.'

The utterance in example (1) would be appropriate if the speaker sees Ali skinning a bear and knows that Ali went out hunting by himself that day (Tatevosov 2001:448). Example (1) is then a logical inference based on a tangible result (i.e. a dead bear in the hands of Ali). Another possible context for its use is when the speaker heard from someone else that Ali killed a bear. The use of the Bagvalal Perfect, as opposed to the Preterite, expresses that the speaker had indirect access to the event described by the main proposition 'Mohammed killed a bear'. Specific interpretations (inference or hearsay) are determined in context. By contrast, the particle *avaji* from Agul unambiguously indicates that the utterance is based on hearsay (2).

- (2) Agul: Huppuq (Majsak 2014:98-99)
- | | | | | |
|----------|---------------|-----------|-----------------------|--------------|
| me | mallaji | idži | χur.u-na, | |
| DEM.M | mullah.ERG | good | learn.PF-CVB | |
| uč.i | sasra-bur.i-s | dars-ar | ic'.an-di | avaji |
| REFL.ERG | other-PL-DAT | lesson-PL | give.IPFV-CVB+COP:PST | REP |
- '[**They say**] this mullah was very well educated, and gave good lessons to others.'

Perfects and particles are the most commonly attested means to mark (indirect) evidentiality in East Caucasian. While perfects mark indirect access in general, particles tend to have more specific meanings such as hearsay. Additionally, evidential auxiliaries can develop from perfect inflections (Section 4.4) or specific lexical verbs (e.g. 'stay' or 'find', see Section 4.5.1).

The East Caucasian languages are spoken at the center of an area where similar systems of evidentiality marking are attested. This area stretches from the Balkans through the Caucasus and Central Asia into Siberia and South Asia and is sometimes referred to as the Great or Old World "Evidential Belt" (Plungian 2010:19; Sumbatova 1999:63; and others).³ It comprises a large number of typologically diverse and genealogically unrelated languages. Typical of this area are relatively small evidential systems focused on indirect marking, indicating that the speaker has no direct knowledge of the event they are talking about. Common means include tense forms like the perfect (1) and specialized particles or clitics (2). As pointed out by Chirikba 2003:265, there "is a tendency in the Balkans, Caucasus and Central Asia to hold the Turkic languages responsible for the development of the evidential category". Turkic languages are a plausible source candidate because the evidential use of certain past tense forms in Turkic is attested in the oldest

³ See Plungian 2010:19-21 for a concise overview of the area and the languages involved.

available sources (see Section 5.2 of this paper in more detail), and the category is present to some degree in all contemporary Turkic languages (Johanson 2018: 510-511). In addition, the Turkic languages are scattered across the area sketched above. As a result, many languages that share the feature are also in contact with a Turkic language.

The map in Figure 1 roughly illustrates the contours of the Evidential Belt with the red, pink and grey dots scattered from Eastern Europe to the eastern coast of Eurasia.⁴ It is a reproduction of the map “78A. Coding of Evidentiality” (de Haan 2013) from the World Atlas of Language Structures (WALS) online (Dryer & Haspelmath 2013), supplemented with the dispersion of Turkic languages based on coordinates from the Glottolog database (Hammarström, Forkel & Haspelmath 2019).⁵

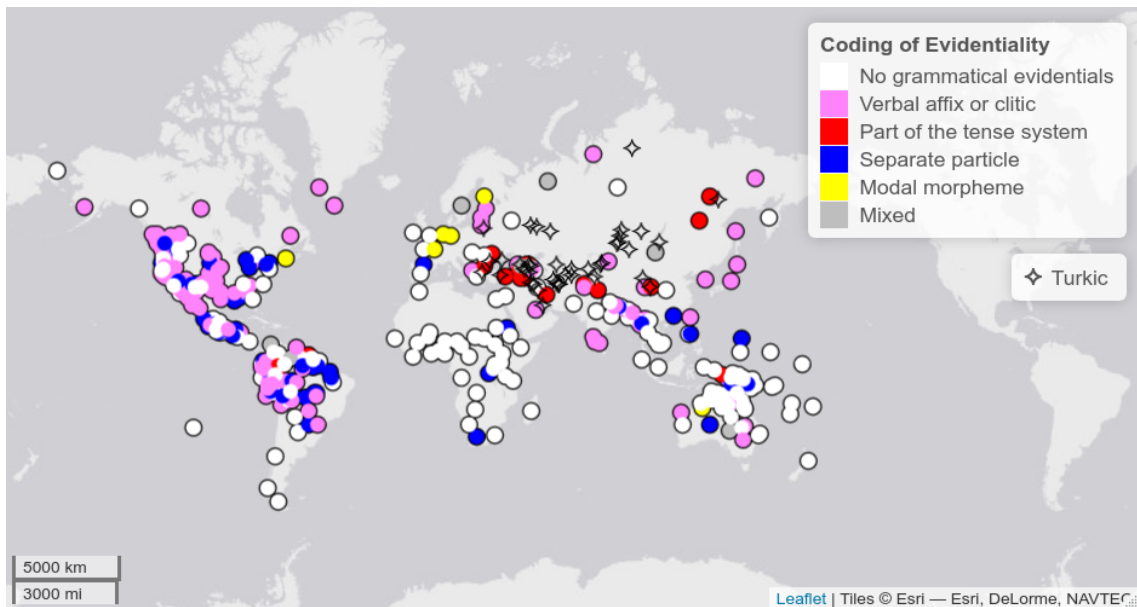


Figure 1. Map: Coding of evidentiality and the spread of Turkic languages
In the East Caucasian family evidentiality is considered a relatively recent innovation (Authier & Maisak 2009:vii). It is attested in many but not all languages of the family (Section 6), and it seems to have been absent in Caucasian Albanian (Maisak 2018:158-160) – the oldest attested language of the family, which has survived on palimpsests dating back to the V-VI centuries (see Gippert et al. 2008).⁶

⁴ The map contains some errors at least in the Caucasus region, as detailed in an issue on Github (<https://github.com/cldf-datasets/wals/issues/1>), but they do not alter the general pattern illustrated by Figure 1.

⁵ To draw the map I accessed the Glottolog database via the *lingtypology* package in R (see note 8), which at the time drew from an older version of the Glottolog database: v2.7 instead of the current 4.0.

⁶ Note that Caucasian Albanian, unlike its descendant Udi, also lacked a perfect (Maisak 2018:157).

Indirect verb tenses and particles do appear in the earliest descriptions of some of the languages, such as Uslar's grammar of Avar,⁷ which predate the invention of evidential typology in the 20th century. The situation of East Caucasian languages is not unique in this regard (Friedman 2018:125). The first overview of the category in East Caucasian is Forker 2018a.

The aim of this paper is to explore the areal dimensions of evidentiality in the East Caucasian languages by comparing how the category is expressed in East Caucasian and neighboring languages, and plotting the distribution of features on a map.⁸ I zoom in on the most common type of marking: the perfect. The paper corroborates an earlier observation that perfects with an indirect evidential function are overall common in the family, but predominantly absent among languages spoken in the southern part of the area (Verhees 2018a). This pattern also encompasses local Turkic languages, suggesting that we could be dealing with an areal phenomenon. However, as I will show in this paper, there is no convincing evidence that East Caucasian languages borrowed the indirect evidential function of the perfect from Turkic, as opposed to the alternative scenario that the feature developed language-internally.

The paper is structured as follows. Section 2 introduces the eastern Caucasus as a linguistic area. Section 3 is dedicated to the typology of “perfectoid” evidentiality (Plungjan 2016:14). Section 4 provides an overview of the morphosyntactic and semantic properties of perfects and related verb forms in East Caucasian languages. A small subsection (4.5) is dedicated to other types of evidential markers that intersect with the evidential tenses in terms of semantics. Section 5 discusses the role of different Turkic languages in the eastern Caucasus in more detail, and provides an overview of evidential forms found in these languages. Section 6 provides map visualizations for the patterns described in Sections 4 and 5. Section 7 reviews the existing literature on other languages spoken in the larger Caucasus area (including West Caucasian, Kartvelian, Armenian, and Iranian languages). Finally, Section 8 discusses the likelihood of the Turkic contact hypothesis for East Caucasian. Section 9 is the conclusion, which summarizes the main points of the paper. This paper is based on my PhD research (Verhees 2019a) but contains a few updates, revisions and fine-tunes compared to the data and conclusions presented therein.

2. The eastern Caucasus as a linguistic area

⁷ See, for example, the section on indicative forms (Uslar 1889:135-136).

⁸ The maps in this paper were created using the *lingtypology* package (Moroz 2017) for R in Rstudio (R Core Team 2018). The package makes use of the open source *leaflet* library for map visualizations (available at: <https://leafletjs.com/>). The original sources of the map tiles, such as Esri or Openstreetmap, are credited at the bottom of each image. The package *tidyverse* (Wickham 2017) was used to manipulate data.

This paper focuses on a particular type of evidentiality marking in the East Caucasian languages and attempts to evaluate the likelihood that this feature emerged as the result of language contact with local Turkic languages. For this purpose, it makes sense to look at the eastern Caucasus as a distinct linguistic area within the Caucasus, based on attested contact patterns. The present section summarizes some relevant aspects of the linguistic geography of the area and explains the choice to focus on Turkic as a potential source of the evidential feature. Section 5.1 elaborates on the nature of contact between East Caucasian and local Turkic languages.

The East Caucasian languages form a large and diverse family consisting of at least 29 distinct languages comprising eight different groups, as listed in Table 1 below.⁹ Some scholars argue for the classification of more idioms as distinct languages (cf. Korjakov 2006). Especially Dargwa, which is represented as a single language in Table 1, subsumes a large number of highly idiosyncratic and mutually unintelligible idioms. East Caucasian is considered a deep-level family comparable to Indo-European in terms of its internal divergence (Nichols 2003). It has no proven relationship to any other language family (see Tuite 2008).

Group	Languages
Nakh	Tsova-Tush (Batsbi), <u>Chechen</u> , <u>Ingush</u>
Avar	<u>Avar</u>
Andic	Akhvakh, Andi, Bagvalal, Botlikh, Chamalal, Godoberi, Karata, Tindi
Tsezic	Bezhta, Hinuq, Hunzib, Khwarshi, Tsez
Lak	<u>Lak</u>
Dargwa	<u>Dargwa</u>
Lezgian	<u>Agul</u> , Archi, Budukh, Kryz, <u>Lezgian</u> , <u>Rutul</u> , <u>Tabasaran</u> , <u>Tsakhur</u> , <u>Udi</u>
Khinalug	Khinalug

Table 1. East Caucasian languages per group

⁹ For different approaches to branching within the family, see Nichols 2003; van den Berg 2005:182-183; Schulze 2009. Underlined languages in the table have their own writing system, and the main literary languages are marked bold.

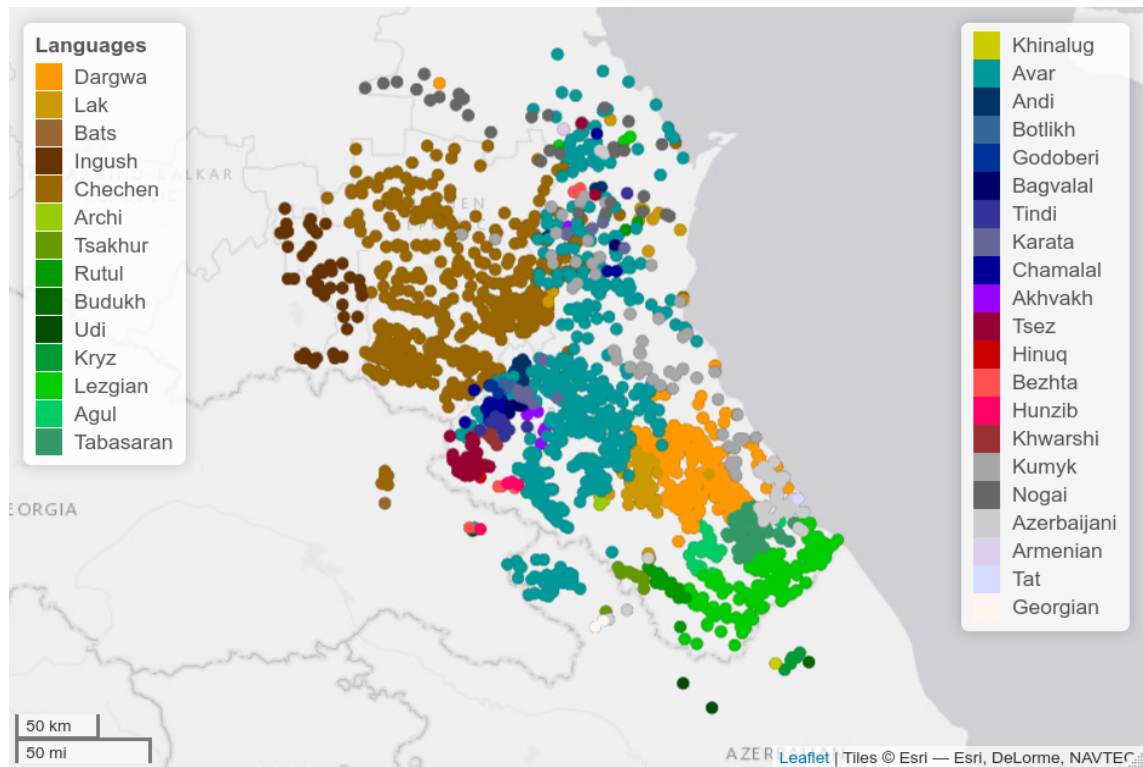


Figure 2. Map: languages spoken in the eastern Caucasus¹⁰

The languages are spoken mainly in a compact area in the eastern part of the Caucasus, covering the North Caucasian republics of Daghestan, Chechnya and Ingushetia (all of which are part of the Russian Federation), with a few speech communities located in present-day Georgia and Azerbaijan (see Figure 2).¹¹ Besides the major languages Georgian and Azerbaijani their neighbors include the Turkic languages Kumyk and Nogai, the Iranian languages Ossetic (spoken in North Ossetia-Alania, which borders Ingushetia in the West) and Tat (spoken in Daghestan and Azerbaijan). Small pockets of Armenian speakers reside in Daghestan.¹² The

¹⁰ The map is based on the *East Caucasian villages data set* (Moroz & Verhees 2020), which contains a list of villages, their coordinates, and the language spoken there. It covers Daghestan, Chechnya, and Ingushetia, as well as some villages in Georgia and Azerbaijan where East Caucasian languages are spoken. The data set in its current version has several significant limitations: multi-ethnic villages and urban areas are not represented; it lacks data regarding Turkic and Lezgian villages outside of Daghestan; data from Georgia and Azerbaijan is limited to East Caucasian speaking communities.

¹¹ A diaspora community of Lezgians also exists in Turkey (Moor 1985), and descendants of Chechen and Ingush, who were deported or forced to emigrate following the Caucasian War (1817-1864), can be found in both Turkey and Jordan (Nichols 2011:4).

¹² The 2010 census of the Russian Federation (FSSS 2010) reports a population of 4997 Armenians in Daghestan. They live in urban areas and the village Karabagly, which is situated in the northeast of

East Caucasian languages are considered indigenous to the territory. Their historical homeland was likely situated in the central/eastern part of Transcaucasia (Schulze 2013:317). Iranian and Turkic peoples settled in the area later in the course of history. Major external influences are Arabic (the language of religion) and Russian, which has been the language of government and education for nearly a century.¹³ Persian was also an important language in the area (Gamzatov & Thordarsson 2011 (1993)).

In addition to its exceptional linguistic diversity, the region is characterized by prolific inter-ethnic contacts through trade and labor migration, among other things (Volkova 1967; Wixman 1980; Karpov & Kapustina 2011). At the same time, the eastern Caucasus never had a single lingua franca that could be used throughout the entire area. Russian established itself in this role only relatively recently (see Dobrushina et al. 2019 on the spread of Russian in Daghestan). Historically, the region formed an intricate patchwork of bi- and multilingualism patterns (Chirikba 2008). Different areas of Daghestan had different lingua francas. Among them were Turkic languages, but also the East Caucasian language Avar. These lingua francas in turn were also in contact with each other. In addition, Daghestan was known for neighboring multilingualism, where people would acquire the languages of nearby villages with whom they shared a market, for example (see Dobrushina 2016 and some detailed case studies presented in Dobrushina et al. 2019). Less is known about the nature and intensity of bilingualism patterns in the Chechen and Ingush republics, but contact influence from various neighboring languages is reflected in the language data (Nichols 2004).

As mentioned in the introduction, Turkic languages are commonly considered a likely source for the diffusion of evidentiality in the larger area. The type of evidentiality marking found in Turkic is a prominent and relatively old feature of the grammar, and the Turkic languages have been in contact with many languages that developed the feature. These factors also make them a plausible source candidate for East Caucasian in comparison to other contact languages in the area. Arabic and Russian lack the feature in question, and Georgian and Persian had limited influence both geographically and in terms of impact.

3. Typology of the (evidential) perfect

The focus of this paper is perfect forms of the verb used to express (indirect) evidentiality. In order to understand how these forms may have emerged in East

Daghestan, an ethnically mixed area where most current inhabitants settled relatively recently (cf. Figure 2).

¹³ By “external” I mean languages that do not have a strong local presence in the form of a substantial speech community. During the Soviet period the North Caucasus had a sizable Russian population especially in urban centers (see Wixman 1980:190), but they never established the type of numerical, cultural, or linguistic dominance found in other national republics of the Russian Federation. Many Russians left the area after the disintegration of the Soviet Union.

Caucasian, the current section presents an overview of the perfect as a typological category.¹⁴ The prototypical function of the perfect is to indicate the current relevance of a past event (Lindstedt 2000:368). This relevance is determined by the fact that a direct or implied result of the event still holds at speech time. As illustrated in Comrie 2001 (1976):56-57, the sentence *John has arrived* (as opposed to the Simple Past equivalent *John arrived*) indicates not only that John reached his place of arrival, but that he is still there at the time of speech. Similarly, the sentence *I have had a bath* “implies that the results of my bath (that I am clean, that I don't immediately need another bath) still hold” (ibid.). Current relevance is a general label that subsumes several more specific meanings, as summarized below, based on McCawley 1971, 1981; Comrie 2001 (1976); and Ritz 2012:882-883. Meaning labels used in this paper are in bold; alternative names used in the literature are indicated between brackets.

Resultative perfect (perfect of result, stative perfect)

Designates an event in the past which has an implicit result at speech time.

John has arrived. (he is now here)

Continuative (perfect of persistent situation, universal perfect)

Designates an event that held during a specific interval in time and persists at speech time.

Mary has worked here for twenty years. (and she still works here)

Hot news perfect (perfect of recent past, new situation)

Designates an event that just happened and represents new information for the addressee.

The president has just resigned!

Experiential

An event occurred in the past at least once before speech time.

I have been to Japan. (at least once in my life)

Not all of these functions are represented equally in the perfects found in individual languages. As pointed out by Plungjan 2016:7-8, it is difficult if not impossible to find a single context where a perfect would be equally used in several different languages, even if these languages are geographically and typologically close.

Diachronically, perfects commonly originate from resultative constructions (Bybee et al. 1994:68-69), which refer to an ongoing state at speech time as the

¹⁴ In this paper I use the term “perfect” to designate verb forms that express current relevance semantics. Labels are capitalized when they refer to language-specific forms, following Haspelmath’s proposal (2010).

result of a past event (Nedjalkov & Jaxontov 1988:6).¹⁵ In contrast with the perfect, their use is mostly limited to change-of-state verbs (though there are some exceptions (Nedjalkov 1983:25)), and they form monovalent, stative predicates (Plungian 2016:10). Perfects on the other hand, potentially combine with any type of verb (Nedjalkov & Jaxontov 1988:15), and retain the argument structure of the lexical verb. Adverbs of “unlimited duration” (e.g. meaning ‘still’) provide a reliable diagnostic to distinguish resultative from perfect, cf. the following minimal pair cited by Lindstedt 2000:367: *She is still gone* (resultative) vs. **She has still gone* (perfect) in English. In the latter case, the use of the adverb is infelicitous, because the predicate does not designate an ongoing state. In structural terms, perfects are predominantly periphrastic forms (Bybee & Dahl 1989:56). In case their origins are resultative, they usually consist of a non-finite form referring to a completed event (such as a past participle or a perfective converb), and a present tense auxiliary meaning ‘be’ or ‘have’ (Bybee et al. 1994:105).

