SAY-complementizers and indexical shift in Poshkart Chuvash

With emphasis on communicative reception reports[*]

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Abstract

Although SAY-complementizers have been extensively documented, the question of the *forms* used in this function and their specific properties has received less attention. The paper focuses on the complementizer *tenine* (an action nominalization of SAY), which is used with communicative reception verbs ('hear', 'read', etc.), in a dialect of Chuvash (Turkic). The main puzzle concerns the difference between *tenine* and the more general complementizer *teze* (the same-subject converb of SAY) with respect to the controller of shifted first person (namely, *teze*, but not *tenine*, disallows non-subject controllers). An account of this restriction based on three independent language-specific constraints is offered. An alternative account is discussed whereby *tenine* (and *teze*) are *synchronically* non-finite forms of SAY. The findings highlight the importance of the form of the complementizer as well as of the choice of controller for shifted 1st person in SAY-based complementation and extend the typological parameters of indexical shift.

Keywords: Chuvash, Turkic, SAY-complementizers, verbs of hearing, speech reports, indexical shift, logophoricity, action nominalizations

1. Introduction

The emergence of complementizers from generic verbs of speech (SAY) has been extensively documented in grammaticalization studies from both typological and areal perspectives (Heine & Kuteva 2002:261ff, Güldemann 2008; Matić & Pakendorf 2013, a.o.). Several grammaticalization paths involving SAY have been established, showing that SAY may acquire a number of different functions as a result of grammaticalization, including a quote marker, a complementizer, a marker of adjunct clauses, a marker of evidentiality, an auxiliary verb, a marker of metalinguistic use (in naming constructions) and others. Interestingly, the research on grammaticalized SAY has primarily focused on its *functions*, whereas *forms* of SAY that undergo grammaticalization (e.g., converb, participle, etc.) and especially their specific functions, have arguably received less attention in the literature. Although Matić & Pakendorf (2013) list several finite and non-finite verb forms of grammaticalized SAY in languages of Eurasia, their list is not meant to be exhaustive, and, more importantly, they do not explicitly discuss which forms are possible in which function. In particular, their typological database contains little or no data on whether participles and (participle-based) action nominalizations of SAY, can be used as complementizers.

This limitation can be explained by the fact, acknowledged by Matić & Pakendorf (2013), that some forms of SAY are more appropriately analyzed as (merely) *conventionalized/non-canonical* as opposed to fully grammaticalized in the sense that they may have (partly) lost semantic compositionality and extended to new contexts but, at the same time, have not undergone grammaticalization along other grammaticalization parameters (see Heine & Kuteva 2002) such as decategorialization (e.g., loss of verbal properties) and phonetic reduction. As Matić & Pakendorf note, such instances of non-canonical forms of SAY may be harder to identify as such due to their intermediate status. They are also more likely to be omitted in a grammatical description (e.g., due to their less extensive distribution), which might explain why there is little discussion of these forms in the typological literature, including Matić & Pakendorf 2013 itself.

This paper aims to fill this gap by bringing into light one such conventionalized form in the Poshkart dialect of Chuvash (Turkic), namely, *tenine*, the past participle-based action nominalization of the verb *te* 'say' (in objective case), illustrated in (1b). *Tenine* functions as the specialized form of the SAY-complementizer used with 'hear' and other verbs of communicative reception, and it exists alongside the more general SAY-complementizer *teze* used with verbs of speech and thought, which is the same-subject converb of *te* 'say', illustrated in (1a).[1]

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[1] Henceforth the forms *teze*, *tenine* and other SAY-based complementizer-like forms in the examples are always fully glossed for the reader's convenience, without any theoretical commitments as to their analysis.

(1) a. (*sonʲə,*) *boris*   *man-a*   [*san-ba*   *ëɕl-e-p*   **te-ze**]   *kala-rʲ-ə.*
     Sonya   Boris   I-OBJ   you.SG-INS   work-NPST-**1SG**   say-CV.SIM   say-PST-3SG
     '(Sonya,) Boris₁ told me that he₁ will work with you.'

    b. (*sonʲə,*) *ep*   *boris-ran*   [(*vəl*)   *san-ba*   *ëɕl-e-p*   {**te-n-in-e**   /
     Sonya   I   Boris-ABL   he   you.SG-INS   work-NPST-**1SG**   say-PC.PST-P.3-OBJ
     ***te-ze**}]   *elt-r-ëm.*
     say-CV.SIM   hear-PST-1SG
     '(Sonya,) I heard from Boris₁ that he₁ will work with you.'

    c. (*sonʲə,*) *ep*   *maʂə-ran*   [*Boris*   *san-ba*   *ëɕl-et*
     Sonya   I   Masha-ABL   Boris   you.SG-INS   work-NPST[3SG]
     {**te-n-in-e**   /   ⁽ᵎ⁾**te-ze**}]   *elt-r-ëm.*
     say-PC.PST-P.3-OBJ   say-CV.SIM   hear-PST-1SG
     '(Sonya,) I heard from Masha that Boris will work with you.'