Indirect evidentiality as a meaning of the perfect emerges as a conversational implicature. When using a perfect, the speaker describes an event as a current situation resulting from a past event. This can imply that they had direct access to the current situation, and by contrast did not witness the event leading up to it, but rather inferred that it happened based on their knowledge of the current situation (Bybee et al. 1994:96). Thus the sentence in (3) can have a regular resultative interpretation: ‘[somebody] opened the window → it is now open’; or it can have an inferential interpretation as demonstrated in the example.

- (3) Agul: Huppuq (Majsak & Merdanova 2002:107)
 {Context: The window is closed, but there are some indirect traces showing that somebody opened it, for example scratches on the window sill.}
 dak’ar **daqu-na-a**
 window open-PFV-CVB-be_in
 ‘[Somebody] **opened** the window.’

In the typology of evidentiality, two types of inference are typically distinguished: inference based on tangible results (as in (3)), which is simply called inferential, and inference based on general reasoning, referred to as presumptive.¹⁶ The latter would be applicable if the speaker in (3) knows that a certain person always opens the window around a certain time (e.g. a cleaner in the morning) and it is now shortly after that time. Presumptive can be part of the meaning of an indirect evidential form, but this is not necessarily the case. The Agul form cited in (3), for example, would not be used in such a context (Majsak & Merdanova 2002), and the same applies to the Bagvalal Perfect (Tatevosov 2003).

¹⁵ Another common source is completives (Bybee et al. 1994:69-74), but they are not relevant to the area under investigation, so they will not be discussed here.

¹⁶ Terminology following Plungian (2001: 352).

As noted by Comrie 2001 (1976):110: “the semantic similarity (not, of course, identity) between perfect and inferential lies in the fact that both categories present an event not in itself, but via its results [...]”. The implication that the speaker did not witness how the event unfolded can subsequently conventionalize, allowing the perfect to extend its usage to situations where the speaker did not witness any part of the event, but merely knows about it through hearsay, as in example (1) from Bagvalal cited in the introduction.

Bybee et al. 1994:105 hypothesized that inferential interpretations probably originate directly from the resultative stage (see Figure 3 below), suggesting that current relevance and indirect evidentiality constitute possibly concomitant yet distinct paths of development. Next, they tend to develop further in the direction of perfective or simple past (Bybee et al. 1994:105), supplanting existing forms, while new structures may take up the role of perfect.

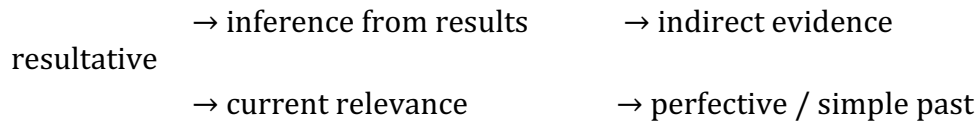


Figure 3. Diachronic development of resultative constructions¹⁷

Based on data from the East Caucasian languages Archi, Bagvalal and Dargwa, Tatevosov argued that inferential should be connected to current relevance as an intermediate stage, because current relevance forms “share more semantic and distributional characteristics with both resultatives and [indirect evidentials] than resultatives and [indirect evidentials] share with each other” (2001: 462). According to Tatevosov 2001, the Archi Perfect covers only current relevance and indirect evidentiality, a combination that the scheme represented in Figure 3 does not seem to predict.¹⁸ He also argued that a form which covers both resultative and indirect evidentiality will be capable of expressing current relevance under certain pragmatic circumstances (Tatevosov 2001:462).

There is, however, at least one East Caucasian idiom with a resultative form that expresses indirect evidentiality but not current relevance: Shiri Dargwa as described in Belyaev 2018. According to Belyaev, it “seems rather improbable that the Shiri Resultative has lost an earlier [current relevance] function: there are no traces of this function, and there is, furthermore, a separate Perfect paradigm, which appears to be relatively old” (2018:108). However, cognate forms in other Dargwa

¹⁷ The scheme is adapted from Bybee et al. 1994:105. I removed the path of development from completive to current relevance, since it is not relevant for East Caucasian, and replaced the term “anterior” with “current relevance”.

¹⁸ This depends, of course, on how one interprets the scheme. See Tatevosov 2001:460-462 for a detailed discussion of the problems with the various ways one can interpret such semantic maps.

varieties do have a current relevance function (ibid.). In the absence of diachronic data it is rather difficult to prove that the Shiri Resultative did not simply lose its current relevance function under the pressure of a competing construction. A number of languages in the eastern Caucasus have multiple resultative/perfect forms with some functional overlap (see Section 4). Possibly the Shiri Resultative is an example of a “donut-gram” (Dahl 2000:10): a form that has lost its prototypical meaning (in this case current relevance) through competition from another construction, while persisting as a marker of related, less central uses (i.e. resultative and indirect evidentiality).

To my knowledge there is no diachronic evidence documenting the evolution from resultative or perfect to an inferential and subsequently unwitnessed past for any language. This is probably due to the fact that inferential implicatures likely appeared first in colloquial use, for which there is little or no historical record. Consequently, the hypothesis that inferential emerges directly from the resultative stage cannot be falsified. As proposed in Verhees 2018b:264-265, the emergence of current relevance could also be viewed as a natural by-product of the grammaticalization process, rather than a necessary intermediate step. When the resultative expands its usage to new morphosyntactic contexts but the evidential interpretation is not yet fully grammaticalized, the latter can still be canceled, which inevitably results in some type of current relevance reading.

In addition to evidentiality, perfects can develop other meaning components that deal with the speaker’s knowledge of the events they are talking about, such as mirativity, which indicates that the event constitutes new, unexpected information for the speaker and / or the addressee (DeLancey 1997:36). In example (4) the speaker finds out that they have some money left, while they thought that they had spent all of it. Since the proposition directly describes the situation encountered by the speaker, other readings of the perfect are disqualified in this case, cf. ‘I have had money’ would imply that the money is no longer there. Mirative meanings can arise from forms marking inference (see, e.g., Gipper 2014), though in the case of the perfect, another possible source of such an interpretation is the “hot news” meaning described at the beginning of this section.¹⁹

- (4) Bagvalal: Kvanada (Tatevosov 2007:380)
 di-č’ as **b-uk’a-b-o** **ek’w’a!**
 I.OBL-CONT money N-be-N-CVB AUX.PRS
 ‘[It turns out] I **have** money!’

Perfects are also known to develop epistemic modal connotations (Wiemer 2018:94), indicating that the speaker does not vouch for the truth value of the information. Friedman 2000 identified the speaker’s willingness to vouch for certain

¹⁹ See C-R New situation (= “Hot news” perfect) → C-R Surprise (Mirative) in Figure 3 in Anderson 1982:234.

information as the central function of supposed indirect evidential tense forms in several languages, including Turkish, Georgian, and the East Caucasian language Lak.²⁰ According to Friedman, the use of such “non-confirmative” forms is ultimately determined by the speaker’s attitude towards the information, while their indirect access to information merely forms one of many factors that might influence this attitude (2000: 329). In other words, non-confirmative markers will often coincide with situations where the speaker did not have direct access to an event, but this is not tantamount to indirect evidentiality being their function. The *-miş* past in Turkish, for example, which is considered an indirect evidential past in most sources, does not occur in texts describing historical events generally considered to be true, regardless of the fact that they are not reported from an eyewitness perspective (Slobin & Aksu-Koç 1986:160), cf. also Johanson 2018:512.

Lazard 1999 views the various interpretations of these forms as contextual variants of a more abstract category called “mediative”, which signals the speaker’s distancing from an event.

“When [speakers] use the ordinary, unmarked forms, they are stating the facts purely and simply as they know them, with no commentary. But, when they choose to use the special, marked forms, they are expressing them mediately, through their acknowledgment of the event, without specifying how it happened, and in so doing they are placing themselves, so to speak, at a distance from what they are saying. In the case of hearsay the utterance implies ‘as I hear’; in the case of inference it implies ‘as I infer’; in the case of unexpected perception it implies ‘as I see’. [...] Speakers are somehow split into two persons, the one who speaks and the one who has heard or infers or perceives. This operation distances them from their own discourse, whereas in neutral expression they adhere to their own discourse by virtue of the very laws of linguistic intercourse. The **real value** of the forms in question is this **abstract distance**, not any consideration of the nature of the source of the speaker’s knowledge of the facts.”²¹ (Lazard 1999:95)

Alternatively such forms can be viewed as a specific type of evidentiality, cf. Csató 2013. It remains a bit unclear how to reconcile all these disparate analyses (see also the discussion in Verhees 2019b:118-119). The nature of the relationship between evidentiality and epistemic modality has been an important topic in the study of evidentiality in general (see an overview in Wiemer 2018). Cross-linguistically, both mirativity and epistemic modality exist independently of evidentiality as categories in their own right, cf. Boye 2012 on epistemic modality and DeLancey 2012 on mirativity. Epistemic modal or mirative interpretations of indirect evidential forms

²⁰ Compare this to Forker’s claim that indirect evidentials in East Caucasian do not imply that the speaker does not vouch for the information, with the exception of Tsakhur (2018a:497).

²¹ Emphasis mine.

can be viewed as pragmatic extensions. At the synchronic level in a given language each interpretation may be relatively more pervasive, while it remains unclear how to quantify and compare these differences.

As far as East Caucasian languages are concerned, some notion of “indirect access” is often all we have. The study of how indirect forms in these languages behave in actual use is still in its infancy. Notable exceptions are Tatevosov & Majsak 1998 on Tsakhur; Tatevosov 2001 on Bagvalal, Archi and Dargwa; Majsak & Tatevosov 2001 on Bagvalal; Tatevosov 2007 on Bagvalal; Majsak & Merdanova 2002 on Agul; Majsak & Tatevosov 2007 on Tsakhur; and Forker 2018b on Avar. For this reason I maintain the evidential nomenclature in this paper. The majority of language descriptions, which form the main source of data for this study, simply describe an ‘unwitnessed past’ (*prošedšee zaglaznoe* in Russian), or a perfect with an indirect evidential meaning. In the best case scenario they distinguish inferential and hearsay interpretations and, more rarely, something akin to mirative.

4. Evidentiality in the East Caucasian tense system

4.1. Formal aspects of East Caucasian perfects

All East Caucasian languages feature at least one verb form reported to have a current relevance function, i.e. a perfect (Verhees 2019a: 52). The data on which the present paper is based were collected from descriptive literature on all the traditionally recognized East Caucasian languages and 11 additional idioms, as well as local Turkic languages. The data consist of 70 verb forms from a total of 45 idioms, comprising perfects (59), resultative constructions (8), and indirect evidential pasts (3).²² The latter two types of forms were collected for comparative purposes. In the present section I will only discuss the East Caucasian forms (see Section 5.2 for the Turkic data), which amount to a total of 65 forms (/42 idioms), 53 of which are perfects. Resultative constructions and indirect evidential pasts will be discussed separately.

East Caucasian perfects most commonly consist of a converb and a present tense ‘be’-auxiliary. The converbs found in these constructions seem to be more or less functional equivalents of each other, despite the fact that they carry a variety of descriptive labels (e.g. Perfective Converb, Anterior Converb, General Converb, Narrative Converb, Past Gerund). Common across different branches are *n*-converbs: Chechen: *-na*; Ingush: *-na*; Tsova-Tush: *-no*; Bezhta: *-na*; Hinuq: *-no*; Tsez: *-no*; Hunzib: *-un*; Khwarshi: *-un*; Tabasaran: *-na*; Agul: *-na*; Lezgian: *-na*; Avar: *-un*; Lak: *-unu* (see also Nikolayev & Starostin 1994:157). Participial constructions are much rarer and often exist alongside a converbal perfect (the only exception being

²² The full dataset with an overview of idioms and forms as well as the sources used is available online via [this link](#). An overview table of the number of forms for each idiom and the functions they cover can be found in the appendix of this paper.

Budukh of the Lezgi branch). The Chechen and Ingush Perfects are based on a non-finite form that functions both as a converb and a participle (Molochieva & Nichols 2018:31). The cognate form in Tsova-Tush is labeled “participle” in Holisky & Gagua 1994:181-183, while it appears to have converbal uses as well, cf. the text samples in Nichols 1981:213. Therefore, the Nakh languages were categorized separately (“other”) in Table 2 below. The two attested perfect forms in Khinalug are based on the resultative stem of the lexical verb (which does not function as a non-finite form independently) in conjunction with a copula. The Udi Perfect takes a suffix of unclear origins, though it can be tentatively linked to a periphrastic construction consisting of a converb and an auxiliary (Maisak 2018:158-160).

A full auxiliary is attested in 33/53 cases. This includes 12 “predicative markers” (Belyaev 2018:83), which are typical of Dargwa idioms. The predicative markers that head periphrastic tenses constitute a mixed paradigm of clitics marking person agreement in first and second person, and a (clitic) copula in third person. They belong to a special word class of predicative markers, which, besides the person markers and the copula, consists of various particles. Some but not all of them are in complementary distribution with each other (Sumbatova & Lander 2014:155-163). As a result, predicative markers cannot simply be equated with the auxiliaries found in other languages, though in the context of periphrastic tenses they are functional equivalents. Eight cases of morpologized auxiliaries are attested. In Ingush and Botlikh both full and reduced variants are attested. These two cases are categorized separately as “mixed” (see Table 2 below).

In 10 cases the perfect coincides with a non-finite form. In Tsez and Hinuq this can be explained by auxiliary omission, because the auxiliary reappears under negation (Khalilova 2011:40, 46-47). In Bezhta the copula is generally preserved, but it is optional in indirect evidential contexts (ibid.). The Archi Perfect is homophonous with the converb *-li*. The same converb appears in a specialized Resultative construction headed by a copula. Tatevosov suggests that the Archi Perfect thus likely originates from the Resultative construction, having differentiated itself formally by dropping the copula (2001:455-459). It should be pointed out here that Tatevosov’s argument rests mainly on analogy with the structure of the Perfect in Bagvalal – a periphrastic form consisting of a Perfective Converb and a copula. An alternative path towards this type of syncretism (as opposed to auxiliary omission) is through insubordination of a non-finite clause, resulting in the reanalysis of a non-finite form as a main predicate (see a typological overview of this phenomenon in Evans 2007). This idea is also mentioned in Majsak’s (2016:368-370) discussion of syncretism in the verbal paradigm of Udi, where both the Perfect and the Aorist coincide with a non-finite form. Non-finite forms in East Caucasian can head independent main clauses, and syncretism of finite and non-finite forms is well-attested (see, e.g., Kalinina & Sumbatova 2007; Kazenin & Testeletskii 2004; Creissels 2009). However, the available studies mostly focus on the functional aspects of this phenomenon. To my knowledge there is no diachronic

investigation confirming that a development from non-finite to finite took place specifically through insubordination in any of these languages.

The Chechen Perfect is homophonous with a converb/participle (-*na*). It was argued in Verhees 2019a:63-64 that this was likely the result of auxiliary omission, since the same form is part of a specialized resultative construction with a copula: -*na CM-u* (Molochieva 2010:139-146). A cognate construction -*na=CM-(y)* with the same non-finite form and a cliticized form of the copula covers both resultative and perfect functions in Ingush (Nichols 2011:254-256; Molochieva & Nichols 2018:31). At the same time, attempts to reconstruct the Proto-Nakh verb system mention a finite *-(*i*)*nV* form (cf. Imnaišvili 1959; Dešeriev 1963:527; Nichols 2004:137). Moreover, copula omission and morphological truncation are not typical of Chechen and Ingush; the Chechen resultative construction with the -*na* form and the copula could have arisen through a separate path of development (Johanna Nichols, p.c.). Another complicated case is Andi of the Andic branch. In this language the Perfect and the General Converb are also homophonous, but the suffix in question (-*d:u* in the Andi proper dialect) does not seem to be a converb suffix historically, nor can it be straightforwardly reconstructed as a morphologized copula or auxiliary (see Verhees 2019c:201-203 in more detail). Overall auxiliary omission seems to be quite rare among East Caucasian perfects.

Tables 2 and 3 below summarize the attested structures and their absolute frequency among the sample of idioms surveyed.

Periphrastic 33	Synthetic 18		Mixed 2
	Morphologization 8	Syncretism of finite and non-finite 10	
		Copula omission 2	Unclear 8

Table 2. Structural types of East Caucasian perfects²³

²³ Synthetic forms include all forms which are synthetic in the affirmative. Dargwa forms with cliticized predicative markers are considered periphrastic because the predicative markers occur in their full form and retain some syntactic autonomy. This includes Shiri, where the perfect lacks a predicative marker in the third person. Note that Belyaev 2018:95 analyzes the Shiri perfect as synthetic. The classification used in the present paper is based on a rough distinction between forms which lack the copula in all affirmative forms (but might reintroduce it under negation), and those which feature a copula or predicative marker in the affirmative, even if the paradigm contains some forms with zero realization. This decision is to some extent arbitrary.

Converb 35	Participle 12	Other 6
---------------	------------------	------------

Table 3. Form of the lexical verb of East Caucasian perfects

Nine East Caucasian idioms feature a dedicated resultative construction in addition to the perfect; seven of these are periphrastic and two have a morphologized copula. Five are based on a converb and three on a participle (the remaining case is Chechen, where the resultative is based on a form that can be either a converb or a participle). Three idioms appear to have dedicated indirect evidential forms: Tsova-Tush, the Axaxdərə dialect of Akhvakh, and the Zaqatala variety of Avar. In all three cases they are synthetic. The Tsova-Tush “Reported” suffixes (Holisky & Gagua 1994:180-181) are homophonous with the participle / converb (-*no*) and the subjunctive (-*lo*) suffixes, respectively. The indirect evidential use differs in terms of distribution, as it attaches to various tense forms to derive their indirect evidential counterparts. The homophonous participle / converb also appears as the dependent in the Tsova-Tush Perfect, which has resultative, current relevance, and indirect evidential uses. In Verhees 2019a:66-67 it was suggested that this could point to a diachronic link between the indirect evidential suffix -*no* and the Perfect in Tsova-Tush (through auxiliary omission and subsequent broadening of the distribution of -*no*), though this requires confirmation. It also remains unclear how the subjunctive suffix plays into this scenario. In Axaxdərə Akhvakh, the indirect evidential past suffix -*wudi* attaches to the verb stem (Creissels 2018). It exists alongside a periphrastic current relevance form consisting of a converb and a copula, and its etymology is unclear (though it could result from contraction of some suffix and the copula *godi*). Other varieties of Northern Akhvakh only have a periphrastic Perfect covering both current relevance and evidentiality (Magomedova & Abdulaeva 2007:690). The “Unreliable Past” (*prošedšee nedostovernoe*) in Zaqatala Avar, formed with the suffix -*la*, corresponds to the periphrastic Perfect of Standard Avar (Saidova 2007:142-144). The origins of this suffix are also unclear, and other functions besides indirect evidential are not yet described.

4.2. Semantics of East Caucasian perfects

As mentioned in the previous section, many East Caucasian perfects retain the diachronically primary resultative function, indicating a present state as the result of a past action.

- (5) Rutul: Kina (Personal Fieldwork 2016)
 key-ma-ɸ had **saxir** **a**
 PVB-PROH-wake he fall_asleep.PFV.CVB AUX.PRS
 ‘Don’t wake [him], he **is sleeping**.’ (lit. has fallen asleep / is asleep)

Resultative perfect is similar, but does not strictly form monovalent predicates, and is not necessarily restricted to change-of-state verbs (cf. Section 3). In Avar, the Perfect (with the *-un* converb and the auxiliary *CM-ugo*) combines resultative and current relevance functions. The resultative reading arises with intransitive change-of-state verbs, and with transitive change-of-state verbs that lack an overtly expressed agent. Once an agent is introduced, the use of *žegi* ‘still’ becomes ungrammatical (as in example (6c)), demonstrating the transition from a stative predicate (resultative) to a more dynamic one (perfect).

- (6) Avar: Khunzakh (Verhees 2018b:263)
- | | | | | | |
|----|--|------------|--------------|--------------|--------------|
| a. | nuc’a | žegi | qan | b-ugo | |
| | door | still | close.CVB | N-COP.PRS | |
| | ‘The door is still closed ’ | | | | |
| b. | di-ca nuc’a | qan | b-ugo | | |
| | I-ERG door | close.CVB | N-COP.PRS | | |
| | ‘I have closed the door.’ | | | | |
| c. | *di-ca | nuc’a | žegi | qan | b-ugo |
| | I-ERG | door | still | close.CVB | N-COP.PRS |
| | ‘I have still closed the door.’ | | | | |

As mentioned in the previous section, dedicated resultatives exist alongside a perfect in nine idioms. In at least four of these cases, the perfect also covers resultative. It is possible that the remaining five idioms feature a similar functional overlap, since resultative proper and resultative perfect are often not strictly differentiated in language descriptions. The distinction between resultative proper and resultative perfect might not be relevant for languages where a single form covers both functions, but for comparative purposes the presence or absence of the resultative proper function is an important diachronic parameter.

Continuative indicates that some event held for a specific time interval in the past and continues to hold presently. This reading seems to be restricted to predicates without an inherent endpoint. Overall, the perfect seems to “invert” the aspectual viewpoint of the original predicate: telic events are transformed into states while atelic events are bounded. In languages where the perfect does not have the continuative function, the present progressive is used to denote such persisting situations (Comrie 2001 (1976):60). Among the East Caucasian languages continuative is attested only in Avar (7), see Verhees (2018b:271), and this claim requires verification. Continuative is not mentioned in Mallaeva’s detailed functional description of the Perfect in Avar (2007), and the example presented below is based on elicitation with just one speaker. Besides not being attested in any

other language of the family, continuative appears to be positively absent in Dargwa (Belyaev 2018) and Lezgi languages (Maisak To appear),²⁴ as well as Andi (Verhees 2018b) and the Anchiq dialect of Karata (Filatov 2020).

- (7) Avar: Khunzakh (Personal Fieldwork 2016)
 dun hani-w **ʃumro** **ha-w-un** **w-ugo**
 I here-M life make-M-CVB M-COP.PRS

 anʃ'-go sona-ʃ.
 seven-NUM year-ERG
 'I **have lived** here for seven years (and continue to live here).'

The “hot news” reading is attested at least in Avar: Mallaeva 2007:204-205 describes a variety of possible interpretations for the utterance in (8); one of them is to describe something that happened somewhat unexpectedly in the recent past.

- (8) Standard Avar (Mallaeva 2007: 205)
 {Context: The speaker just witnessed that the king arrived, while nobody expected this. ‘Did you hear the news?’}
 q'iral **w-ač'-un** **w-ugo**
 king M-arrive-CVB M-COP.PRS
 ‘The king **has arrived**.’

The experiential function is attested as a meaning of the perfect only in Kryz and Udi. More often this meaning is expressed with a perfective past. Four idioms feature a dedicated experiential construction, as in example (9) from Agul. These constructions formally resemble resultatives and perfects as described above, and they have been included in the sample of perfect forms, since their meaning belongs to the current relevance family.

- (9) Agul: Huppuq (Majsak & Merdanova 2016: 384) (via Maisak To appear)
 {Context: A: Can one swim in this lake? B:}
 aw, zun sa ximu-gala žan-ar **ʃuč:u-f-e**
 yes I one how.much-time body-PL wash.PFV-NMLZ-COP

 gi-sa-ʃ.
 DEM-LOC-INTER
 ‘Yes, I **have bathed** there several times.’

²⁴ Both authors confirmed in personal communication that they did not find evidence for this meaning either in corpus data or through elicitation, despite having looked specifically for various perfect meanings, in part using the same questionnaire that was used to elicit continuative in Avar (Verhees 2018b).

31/53 perfects in the sample are reported to express indirect evidentiality. As mentioned above, three idioms feature a specialized indirect evidential form. Five languages appear to lack the category of evidentiality within the tense system (this will be discussed in more detail in Section 8). Indirect evidential perfects generally cover hearsay and inference based on tangible results (see example (1) in Section 1); the exact interpretation should be retrieved from context. It is not always clear from a description whether a form covers both inferential (the first step towards the grammaticalization of indirect evidentiality) and hearsay (a sign that the form is at a more progressed stage of development).

Perfects with the indirect evidential feature are commonly used as a narrative tense for fairy tales, legends, and other types of events not witnessed by the speaker. This is a good indication that the indirect evidential meaning is grammaticalizing. First, because it presupposes compatibility with the hearsay reading and second, because current relevance perfects cannot constitute the main line of narrative sequences (Lindstedt 2000:371). In this context indirect evidential perfects function as unwitnessed pasts, having lost the implication of a situation that currently holds (cf. Kibrik 1985 on the Resultative / “Absentive Aorist” in Andi).

At the same time, the form may preserve its classical perfect meaning in other contexts beyond the narrative use. Indirect evidential semantics are not mutually exclusive with current relevance. Inferential in particular involves a resulting situation from which the speaker infers the preceding event. This can easily be expressed simultaneously with current relevance. It is difficult to ascertain at which point an inferential interpretation becomes part and parcel of the perfect’s semantics in a given language, as opposed to being a mere contextual interpretation. Consider the following Lezgian example from Greed 2017:17.

- (10) Lezgian (Greed 2017:17)
kic'-i č̣i tort t'ü-nwa!
dog-ERG our cake eat-PRF
'The dog **has/must have eaten** our cake!'

The sentence in (10) was elicited using the Perfect Questionnaire (Dahl 2000:800-809), which contains the pair of questions presented in (11).

- (11a) {Context: A comes from the kitchen very agitated and tells B what he has just seen happen:}
A: The dog EAT our cake!
- (11b) {Context: A comes from the kitchen where he has just seen the sad remains of the cake. He tells B what he assumes to have happened:}
A: The dog EAT our cake!

During elicitation of this questionnaire, speakers are asked to translate the underlined sentences using an appropriate verb form, taking into account the context provided in square brackets. The difference between (11a) and (11b) is that in (11a), the speaker witnessed how the event took place (the dog ate the cake), whereas in the case of (11b), they witnessed only the resulting situation (the cake was eaten – presumably by the dog).

One of the Lezgian speakers consulted by Greed 2017 commented that both sentences could be translated either with the Aorist or the Perfect. In the case of the second context, however, “the sentence with the Perfect form is more appropriate. Since the speaker did not witness the dog eating the cake, he is inferring from the evidence what must have happened” (Greed 2017:17). It is unclear how the speaker originally phrased their explanation, and how conventional this interpretation is among speakers of Lezgian. One could easily imagine that in a language like English, an appropriate translation of (11a), answering the question “what happened?”, would feature a Simple Past: “The dog ate our cake!”, while situation (11b) might be described using a Present Perfect: “The dog has eaten our cake!”, since it describes a resulting situation. This does not mean that the English Present Perfect has an indirect evidential meaning.

There is no further evidence that the Lezgian Perfect marks indirect evidentiality (see Haspelmath 1993), and it is notably absent in folklore texts, in contrast with other East Caucasian languages (Verhees 2019a:131-133). This points to a more general problem with evidential readings of perfect forms. Especially inferential interpretations are potentially universal, though they seem intuitively more pervasive in certain languages. Researchers often rely on a combination of their own intuition and speakers’ meta-commentary to assess the degree to which the evidential interpretation is conventionalized, but there appear to be no stable empirical criteria that would allow a cross-linguistic comparison of this parameter.

Forker suggests that East Caucasian perfects are “evidential strategies”, because their evidential reading can often be canceled with the help of a context that renders it impossible, such as ‘I saw it myself’ in example (12) below (Forker 2018a:496).

- (12) Dargwa: Sanzhi (Forker 2018a:496)
- | | | |
|-------------|------------------------|--------------------------------|
| Sanijat-li | t’ala ^h -ne | d-irc-ib=ca-d. |
| Sanijat-ERG | dishes-PL | NPL-wash.PFV-PRET=COP.PRES-NPL |
| dam=q’ar | il | či-b-až-ib=da |
| 1SG.DAT=PTC | 3SG | SUP-N-see.PFV-AOR=1 |
- ‘Sanijat **has washed** the dishes. I saw it myself.’

Without the latter part, the sentence would imply that the speaker somehow inferred that Sanijat washed the dishes, for example after seeing “a lot of water on

the kitchen floor and a wet towel” (ibid.). Cancelability in general indicates that a meaning is an implicature rather than a grammatical meaning (Hopper & Traugott 2003 (1993):79-81). A converse effect can be achieved, however, by introducing an element that is incompatible with current relevance. In example (13) from Tatevosov 2001:452 the use of the definite time adverbial *s:uni* (‘yesterday’) forces an indirect evidential interpretation.²⁵ Without the adverbial, the sentence in (13) would automatically be interpreted as referring to a present result, namely that the thief is caught (ibid.).

- (13) Bagvalal: Kvanada (Tatevosov 2001:452)
s:uni *den* *qačax* **w-iš:i-w-o** **ek’wa!**
 yesterday I.ERG thief M-catch-M-CVB AUX.PRS
 ‘Yesterday I **caught** the thief (but I didn’t know he was a thief and let him go).’

Andi features a set of intransitive verbs that default to a resultative reading when inflected for Perfect.²⁶ When they are embedded in a narrative sequence, however, their interpretation shifts to indirect evidential past.

- (14) Andi: Rikvani (Verhees 2020a:315)
hege-j **j-aɹi-d**
 DEM-F F-become_tired-PRF
 ‘She **is tired**.’

- (15) *hege-j* **hogik’o-d**
 DEM-F sit_down-PRF
 ‘She **is sitting**.’ (lit. has sat down)

- (16) *se-b* *zaman* *hege-j* *t’ulu=gu* **j-aɹi-d**
 one-INAN1 time DEM-F very=INT F-become_tired-PRF

hege-j **hogik’o-d** *λ’et’uro-λ* *angu-l’a*
 DEM-F sit_down-PRF tree-GEN branch-SUP
 ‘One time, she **became** very **tired**. She **sat down** on a tree branch.’ (The speaker did not witness this.)

²⁵ Example (13) illustrates the well-known “first person effect” (see Curnow 2002): indirect evidentials occur less frequently with first person subjects, and when they do, the result is a “lack of consciousness” interpretation, meaning that the speaker had indirect access to their own actions because they carried them out unwittingly, for example because they were intoxicated, asleep, or simply not aware of what they were doing.

²⁶ This concerns verbs denoting a change in a physical state or a posture. Some of these predicates seem to be common across the entire family due to the absence of corresponding stative lexemes.

Examples (14) and (15) demonstrate the interpretation of these forms in isolation, while in (16) they form part of a narrative about events not witnessed by the speaker. (All three examples are elicited.) Verbs that do not mark a change of state, especially stative ones, receive an indirect evidential interpretation by default.

In various Dargwa idioms the perfect forms of imperfective verbs default to the indirect evidential reading, while perfective verbs are ambiguous (Forker 2018a:496). Tatevosov 2007 linked the available interpretations of the Bagvalal Perfect to the semantic class of the verb, distinguishing verbs that never have an indirect evidential meaning when inflected for Perfect, verbs that always have an evidential meaning, and verbs that can have evidential and non-evidential meanings. Similar observations have been made for other East Caucasian languages (Forker 2018a:494). According to Friedman 2007:362-363, different interpretations of the Periphrastic Preterite in Lak correlate with the case marking on the subject: current relevance in case of an absolutive subject (17), and indirect evidentiality with a genitive/ergative subject (18).²⁷ It is unclear how this pattern emerged.

(17) Lak (Friedman 2007:363)
ga **b-a<w>χ:-unu** **ur** čwu.
he N-sell<N>-PST.CVB [M].is horse
'He **has sold** the horse.'

(18) Lak (Friedman 2007:362)
ga-na-l**n-a<w>χ:-unu** **b-ur** čwu
he-OBL-GEN N-sell<N>-PST.CVB N-is horse
'[Apparently] he **sold** the horse.'

The interpretation of East Caucasian perfects can thus depend on clausal constituents as well as the broader discourse context.

As mentioned in Section 3, there is not much data on possible additional functions of indirect evidential perfects. Nonetheless, I will provide some examples of other interpretations below. According to Maisak & Tatevosov 2007, the indirect forms of Tsakhur do not strictly convey indirect evidentiality or mirativity. While they are compatible with both contexts of indirect witnessing and surprise, this does not cover the entire range of their usage. Maisak & Tatevosov 2007 describe the overarching function of these forms in terms of the speaker's distancing, similar to Lazard's concept of "mediative" (see Section 3 and Lazard 1999 *inter alia*).²⁸ In example (19) the speaker is clearly not expressing surprise or indicating that they

²⁷ According to Friedman, the Lak genitive functions as an ergative here (2007:362).

²⁸ Unfortunately the source did not provide an example of this "distancing" function with the Perfect in particular. As will be discussed in more detail in Section 4.4, Tsakhur features an indirect evidential system that diachronically originates from the Perfect, but has extended to other tenses as well, including the Durative shown in example (19).

have no direct knowledge of the situation. According to Maisak & Tatevosov 2007:390, the use of the indirect form in this case “expresses [the speaker’s] non-involvement and non-participation in other people’s affairs.”

- (19) Tsakhur: Mishlesh (Maisak & Tatevosov 2007:390)
 “baš usteʁ, ma-na wuš-da iš-o-b.”
 head above this.III-ATR your-ATR business.III-COP-III
 ‘I agree (lit. above the head), that **is** your own business.’

A largely unexplored topic in the study of East Caucasian perfects is their use in interaction as opposed to monologues. In example (20) from Icari (Dargwa), the speaker points out to his wife that the meat in the kitchen appears to have gone bad (judging from an unpleasant smell).²⁹ The speaker commented on his use of the Perfect that using the Aorist (which is unmarked for evidentiality) in this case would be rude, because it would sound too categorical. Instead, the speaker opts to make a casual observation, thereby gently “inviting” his wife to admit that the meat has indeed gone bad. This is reminiscent of (non-)confirmativity as described by Friedman (Section 3).

- (20) Dargwa: Icari (Fieldwork 2016)
 {Context: You walk into the house and immediately sense the smell of rotten meat. You say to your wife:}
 wa dila r-ik:an x:unul, cel,
 hey 1SG.GEN F-beloved wife, somehow

 kuxnjali-b dig k:wʔbih-ub-ca-b.
 kitchen-N[ESS] meat spoil-PRET-COP-N
 ‘Hey, my dear wife, somehow the meat **has spoiled** in the kitchen.’

In the case of (20), none of the Perfect’s potential readings are excluded: the speaker refers to a past event with a current result, which is based on his inference from a perceivable result (a smell), while he motivates the choice of the marker with a politeness strategy suggesting reduced commitment to the truth value of the proposition. As demonstrated in the preceding paragraph, not all possible interpretations of the perfect are equally possible or likely in every possible context. Identifying the key factors that influence the number of possible interpretations (some of which were discussed above) would be a fruitful avenue for future comparative research on the semantics and pragmatics of these forms.

²⁹ This example was elicited.

4.3. *Witnessed past*

Following the grammaticalization of the perfect as an indirect evidential or unwitnessed past, a general past may be reanalyzed as a marker of direct evidentiality or witnessed past.³⁰ It remains unclear whether this has actually occurred in any of the East Caucasian languages. Studies on languages from the Nakh and Tsezic branches for the most part employ the terms Witnessed and Unwitnessed Past (e.g. Comrie & Polinsky 2007; Molochieva 2010; Khalilova 2011; Nichols 2011). The unwitnessed members of the opposition diachronically originate from perfects and in some cases preserve resultative and/or current relevance functions.

Comrie & Polinsky 2007 analyze the use of the corresponding forms in Tsez narratives in terms of witnessed vs. not witnessed. They point out that speakers of Tsez can start a narration with the Unwitnessed Past to frame the story as based on indirect access, and subsequently switch to Witnessed Past to “add vividness” (Comrie & Polinsky 2007:343). It is not evident from the examples provided that the alternation of these forms in narratives demonstrates a manipulation of marked evidential forms for stylistic purposes. The appearance of the Witnessed Past in unwitnessed contexts may simply indicate that the form is more neutral than the authors assume; see the discussion in Forker 2018a:499 and the fact that the forms seem to be interchangeable in this context. Alternatively, it could be an example of text-level “grounding”, which neutralizes the evidential distinction (Nichols 1981). The alternation of indirect evidential forms and their counterparts (including neutral ones) in narrative texts for information structural purposes is a cross-linguistically well-attested phenomenon (Shinzato 1991; Dwyer 2000; Makarcev 2013).

At least to speakers of Ingush, the evidential opposition between certain past tense forms is very salient (Nichols 2011:243). In the right setting, however, speakers of Avar may also have a strong sense that the Aorist indicates direct access, even though it is generally considered to be neutral in terms of evidentiality, as described in Mallaeva 2007 and Forker 2018b. When asked about the difference between (21a) and (21b), my consultant commented that (21b) indicates that the person who uttered the sentence had perhaps heard the rain, or had some other type of direct personal knowledge of the event. This interpretation arises in the specific context of elicitation, when the speaker is asked to describe the difference between two verb forms in the same context. It is unclear to what extent this meaning is inherent to the respective verb forms across speakers.

³⁰ A general past is a morphologically and functionally less marked past tense with respect to the perfect. Depending on the language, it can be an Aorist, Preterite, Simple Past, etc.

(21a) Avar: Khunzakh (Fieldwork 2016)
 noł c'ad **b-an** **b-ugo**
 last_night rain N-fall.CVB N-COP.PRS
 'It **rained**(PRF) last night.'

(21b) noł c'ad **b-ana**
 last_night rain N-fall.AOR
 'It **rained**(AOR) last night.'

It remains uncertain whether the Witnessed Past forms in Nakh and Tsezic are somehow qualitatively different from their equivalents in other East Caucasian languages, which are generally considered neutral.

4.4. Perfect "series"

In a number of East Caucasian languages an auxiliary inflected for perfect derives indirect evidential counterparts of periphrastic tenses that normally take a past auxiliary. This results in two parallel paradigms traditionally referred to as "series". Table 4 below shows a fragment of the Aorist and Perfect series for the verb 'read' in Avar (from Verhees 2018b:268).

	Aorist		Perfect		
	c'al- ana read-AOR		c'al- un read-CVB	b-ugo N-COP.PRS	
Pluperfect	c'al-un read-CVB	b-uk'-ana N-be-AOR	c'al-un read-CVB	b-uk'-un N-be-cvb	b-ugo N-COP.PRS
Imperfect	c'al-ul-e-b read-PRS-PTCP-N	b-uk'-ana N-be-AOR	c'al-ul-e-b read-PRS-PTCP-N	b-uk'-un N-be-CVB	b-ugo N-COP.PRS

Table 4. Aorist and Perfect series of 'read' in Avar

While East Caucasian perfects often preserve their functional polysemy, the perfect auxiliaries unambiguously mark indirect evidentiality. This could be due to lexical semantics: 'be' is a stative verb, and verbs from this class tend to default to an indirect evidential interpretation (see Section 4.2 of this paper). Such perfect series are attested in Avar and the Andic and Tsezic languages, though perhaps it is more widespread (cf. Section 5.2 on Turkic languages).

Divergent paradigms are found in Chechen and Tsakhur. Indirect evidential tenses in Chechen take various forms of the auxiliary *xil-* ('be, become'), see a fragment of the verbal paradigm in Table 5 based on Molochieva 2007; 2010. The

Unwitnessed Past consists of the *-na* converb and the Perfect form of the auxiliary *xilla*. This is structurally similar to a pluperfect from the perfect series in other languages (cf. Table 4 above).

	Simple past	Witnessed		Perfect	Unwitnessed	
	iic-i take-PST	iici-ra take-PST.W		-ec-na take-PRF	ec-na take-CVB	xil-la AUX-PRF
Pluperfect	ec-niera take-PQP				ec-na take-CVB	xil-liera AUX-PQP
Progressive		oec-ush take-SIM.CVB	vara COP.PST		oec-ush take-SIM.CVB	xil-la AUX-PRF

Table 5. Fragment of the past tense paradigm of ‘take’ in Chechen. Transcription follows standard language.

Apparently the lexical verb rather than its Perfect form has been reanalyzed as an evidential marker in Chechen. According to Molochieva 2010:138-139, the Chechen Perfect is “neutral with regard to evidentiality”, although she does provide some examples where it has inferential meaning.

- (22) Standard Chechen (Molochieva 2010:138)
 {Context: Axmed was supposed to wait for his friends, but he went away. They came and did not find his bag at the place where Axmed was to be waiting for them. The statement is based on inference.}
- | | | | |
|--------------|---------------------|---------|------------|
| Ahwmad | dwa-v-ax-na, | cun | toermag |
| Axmed.NOM(M) | away-M-go-PRF | 3SG.GEN | bag.NOM(N) |
-
- | | |
|----------|----------|
| b-aa-c | quzahw |
| N-be-NEG | here.LOC |
- ‘[I assume] Axmed **went away**, his bag is not here.’

In older sources the Chechen Perfect appears as a narrative tense for unwitnessed events (see for example the text samples from the 19th century cited in Nichols 1981), suggesting that it was compatible with hearsay at some earlier point in time. Whether Chechen has undergone some kind of paradigmatic shift requires further investigation.