The main argument in this paper concerns the distributional and semantico-syntactic differences between *teze* and *tenine*, related to the interpretation of indexicals (specifically, 1st person agreement) in complement clauses introduced by these forms. It is cross-linguistically common for indexicals in embedded clauses to be interpreted relative to the original/reported speaker or attitude holder, as in traditional direct speech in European languages (see, e.g., Comrie 1985:107ff, Coulmas 1986). Following recent usage, I will refer to such indexicals as *shifted* (see the terminological discussion in Munro et. al. 2012). Indexical shift is a more general phenomenon than traditional direct speech as indexicals may take the original speaker perspective (i.e., be shifted) even in clauses that otherwise pattern with traditional indirect speech or that are neutral with respect to this distinction as, e.g., in languages which do not distinguish between these two forms of speech (see Munro et. al. 2012 and Spronck & Nikitina 2019 for further discussion).

Although the term "indexical shift" is primarily associated with a relatively new field of research in formal semantics/generative grammar which has been focused on theoretical accounts of indexical shift in terms of so-called monster operators (see, a.o., Schlenker 2003, 2011, Anand & Nevins 2004, Shklovsky & Sudo 2014), in recent years this field has switched to a more data-oriented approach, combining theoretical work with a serious interest in cross-linguistic variation in the domain of indexical shift (Deal 2020, Sundaresan 2018). While this paper is not concerned with formal accounts of indexical shift, it aims to contribute to the growing body of typological work on indexical shift (potentially informing both monster-based and other theoretical accounts) by drawing attention to those parameters of indexical shift that have received less attention in the

literature, specifically the choice of the controller for shifted 1st person and the form of the (SAY-)complementizer (as well as their potential interaction).

The empirical core of the paper is based on a previously not described pattern of shifted 1st person in SAY-based complements in communicative reception reports (with verbs 'hear', 'learn', etc.). Reception reports are specifically interesting from the point of view of the controller choice. Whereas with verbs of speech and thought, the original speaker/attitude holder, controlling shifted 1st person, aligns with the grammatical subject, in reception reports the "author" of the report (the original speaker) is realized as the (ablative) source, with the subject being the recipient of the report (the hearer). Because of this non-canonical alignment, the controller choice in reception reports is in principle underdetermined and depends on a particular strategy a language may choose to resolve the syntax-semantic mismatch. A priori a language may choose: (a) a "semantic" strategy, i.e., control by the source (the original speaker); (b) a "syntactic" strategy, i.e. control by the grammatical subject, which would require its construal as the attitude holder (cf. Özyıldız et al. 2018); (c) a union of the two; or (d) neither option. We may also expect (e) the use of some special, ad-hoc strategy. Although there is little cross-linguistic data on indexical shift with verbs of reception, at least options (b), for Uyghur (see Sudo 2010) and Tsez (see Polinsky 2015), and option (c), for Turkish (Özyıldız et al. 2018), have been documented.

Poshkart Chuvash appears to be different in this respect, having some combination of strategies (a) and (e). Specifically, with verbs of speech and thought the controller for shifted 1st person is the subject and the complementizer has the default converbial form *teze*, as in (1a).[2] By contrast, with verbs of reception the controller is the (ablative) source and the complementizer takes the nominalized form *tenine*, as in (1b). Interestingly, the change in the form of the complementizer is obligatory only in constructions with indexical shift, as otherwise both complementizers are in principle possible (although *teze* is slightly dispreferred), as shown in (1c).

The theoretical contribution of this paper is to offer an account of the pattern in (1), i.e., of the incompatibility of *teze* with (source-controlled) shift of 1st person with reception verbs. Note that this incompatibility cannot be attributed to a ban on source-control of shifted 1st person in general (as it is possible with *tenine*) nor to a general incompatibility of *teze* with reception verbs. Thus, the unacceptable pattern in (1b) appears to be banned specifically due to the *combination* of shifted 1st person with *teze*. Yet, it would be undesirable to encode this restriction as a specific construction. Although there is nothing conceptually wrong with this move, the challenge I take

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[2] Examples in (1a)–(1c) deliberately contain incomplete/partial shift with the 2nd person pronoun *sanba* taking the current speaker perspective (and would be described as so-called *Shift Together* exceptions in generative approaches). See section 3 for discussion.

up in this paper is to offer an account of the pattern in (1) that would appeal only to *independent* properties of *teze* and shifted 1st person.

In a nutshell, the proposed account is based on two assumptions: (i) the control of shifted 1st person in Poshkart Chuvash is in general semantic, i.e., original speaker/source-oriented; whereas (ii) *teze* is in general subject-oriented in the sense that it requires the "author" of the embedded proposition (the "logophoric center") to be aligned with the grammatical subject. The unacceptability of *teze* in (1b), then, arises as a result of the conflict between (i) and (ii). The conflict is resolved by the choice of a different form of the complementizer, namely *tenine*. The paper also discusses an alternative account, according to which *tenine* is synchronically not a complementizer but a (participle-based) action nominalization with a null subject controlling shifted 1st person so that control is always syntactic (subject-oriented).

The paper is mainly based on elicited data collected by the author in the village of Maloe Karachkino (Poshkart), Chuvash Republic, Russian Federation in 2017–2019.[3] Examples in Poshkart Chuvash are occasionally supplemented with examples in Standard Chuvash. All examples of the latter kind come from the Bilingual Chuvash-Russian Corpus (http://ru.corpus.chv.su/).

The paper is structured as follows. Section 2 provides some background on SAY-complementizers in Poshkart Chuvash. Section 3 contains some general discussion of indexical shift in Poshkart Chuvash. Section 4 presents the main puzzle and provides an account of this puzzle. Section 5 discusses an alternative account in terms of syntactic decomposition of the SAY-complementizers. Section 6 concludes.

2. SAY-complementizers in Poshkart Chuvash

2.1. Poskart Chuvash

Poshkart Chuvash (henceforth PC) is a variety of Chuvash (< Turkic) spoken in the Maloe Karachkino (Poshkart) village with about 400 inhabitants located in the Yadrin district of the Chuvash Republic (the Volga river region of Russian Federation).[4] PC is traditionally identified as a distinct dialect of Chuvash with a number of phonological and morphosyntactic features distinguishing it from the standard variety (see, e.g., Ašmarin 1898:344–392). Most if not all speakers of PC understand Russian and have at least some command of Standard Chuvash.

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[3] The data were collected during the three (student) linguistic expeditions to Maloe Karachkino/Poshkart organized by the Higher School of Economics in Saint Petersburg and led by Masha Kholodilova in 2017–2019. Some portion of the examples from PC was also elicited remotely (over the Internet) in 2020.

[4] The population size data come from the 2010 census cited in Chuvash Wikipedia (https://cv.wikipedia.org/wiki/Пушкăрт_(Етӗрне_районӗ)).

To facilitate further discussion, I will mention a few basic facts about PC morphosyntax. As typical of the Turkic languages, PC is an agglutinative language with vowel harmony. It has a rich case system with differential accusative marking; but there is no morphological distinction between dative and accusative case, which are glossed as a (single) objective case. Possessive marking is very impoverished. The only fully productive marker is the number-neutral 3rd person marker, which is used not only to mark the head noun with genitive and other dependents, but also as an optional marker of definiteness and as a nominalizer of adjectives/participles, as in 'the big/crying one' (see Logvinova 2019a for details). The 1st and 2nd person markers only exist in the singular and are usually omitted or replaced with the 3rd person marker.[5]

Finite verb forms agree in person and number with their subjects. The present and the future are not morphologically distinguished and are glossed as non-past. A number of non-finite forms including the simultaneous converb *-sA* and the past participle *-nƏ* can be used as predicates of independent clauses (without subject-verb agreement).[6] Aspectual distinctions are commonly expressed by constructions with the *-sA* converb followed by some light verb.

The basic word order is SOV, although some complements, especially clausal complements, can be more or less freely placed before the subject or after the verb for the purposes of information structure.

2.2. (Participle-based) nominalized clauses

As is typical of the Altaic languages, complement clauses are expressed either by non-finite clauses or by clauses introduced by SAY-complementizers (see below). The most common non-finite complement type, which will be important for further discussion, are nominalized clauses headed by participle-based action nominalizations (referred throughout the paper as nominalized clauses and (action) nominalizations), illustrated in (2a)–(2d).[7] Participle-based nominalizations are fully regular and can be derived from any verb; they also retain sentential dependent-marking (see Koptjevskaja-Tamm 1993), as opposed to other kinds of (more lexical) action nominalizations in PC, which have dependent-marking typical of non-derived NPs.[8]

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[5] In addition, the 1st person marker is lexically restricted to nouns expressing family relations.

[6] Alterable vowels in suffixes are indicated by capital letters (*A* stands for *a* or *e*; *Ə* for *ə* or *ë*). Suffixes with alterable obstruents are given with a devoiced alternant, which becomes voiced in an intervocalic position (e.g., *-sA* stands for *-sA* or *-zA*).

[7] Other non-finite complementation strategies include: (a) infinitival complements, used with control verbs; (b) complements headed by the *-sA* converb, used with a number of aspectual and modal predicates; (c) complements headed by the unmarked future participle, used with a few modal and volitional predicates; and (d) complements headed by the anteriority converb *-sAn*, used with some subject experiencer and evaluative predicates. See Kožemjakina 2017 for details, and also Khanina, ms for Standard Chuvash.

[8] As is the case with independent clauses, the arguments of (participle-based) nominalized clauses, including the subject can be freely dropped in appropriate discourse conditions.

(2) a. [*es   pørt   tu-za   **lart-n-in-e**]   *peťə   kor-za.*
   you.SG   house   do-CV.SIM   put-PC.PST-P.3-OBJ   Petya   see-CV.SIM
   'Peter saw that you had built a house.'

   b. *aməş*   [*uľ-ə   pilëk   **il-es-in-e**]   *şan-ʨ-ə.*
   mother.P.3   son-P.3   five   take-PC.FUT-P.3-OBJ]   believe-PST-3SG
   'Mother believed that her son will get an A ("five").'

   c. *peťə*   [*pilëk   **il-në-ʑën**]   *savn-at.*
   Petya   five   take-PC.PST-CSL   be.glad-NPST[3SG]
   'Petya is glad that he has got an A ("five").'

   d. *maşə*   [*xəj-n   koʑak   **tar-nə**   **ɕinʥen**]   *kala-rʲ-ə.*
   Masha   self-GEN   cat   run.away-PC.PST   about   say-PST-3SG
   'Masha told [me] about the fact that her own cat has run away.'