Tsakhur of the Lezgetic branch also features a rather unique system of indirect evidential marking. Each finite tense in Tsakhur has an attributivized and a non-attributivized form, referred to in Maisak & Tatevosov 2007 as AF and NAF, respectively. Contrary to what the name might suggest, attributivized forms are not

necessarily attributive: they are formed with an attributive marker, yet they can head independent main clauses and function as finite tenses. For the most part, the functional distinction between AFs and NAFs remains unclear (Kalinina & Toldova 1999). Only forms with the copula *wo-d* show a systematic opposition of indirect experience (NAF) as opposed to unmarked events (AF). Table 6 below lists the forms in question, as described in Maisak & Tatevosov 2007. The basic past tense in Tsakhur is the Aorist, which is unmarked. As a result, Tsakhur has two perfects, only one of which is associated with indirect evidentiality.³¹ One of the remarkable features of this system is the fact that the indirect forms are morphologically less marked than their neutral counterparts, while it is usually the other way around (cf. Tables 4 and 5). Note that the paradigm also involves non-past forms (Durative and Potential).

Label	NAF		AF	
Perfect	aqi	wo-d	aqi	wo-d-un
	open.PFV	aux-IV	open.PFV	AUX-IV-ATTR
Durative	aqa	wo-d	aqa	wo-d-un
	open.IPFV	aux-IV	open.IPFV	AUX-IV-ATTR
Prospective	aqas-o-d		aqas-o-d-un	
	open.POT-COP-IV		open.POT-COP-IV-ATTR	

Table 6. Periphrastic tenses of the verb *aq-* ‘open’ with the auxiliary *wod(-un)* in Tsakhur (Maisak & Tatevosov 2007)

According to the analysis of Maisak & Tatevosov 2007, the indirect forms in Tsakhur lean more towards a general mediative function (see Section 3 and Section 4.2). Since the same authors provided a different analysis for indirect forms in the Andic language Bagvalal (cf. Maisak & Tatevosov 2001), I consider this a fairly reliable indication that there is indeed a significant functional difference between the indirect forms of Tsakhur and Bagvalal. A comparison of narrative texts in these two languages showed that the behavior of the indirect forms in Bagvalal is more consistent with an analysis in terms of indirect evidentiality (Verhees 2019b:139-158), though it should be pointed out that the study in question was limited to a rather small and unbalanced sample.

³¹ According to Maisak & Tatevosov (2007:378) the diachronic source for the indirect forms in Tsakhur is nonetheless the Perfect, which presumably results from reanalysis of the copula *wo-d*, specifically, as an indirect marker (rather than the Perfect structure as a whole).

4.5. Other types of evidentiality marking

Two other types of evidentiality marking are fairly well-attested in the family: 1) auxiliaries derived from specific lexical verbs; and 2) dedicated particles. These forms also mark indirect access and show some functional overlap with the perfect and related tenses in their role as evidential markers. For this reason it is relevant to discuss them. They cannot be taken into consideration when discussing areal hypotheses, however, because there is not enough data on these types of markers across all groups of the language family. The following sections provide a brief overview.

4.5.1 Evidential auxiliaries from lexical verbs

In various Dargwa idioms, verbs meaning ‘stay, remain’ can head predicates, marking that the speaker had some type of indirect access to the events, which can include hearsay and inference from results as well as prior knowledge (Forker 2018a:500-502). According to Forker these auxiliaries are often used in traditional narratives (*ibid.*). This is interesting, because the idioms in question (such as Kaitag and Kubachi) also feature an indirect evidential tense of resultative/perfect origin (Belyaev 2018:103), which are the form of choice for unwitnessed narratives in other East Caucasian languages.

- (23) Dargwa: Kubachi (Magometov 1963:333) via (Forker 2018a:502)
ti-w-le **už-ib-i=sa-w** sa Malla Rassittin
exist-M-CVB stay.M-AOR-CVB=COP.PRS-M one MullahNasreddin
‘Once upon a time there **was** one Mullah Nasreddin.’

In Avar and a number of other languages a verb meaning ‘find’ or ‘discover’ functions as an auxiliary with a meaning that is similar to (indirect) evidentiality. This seems to be an areal feature among languages that have had prolonged contact with Avar (Majsak & Danièl' 2018:143-144), although it is also attested in Standard Dargwa (Mutalov 2002:149).

According to Majsak & Danièl' 2018:126-130, constructions with ‘find’ in the past tense mark the speaker’s discovery of an event. Depending on the internal structure of the event, this can indicate inference: when the verb is perfective and the focus is on a resulting situation (24); or personal witnessing in case of an imperfective verb, where the speaker discovers an ongoing event (25). These verbs follow the morphosyntactic pattern of auxiliaries: they can take the place of the auxiliary in a periphrastic past tense or head a non-verbal predication. According to Majsak & Danièl' 2018:129-130, the point of reference for the discovery marker is not the speaker (as is typical of evidentials) but the subject. Compare example (24), where the protagonist of the story is a third person subject, and (25), where the

speaker talks about personal experiences. In the examples presented below, the subject is implicit, but the construction can also take an overt experiencer (or discoverer) subject.

- (24) Dargwa: Mehweb (Majsak & Danièl' 2018:127)
 {Context: When he returned to the place where he threw out the gold.}
 šejt'at-une-jni id-di d-ar?-i-le
 devil-PL-ERG this-PL NPL-gather.PFV-PST-CVB

ʔar-d-uχ-i-le **d-arg-i-le** le-r
 PV-NPL-carry.PFV-PST-CVB NPL-find.PFV-PST-CVB COP-NPL
 '[He found out that] the devils had gathered and **took it away**.'

- (25) Bagvalal: Kvanada (Majsak & Danièl' 2018:126)
 {Context: When we went back, one guy decided to fool us:}
 hinc'-ibi=la miq'-a-la raq'ê:-w-o,
 rock-PL=ADD road-OBL-SUP put-M-PFV.CVB

š'wax **w-eŋi-ŋax** w-isã
 run(PFV.CVB) M-go-IPFV-CVB M-find.AOR
 '[he] put rocks on the road, and [I saw how he] **ran** away.'

Future forms of the 'find' verbs convey presumptive meaning, i.e. inference based on prior knowledge. As mentioned above, this type of inference (as distinct from inference from a tangible result) is also part of the semantics of light verb constructions in Dargwa. In some languages (such as the Turkic language Kumyk discussed in Section 5.2), it seems that the perfect can also incorporate this meaning. The extent to which East Caucasian perfects are compatible with inference from knowledge remains a topic for future research.

- (26) Archi (Majsak & Danièl' 2018:131)
 to-w-mu ručka-t:u š:ur-ši **χo-qi**
 HE-I-OBL.I(ERG) pen-PL NPL.buy.IPFV-CVB NPL.find.PFV-FUT
 'He is **probably** buying pens [right now].'

According to Majsak & Danièl' 2018:130, the future construction is more grammaticalized than the past tense 'find' construction. An earlier analysis of the construction in Bagvalal characterized its development as one of lexicalization towards a modal marker instead (Majsak & Tatevosov 2001:316-318), on a par with constructions like *možet byt'* [can.3SG.PRS be.INF] 'perhaps, maybe' in Russian. This seems more accurate, since its distribution is similar to that of a modal adverb. Contrary to the past form of 'find', the future form does not govern the predicate's

temporal reference, cf. example (26), which refers to the present tense, and other examples provided in Majsak & Danièl' 2018:130-138.

4.5.2 Evidential particles

In East Caucasian, particles marking reported speech are ubiquitous. Most of them are not evidentials but quotatives – they simply mark the presence of reported speech: a meta-representation of a verbalized thought (27). Besides repeating the words of another speaker this includes self-quotation, quoting imagined utterances and presenting thoughts as quotes.

- (27) Botlikh (Saidova & Abusov 2012:43)
- | | | | |
|----------------|---------|----------|---|
| azarc'ida | hiλ'u | du-qi | k ^w at'a-bas:i= tal u |
| thousand_times | say.AOR | you-APUD | be_late-PROH=QUOT |
- 'I told you a thousand times: "don't be late!"'

As a rule, utterances marked with a quotative appear in conjunction with a clause headed by a verb of speech, or other types of verbs that can introduce a verbalized thought (e.g. 'think', 'seem', 'complain'), though not necessarily. In some contexts the absence of a speech clause can render a type of depersonalized quotation, resulting in a hearsay interpretation, cf. examples (28) and (29) from Bezhta.

- (28) Bezhta (Khalilova 2011:43)
- | | | | | |
|----------|---------------|-------------|--------|----------|
| holco | načalniki-ya | niso-na | gey | ali-qa |
| that.obl | chief-OBL.ERG | say-PFV.CVB | be.PRS | Ali-POSS |
- hōs-coy-s öžö
one-DISTR-GEN boy
- | | | | |
|---------|--------|---------------|--------|
| dibo | gey, | hōs-coy-s | öžö |
| 1SG.GEN | be.PRS | one-DISTR-GEN | boy(M) |
- | | | |
|---------|-------------------|-------------|
| dil | Ø-aqa-s-λo | niso-na |
| 1SG.DAT | M-become-FUT-QUOT | say-PFV.CVB |
- 'The chief said to Ali, "You have one of the boys, and I will have another boy.'"
- (29) Bezhta (Khalilova 2011:44)
- | | | |
|------|------------|-----------------|
| hugi | biλoya | Ø-ēλ'-eyo-λo |
| he | house.near | M-go-PST.W-QUOT |
- 'He went home, *they said*.'

Dedicated hearsay particles are also attested (30), though they seem to be much rarer in East Caucasian: so far they are attested only in Avar, a few Andic and Tsezic languages, and Lezgian, see Verhees To appear. This could be the result of a descriptive gap. Discursive particles are not described exhaustively or in much detail in the majority of available reference grammars.

- (30) Andi: Rikvani (Verhees 2020:320)
- | | | | |
|---------|--------------|-------------------------------------|---------------------------|
| dj-o | c'in-no-s:u | w-ul ² on-d= bodi | wstrečali-l' ^o |
| 1SG-AFF | know-HAB-NEG | M-go-PRF=REP | meeting.PL-SUP.LAT |
- 'I don't know, he went (*they say*) to meetings.'

Cross-linguistically, both quotatives and hearsay markers commonly originate from verbs of speech (Heine & Kuteva 2004 (2002):261-265, 265-268), and this also seems to be the case in some East Caucasian languages, see Haspelmath 1993:148 on Lezgian *lda*, or Khalilova 2011:42 on reported speech particles in Tsezic. A number of idioms use a petrified form of a verb 'say', such as the quotative converb *eł'ehe* 'having said' in Northern Akhvakh (Magomedbekova 1967:107), or the habitual *b-ik^war* '[they] say' in Icari Dargwa (31), or even a cliticized verb that can appear in different tense forms, such as Ingush *joax* 'they say, it is said' (Nichols 2011:279-280). It remains unclear whether quotatives and hearsay markers are connected to each other diachronically in East Caucasian, or whether they constitute two different paths of development from the same lexical source.

- (31) Dargwa: Icari (Fieldwork 2016)
- | | | | | |
|-----|---------|-------------|----------|-------------|
| wa | x:unul, | šahar-ri-ci | b-eqel | ħakim-ti |
| hey | wife, | city-IN.LAT | HPL-many | official-PL |
-
- | | | |
|--------------------------|-------------|------------------|
| sa-b-aħ-ib-li | le-b | b-ik'w-ar |
| PREV-HPL-go.PFV-PRET-CVB | be.here-HPL | HPL-say-HAB |
- 'Hey wife, many officials have come to the city, **they say**.'

Hearsay particles can also be used in storytelling (see Forker 2018b on Avar, or Verhees 2020a on Andi). For some languages this results in two functionally similar narrative strategies. Possibly they carry stylistic differences, but this requires further investigation.

Turkic languages also feature quotative markers from speech verbs (often in a converbal form), which may or may not extend their use to hearsay. See, for example, İközöğlü 2012 on Turkish or Greed 2014:75-79 on Tatar. Kehayov & Boye 2016:870-871 mention that various forms of 'say' verbs commonly develop into "quotative complementizers" in the Turkic contact area. They include examples from Hinuq (East Caucasian), Adyghe (West Caucasian) and Ossetic (an Iranian

language spoken in the North Caucasus). Unfortunately, very little is known about the corresponding forms from the Turkic languages spoken in the eastern Caucasus.

Kryz borrowed a clitic *-miš* from Azerbaijani, which marks general indirect access (Authier 2009:255-257; Authier 2010). In example (32) it indicates hearsay according to Authier 2010:16.

- (32) Kryz: Alyk (Authier 2010:16)
pis-a kar hiçvaxt k'iy-ğar sanxan-de-d-**miš**
bad-a work never heart-SUP.EL forget-NEG.PRS-N-EVID
'A bad deed is never forgotten.'

The clitic seems to be a copy of the Azerbaijani copula particle *-(i)miš*, specifically, rather than the perfect suffix *-miš*. As will be discussed in more detail in Section 5.2, the *-miš* past in Azerbaijani seems to have lost its indirect evidential function, while the copula particle *-(i)miš* is a stable marker of indirect evidentiality. In addition, the Kryz clitic more closely resembles *-(i)miš* in terms of its distributional characteristics, see Authier 2010:17. So far this is the only example of evidential matter borrowing from Turkic to East Caucasian in the eastern Caucasus area that I am aware of.

5. Turkic languages

As mentioned in Section 2, three Turkic languages are present in the eastern Caucasus: Kumyk and Nogai of the Kipchak branch, and Azerbaijani of the Oghuz branch. Figure 4 below shows the distribution of Turkic languages in the Republic of Daghestan.³² Turkic settlements also exist in the Chechen and Ingush Republics, but unfortunately I do not have data on all of their locations. Outside of Daghestan, Azerbaijani is spoken in the eponymous republic, which borders Daghestan in the south, and in the northern part of Iran. Dialects of Nogai are dispersed throughout the North Caucasus (Johanson 2006:160), while Kumyk is spoken primarily in Daghestan. These respective languages and the corresponding ethnic groups originate from various Turkic tribal confederations, and were consolidated relatively recently at different times in the Medieval period, see Golden 1992. Turkish never had a physical presence in the area, but it was acquired by some as an important regional language. To this day it is offered as an elective in certain Daghestanian schools.

³² Data from the *East Caucasian villages data set* (Moroz & Verhees 2020), cf. note 10.

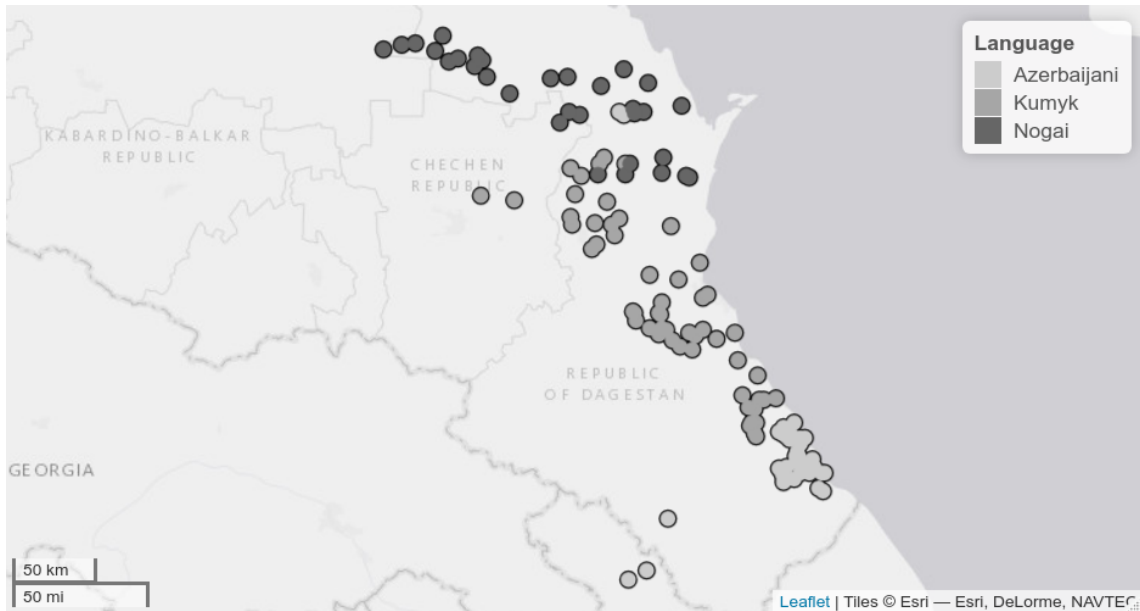


Figure 4. Map: Distribution of Turkic languages in Daghestan

5.1. Contact with East Caucasian

The Turkic languages and their zones of influence form complementary areas characterized by different types of contact. Azerbaijani was historically the main L2 and language of literacy in the southern part of the area, encompassing southern Daghestan and Azerbaijan. It was used as a lingua franca in the important market city Derbent (Wixman 1980:59), and for communication between speakers of different Lezgian languages (Volkova 1967:28). East Caucasian speakers from the southern area were also involved in what are known as pendulum migrations, where entire families or even villages would temporarily relocate to particular areas of Azerbaijan for seasonal work (Chechuro et al. To appear). Contact between East Caucasian and Azerbaijani has been largely asymmetrical (Volkova 1967:27-28). This is even the case in the Tabasaran district of Daghestan, where several villages speak a local variety of Azerbaijani (Ibragimov 2002:508). While their Tabasaran neighbors show near universal bilingualism with Azerbaijani, only a few people among the Azerbaijani-speaking population report a knowledge of Tabasaran (see data from Darvag, Ersi, Dyubek, and Dzhavgat in Dobrushina et al. 2017).

In the central part of Daghestan, (male) speakers of East Caucasian would acquire a command of Kumyk through pasture sharing in the lowlands, or trade at the market of Buynaksk (Volkova 1967; Wixman 1980:58-59; Chirikba 2008:74). It was also spoken as an L2 by some neighboring communities.³³ Nogai was the main

³³ The Atlas of Multilingualism in Daghestan (Dobrushina et al. 2017) reports speakers with a command of Kumyk in Dargwa villages Mallakent, Chankurbe, Chabanmakhi, Chumli, Tsukhta, Upper

lingua franca in the market of Kizlyar in northern Daghestan and also in Mozdok (Ossetia) (Wixman 1980:58), where it played a role similar to that of Kumyk in central Daghestan (Chirikba 2008:74). Volkova 1967:28 reports that in the multi-ethnic village Braguny (in the Chechen Republic), a mixture of Kumyk, Nogai, and Kabardian (a West Caucasian language) was spoken. Its local market attracted Chechens, Georgians, Armenians, and Cossacks, who would communicate in Kumyk or Nogai (*ibid.*). Unfortunately the scale of bilingualism with Kipchak Turkic among the East Caucasian population remains a bit unclear. It appears to have left very little trace in the language repertoire of Daghestanian highland villagers born in 1827 or later: the figures for bilingualism with Kumyk reported in Dobrushina et al. 2017 are much lower than those for Azerbaijani, and Nogai is unattested as L2 in the database. Nogai is considered to have been of less influence in the area than Kumyk, and has been subjected to assimilation by the latter (Wixman 1980:111).

In northwestern Daghestan, centered around the trade center Khunzakh, the East Caucasian language Avar was widespread as a lingua franca; see Dobrušina & Zakirova 2019 for more detail on the particularities of Avar in the role of L2. This is relevant for the distribution and influence of Turkic languages, because it interrupts Kipchak hegemony in the northern/central zone. Figure 5 below plots the locations of major trade centers and their dominant lingua franca (according to Wixman 1980) against the spread of local languages. This crude division more or less concurs with what we know about the areas associated with the respective L2s, though it obscures many specific configurations on a smaller scale.

Turkic influence is reflected in the presence of borrowed vocabulary across the entire East Caucasian family. Unfortunately, the exact source language often remains unclear, because the Turkic languages spoken in the eastern Caucasus share a lot of their vocabulary.³⁴ In addition, the presence of borrowings does not imply direct contact: they could have been mediated through another East Caucasian language like Avar (Daniel et al. To appear) or Lak (Chumakina 2009:434). Lexical borrowing in the opposite direction – from East Caucasian to local Turkic languages – to my knowledge is attested only for Kumyk (Selimova 2016). Another complicating factor is the fact that L2 speakers of different Turkic languages communicated with each other in Turkic (Wixman 1980: 109), e.g. an Avar who spoke Kumyk could communicate with a Lezgian who knew Azerbaijani. This is made possible by the fact that the Turkic languages of the area are to some

Ubekimakhi, Sutbuk, Urtsaki and Kubachi, many of which are located in the vicinity of Kumyk villages. Knowledge of Kumyk is also attested in the Avar village Durangi, which is located near Chabanmakhi, Chankurbe, and the Kumyk village Dorgeli, and in Rikvani, an Andi village that is quite remote from the area where Kumyk is spoken. In the Andi village Zilo, which is located close to Rikvani, nobody spoke Kumyk.