Participle-based action nominalizations are derived from the past participle *-n∂* (expressing both anteriority or simultaneity), cf. (2a) and (2c)–(2d), the future participle *-As*, cf. (2b), or the debitative participle *-mAlA*, which express the respective tense/modality (aspectual distinctions are expressed with light verbs, cf. (2a)). On top of the participial morphology, such nominalizations take possessive and case suffixes. They also have roughly the distribution of NPs. Although most commonly they appear in objective case, cf. (2a)–(2b), they can also appear in other cases including nominative, as in (14a)–(14b), instrumental, as in (16a)–(16b), and causal (2c), and also as objects of postpositions, as in (2d). The only possessive suffix that occurs in participle-based nominalizations is the 3rd person marker, which is used for all person/number combinations, cf. (2a). The possessive marker is largely lexicalized and is almost totally conditioned by the case and participial morphology on the nominalization in a rather idiosyncratic way.[9] It is obligatory in nominative, instrumental and objective case (with the exception of the future participle, where it is optional) and is optional (or non-occurring) with the other cases.[10]

Nominalized clauses are used with a wide range of verbs expressing cognition and perception as well as with emotive and evaluative predicates. They are also possible with verbs of speech such as *kala* 'say' (with which it is translated as 'announce') and others although clauses with SAY-complementizers are more common in this case. A partial list of predicates taking nominalized clauses (in the alphabetic order) is given in (3).

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[9] This is also reflected by the fact that descriptive grammars sometimes treat the combination of the participle with the possessive marker (in Standard Chuvash) as a single morpheme (see Khanina, ms).
[10] See Kožemjakina 2017.

(3)   Predicates compatible with nominalized clausses

ənlan 'understand', *astu* 'remember', *elt* 'hear' (8b), *etle* 'listen', *ënen* 'believe', *jorat* 'like', *kala* 'say' (2d), *pël* 'know' (9a), *pël-der* ['know-CAUS'] 'announce, mean', *kët* 'wait', *kilëş* 'agree' (16a), *kor* 'see' (2a), *man* 'forget', *moktan* 'boast' (16b), *ozal* 'bad' (14b), *savən* 'be glad' (2c), *şan* 'believe' (2b), *tërës* 'true' (14a), *xəra* 'be afraid', *xojxər* 'be sad' (17).

2.3. The lexical (contentful) verb te *'say'*

Apart from nominalized clauses, the other major complement type is finite (sentence-like) clauses, introduced either: (a) by non-finite forms of the verb *te* 'say' (*teze*, *tenine*, etc.) functioning as a (SAY-)complementizer (see sections 2.4–2.6); or (b) directly by the lexical verb *te* 'say', without a complementizer, as illustrated in (4a)–(4c). *Te* 'say' is the only verb that can (and must) take finite complement clauses directly, as shown in (4a), since other verbs require a complementizer, cf. (1a)–(1c).[11] In many respects, the lexical verb *te* 'say' behaves like an ordinary verb. For example, it is compatible with a wide range of morphological markers, including negation and imperative, and can take dative arguments, as in (4b).[12] Note also that the construction with the 3PL non-past form *tetɕë* (with no overt subject), shown (4c), is used as a reported evidential (see Aikhanvald 2004:140ff, Matić & Pakendorf 2013:377ff for similar constructions in other languages).

(4)   a.   *lionilə*   [*boris*   *san-ba*   *ëɕl-et*   (*te-ze)]   **te-r-ë**.
         Lionila   Boris   you.SG-INS   work-NPST[3SG]   say-CV.SIM   say-PST-3SG
         'Lionila said that Boris will work with you.'

       b.   *peťə*   *man-a*   [*sonʲə-ba*   *ëɕl-e-p*]   **te-m-en**.
         Petya   I-OBJ   Sonya-INS   work-NPST-1SG   say-NEG-PC.RES
         'Petya didn't tell me that he was going to work with Sonja.'

       c.   [*san*   *koʑak*   *sumarlan-za*   *kaj-nə*]   **t-etɕë**.
         you.SG.GEN   cat   get.sick-CV.SIM   go-PC.PST   say-NPST.3PL
         'Your cat has got sick, they say.'

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[11] It is fairly common for languages with non-canonical SAY, at least in Asia and Africa, to use a SAY-complementizer with a different verb meaning 'say', thus presumably avoiding the otherwise arising doubling/haplology (see, e.g., Matić & Pakendorf 2013, Lord 1993). Nonetheless, some languages do allow such doubling (cf. Matić & Pakendorf 2013:410).

[12] The lexical verb *te* 'say' has a further difference from other complement-taking verbs, namely, it requires adjacency to the complement clause, as shown in (i), cf. (6a). One of the reviewers suggests that the adjacency requirement might be related not to the lexical property of *te* 'say' but to an obligatory deletion of the complementizer (see the previous comment) under adjacency to V. Exploration of this interesting possibility is left for future work.
 (i) [??]*[boris*   *san-ba*   *ëɕl-et*]   *lionilə*   **te-r-ë**.
     Boris   you.SG-INS   work-NPST[3SG]   Lionila   say-PST-3SG
     'Lionila said that Boris will work with you.'.

2.4. Clauses headed by teze

The most common form of the SAY-complementizer is *teze*, which is morphologically the same-subject simultaneous converb of *te* 'say'.[13] Clauses headed by *teze* (*teze*-clauses) are used with various verbs of speech and thought, including such frequent verbs as *kala* 'say', as in (5a), see also (1a), and *şotla* 'think', as in (5b). *Teze*-clauses are also possible with verbs of reception such as *elt* 'hear', cf. (1c), although *tenine*-clauses are generally preferred in this case (see section 2.5.1). A partial list of verbs taking *teze*-clauses is given in (6).

(5) a. *lionilə* [*boris   san-ba   ëɕl-et   **te-ʑe**]   **kala-rʲ-ə**.
     Lionila Boris   you.SG-INS work-NPST[3SG] say-CV.SIM   say-PST-3SG
     'Lionila said that Boris will work with you.'

   b. [*ulʲ-ə   pilëk il-et   **te-ʑe**]   *aməş*   {**şotl-at** /
     son-P.3 five take-NPST[3SG]   say-CV.SIM mother.P.3 think-NPST[3SG]
     şan-at}.
     hope-NPST[3SG]
     'Mother thinks/hopes that her son will get an A ("five").'

(6) Verbs compatible with *teze*-clauses
     ənlan 'understand', *elt* 'hear (1c), *ënen-der* ['believe-CAUS'] 'persuade, assure', *kala* 'say' (5a), *moktan* 'boast' (16b), *pël-der* 'announce' ['know-CAUS'], *şan* 'hope, believe' (5b), *şan-tar* ['believe-CAUS'] 'promise, assure', *şotla* 'think' (5b).

Teze-clauses are usually incompatible with factive verbs, which take nominalized clauses instead.[14] This includes emotive factive verbs such as *savən* 'be happy' (cf. (2c)) and *xojxər* 'be sad' (cf. (17)), but also factive verbs of cognition and perception such as *pël* 'know', illustrated in (7), *astu* 'remember', *kor* 'see' (cf. (3a)) and others.

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[13] *Teze* can also be used to introduce purposive converbial clauses, as in (i). Such uses are not discussed in this paper.
(i) *boris* [*sonʲ-ə-ba   ëɕl-es   **te-ʑe**]   *kil-ze*.
    Boris Sonya-INS   work-PC.FUT say-CV.SIM   come-CV.SIM
    'Boris went to the school to work with Sonya.'
[14] *Ənlan* 'understand' is a potential exception to this generalization as it sometimes accepted with *teze*-clauses. Note, however, certain otherwise factive verbs are known to allow non-factive (evidential) uses (see, e.g., Simons 2007 and also footnote 17). It remains to be seen whether *ənlan* 'understand' with *teze*-clauses can also be analyzed in this way.

(7)   *ep*   *eki-ren*   [*on*   *koʐag-ə*   {***tar-n-in-e***   /   **tar-za*

      I   sister-ABL   he.GEN   cat-P.3   run.away-PC.PST-P.3-OBJ   run.away-CV.SIM

      te-ze*}]**   ***pël-d-ëm.

      say-CV.SIM   know-PST-1SG

      'I learned from my sister that her cat has ran away.'

2.5. Clauses headed by (action) nominalizations of te 'say'

An interesting feature of PC, which is of particular relevance to this paper, is that SAY-complementizers can be based not only on converbial forms of SAY (*teze*) but also on participial forms, including (participle-based) action nominalizations of *te* 'say' and participles proper, i.e. heads of noun-modifier clauses (see section 2.6). Nominalizations of *te* 'say' which are used in a complementizer-like function are restricted to forms based on the past participle *-nƏ* in the objective (*tenine*) or the nominative form (*teni*), both of which also take an obligatory 3rd person possessive marker, nominalizations in other cases being extremely rare (see section 2.5.3).

      The availability of participles and (action) nominalizations of SAY in a complementizer-like function is of some typological interest. According to Matić & Pakendorf (2013), the dominant form of non-canonical SAY in Eurasia is a same-subject converb, which is also the case in PC. Although participles of SAY are also widely attested, Matić & Pakendorf only mention their use in metalinguistics constructions but not in complementation, whereas action nominalizations of SAY appear to be entirely lacking in their database.[15,16]

2.5.1. Clauses headed by tenine

Clauses headed by *tenine* (the past participial action nominalization of the verb *te* 'say' marked with objective case), or *tenine*-clauses, have a rather restricted distribution. Most commonly, they occur with the verb *elt* 'hear' (which is also is by far the most frequent verb that occurs with *tenine* in the corpus of Standard Chuvash), as shown in (8a)–(8b), see also (1b)–(1c) above, and slightly less so with the verb *pël* 'know, learn', as in (8a) and (8c). The two verbs have a roughly similar meaning in construction with *tenine* and are often interchanged; they also both take an optional

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[15] At least one instance of an action nominalization of SAY in a complementizer-like function is reported for Tamil (see Steever 2002:95, ex.(3b)).