³⁴ For this reason, neither Chumakina 2009 nor Comrie & Khalilov 2009 specify the ultimate source language for Turkic borrowings in their investigations of loanwords in the East Caucasian languages Archi (Lezgi branch) and Bezhta (Tsezic branch).

extent mutually intelligible. Unfortunately there are no records of how this worked in practice.

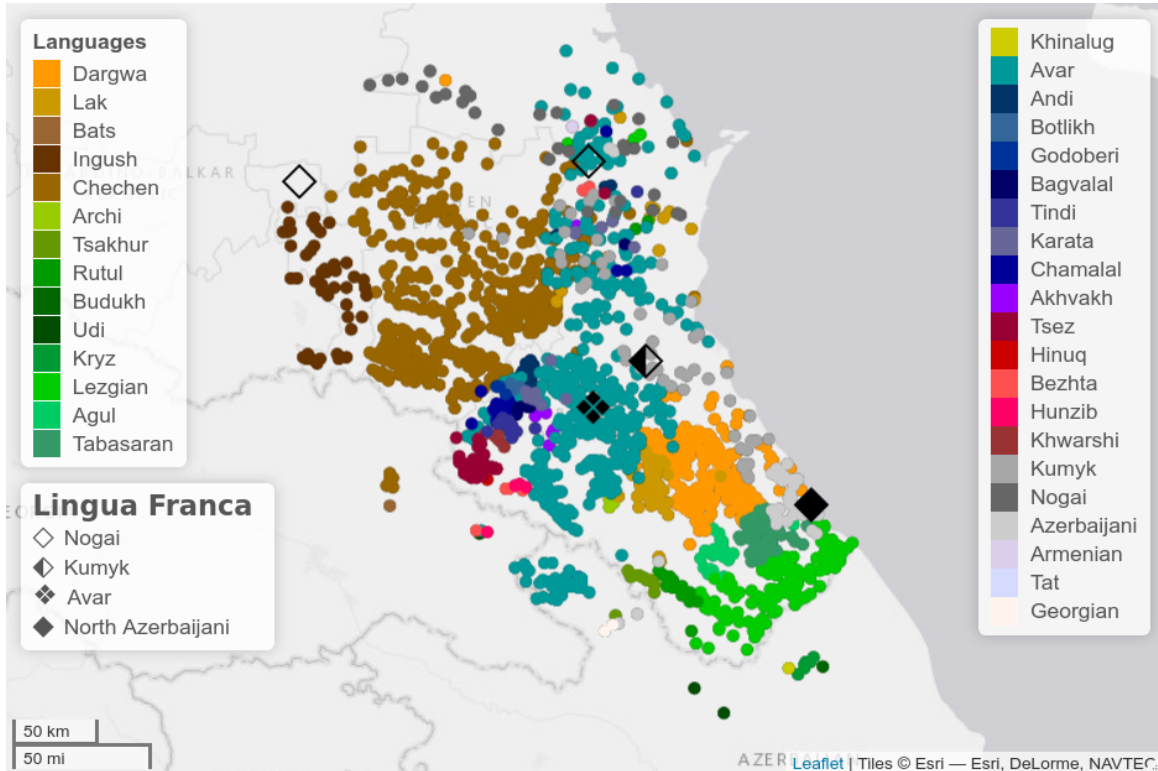


Figure 5. Map: Villages, languages, and major trade centers in the eastern Caucasus

East Caucasian languages spoken in the southern part of the area (i.e. in southern Daghestan and northern Azerbaijan) reveal significant structural influence from Azerbaijani in the form of borrowed morphemes, grammatical patterns, and phonological features (see an overview in Aristova 2019). In their turn, East Caucasian languages do not seem to have had much influence on Azerbaijani (though see Aslanov 1974 on the presence of ejective consonants in a local variety of Azerbaijani). Structural influence of Kipchak Turkic is virtually unattested, save for the presence of front rounded vowels in dialects of Chechen (Nichols 2004:138).

5.2. Evidentiality in Turkic languages of the eastern Caucasus

The Kipchak languages feature a past tense with the suffix *-ban*, which is associated with current relevance functions and is homophonous with the past participle

suffix.³⁵ Abdullaeva et al. describe the semantics of the Kumyk *van*-form as a “synthesis of perfect temporal meaning and unwitnessed modal meaning” (2014:335). This consists of resultative, resultative perfect and experiential for perfect, and inferential (both from result and reasoning) and hearsay for the evidential meaning component. In example (33a), the speaker makes a claim based on evidence, while in (33b), their claim is based on an assumption (Abdullaeva et al. 2014:332-333). According to Johanson (2018:514), the indirect evidential function of *-van* forms in general, and Kumyk in particular, is not very prominent.

(33a) Standard Kumyk (Abdullaeva et al. 2014:332)

seni xat-iŋ čï,
2sg.GEN handwriting-2SG.POS EMPH,

kaʒiz-ni sen **jaz-*van*-san**
letter-ACC 2SG write-PRF-2SG

‘This is *your* handwriting, you **wrote** this letter.’

(33b) Standard Kumyk (Abdullaeva et al. 2014:333)

qaraʒanda, kaʒiz-ni sen **jaz-*van*-san**
apparently, letter-ACC 2SG write-PRF-2SG

‘It seems you **wrote** this letter.’

The Nogai *van*-form does not appear to have an evidential function at all (Baskakov 1940:108; Kalmykova & Sarueva 1973:232). Nonetheless, both languages have periphrastic forms with an auxiliary in the *-van* form, which unambiguously refers to unwitnessed events (similar to the perfect auxiliaries in East Caucasian described in Section 4.4): *bol-*van** in Kumyk, *e-ken* in Nogai. The *-van* form in its finite function is opposed to a perfective past *-di*, which Kalmykova & Sarueva labeled a “categorical past” (*prošedšee kategoričeskoe*) in their grammar of Nogai, meaning that the event was completed in the past, and “the speaker does not doubt its completion” (1973:234). This could point to a more epistemic modal or “non-confirmative” meaning (Section 3). The *-di* past in Kumyk is characterized as a perfective past with overtones of direct experience, and is also labeled “categorical past” (Abdullaeva et al. 2014:329-330).

In Azerbaijani the *di*- past is opposed by a form with the suffix *-miš*. The *miš*-past in Turkish is described as an indirect evidential suffix in Slobin & Aksu-koç (1986) and many other sources. Its Azerbaijani counterpart, however, does not express indirect evidentiality by itself: it requires the aid of adverbs meaning “it is said” or “it seems” (Širaliev & Sevortjan 1971:127). Azerbaijani does have an auxiliary element *-(i)miš* with a stable indirect evidential meaning (Johanson

³⁵ I use *-van*, *-di* and *-miš* as citation forms for the Turkic suffixes. In actual language use they have several allomorphs, depending on the environment in which they occur.

2018:519), suggesting that the absence of an evidential reading for the suffix *-miš* is a case of loss (this absence is discussed from a broader geographical perspective in Section 8 of this paper). Note that the Turkish *-miš* form, in contrast with Azerbaijani, does not function as a perfect of current relevance: the form only displays some vestiges of resultativity in its participial use, cf. Slobin & Aksu-koç 1982:188-192. Indirect evidentiality is generally considered its main function, though some authors argue that its semantics cannot simply be reduced to the marking of information source, cf. Johanson 2000:61 and other alternative views discussed in Section 3 of this paper. Similar to the opposition of perfect and past auxiliaries in East Caucasian languages, the Turkic indirect auxiliaries have counterparts in the *-di* form.

Both *-miš* and *-kan* are of unclear etymological origin (Johanson 2018:515), but they coincide with participles that can form the dependent in a periphrastic tense. The *-miš* form is already attested as a finite past tense with indirect evidential meaning in Old Turkic (Erdal 2004:239), which is dated from the VII-XIII century. Erdal 2004:268 points out that current relevance semantics in Old Turkic were conveyed by a periphrastic construction consisting of a *-miš* participle and a copula. Meanwhile the finite uses of *-miš* without a copula are limited to indirect evidentiality and mirativity (ibid.:273-274). The copula *är-miš* (the predecessor of Azerbaijani *-(i)miš*) was already in place as an indirect marker at this stage (ibid.:273-274).³⁶ It seems possible that the contemporary *-miš* forms are rooted in a periphrastic perfect with an indirect evidential function, although this trajectory is not discussed in the historical comparative grammar of Tenišev et al. 2002:198-190. According to Johanson 2018:514, the *-miš* past had current relevance uses in Old Anatolian Turkish and Old Ottoman, the predecessors of modern Turkish and Azerbaijani. This suggests that at least some varieties of Turkic retained the current relevance function in contrast with the Old Turkic data.

The suffix *-kan* does not occur with finite uses in the Old Turkic period (Erdal 2004:233). According to Johanson 2018: 514, the *-kan* form replaced *-miš* in Eastern Middle Turkic. A younger construction with the *-ib* converb and the auxiliary *-dir* (from *tur-ur* 'stand') marks indirect evidentiality in Nogai and current relevance in Kumyk (ibid.: 515). Finite *-ib* forms in Azerbaijani have fused into a single paradigm with *-miš* (see Zaslansky 2019a; 2019b) for more detail). Table 7 summarizes the functions of various markers based on the sources cited in this section.³⁷

³⁶ Consequently, the synchronic situation in Azerbaijani likely results from a loss of the evidential meaning and renewal of perfect semantics (as also suggested in Johanson (2018)).

³⁷ Note that the markers as cited in Table 7 constitute generalized types that may look different in the respective languages and in actual language use.

Marker	Kumyk	Nogai	Azerbaijani
-ɤan	current relevance	current relevance	-
	indirect evidentiality		
-ib(-dir)	current relevance	indirect evidentiality	current relevance
-miš	-	-	
ɤan-type copula	indirect evidentiality	indirect evidentiality	-
miš-type copula	-	-	indirect evidentiality

Table 7. Perfect / indirect evidentiality markers in the Turkic languages of the eastern Caucasus

As described in Csató 2013, the Turkic languages display a continuous renewal of the perfect and indirect evidential cycles with new morphological material. This diachronic instability is a problem for comparison and reconstruction in the absence of historical data. It makes it difficult to pinpoint which form could have served as the borrowing model. Based on synchronic data, only the Kumyk *ɤan*-Perfect would qualify, since it is the only form that models the functional polysemy of current relevance and indirect evidentiality (though the latter is considered to be rather weak by some authors).

6. Map visualizations

This section presents map visualizations of two particular features: the presence of an indirect evidential perfect and the presence of evidentiality in the tense system. It is difficult to present the areal pattern accurately on a static map, taking into account the fact that most of the languages have multiple forms, including forms that are related to the perfect only diachronically. Figure 6 below illustrates whether a language features a verb form that has both current relevance and indirect evidential functions. Figure 7 shows in which languages indirect evidentiality is expressed in the tense system, regardless of whether this involves the perfect or not. Chechen and Azerbaijani, which lack an indirect evidential perfect, do feature a type of evidential marking in the tense system that is probably diachronically related to the perfect (see Section 4.4). Zaqatala Avar and Axaxdərə Akhvakah seem to lack an indirect evidential perfect, but do feature indirect evidential past suffixes of unclear origins, as was discussed in more detail in Section 4.1.

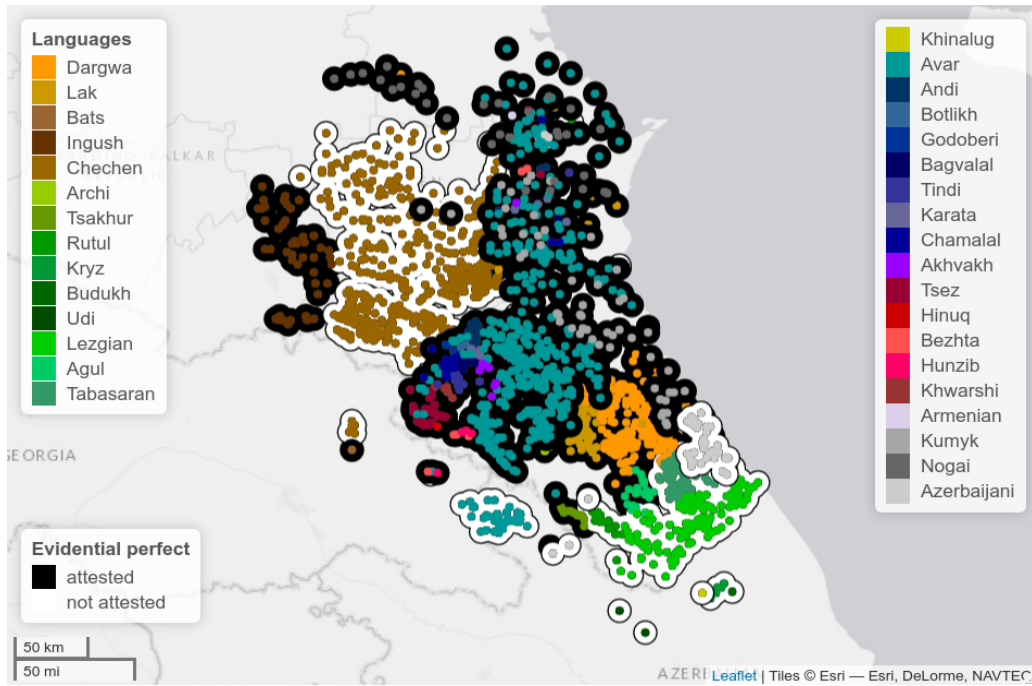


Figure 6. Map: Indirect evidentiality as a meaning of the perfect

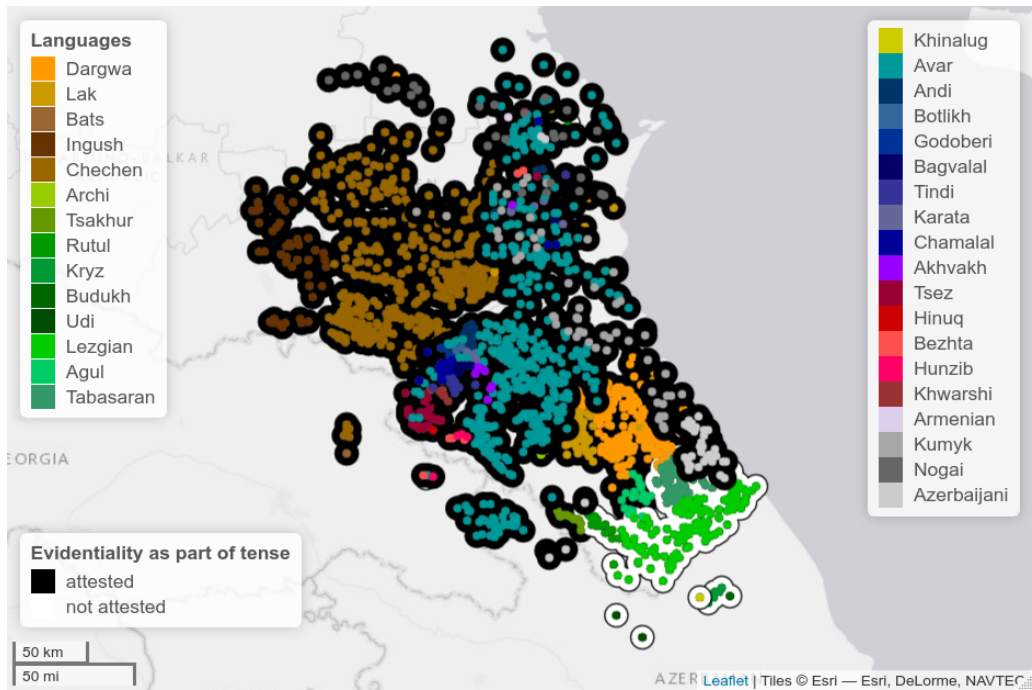


Figure 7. Map: Indirect evidentiality within the tense system

For most languages the available data describe a particular variety (e.g. a literary language, a dialect spanning a number of villages, or a single-village idiom). In case precise data for a particular idiom were available, they were included. In the remaining cases the information represents a generalization from the available data. Data for Bagvalal, for example, come from the village variety of Kvanada (described in Kibrik et al. 2001). Information about the feature in Kvanada (attested) was then extrapolated to cover all Bagvalal-speaking villages. The benefit of using a village-based visualization is that it clearly shows the boundaries between languages. On the downside, the generalizing approach for assigning values to points on the map potentially erases significant dialectal differences that have not yet been described.³⁸

Three languages appear to lack evidential marking altogether based on the available literature: Udi, Tabasaran, and Khinalug. In the case of Tabasaran this could be a descriptive issue, whereas for Udi this is not very likely, see Alekseev et al. 2008; Schulze 2005). Kibrik et al. 1972:178 described an occasional unwitnessed connotation for one of the perfects in Khinalug. More recent research on Khinalug suggests that the language employs various deictic copulas rather than verb tenses to mark evidentiality; research on this system is currently ongoing (Monika Rind-Pawłowski, p.c.). This is an interesting case because evidential marking based on spatial deixis is cross-linguistically attested (de Haan 2005; Jacques 2018), but so far unheard of in the Caucasus region.

7. Other languages of the area

In this section I review the available literature on evidentiality in languages spoken in the larger area surrounding the eastern Caucasus, including Iranian languages (Persian, Ossetic, Tat), Armenian, the Kartvelian languages, and the West Caucasian languages. Many of them feature similar systems of evidentiality marking that could have resulted from language contact with Turkic.

7.1. Iranian

According to Johanson 2018:514, the indirect evidential meaning of the Azerbaijani *-miš* past was weakened due to contact influence from Persian. Perfect forms in Persian, however, also have an indirect evidential function, which is compatible with

³⁸ The data and code used to draw the maps, as well as html versions of the map, are also available in the online supplement: <<https://osf.io/tcba8/>>. These data also formed the basis for Verhees 2020b, which provides an online interface where the user can check the available data for a given village point on the map (e.g. does the data describe the village dialect, or was the information generalized from a source describing a different dialect or a standard variety).

contexts of inference and hearsay (see, e.g., Lazard 2000:210-211).³⁹ Iranists typically distinguish two perfect forms: i) formed with a perfective verb; ii) formed with an imperfective verb and carrying the prefix *mi-*. The former is a regular current relevance perfect, while the latter is more of a perfect continuous (Soper 1987:352-356; Jahani 2000:189-191). Both can have indirect evidential interpretations in addition to their aspecto-temporal meaning. Persian also has two pluperfect forms, formed with either the Aorist or Present Perfect form of the auxiliary, similar to the parallel series attested in East Caucasian and Turkic. The pluperfect with a perfect auxiliary has an indirect evidential meaning. Soper 1987:355 mentions that the imperfective perfect, the perfect pluperfect, and the indirect evidential use of the perfective perfect, are all rather rare. He attributes the appearance of the evidential meaning component to contact with Turkish or Azerbaijani, since there is no evidence for it in older stages of Iranian (ibid.:356).

As far as other Iranian languages of the area are concerned, Ossetic, which neighbors Ingush at the western fringe of the area under investigation, lacks both a perfect and evidentiality as a category of the verb (Erschler 2020). Boeder 2000:284, citing Grjunberg 1963, mentions the existence of an evidential particle -*miš* borrowed from Azerbaijani in a variety of Tat spoken in Azerbaijan. The particle is used in combination with the Perfect, and probably derives from the copula -*(i)miš* rather than the perfect suffix -*miš* (ibid.), parallel to what seems to be the case in Kryz (as discussed in Section 4.5). The Şirvan variety of Tat features an evidential paradigm that is structurally similar to that of Azerbaijani (with the Perfect form of 'be' as an auxiliary), but does not involve borrowed morphemes; the particle -*miš* shows up only in direct elicitation (Suleymanov 2020:190), where it is more likely to indicate some type of code-switching than morphological borrowing. Judeo-Tat features a perfect that may have an evidential meaning "in context" (Authier 2012:190) but no borrowed particles.

7.2. Armenian

The Perfect in Eastern Armenian (with the Past Participle in *-el* and an auxiliary) expresses both current relevance and indirect evidentiality (Kozintseva 2000). An auxiliary *ey-el* derives further indirect periphrastic tenses (ibid.:408). Western Armenian features an indirect evidential past that consists of a Past Participle in *-er* and an auxiliary (Donabédian 2001). The auxiliary form *ey-er* in Western Armenian functions as an evidential particle (Donabédian 1996). The Perfect in Western Armenian takes another participial form with the suffix *-ac* in combination with an auxiliary (Donabédian 2001:422). This construction corresponds to a Present Resultative in Eastern Armenian (Kozintseva 2000:407), meaning that the two varieties of Armenian feature analogous constructions in different stages of development (see Table 8 below).