[16] All participle-based forms of SAY discussed in this section, including action nominalizations, are possible in the metalinguistic function, as shown by examples from Standard Chuvash in (ia)–(ib). Such uses are not discussed in this paper.

(i) Standard Chuvash

    a.   *"Unta,"*   ***te-n-i*** —   *front-ra*   ***te-n-in-e***   *pël-ter-et.*

        there   say-PC.PST-P.3   front-LOC   say-PC.PST-P.3-OBJ   know-CAUS-NPST[3SG]

        '"There" means "on the front".' (http://ru.corpus.chv.su/kusaru/456471.html)

    b.   *Unən*   *"XX let RKKA"*   ***t-eken***   *medal̹ pur.*

        3SG.GEN   "XX let RKKA"   say-PC.PRS   medal COP

        'He has a medal for the XX's anniversary of the Red Army' (http://ru.corpus.chv.su/kusaru/500983.html)

source argument marked with the ablative case, as in (8a). *Elt* 'hear' differs from *pël* 'know, learn', however, in that it can also occur with *teze*-clauses, with no clear difference in meaning, as shown in (8b), see also (1c), although for many speakers such constructions are clearly less preferred. By contrast, with *pël* 'know, learn' *teze*-clauses are strictly disallowed, as we saw in (7) above.

(8) a. *ep*   **eki-ren**   [*on*   *koӡagʲ-ə*   *tar-za*   **te-n-in-e**]

     I   sister-ABL he.GEN   cat-P.3   run.away-CV.SIM say-PC.PST-P.3-OBJ

     elt-r-ëm   / **pël-d-ëm**.

     hear-PST-1SG know-PST-1SG

     'I heard/learned from my sister that her cat has ran away.'

    b. [*jonaӡar*   *jal-da*   *poӡar*   {*pol-nə*   **te-n-in-e**   (**te-ze**) /

      neighbor   village-LOC fire   be-PC.PST   say-PC.PST-P.3-OBJ   say-CV.SIM

      pol-n-in-e}]   *ep*   **elt-r-ëm**.

      be-PC.PST-P.3-OBJ   I   hear-PST-1SG

      'I heard that there has been a fire in the neighboring village.'

    c. [*poskil*   *pørt*   *tu-za*   {*lart-nə*   **te-n-in-e** /   **lart-n-in-e**}]

     neighbor   house   do-CV.SIM put-PC.PST   say-PC.PST-P.3-OBJ put-PC.PST-P.3-OBJ

     ep   **pël-e-p**.

     I   know-NPST-1SG

     'I know (from someone who told me) that my neighbor has built a house.'

Note that while for *elt* 'hear' and *pël* 'know, learn' *tenine*-clauses are the preferred (required) type of a SAY-complement, they are still semantically a more marked complement type, compared to nominalized clauses, cf. (8b)–(8c). For example, speakers often translate the relevant sentences with *tenine* as 'heard *X's/the words (claim)* that S' or 'know/learn *from X's/someone's words* that S', commenting (especially in the case of examples without an explicit source like (8b)–(8c)) that the use of *tenine* emphasizes that the information was received via hearsay. While for *elt* 'hear' *tenine*-clauses do not seem to differ truth-conditionally from nominalizations, for *pël* 'know, learn' the use of *tenine* seems to change the meaning of the verb to a non-factive one, along the lines of 'know from hearsay'.[17] The relevance of the hearsay component for *tenine* is also supported by the fact that they are disallowed with the direct perception verb *kor* 'see', as shown in (9), cf. (2a).

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[17] The use of *tenine*-clauses with 'know' and potentially also with 'understand' and 'remember' (see below) is reminiscent of so-called evidential uses of cognitive factive verbs discussed in Simons 2007, in which they lose their presuppositionality. Similar evidential uses are also observed with 'hear', except that 'hear' is not usually classified as a factive/presuppositional verb (cf. Anand & Hacquard 2014).

(9) [*es   pørt   tu-za   lart-sa   **te-n-in-e**]   *pet͡ɕə*   {**kor-za*   /

you.SG house   do-CV.SIM put-CV.SIM say-PC.PST-P.3-OBJ Petya   see-CV.SIM

elt-se}.

hear-CV.SIM

(Intended:) 'Petya saw/heard that you had built a house.'

Apart from *elt* 'hear' and *pël* 'know, learn', *tenine*-clauses can occur with *şan* 'believe', as in (10a)–(10b). In contrast to the former verbs, *şan* 'believe' readily allows *teze*-clauses, cf. (5b). However, the verb has a different meaning when it takes a *tenine*-clause. While with a *teze*-clause it normally functions as an ordinary propositional attitude verb like 'think' (cf. (5b)), with a *tenine*-clause its meaning is rather 'believe *the claim* that p', as it involves the subject believing what (s)he was told by some other participant (which has a role comparable to a source).[18] This source participant can also be overtly realized by a NP marked with objective case (as is also the case in English), as in (10b), forcing the 'believe (the claim)' reading. Interestingly, in this case *teze*-clauses are less preferred (even though not totally disallowed) compared to *tenine*-clauses, not unlike what we saw in the case of *elt* 'hear'.[19,20]

(10) a. *aməş*   [*ul͡ʲ-ə*   *pilëk*   *il-et*   **te-n-in-e**]   *şan-t͡ɕ-ə*.

mother.P.3 son-P.3 five   take-NPST[3SG]   say-PC.PST-P.3-OBJ believe-PST-3SG

'Mother believed (the claim) that her son will get an A ("five").'

b. [*ul͡ʲ-ə*   *pilëk*   {*il-et*   **te-n-in-e**   (*?te-ze*)   /   (?)***il-es-in-e***}]

son-P.3 five   take-NPST[3SG]   say-PC.PST-P.3-OBJ say-CV.SIM take-PC.FUT-P.3-OBJ

aməş   **ut͡ɕitel͡ʲ-a**   *şan-at*.

mother.P.3 teacher-OBJ   believe-NPST[3SG]

'Mother believes (the claim) that her son will get an A ("five").'

Another verb that can occur with *tenine*-clauses, perhaps less commonly, is *vula* 'read', illustrated in (11). This verb preferably takes nominalized clauses (embedded in an *about*-PP), but it is also accepted with *tenine*, without a clear truth-conditional difference. As in the case of *elt* 'hear' and *şan* 'believe (the claim)', *teze*-clauses are less preferred than *tenine*-clauses, although

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[18] On the difference between these two readings of 'believe' (the so-called 'volunteer-stance' vs. 'response-stance') see, e.g., Cattell 1978. See also Bogal-Albritten & Moulton 2017 (and references therein) for some crosslinguistic discussion of 'response-stance' believe.

[19] The verb *ënen* 'believe' (cf. (13b)) seems to show a roughly similar pattern although it was not specifically investigated.

[20] In examples such as (10b), with *şan* 'believe' taking an overt source argument, nominalized clauses become less than fully acceptable, for reasons that remain to be understood.

they are not totally disallowed (again, with no clear difference in meaning).[21] The verb is similar to the other *tenine*-taking verbs in that it also allows an optional (non-sentient) source-like argument (realized as a NP marked with the locative case), expressing a repository of propositional information, e.g., 'book', 'article', etc., as shown in (11).[22]

(11) *direktor* [*pern ṣkol përremëṣ vɨrən* {***jiʑən-nə ɕinʥen*** /
　　headmaster we.GEN school first place occupy-PC.PST about

　　jiʑən-za ***te-n-in-e*** (ˀ***te-ze***)}] ***xazat-ra vula-nə***.
　　occupy-CV.SIM say-PC.PST-P.3-OBJ say-CV.SIM newspaper-LOC read-PC.PST

　　'The headmaster read in a newspaper that our school has got the first place.'

Apart from the above verbs, *tenine*-clauses are also occasionally accepted with cognitive factive verbs *ənlan* 'understand' and *astu* 'remember' (cf. (13c)), although some speakers consider such examples impossible or marginal, opting instead for nominalized clauses (marked with objective case).[23,24] The list of verbs compatible with *tenine*-clauses is summarized in (12).

(12) Verbs compatible with *tenine*-clauses
　　ˀ*ənlan* 'understand', ˀ*astu* 'remember', *elt* 'hear' (8a,b), *ënen* 'believe', *pël* 'know' (8a,c), *ṣan* 'believe' (10a,b), *vula* 'read' (11).

Verbs taking *tenine*-clauses appear to have a common semantic core, namely, they involve *an experiencer subject construed as receiving verbal information from some (linguistically explicit or implicitly understood) source or through hearsay*.[25] Following Özyıldız et al. 2018, I will refer to these verbs as communicative reception verbs, or simply reception verbs, and to constructions involving them as (communicative) reception reports.

Given the relevance of the source of information for the complementizer *tenine*, it may be viewed as a lexical (non-grammatical) means for an optional expression of an evidential (hearsay)

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[21] The corpus of Standard Chuvash contains several examples of *teze*-clauses with *vula* 'read'. Most of them, however, are punctuated as quotations, suggesting that they are not true complements (see section 3).

[22] See Anand & Hacquard 2014:78 for some discussion of such arguments.

[23] The more marginal status of *tenine*-clauses with these verbs might be related to the fact that, unlike the other *tenine*-taking verbs, they do not readily allow an overt source argument (see also footnote 25).

[24] In the subsequent discussion of *tenine*-taking (specifically, in section 4) these two verbs are largely ignored.

[25] Note that while the central members of the class of *tenine*-taking verbs all take an *explicit* source argument (prototypically an ablative phrase), it is unclear whether this must be a *necessary* condition for a verb to be compatible with *tenine*, especially in view of (marginal) acceptability of *tenine* with *ənlan* 'understand' and *astu* 'remember' (cf. (13c)). Nevertheless, I wish to maintain that a source participant is always present (at least the level of semantics) in *constructions* with *tenine*-clauses, independently of whether it can be syntactically realized. On this view, the source participant would be similar to the "judge" with predicates of personal tastes, which is also sometimes unrealizable, cf. *??tasty for/to Sue* (see Stephenson 2007:520), or to the understood but unrealizable "point of view"/"logophoric center" participant in examples like *Having traveled all day, the hotel was a vision indeed* (see Williams 1992:300). I wish to thank an anonymous reviewer for raising this issue.