³⁹ Lazard 2000 employs the term "mediative" (fr. *médiatif*), cf. Section 3 of this paper.

Classical Armenian (the predecessor of both contemporary varieties) featured a Perfect with a participle in *-al* and an auxiliary. The *-al* participle in Classical Armenian could be used without the auxiliary to narrate unwitnessed events in a third person context (Kozintseva 2000:405-407). This is considered to be the result of auxiliary omission (*ibid.*). According to Kozintseva 2000:415, Iranian and Turkic languages could have played a role in the development of the Eastern Armenian system.

Function	Eastern Armenian	Western Armenian	Classical Armenian
Resultative	-ac + aux	-ac + aux	-al + aux
Current relevance	-el + aux		
Indirect evidentiality		-er + aux	-al

Table 8. Perfects in Armenian

7.3. Kartvelian

The Perfect in Standard Georgian combines current relevance with indirect evidential use (Boeder 2000). It also features an indirect evidential Pluperfect (Hewitt 1979:87-88), but appears to lack further indirect periphrastic forms. Laz, Mingrelian, Svan, and Georgian dialects spoken in the vicinity of these languages, by contrast “have developed a richer system which provides special evidential verb forms as counterparts not only for the non-evidential aorist but also for the present, imperfect, and future” (Boeder 2000:309). At least in the case of Svan, the more elaborate paradigm ultimately also originates from the Perfect (Sumbatova 1999).

Boeder 2000: 297-298 pointed out that indirect evidentiality as a meaning of the Georgian Perfect could have been induced by contact with Turkic languages, though language-internal development is equally plausible based on the available evidence. For Svan, a language that is geographically quite far removed from Turkic-speaking areas yet features an elaborate evidential system, Boeder proposes that the feature could have been mediated through Mingrelian, given that the Mingrelian system developed under Turkish influence (2000:276-277).⁴⁰ Some Georgian dialects use a third person perfect form of a ‘be’-verb as an indirect evidential particle, which is likely a calque from Azerbaijani *-(i)miš* (Boeder 2000:283-284). It remains a bit unclear whether these varieties bypassed the evidential perfect stage in developing these particles.

⁴⁰ According to Chirikba 2003:267, Mingrelian was perhaps also influenced by the neighboring Abkhaz language.

7.4. West Caucasian

Chirikba 2003 described two dedicated indirect evidential suffixes that attach to finite verb forms for Abkhaz. They originate from future forms of a yet unidentified lexical verb. Cognate forms are attested in Abaza (Panova 2019:39-41). Adyghe and Kabardian employ a combination of a perfective suffix and a future marker (-*ya-n*) (Chirikba 2003:263-264). It is important to note that this marking has no diachronic connection to a perfect-type form. Overall, special markers of semantics associated with the perfect seem to be only marginally attested in the West Caucasian family. Abkhaz features a suffix -*χ'a*, which expresses current relevance; its cognate in Abaza is a dedicated iative marker, a grammatical form that occupies an intermediate position between adverbs like 'already' and the perfect in terms of semantics (Panova 2019:26; Kljagina 2018:56-60). Adyghe and Kabardian appear to lack such forms altogether (see Kljagina 2018). According to Chirikba 2003:266-267 the development of the indirect evidential markers in West Caucasian predates significant contact with Turkic languages. It is interesting to note that the now extinct Ubykh language, which was geographically located in between Abkhaz-Abaza and Circassian (Adyghe and Kabardian), apparently lacked any type of indirect evidential marking (ibid.).

7.5. Summary

To sum up, throughout the extended region we find types of indirect evidential marking that are similar to the ones described for East Caucasian (Section 4) and Turkic (Section 5.2). Perfects commonly develop an indirect evidential meaning. Subsequently, an auxiliary inflected for perfect may become an indirect evidential past auxiliary (as opposed to an unmarked past auxiliary), or an indirect evidential particle. The only exceptions are the West Caucasian languages, which feature an indirect evidential marker originating from a future form with no diachronic link to the perfect, and Ossetic, which appears to lack both a perfect and indirect evidential marking.

Despite the superficial similarities across languages, families, and micro-areas, there is no overwhelming evidence that any of these forms emerged due to contact with a specific (Turkic) language, as opposed to the alternative hypothesis of language-internal development. This holds even in the case of languages for which a historical record is available, such as Georgian or Armenian. As Boeder pointed out with regards to Georgian, deciding the exact meaning of a polyfunctional verb tense in historical texts is a difficult methodological problem (2000:297). This is challenging even in the case of contemporary language data, but becomes increasingly more difficult when certain hypotheses emerging from the data cannot be verified with living speakers. Another problem, already mentioned in Section 3, is that indirect evidentiality as a meaning of the perfect – generally assumed to

originate from conversational implicature – probably appeared first in spoken language, for which there is no historical data. This makes it impossible to pinpoint an approximate time-frame for the emergence of the feature and subsequently relate this to historical data on language contact. At least in the case of West Caucasian, the development of evidential marking seems to have predated significant contact with Turkic languages (Chirikba 2003:266).

8. The Turkic Hypothesis

As mentioned in the introduction, in terms of evidentiality the (eastern) Caucasus forms part of a larger area stretching across Eurasia where indirect evidential tenses are relatively frequent. The category is also mentioned in studies on the Caucasus as a linguistic area (e.g. Johanson 2006:172-174; Chirikba 2008:66; Tuite 1999:5) as being a common feature shared across language families. While the development of evidentiality – especially the path from perfect to indirect access – can occur language-internally without contact influence, this phenomenon is suspiciously frequent in areas where Turkic languages are spoken, as illustrated by Figure 1 in Section 1. The Turkic languages seem good source candidates for the diffusion of indirect evidentiality across Eurasia: the feature is attested throughout the family, it is confirmed to be quite old, and Turkic-speaking communities are dispersed across the area where it is particularly frequent. Nevertheless, there are relatively few cases where the Turkic contact scenario can actually be confirmed to some extent (an exception might be the Balkan Slavic languages, according to the timeline sketched in Friedman 2018:129-131). In most cases it is merely suggested as a possibility. In this section I evaluate the likelihood of the Turkic hypothesis for East Caucasian. As I will show, the available evidence does not support the idea that East Caucasian languages borrowed indirect evidentiality as a function of the perfect from a Turkic contact language. I will propose a tentative alternative hypothesis that combines language-internal development with contact-induced boosting.

Hypotheses about contact influence usually start with an observation that two or more languages spoken in the same area share a similar feature. In order to prove that this similarity results from language contact rather than other processes (e.g. a typologically common development or coincidence), additional evidence is necessary. Ideally the researcher can show that the development probably would not have taken place in the absence of contact, and that the emergence of the feature aligns with the history of language contact. Indirect evidential perfects in the Caucasus seem like a compelling example of convergence because the feature is shared by a large number of languages that are typologically diverse and belong to different language families. It is difficult to prove, however, that the feature would not have emerged in certain languages without the influence of a contact language. The feature can technically emerge without contact influence (Section 3), and most of the supposed target languages involved are spoken in the same area, e.g. there are

no East Caucasian languages for which we can exclude the possibility of contact with a Turkic language for comparison.

As shown in Section 6 of this paper, the presence of evidentiality in the tense system and as a meaning of the perfect show a peculiar distribution in the eastern Caucasus. Evidential perfects are generally common in the East Caucasian family, but they are absent among several Lezgian languages and Khinalug, which are spoken in the southern part of the area. In Verhees 2018a I connected this to the influence of Azerbaijani, where the perfect has lost its evidential function (Section 5.2). In combination with the fact that Azerbaijani is the most important L2 for all the languages that lack the feature, this suggests that the tendency toward current relevance at the expense of evidentiality could be a contact feature. However, the spread of the evidential feature's absence does not form a perfect match with our knowledge of bilingualism patterns. The area where Azerbaijani was the dominant lingua franca also includes Agul and Tsakhur, which do feature evidential perfects. To my knowledge their sociolinguistic situation does not differ from that of e.g. Rutul or Lezgian in such a way that it can account for this discrepancy.

The area where evidential perfects are attested in its turn roughly coincides with the distribution of Kumyk and Nogai as lingua francas (again with the exception of Agul and Tsakhur). It is not very plausible, however, that the East Caucasian languages developed the feature under their influence. Whereas there is ample evidence for the influence of Azerbaijani on the grammar of East Caucasian languages spoken in the south (see Section 5), I am not aware of any such cases involving Kumyk or Nogai. Azerbaijani as a lingua franca also covered more domains of use and did not compete with other local languages for its role as lingua franca (as opposed to Kumyk, which partially shared its position with Avar). This asymmetry is also reflected in the bilingualism rates for Daghestanian highland villages (Dobrushina et al. 2017): the figures for Kumyk are significantly lower than for Azerbaijani, and Nogai bilingualism is unattested in the database.

In addition, the Kipchak perfects do not provide a convincing borrowing model. If the East Caucasian languages borrowed the evidential function of the perfect from a Turkic language, the source construction should feature the same polysemy pattern, combining current relevance with indirect evidentiality. There is only one form that currently satisfies this parameter: the Kumyk *van* Perfect (see Table 7, Section 5.2). This form is structurally very different from the majority of East Caucasian perfects (synthetic and homophonous with a participle, as opposed to periphrastic forms with converbs), which would entail a rather sophisticated process of what Johanson 2000 calls “selective copying”. A speaker of East Caucasian would have to “recognize” the Kumyk *-van* form as somehow similar to their native perfect construction based on functional parameters in order to recruit this particular form for the expression of indirect evidentiality. Note also that according to some authors, the evidential semantics of the *-van* form in Kumyk are not very strong, which makes it a doubtful source candidate.

It should be pointed out, however, that synchronic data can be deceptive where perfects are concerned. Perfects are “evolutionarily unstable” (Plungjan 2016:8), meaning that they tend to develop into other categories, such as perfective past. If a language has a tendency to preserve the current relevance function (and this seems to be the case both in the East Caucasian and Turkic languages), new morphological structures will be recruited to fulfill this function when older forms become specialized for past or evidentiality. These constructions can look rather different, e.g. in Kipchak Turkic we find one Perfect that is homophonous with a participle, and another consisting of a converb and an auxiliary. The functional range of the perfect is distributed between these two (Table 7, Section 5.2). In the absence of historical data it is difficult to tell which form-meaning pairing was in place at an earlier point in time when the contact influence supposedly started, and could thus have acted as the borrowing model. The fact that the majority of East Caucasian perfects are periphrastic with a converb while the most frequent forms in Turkic are synthetic and coincide with a participle could simply mean that the former have been renewed due to some language-internal processes that occurred after the borrowing of the evidential function.

Since none of the East Caucasian languages have a long written record, we do not know which structures fulfilled the role of the perfect throughout history, nor can we pinpoint in which period the evidential function emerged. The same applies to the Turkic languages spoken in the area. Available historical data confirm the general intuitions that the feature is relatively old in Turkic, while it is a more recent development in East Caucasian. Caucasian Albanian (V-VI centuries), the oldest attested East Caucasian language, lacked both a perfect and indirect evidentiality (Gippert et al. 2008; Maisak 2018:158–160). In Old Turkic (VII-XIII centuries) by contrast, these features were present, as discussed in Section 5.2. However, since these historical languages are not direct ancestors of most of the languages discussed in this paper (the East Caucasian languages besides Udi and the Kipchak Turkic languages), they cannot be taken as representative of earlier stages of the contemporary languages under investigation here.

The further development of the evidential feature in East Caucasian tense systems does not clearly point to contact influence, either. In most cases a perfect ‘be’-auxiliary becomes a stable indirect evidential past marker, parallel to what we find in Turkic and other languages of the area. This development is too trivial, however, to be considered a clear sign of convergence. The constructions with Perfect auxiliaries follow the same model as existing periphrastic tenses with a general past ‘be’-auxiliary, and as pointed out in Section 4.2, stative verbs like ‘be’ tend to default to an evidential reading (as opposed to current relevance) when inflected for perfect. This makes it a rather natural development. Tsakhur and Chechen show divergent paradigms that can be loosely connected to the perfect diachronically (see Section 4.4). While it cannot be completely ruled out that

language contact had some influence on the emergence of these systems at a certain point, their subsequent development is strongly idiosyncratic.

To sum up, there is no clear evidence to support the hypothesis that indirect evidential perfects appeared in East Caucasian under the influence of Turkic. This is mostly due to a lack of necessary data. Therefore, the hypothesis cannot be confirmed nor definitively refuted. Below I describe a tentative hypothesis for how the synchronic picture could have resulted from a combination of common language-internal processes (the perfect developing an evidential implicature) and a specific type of language contact that boosted the development of the evidential meaning component.

As pointed out in Section 3, perfects commonly develop inferential overtones, which can be more or less prominent in different languages. I propose that the East Caucasian languages (and other languages of the area) naturally developed a perfect from a resultative construction, and that it already carried some indirect evidential overtones. The languages then copied the use of the perfect as an unwitnessed narrative tense (i.e. constituting the main line of a narrative sequence describing events not witnessed by the speaker), which strengthened its indirect evidential semantics.

Narrative use provides a good source model for indirect evidentiality. First, it constitutes an unambiguous context for the evidential reading (see Section 4.2). Second, narrative use is a relatively stable feature even in languages where the indirect evidential function is not very salient in other contexts (Verhees 2019a:129). This also applies to Kumyk, where the *-ban* form does not have a strong indirect evidential meaning component according to Johanson 2018:514, while it does appear as a narrative tense in folklore texts (Anna Dybo, p.c.). Finally, the use of a perfect in such a context would be highly unusual and thus salient to an L2 speaker in whose native language the narrative main line builds on a general past. At least in the eastern Caucasus, the presence of shared folklore motives across speech communities confirms that this type of language contact (i.e. the sharing of oral literature) took place. Interestingly, the presence vs. absence of certain motifs follows a similar areal pattern to the distribution of evidentiality and different Turkic lingua francas (Adžiev 1991).

If we accept this hypothesis as plausible, one might wonder whether it is possible for a language to borrow just the narrative use as a kind of stylistic device, while the target form remains a regular perfect in other contexts. So far this does not seem to be the case (see also Greed 2018): if unwitnessed narrative use is attested, the form also has indirect evidential interpretations in other contexts. Conversely, the presence of some indirect evidential implicature seems to be a necessary prerequisite for languages to develop the narrative use. This ties in with Johanson's 2006:172 proposal that the Turkic languages perhaps did not directly cause the development of the feature, but that their influence may have stimulated the evolution of "latent tendencies towards indirectivity" that were already present.

It is possible that some languages initially borrowed the use of a non-finite form as an unwitnessed narrative tense. In Classical Armenian the Past Participle *-al* could function independently as an unwitnessed narrative tense in third person, which is typically analyzed as a case of auxiliary omission, since the same participle occurred in a periphrastic Perfect construction with an auxiliary verb (Section 7.2). Contemporary varieties of Armenian feature periphrastic Perfects that cover both current relevance and indirect evidentiality. Evidential auxiliaries, however, take the form of the participle (without an auxiliary). The transfer of the indirect evidential feature to a perfect or resultative that was already in place could result from contamination, whereby a non-finite narrative form and the construction with the auxiliary become identified as variants of the same construction, thus allowing their semantics to blend. If the indirect evidential function was introduced specifically through narrative use, it is not surprising that the auxiliary is most frequently absent in third person contexts, since unwitnessed narratives are rarely cast in a perspective other than third person.⁴¹ Note that there is some evidence that the Past Participle in Avar used to function as an unwitnessed narrative tense without the aid of an auxiliary (Forker 2018a:499; 2018b:196-199), a function that has since been taken over by the periphrastic Perfect. As mentioned in Section 4.1, the diachronic development of syncretism between finite and non-finite forms in East Caucasian requires further investigation.

9. Conclusion

The aim of this paper was to provide an overview of the most common type of evidentiality marking in East Caucasian: the perfect, which indicates that the speaker did not have direct access to an event (i.e. indirect evidentiality), and to evaluate whether it could have emerged as the result of contact with local Turkic languages. Chirikba 2003:245 notes: “The evidential category is a pan-Caucasian phenomenon, present in one or another form in the majority of, if not all, Caucasian languages.” It seems, however, that the feature is completely absent at least in Udi, which is a relatively well-studied East Caucasian language (Section 6).

An indirect evidential function of the perfect is attested in 24/29 languages, and as discussed in Sections 6 and 8, it is notably absent in languages spoken in the southern part of the area. Perfects more generally, defined in this paper as verb forms expressing current relevance semantics (Section 3), are universally attested

⁴¹ Narratives marked for indirect evidentiality typically describe events that took place outside the deictic sphere of the main speech act participants. A first person subject is licensed only on the rare occasion when the speaker was not fully cognizant of the events, e.g. because they were drunk and heard about their own actions after the fact. In some languages the indirect forms are also used in dream narrations (see Maisak & Tatevosov 2007 on Tsakhur). I am not aware of any literature discussing the possibility of an unwitnessed narrative from a second person perspective, but this seems like a pragmatically unlikely situation.

in East Caucasian (Verhees 2019a),⁴² as well as in local Turkic languages. This might seem like a trivial observation, but note that Turkish (a Turkic language that is to some extent mutually intelligible with Azerbaijani and geographically contiguous with the area under investigation) lacks a current relevance form (Section 5.2), and so do Ossetic (Section 7.1) and some of the West Caucasian languages (Section 7.4). The situation in East Caucasian is actually quite similar to the general picture of the Turkic languages presented in Csató 2013: both the indirect evidential and the current relevance functions are subject to renewal, and across the family new structures are continuously recruited for this purpose, resulting in polyfunctional forms as well as the synchronic co-existence of multiple constructions with a partial functional overlap (cf. the overview in Table A1 in the appendix).

The majority of East Caucasian perfects are (or transparently originate from) a periphrastic structure consisting of a converb and an existential copula. Perfects based on participles are also attested, but less frequently. In a few languages the finite perfect coincides with a non-finite form. In the Turkic languages spoken in the area, this seems to be the norm: the main perfect forms are homophonous with a past participle (Section 5.2). Whether the syncretism in East Caucasian results from auxiliary omission or insubordination remains a topic for future research in most cases (Section 4.1).

As discussed in Section 8, though the distribution of indirect evidentiality as a meaning of the perfect largely concurs with the spread of different Turkic languages as lingua franca, it does not form a perfect match with the distribution of patterns and results of bilingualism in the area. Most importantly, the Turkic languages spoken in the area where the feature is present (Kipchak languages in the northern and central zones) seem to have had little if any structural influence on East Caucasian, which makes it unlikely that they are responsible for the diffusion of this feature. A lack of historical data on language contacts and earlier stages of the languages and forms involved further complicates the reconstruction of the feature's origin in East Caucasian. As a result the Turkic contact scenario cannot currently be confirmed for East Caucasian. Possibly the widespread emergence of the feature is due to a combination of language-internal development and contact-induced boosting. In Section 8 I proposed a tentative hypothesis for how the exchange of oral literature could have facilitated the feature's diffusion.

Several other types of (indirect) evidential marking are attested throughout the area. Specialized indirect evidential auxiliaries may develop from an auxiliary inflected for perfect or from specific lexical verbs, such as 'stay' or 'find' (Section 4.5.1). Future forms of these verbs tend to develop into presumptives, specifically. West Caucasian features general indirect evidential markers originating from future forms (Section 7.4). Perfect auxiliaries as evidential markers may develop after the perfect has obtained an indirect evidential reading. Some Georgian dialects calqued

⁴² For some specific idioms positive evidence is lacking (e.g. Avar has a perfect, but the status of what seems to be its equivalent in the Zaqatala dialect remains a bit unclear).

this pattern from Azerbaijani, according to Boeder 2000:283-284), and the same happened in the Şirvan dialect of Tat (Suleymanov 2020:184-190). Another widespread phenomenon in the larger area is reported speech particles, which often originate from full speech verbs. They are also attested in Turkic languages in general (Section 4.5), though I was not able to find any information on this type of markers in the Turkic languages spoken in the eastern Caucasus. Most of the reported speech particles attested in East Caucasian are quotatives, and thus do not mark evidentiality per se (cf. discussion in Section 4.5.2). Dedicated evidential particles (e.g. marking hearsay) seem rather rare, though this could be due to oversights in language descriptions. So far the only confirmed case of evidential matter borrowing from Turkic to East Caucasian is the indirect evidential particle -*miš* in Kryz, copied from the Azerbaijani copula *-(i)miš* (Section 4.5).

A prospect for future research on the topic of evidentiality in East Caucasian would be to compare the use of evidential forms in folklore texts (preferably those based on oral narrations) across a sample of languages (including local Turkic varieties), and cross-reference patterns in narrative strategy with shared motives and formulaic expressions as well as geographical location and information about language contact. This might also provide new insights into the distribution of labor among the various tenses, particles and auxiliaries that overlap semantically.

Abbreviations

III - third noun class
1 - first person
2 - second person
3 - third person
ATR - attributive
ADD - additive
AFF - affective
AOR - aorist
APUD - apud locative
AUX - auxiliary
CM - class marker
COP - copula
CVB - converb
DAT - dative
DEM - demonstrative
DISTR - distributive
EL - elative
ERG - ergative
ESS - essive
EVID - evidential

F - feminine
FUT - future
GEN - genitive
HAB - habitual
HPL - human plural
INAN1 - inanimate 1
INT - intensifier
INTER - inter locative
IPFV - imperfective
LAT - lative
LOC - locative
M - masculine
N - neuter
NEG - negative
NMLZ - nominalizer
NOM - nominative
NPL - nonhuman plural
NUM - numeral
OBL - oblique
PFV - perfective
PL - plural
POSS - possessive
PQP - pluperfect
PRET - preterite
PRF - perfect
PROH - prohibitive
PRS - present
PST - pst
PTC - particle
PTCP - participle
PVB - preverb
QUOT - quotative
REFL - reflexive
REP - reportative
SG - singular
SIM - simultaneous
SUP - super locative
W - witnessed

References

- Abdullaeva, A.Z., N.Ė. Gadžiaxmedov, K.S. Kadyradžiev, I.A. Kerimov, N.X. Ol'mesov, D.M. Xangišiev. 2014. *Sovremennyj kumykskij jazyk* [Modern Kumyk]. Makhachkala: IJaLI.
- Adžiev, A.M. 1991. Vvedenie [Introduction]. In A.M. Adžiev, F.O. Abakarova and X.M. Xalilov, eds., *Tradicionnyj fol'klor narodov Dagestana* [Traditional folklore of the people of Dagestan]. Moscow: Nauka, 1-18.
- Alekseev, Mixail E., Timur A. Majsak, Dmitrij S. Ganenkov and Jurij A. Lander, eds. 2008. *Udinskij sbornik: grammatika, leksika, istorija jazyka* [Udi. Grammar, lexicon, history of the language]. Moscow: Academia.
- Anderson, Lloyd B. 1982. The 'perfect' as a universal and as a language-specific category. In Paul J. Hopper, ed., *Tense-aspect: between semantics and pragmatics*. Amsterdam/Philadelphia: John Benjamins, 227-264.
- Aristova, Maria. 2019. *Database of Turkic borrowings in East Caucasian*. Unpublished.
- Aslanov, A.M. 1974. Iberijsko-kavkazskije abruptivy v zakatalsko-kaxskix govorax azerbajdžanskogo jazyka [Ibero-Caucasian ejectives in the Zaqatala-Qax dialects of Azerbaijani]. *Ezhegodnik iberijsko-kavkazskogo jazykoznanija*, 224-228.
- Authier, Gilles. 2009. *Grammaire kryz*. Paris: Peeters.
- Authier, Gilles. 2010. Azeri morphology in Kryz (East Caucasian). *Turkic Languages* 14, 14-42.
- Authier, Gilles. 2012. *Grammaire juhuri, ou judéo-tat, langue iranienne des Juifs du Caucase de l'est*. Wiesbaden: Reichert Verlag.
- Authier, Gilles and Timur Maisak. 2011. Introduction. In Gilles Authier and Timur Maisak, eds., *Tense, aspect, modality and finiteness in East Caucasian*. Bochum: Universitätsverlag Dr. N. Brockmeyer, vii-xii.
- Baskakov, Nikolaj A. 1940. *Nogajskij jazyk i ego dialekty: grammatika, teksty i slovar'* [Nogai and its dialects: grammar, texts, and dictionary]. Moscow: Izdatel'stvo Akademii nauk SSSR.
- Belyaev, Oleg. 2018. Aorist, resultative and perfect in Shiri Dargwa and beyond. In Diana Forker and Timur Maisak, eds., *The semantics of verbal categories in Nakh-Daghestanian languages*. Leiden: Brill, 80-119.
- van den Berg, Helma. 2005. The East Caucasian language family. *Lingua* 115(1-2), 147-190.
- Bergqvist, Henrik. 2018. Evidentiality as stance: event types and speaker roles. In Ad Foolen, Helen de Hoop and Gijs Mulder, eds., *Evidence for evidentiality*. Amsterdam/Philadelphia: John Benjamins, 19-44.
- Boeder, Winfried. 2000. Evidentiality in Georgian. In Lars Johanson and Bo Utas, eds., *Evidentials. Turkic, Iranian and Neighbouring Languages*. Berlin/New York: Mouton de Gruyter, 275-328.

- Boye, Kasper. 2012. *Epistemic meaning: A crosslinguistic and functional-cognitive study*. Berlin/Boston: Walter de Gruyter.
- Bybee, Joan L. and Östen Dahl. 1989. The creation of tense and aspect systems in the languages of the world. *Studies in Language* 13(1), 51-103.
- Bybee, Joan L., Revere Perkins and William Pagliuca. 1994. *The evolution of grammar: tense, aspect and modality in the languages of the world*. Chicago/London: The University of Chicago Press.
- Chechuro, Ilya, Michael Daniel and Samira Verhees. To appear. Small-scale multilingualism through the prism of lexical borrowing. *International Journal of Bilingualism*.
- Chirikba, Viacheslav. 2003. Evidential category and evidential strategy in Abkhaz. In Alexandra Y. Aikhenvald and Robert M.W. Dixon, eds., *Studies in Evidentiality*. Amsterdam/Philadelphia: John Benjamins, 243-290.
- Chirikba, Viacheslav. 2008. The problem of the Caucasian sprachbund. In Pieter Muysken, ed., *From linguistic areas to areal linguistics*. Amsterdam: John Benjamins, 25-94.
- Chumakina, Marina. 2009. Loanwords in Archi, a Nakh-Daghestanian of the North Caucasus. In Martin Haspelmath and Uri Tadmor, eds., *Loanwords in the world's languages. A comparative handbook*. Berlin: De Gruyter Mouton, 430-446.
- Comrie, Bernard. 2001 (1976). *Aspect*. Cambridge: Cambridge University Press.
- Comrie, Bernard and Madzhid Khalilov. 2009. Loanwords in Bezhta, a Nakh-Daghestanian of the North Caucasus. In Martin Haspelmath and Uri Tadmor, eds., *Loanwords in the world's languages. A comparative handbook*. Berlin: De Gruyter Mouton, 414-429.
- Comrie, Bernard and Maria Polinsky. 2007. Evidentials in Tsez. In Zlatka Guentchéva and John Landabaru, eds., *L'énonciation médiatisée II*. Louvain/Paris/Dudley MA: Peeters, 335-50.
- Creissels, Denis. 2009. Participles and finiteness: The case of Akhvakh. *Linguistic Discovery* 7(1), 106-130.
- Creissels, Denis. 2018. Perfective tenses and epistemic modality in Northern Akhvakh. In Diana Forker & Timur Maisak, eds., *The semantics of verbal categories in Nakh-Daghestanian languages*. Leiden: Brill, 166-187.
- Csató, Éva, A. 2013. Growing apart in shared grammaticalization. In Martine Robbeets and Hubert Cuyckens, eds., *Shared grammaticalization. With special focus on the Transeurasian languages*. Amsterdam/Philadelphia: John Benjamins, 251-258.
- Curnow, Timothy Jowan. 2002. Types of interaction between evidentials and first-person subjects. *Anthropological Linguistics* 44(2), 178-196.
- Dahl, Östen. 2000. *Tense and aspect in the languages of Europe*. Berlin/New York: Mouton de Gruyter.
- Daniel, Michael, Ilya Chechuro, Nina Dobrushina and Samira Verhees. To appear.

- Lingua francas as lexical donors: a quantitative field study. To appear in *Language*.
- DeLancey, Scott. 1997. Mirativity: The grammatical marking of unexpected information. *Linguistic Typology* 1(1), 33-52.
- DeLancey, Scott. 2012. Still mirative after all these years. *Linguistic Typology* 16(3), 529-564.
- Dešeriev, Junus D. 1963. *Sravnitel'no-istoričeskaja grammatika naxskix jazykov i problemy proisxoždenija i istoričeskogo razvitija gorskix kavkazskix narodov* [Historical-comparative grammar of Nakh languages and the question of the historical development of Caucasian mountain peoples]. Grozny: Čečeno-ingušskoe knižnoe izdatel'stvo.
- Dobrushina, Nina. 2016. Multilingualism in highland Daghestan throughout the 20th century. In Marián Sloboda, Petteri Laihonen and Anastassia Zabrodskaja, eds., *Prague Papers on Language, Society and Interaction / Prager Arbeiten zur Sprache, Gesellschaft und Interaktion. Vol. 4: Sociolinguistic transition in former Soviet and Eastern Bloc countries: Recent developments two decades after the regime change*. Frankfurt am Main: Peter Lang, 75-96.
- Dobrushina, Nina, Daria Staferova & Alexander Belokon. 2017. *Atlas of Multilingualism in Daghestan Online*. Moscow: Linguistic Convergence Laboratory, NRU HSE. <https://multidagestan.com>, accessed 10.09.2020.
- Dobrushina, Nina, Alexandra Kozhukhar & George Moroz. 2019. Gendered multilingualism in highland Daghestan: story of a loss. *Journal of Multilingual and Multicultural Development* 40(2), 115-132.
- Dobrušina, Nina R. and Aigul' N. Zakirova. 2019. Avarskij jazyk kak lingva franka: issledovanie v karatinskoj zone [Avar as lingua franca: an investigation of the Karata zone]. *Tomskij žurnal lingvističeskix i antropologičeskix issledovanij*. T1 № 23, 44-55.
- Donabédian, Anaïd. 1996. Pour une interprétation des différentes valeurs du médiatif en arménien occidental. In Zlatka Guentchéva, ed., *L'Énonciation médiatisée*. Louvain/Paris: Peeters, 87-108.
- Donabédian, Anaïd. 2001. Towards a semasiological account of evidentials: An enunciative approach of *-er* in Modern Western Armenian. *Journal of pragmatics* 33(3), 421-442.
- Dryer, Matthew S. and Martin Haspelmath, eds. 2013. *The world atlas of language structures online*. Leipzig: Leipzig: Max Planck Institute for Evolutionary Anthropology. <https://wals.info/>, accessed 10.09.2020.
- Dwyer, Arienne. 2000. Direct and indirect experience in Salar. Lars Johanson and Bo Utas, eds., *Evidentials. Turkic, Iranian and Neighbouring Languages*. Berlin/New York: Mouton de Gruyter, 45-60.
- Erdal, Marcel. 2004. *A grammar of Old Turkic*. Leiden: Brill.
- Erschler, David. 2020. Iron Ossetic. In Maria Polinsky, ed., *The Oxford handbook of languages of the Caucasus*. Oxford: Oxford University Press.

- Evans, Nicholas. 2007. Insubordination and its uses. In Irina Nikolaeva, ed., *Finiteness: theoretical and empirical foundations*. Oxford: Oxford University Press, 366-431.
- Filatov, Konstantin V. 2020. *Sistema indikativa ančixskogo dialekta karatinskogo jazyka* [The indicative system in the Anchiq dialect of Karata]. Bachelor thesis: NRU HSE Moscow.
- Forker, Diana. 2018a. Evidentiality in Nakh-Daghestanian languages. In Alexandra Y. Aikhenvald, eds., *The Oxford Handbook of Evidentiality*. Oxford: Oxford University Press, 490-509.
- Forker, Diana. 2018b. The semantics of evidentiality and epistemic modality in Avar. In Diana Forker and Timur Maisak, eds., *The semantics of verbal categories in Nakh-Daghestanian languages*. Leiden: Brill, 188-214.
- Friedman, Victor A. 2000. Confirmative/nonconfirmative in Balkan Slavic, Balkan Romance, and Albanian with additional observations on Turkish, Romani, Georgian, and Lak. In Lars Johanson and Bo Ubas, eds., *Evidentials. Turkic, Iranian and neighbouring languages*. Berlin/New York: Mouton de Gruyter, 329-367.
- Friedman, Victor A. 2007. The expression of speaker subjectivity in Lak (Daghestan). In Zlatka Guentchéva and John Landabaru, eds., *L'Énonciation médiatisée II*. Louvain/Paris/Dudley MA: Peeters, 351-376.
- Friedman, Victor A. 2018. Where do evidentials come from? In Alexandra Y. Aikhenvald, ed., *The Oxford Handbook of Evidentiality*. Oxford: Oxford University Press, 124-147.
- Federal State Statistics Service (FSSS). 2010. 'Vladienie jazykami naseleniem rossijskoj federacii' [Language proficiency among the population of the Russian Federation]. Vserossijskaja perepis' naselenij 2010. *Tom 4. Nacional'nij sostav i vladenija jazykami, graždanstvo*. http://www.gks.ru/free_doc/new_site/perepis2010/croc/perepis_itogi1612.htm, accessed 28.08.2020.
- Gamzatov, Gadzhi G. and Fridrik Thordarsson. 2011 (1993). Dāgēstān. *Encyclopaedia Iranica Volume VI Fascicle 6*, 568-576. <https://www.iranicaonline.org/articles/dagestan>, accessed 10.09.2020.
- Gipper, Sonja. 2014. From inferential to mirative: An interaction-based account of an emerging semantic extension. In Evie Coussé and Ferdinand von Mengden, eds., *Usage-based approaches to language change*. Amsterdam/Philadelphia: John Benjamins, 83-116.
- Gippert, Jost, Wolfgang Schulze, Zaza Aleksidze and Jean-Pierre Mahé, eds. 2008. *The Caucasian Albanian palimpsests of Mt. Sinai. Volume 1*. Turnhout: Brepols.
- Golden, Peter B. 1992. *An introduction to the history of the Turkic peoples. Ethnogenesis and state-formation in Medieval and Early Modern Eurasia and the Middle East*. Wiesbaden: Otto Harrassowitz.

- Greed, Teija. 2014. The expression of knowledge in Tatar. In Alexandra Y. Aikhenvald and R.M.W. Dixon, eds., *The grammar of knowledge*. Oxford: Oxford University Press, 69-88.
- Greed, Teija. 2017. Evidential coding in Lezgi. *Languages of the Caucasus* 2, 3-33.
- Greed, Teija. 2018. From perfect to narrative tense: The development of an evidential meaning examined generally and in the Even language. *Studies in Language* 42(4), 923-966.
- de Haan, Ferdinand. 2005. Encoding speaker perspective: Evidentials. In Zygmunt Frajzyngier, Adam Hodges and David S. Rood, eds., *Linguistic diversity and language theories*. Amsterdam/Philadelphia: John Benjamins, 379-398.
- de Haan, Ferdinand. 2013. Coding of evidentiality. In Matthew S. Dryer and Martin Haspelmath, eds., *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology.
<https://wals.info/chapter/78>, accessed 03.07.2021.
- Hammarström, Harald, Robert Forker and Martin Haspelmath. 2013. *Glottolog 4.0*. Jena: Max Planck Institute for the Science of Human History.
<https://glottolog.org/>, accessed 10.09.2020.
- Haspelmath, Martin. 1993. *A grammar of Lezgian*. Berlin/New York: Mouton de Gruyter.
- Haspelmath, Martin. 2010. Comparative concepts and descriptive categories in crosslinguistic studies. *Language* 86(3). 663-687.
- Heine, Bernd and Tania Kuteva. 2004 (2002). *World lexicon of grammaticalization*. Cambridge: Cambridge University Press.
- Hewitt, B.G. 1979. The expression of “inferentiality” in Abkhaz. *Journal of Linguistics* 15, 87-92.
- Holisky, Dee Ann & Rusudan Gagua. 1994. Tsova-Tush (Batsbi). In Riek Smeets, ed., *The indigenous languages of the Caucasus Volume 4 Part 2*. Delmar NY: Caravan Books, 147-212.
- Hopper, Paul J. and Elizabeth C. Traugott. 2003 (1993). *Grammaticalization*. Cambridge: Cambridge University Press.
- Ibragimov, M.-R.A. 2002. Azerbajdžancy [Azerbaijani's]. In S.A. Arutjunov, A.I. Osmanov and G.A. Sergeeva, eds., *Narody Dagestana* [Peoples of Daghestan]. Moscow: Nauka, 507-518.
- İkizoğlu, Didem. 2012. Multiple quotatives in Turkish. *Studia Uralo-Altaica* 49, 243-251.
- Imnaišvili, D. 1954. Turmeobitebi kist'uri džgupis enebši. *IKE* 6, 324-342.
- Jacques, Guillaume. 2018. Non-propositional evidentiality. In Alexandra Y. Aikhenvald, ed., *The Oxford Handbook of Evidentiality*. Oxford: Oxford University Press, 109-123.
- Jahani, Carina. 2000. Expressions of indirectivity in spoken Modern Persian. In Lars Johanson and Bo Utas, eds., *Evidentials. Turkic, Iranian and Neighbouring Languages*. Berlin/New York: Mouton de Gruyter, 185-208.

- Johanson, Lars. 2000. Turkic indirectives. In Lars Johanson and Bo Utas, eds., *Evidentials. Turkic, Iranian and Neighbouring Languages*. Berlin/New York: Mouton de Gruyter, 61-88.
- Johanson, Lars. 2002. Contact-induced change in a code-copying framework. In Mari C. Jones and Edith Esch, eds., *Language change: The interplay of internal, external, and extra-linguistic factors*. Berlin: De Gruyter Mouton, 285-314.
- Johanson, Lars. 2006. On the roles of Turkic in the Caucasus area. In Yaron Matras, April McMahon and Nigel Vincent, eds., *Linguistic areas. Convergence in historical and typological perspective*. New York: Palgrave MacMillan, 160-181.
- Johanson, Lars. 2018. Turkic indirectivity. In Alexandra Y. Aikhenvald, ed., *The Oxford Handbook of Evidentiality*. Oxford: Oxford University Press, 510-524.
- Kalinina, Elena & Nina Sumbatova. 2007. Clause structure and verbal forms in Nakh-Daghestanian languages. In Irina Nikolaeva, ed., *Finiteness: theoretical and empirical foundations*. Oxford: Oxford University Press, 183-249.
- Kalinina, Elena Ju. and Svetlana Ju. Toldova. 1999. Atributivizacija [Attributivization]. In Aleksandr E. Kibrik and Jakov G. Testelec, eds., *Elementy tsaxurskogo jazyka v tipologičeskom osveščanii* [Elements of Tsakhur from a typological perspective]. Moscow: Nauka, 377-419.
- Kalmykova, Sof'ja A. and Marija F. Sarueva. 1973. *Grammatika nogajskogo jazyka* [Grammar of Nogai]. Cherkessk: Stavropol'skoe knižnoe izdatel'stvo, karačaevo-čerkeskoe otdelenie.
- Karpov, Jurij Ju. & Elena L. Kapustina 2011. *Gorcy posle gor. Migracionnye processy v Dagestane v XX-načale XXI veka: ix social'nye i etnokul'turnye posledstvija i perspektivy* [Mountaineers after the mountains. Migration processes in Daghestan in the 20th and early 21st centuries: social and ethno-cultural consequences and perspectives]. St. Petersburg: Peterburgskoe Vostokovedenie.
- Kazenin, Konstantin I. and Jakov G. Testelecs. 2004. Where coordination meets subordination: converb constructions in Tsakhur (Daghestanian). In Martin Haspelmath, ed., *Coordinating constructions*. Amsterdam/Philadelphia: John Benjamins, 227-240.
- Kehayov, Petar and Kasper Boye. 2016. Complementizer semantics in European languages: Overview generalizations. In Kasper Boye and Petar Kehayov, eds., *Complementizer semantics in European languages*. Berlin/Boston: De Gruyter Mouton, 809-878.
- Khalilova, Zaira. 2011. Evidentiality in Tsezic languages. *Linguistic Discovery* 9(2), 30-48.
- Kibrik, Andrej A. 1985. Absentiv-aorist und resultativ in der andischen Sprache. In Heinz Fähnrich, ed., *Sprachen Europas und Asiens*. Jena: Friedrich Schiller Universität, 55-66.
- Kibrik, Aleksandr E., Konstantin I. Kazenin, Ekaterina A. Ljutikova, Sergej G.

- Tatevosov, eds., *Bagvalinskij jazyk. Grammatika. Teksty. Slovare* [Bagvalal. Grammar, texts, dictionaries]. Moscow: Nasledie.
- Kljagina, Evgenija S. 2018. *Sistema prošedšix vremen v abxazo-adygskix jazykax* [The past tense system in Abkhazo-Adyghean languages]. Bachelor thesis: Russian State University for the Humanities.
- Korjakov, Jurij B. 2006. *Atlas kavkazskix jazykov* [Atlas of Caucasian languages]. Moscow: Pilgrim.
- Kozintseva, Natalia. 2000. Perfect forms as a means of expressing evidentiality in Modern Eastern Armenian. In Lars Johanson and Bo Utas, eds., *Evidentials. Turkic, Iranian and Neighbouring Languages*. Berlin/New York: Mouton de Gruyter, 401-418.
- Lazard, Gilbert. 1999. Mirativity, evidentiality, mediativity, or other? *Linguistic Typology* 3, 91-109.
- Lazard, Gilbert. 2000. Le médiatif: considérations théoriques et application à l'iranien. In Lars Johanson and Bo Utas, eds., *Evidentials. Turkic, Iranian and Neighbouring Languages*. Berlin/New York: Mouton de Gruyter, 209-228.
- Lindstedt, Jouko. 2000. The perfect-aspectual, temporal and evidential. In Östen Dahl, ed., *Tense and aspect in the languages of Europe*. Berlin/New York: Mouton de Gruyter, 365-384.
- Magomedbekova, Zagidat M. 1967. *Axvaxskij jazyk* [Akhvakh]. Tbilisi: Mecniereba.
- Magomedova, Patimat T. and Indira A. Abdulaeva. 2007. *Axvaxsko-russkij slovar'* [Akhvakh-Russian dictionary]. Makhachkala: IJaLI.
- Magometov, Aleksandr A. 1963. *Kubačinskij jazyk* [Kubachi]. Tbilisi: Mecniereba.
- Majsak, Timur A. 2014. *Agul'skie teksty 1900-1960-x godov* [Agul texts from 1900-1960]. Moscow: Academia.
- Majsak, Timur A. 2016. Perfekt i aorist v nižskom dialekte udinskogo jazyka. In Timur A. Majsak, Vladimir A. Plungjan and Ksenija P. Semënova, eds., *Tipologija perfekta*. St. Petersburg: Nauka, 315-378.
- Maisak, Timur. 2018. The Aorist/Perfect distinction in Nizh Udi. In Diana Forker and Timur Maisak, eds., *The semantics of verbal categories in Nakh-Daghestanian languages*. Leiden: Brill, 120-165.
- Maisak, Timur. To appear. Structural and functional variations of the perfect in Lezgian languages. In Kristin Melum Eide and Marc Fryd, eds., *The perfect volume*. Amsterdam: John Benjamins.
- Majsak, Timur A. and Mixail A. Daniël'. 2018. "Černaja koška grammatikalizaii": konstrukcii s glagolom 'najti' v dagestanskix jazykax ["The black cat of grammaticalization": constructions with the verb 'find' in Daghestanian languages]. In Dar'ja A. Ryžova, Nina R. Dobrushina, Anastasia A. Bonč-Osmolovskaja, Anastasia S. Vyrenkova, Maria V. Kjuseva and Boris V. Orexov, eds., *EVRika! Sbornik stat'ej o poiskax i naxodkax k jubileju E.V. Raxilinoj*. Moscow: Labirint, 120-152.
- Majsak, Timur A. and Solmaz R. Merdanova. 2002. Kategorija évidencial'nosti v

- agul'skom jazyke [The category of evidentiality in Agul]. *Kavkazovedenie* 1, 102-112.
- Majsak, Timur A. and Solmaz R. Merdanova. 2016. Perfekt i smežnye značeniya v agul'skom jazyke [The perfect and adjacent meanings in Agul]. In Timur A. Majsak, Vladimir A. Plungjan and Ksenija P. Semënova, eds., *Tipologija perfekta*. St. Petersburg: Nauka, 379-424.
- Majsak, Timur A. and Sergej G. Tatevosov. 2001. Èvidencial'nost'. In Aleksandr E. Kibrik, Konstantin I. Kazenin, Ekaterina A. Ljutikova and Sergej G. Tatevosov, eds., *Bagvalinskij jazyk. Grammatika, teksty, slovari* [Bagvalal. Grammar, texts, dictionaries]. Moscow: Nasledie, 293-318.
- Maisak, Timur and Sergei Tatevosov. 2007. Beyond evidentiality and mirativity. Evidence from Tsakhur. In Zlatka Guentchéva and John Landabaru, eds., *L'énonciation médiatisée II*. Louvain/Paris/Dudley MA: Peeters, 377-406.
- Makarcev, Maksim M. 2013. Èvidencial'nost' v prostranstve balkanskogo teksta [Evidentiality in Balkan texts]. St. Petersburg: Nestor-Istorija.
- Mallaeva, Zulajxat M. 2007. *Glagol avarskogo jazyka: struktura, semantika, funkcii* [The Avar verb: structure, semantics, functions]. Makhachkala: IJaLI.
- McCawley, James D. 1971. Tense and time reference in English. In Charles J. Fillmore and Terence Langendoen, eds., *Studies in linguistic semantics*. New York: Holt, Rinehart and Winston, 96-113.
- McCawley, James D. 1981. Notes on the English present perfect. *Australian Journal of Linguistics* 1, 81-90.
- Molochieva, Zarina. 2007. Category of evidentiality and mirativity in Chechen. *Conference on the Languages of the Caucasus*, 7-9.12.2007, Max Planck Institute EVA, Leipzig. Handout.
- Molochieva, Zarina. 2010. *Tense, aspect and mood in Chechen*. Phd thesis: Universität Leipzig.
- Molochieva, Zarina & Johanna Nichols. 2018. Tense, aspect, mood and evidentiality in Chechen and Ingush. In Diana Forker and Timur Maisak, eds., *The semantics of verbal categories in Nakh-Daghestanian languages*. Leiden: Brill, 26-48.
- Moor, Marianne. 1985. *Studien zum lesgischen Verb*. Wiesbaden: Otto Harrassowitz.
- Moroz, George. 2017. *lingtypology: easy mapping for Linguistic Typology*. <https://CRAN.R-project.org/package=lingtypology>
- Moroz, George and Samira Verhees. 2020. *East Caucasian villages dataset*. https://github.com/sverhees/master_villages, accessed 10.09.2020.
- Mutalov, Rasul O. 2002. *Glagol darginskogo jazyka* [The Dargwa verb]. Makhachkala: Izdatel'sko-poligrafičeskij centr DGU.
- Nedjalkov, Vladimir P. 1983. *Tipologija rezul'tativnyx konstrukcij* [The typology of resultative constructions]. Leningrad: Nauka.
- Nedjalkov, Vladimir and Sergei Jaxontov. 1988. The typology of resultative

- constructions. In Vladimir Nedjalkov, ed., *Typology of resultative constructions*. Amsterdam: John Benjamins, 3-62.
- Nichols, Johanna. 1981. Transitivity and foregrounding in the North Caucasus. In Danny K. Alford, Karen Ann Hunold, Monica A. Macaulay, Jenny Walter, Claudia Brugman, Paul Chertok, Inese Čivkus and Marta Tobey, eds., *Proceedings of the Seventh Annual Meeting of the Berkeley Linguistics Society*. Berkeley: Berkeley Linguistics Society, 202–221.
- Nichols, Johanna. 2003. The Nakh-Daghestanian consonant correspondences. In Dee Ann Holisky and Kevin Tuite, eds., *Current trends in Caucasian, East European and Inner Asian linguistics*. Amsterdam/Philadelphia: John Benjamins, 207-264.
- Nichols, Johanna. 2004. The origin of the Chechen and Ingush: A study in alpine linguistics and ethnic geography. *Anthropological Linguistics* 46(2), 129-155.
- Nichols, Johanna. 2011. *Ingush grammar*. Berkeley/Los Angeles: University of California Press.
- Nikolayev, Sergei L. and Sergei A. Starostin. 1994. *A North Caucasian etymological dictionary*. Moscow: Asterisk Publishers.
- Panova, Anastasia. 2019. *Voprosy funkcionirovanija abazinskix glagol'nyx suffiksov* [Functions of verb suffixes in Abaza]. Bachelor thesis: NRU HSE Moscow.
- Plungian, Vladimir A. 2001. The place of evidentiality within the universal grammatical space. *Journal of pragmatics* 33(3), 349-357.
- Plungian, Vladimir A. 2010. Types of verbal evidentiality marking: an overview. In Gabriele Diewald and Elena Smirnova, eds., *Linguistic realization of evidentiality in European languages*. Berlin/New York: De Gruyter Mouton, 15-58.
- Plungjan, Vladimir A. 2016. *K tipologii perfekta v jazykax mira. Predislovie* [Towards a typology of the perfect in the languages of the world. Preface]. In Timur A. Majsak, Vladimir A. Plungjan and Ksenija P. Semënova, eds., *Tipologija perfekta*. St. Petersburg: Nauka, 7-38.
- R Core Team. 2018. *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing. Vienna, Austria. <https://www.R-project.org/>.
- Ritz, Marie-Eve. 2012. Perfect tense and aspect. Robert I. Binnick, ed., *The Oxford Handbook of Tense and Aspect*. Oxford: Oxford University Press, 881-907.
- Saidova, Patimat A. 2007. *Zakatal'skij dialekt avarskogo jazyka* [The Zaqatala dialect of Avar]. Makhachkala: IJaLI.
- Saidova, Patimat A. and Magomed G. Abusov. 2012. *Botlixsko-russkij slovar'* [Botlikh-Russian dictionary]. Makhachkala: IJaLI.
- Schulze, Wolfgang. 2005. *A functional grammar of Udi*. Manuscript.
- Schulze, Wolfgang. 2009. *Languages of the Caucasus*. Unpublished. <http://wschulze.userweb.mwn.de/lgxcauc.pdf>, accessed 10.09.2020.
- Schulze, Wolfgang. 2013. Historische und areale Aspekte der

- Bodenschatz-Terminologie in den ostkaukasischen Sprachen. *Iran and the Caucasus* 17(3), 295-320.
- Selimova, Gjulbaxar A. 2016. Dagestanizmy v dialektax kumyjskogo jazyka [Daghestanisms in Kumyk dialects]. *Filologičeskie nauki. Voprosy teorii i praktiki* 59(5), 133-136.
- Shinzato, Rumiko. 1991. Where do temporality, evidentiality and epistemicity meet? A comparison of Old Japanese -ki and -keri with Turkish -di and -miş. *Gengo Kenkyu Journal of the Linguistic Society of Japan* 99, 25-57.
- Širaliev, M.Š. and È.V. Sevortjan. 1971. Grammatika azerbajdžanskogo jazyka (fonetika, morfoložija, sintaksis) [Grammar of Azerbaijani (phonetics, morphology, syntax)]. Baku: Elm.
- Slobin, Dan I. and Ayhan A. Aksu-Koç. 1982. Tense, aspect and modality in the use of the Turkish evidential. In Paul J. Hopper, ed., *Tense-aspect: between semantics and pragmatics*. Amsterdam: John Benjamins, 185-200.
- Slobin, Dan I. and Ayhan A. Aksu-Koç. 1986. A psychological account of the development and use of evidentials in Turkish. In Wallace Chafe and Johanna Nichols, eds., *Evidentiality: the linguistic encoding of epistemology*. New Jersey: Ablex, 159-167.
- Soper, John David. 1987. *Loan syntax in Turkic and Iranian: The verb systems of Tajik, Uzbek and Qashqay*. Phd thesis: University of California, Los Angeles.
- Suleymanov, Murad. 2020. *A Grammar of Şirvan Tat*. Wiesbaden: Reichert Verlag.
- Sumbatova, Nina. 1999. Evidentiality, transitivity and split ergativity. Evidence from Svan. In Werner Abraham and Leonid Kulikov, eds., *Tense-aspect, transitivity and causativity: Essays in honour of Vladimir Nedjalkov*. Amsterdam/Philadelphia: John Benjamins, 63-96.
- Sumbatova, Nina R. and Jurij A. Lander. 2014. *Darginskij govor selenija Tanty: grammatičeskij očerk, voprosy sintaksisa* [The Dargwa variety of the village Tanty: grammar sketch and syntax]. Moscow: Jazyki slavjanskoj kul'tury.
- Tatevosov, Sergei. 2001. From resultatives to evidentials: Multiple uses of the perfect in Nakh-Daghestanian languages. *Journal of Pragmatics* 33(3), 443-464.
- Tatevosov, Sergei. 2003. Inferred evidence: Language-specific properties and universal constraints. In Katarzyna M. Jaszczolt and Ken Turner, eds., *Meaning through language contrast Volume 1*. Amsterdam/Philadelphia: John Benjamins, 357-387.
- Tatevosov, Sergej G. 2007. Èvidencial'nost' i admirativ v bagvalinskom jazyke [Evidentiality and admirative in Bagvalal]. In Viktor S. Xrakovskij, ed., *Èvidencial'nost' v jazykax Evropy i Azii: sbornik statej pamjati Natal'i Andreevny Kozincevoj*. St. Petersburg: Nauka, 351-397.
- Tatevosov, Sergej G. and Timur A. Majsak. 1998. Kodirovanie èpistemičeskogo statusa sredstvami morfosintaksisa (na materiale caxurskogo jazyka) [Encoding of epistemic status with morphosyntactic means (data from

- Tsakhur)]. *Voprosy Jazykoznanija* 1998(1), 60-88.
- Tenišev, È.R., G.F. Blagova, È.A. Grunina, A.V. Dybo, I.V. Kormušin, L.S. Levitskaja, D.M. Nasilov, O.A. Mudrak, K.M. Musaev and A.A. Čečenov. 2002. *Sravnitel'no-istoričeskaja grammatika tjurkskix jazykov*. Moscow: Nauka.
- Tournadre, Nicolas and Randy J. LaPolla. 2014. Towards a new approach to evidentiality. *Linguistics of the Tibeto-Burman area* 37(2), 240–263.
- Tuite, Kevin. 1999. The myth of the Caucasian Sprachbund: The case of ergativity. *Lingua* 108, 1-26.
- Tuite, Kevin. 2008. The rise and fall and revival of the Ibero-Caucasian hypothesis. *Historiographia Linguistica* 35(1/2), 23-82.
- Uslar, Pëtr K. 1889. *Avarskij jazyk* [Avar]. Tiflis: Upravlenie Kavkazskago Učebnago Okruga.
- Verhees, Samira. 2018a. K proisxoždeniju èvidencial'nosti v naxsko-dagestanskix jazykax: strukturnye i areal'nye perspektivy [Towards the origin of evidentiality in Nakh-Daghestanian languages: structural and areal perspectives]. *Vestnik PSTGU. Serija 3: Filologija*. 57, 110-123.
- Verhees, Samira. 2018b. The perfect in Avar and Andi: Cross-linguistic variation among two closely related East Caucasian languages. In Dalila Ayoun, Agnès Celle and Laure Lansari, eds., *Tense, aspect, modality and evidentiality: Cross-linguistic perspectives*. Amsterdam: John Benjamins, 261-280.
- Verhees, Samira. 2019a. *Èvidencial'nost' kak čast' vido-vremennoj sistemy v naxsko-dagestanskix jazykax* [Evidentiality as part of tense-aspect in Nakh-Daghestanian languages]. Phd thesis: NRU HSE Moscow.
- Verhees, Samira. 2019b. Defining evidentiality. *Voprosy Jazykoznanija*. 2019(6), 113-133.
- Verhees, Samira. 2019c. General converbs in Andi. *Studies in Language* 43(1), 195-230.
- Verhees, Samira. 2020a. Evidentiality in the Rikvani dialect of Andi. *Iran and the Caucasus* 24(3), 309-324.
- Verhees, Samira. 2020b. Perfect. In Michael Daniel, George Moroz, Timofey Mukhin, Chiara Naccarato, Samira Verhees and Konstantin Filatov, eds., *Typological Atlas of the languages of Daghestan (TALD)*. Moscow: Linguistic Convergence Laboratory, NRU HSE, 2020. <http://lingconlab.ru/dagatlas/perfect.html>, accessed 03.07.2021.
- Verhees, Samira. To appear. Particles of reported speech and inference. In Michael Daniel, George Moroz, Timofey Mukhin, Chiara Naccarato, Samira Verhees and Konstantin Filatov, eds., *Typological Atlas of the languages of Daghestan (TALD)*. Moscow: Linguistic Convergence Laboratory, NRU HSE, 2020.
- Volkova, Natalia G. 1967. Voprosy dvujazyčija na Severnom Kavkaze [Bilingualism in the North Caucasus]. *Sovetskaja Ètnografija* 1967(1), 27-40.
- Wickham, Hadley. 2017. *tidyverse: Easily Install and Load the 'Tidyverse'. R package version 1.2.1*. <https://CRAN.R-project.org/package=tidyverse>, accessed

10.09.2020.

- Wiemer, Björn. 2018. Evidentials and epistemic modality. In Alexandra Y. Aikhenvald, ed., *The Oxford Handbook of Evidentiality*. Oxford: Oxford University Press, 85-108.
- Wixman, Ronald. 1980. *Language aspects of ethnic patterns and processes in the North Caucasus*. University of Chicago, Department of Geography.
- Zaslansky, Matthew. 2019a. The overabundance of the perfect and the decay of evidentiality in Standard Azerbaijani. A diachronic study of *-(y)lb* and *-mIş*. *TU+4*, 16-17.02.2018, NYU. Handout.
- Zaslansky, Matthew. 2019b. Systematic overabundance exhibits systematic differentiation: On person marking, perfect marking, and evidentiality in Azerbaijani. UC San Diego: Department of Linguistics.
<https://escholarship.org/uc/item/11t996k7>, accessed 03.07.2021.

Appendix

Table A1 provides an overview of the number and function of perfects, resultatives, and indirect evidential pasts in East Caucasian and neighboring Turkic languages. Languages are ordered by group and alphabet. Numbers distinguish separate forms covering a certain functional range (e.g. Axaxdərə Akhvakh has a dedicated current relevance form (1) and a dedicated indirect evidential past (2), while the Northern Akhvakh dialect spoken in Daghestan has one form (1) covering (at least) resultative and indirect evidentiality. Keep in mind that these data are based on descriptive sources. Absence of a function in the table does not necessarily mean absence in general. Literature references are available in the raw data [online](#). Note that in Section 4, dedicated experiential forms are counted as perfect / current relevance (CR), since experiential belongs to the current relevance family of meanings.

Language	Idiom	Resultative	CR	Evidentiality	Experiential
Akhvakh	Axaxdərə		1	2	
Akhvakh	Northern Akhvakh	1		1	
Andi	Andi	1		1	
Andi	Rikvani	1		1	
Andi	Zilo	1	1	1	
Bagvalal	Kvanada	1			
Bagvalal	Kvanada	2	2	2	
Botlikh	Botlikh	1	1	1	
Chamalal	Gadiri			1	
Chamalal	Gigatl'		1	1	
Chamalal	Upper Gakvari	1		1	
Godoberi	Godoberi	1	2,3	3	

Karata	Karata		1	1	
Tindi	Tindi	1			
Tindi	Tindi	2	2	2	
Avar	Standard	1	1	1	
Avar	Zaqatala			1	
Dargwa	Akusha	1	1	1	
Dargwa	Ashti	1	1	1	
Dargwa	Standard	1		1	2
Dargwa	Icari	1			
Dargwa	Icari		2	2	
Dargwa	Kaitag	1	1	2	
Dargwa	Kubachi	1	1	2	
Dargwa	Shiri	1	2	1	3
Dargwa	Tanti	1	1	1	
Khinalug	Khinalug	1,2	1,2		
Lak	Standard		1	1	
Agul	Huppuq'	1	1,2	1	2,3
Archi	Archib	1	1	1	
Archi	Archib	2			
Budukh	Budukh	1	1		
Kryz	Alyk	1	1		1
Kryz	Alyk	2			
Lezgian	Standard	1	1		

Rutul	Luchek	1	1		
Rutul	Rutul				1
Tabasaran	Northern Tabasaran	1	1		
Tsakhur	Mishlesh	1	1		
Tsakhur	Mishlesh	2	2	2	
Udi	Nizh	1,2	1,2	1,2	
Chechen	Standard	1	2		
Ingush	Standard	1	1	1	
Tsova-Tush	Zemo-Alvani	1		1,2	1
Bezhta	Bezhta	1	1	1	
Hinuq	Hinuq	1	1	2	
Hunzib	Hunzib		1	1	
Khwarshi	Kwantlada	1		2	
Tsez	Asakh			1	
Kumyk	Standard	1	1,2	1	1
Nogai	Standard	1,2	1,2	1	
Azerbaijani	Standard		1		

Table A1. Perfects and their functions in East Caucasian and neighboring Turkic languages. Overview.