13

meaning in the domain of complementation (see Aikhenvald 2004:10, 2014:20). This characterization of *tenine* fits with the fact that it often implies that the speaker is not committed to the veracity of the proposition in the complement, which is often observed for reported/hearsay evidentials. This is illustrated by the examples from Standard Chuvash in (13a)–(13c).[26]

(13) Standard Chuvash

a. *Epë   paroxod   ɕintɕen politsi-sem   ʂira-kan   ɕin   sik-në*

I   steamboat off   policeman-PL seek-PC.PRS   person   jump-PC.PST

te-n-in-e   ilt-r-ëm.

say-PC.PST-P.3-OBJ   hear-PST-1SG

'I heard that allegedly a man sought after by the police has jumped off the ship.' (http://ru.corpus.chv.su/kusaru/159624.html)

b. *Vësem — uxmax-sem,   esë   tasaləx-ʂən   tərəʂ-n-i-pe*

they   fool-PL   you.SG cleanliness-CSL care-PC.PST-P.3-INS

*ɕapla   tu-nə   **te-n-in-e   ënen-ë-ɕ.***

so   do-PC.PST   say-PC.PST-P.3-OBJ   believe-FUT-3PL

'They are fools, they will believe that you are doing this out of concern for the cleanliness.' (http://ru.corpus.chv.su/kusaru/211229.html)

c. *ɕav   tɕir-e   pula   temperatura   xəpar-atʲ   **te-n-in-e***

this   illness-OBJ because.of fever   increase-NPST[3SG] say-PC.PST-P.3-OBJ

*ɕeɕ   **astəv-at-əp.***

PTL   remember-NPST-1SG

'I remember (= it is in my recollection) that this illness is supposedly accompanied by a fever.' (http://ru.corpus.chv.su/kusaru/267036.html)

I have largely presupposed that *tenine* in the examples above is a complementizer. The question arises as to whether (at least in some of the examples) *tenine* is amenable to a compositional analysis as *synchronically* an action nominalization of the lexical verb *te* 'say' with a pro-dropped subject or, perhaps, with an impersonal null subject, as found in reported evidential uses of *te* 'say', cf. (4c), along the lines of 'X heard/believed/read etc. *that they said/Y said* that S'. While this analysis, which will be discussed in more detail in section 5, cannot be ruled out a priori, it is rather unlikely. First of all, for most examples in this section paraphrases containing the (explicit) verb 'say' appear infelicitous or superfluous. In addition, speakers do not normally

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[26] The Russian translation equivalents of (13a) and (13c), which are given here in the English translation, contain the reportative complementizer/particle (*čto*) *budto* 'as if' (see Hansen et al. 2016); in addition, (13c) contains an impersonal reflexive form of the verb 'remember' (*pomnitsja*), implying that the speaker recollection is not clear.

use the verb 'say' when translating sentences with *tenine*-clauses, whereas they systematically use *tenine*-clauses to translate ordinary reception reports (which do not involve the verb 'say'). Finally, corpus examples with *tenine* usually (if not always) have no verb 'say' in their translations (cf. (13a)–(13c)). Given the above considerations, which are, in fact, suggested as criteria for non-canonicity of SAY by Matić & Pakendorf (2013:373), we may tentatively conclude that *tenine* is a special reportative/hearsay complementizer restricted to verbs of reception.

2.5.2 Clauses headed by teni

Clauses headed by *teni* (the past participial action nominalization of the verb *te* 'say' marked with nominative case), or *teni*-clauses, occur as sentential subjects instead of *teze*-clauses, which are disallowed in this function, as shown in (14a). *Teni*-clauses are similar to *tenine*-clauses in important respects (except for their subject function). They are also optional and can always be replaced with nominalized clauses (in the nominative), cf. (14a). Similarly, they emphasize that the proposition expressed by the clause has a hearsay source, often implying that the speaker takes it to be false or doubtful, as shown by the corpus examples from Standard Chuvash in (15a)–(15b).[27] The above characterization of *teni*-clauses receives further support from the fact that they are disallowed with some factive (evaluative) predicates, as shown in (14b).[28]

(14) a. [*man   eki   katɕ-a   {tok-n-i   /   tok-sa   te-n-i*
　　　　　I.GEN   sister   groom-OBJ go.out-PC.PST-P.3   go.out-CV.SIM   say-PC.PST-P.3
　　　　　(*te-ze*)}]   *tërës mar.*
　　　　　say-CV.SIM   true   NEG.ASCR
　　　　　'That my sister has got married (as they say) is not true.'

　　 b. [*san   koʑak   {tar-n-i   /   ??tar-za   te-n-i*}]
　　　　　you.SG.GEN   cat   run.away-PC.PST-P.3   run.away-CV.SIM   say-PC.PST-P.3
　　　　　pet   ozal.
　　　　　very bad
　　　　　'That your cat has run away is very bad.'

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[27] Note that in (15b) the current speaker refers to a particular speech act rather than some unspecified rumor.
[28] The distribution of *teni*-clauses was not investigated in detail.

(15) Standard Chuvash

a. *Komandir-sem   ən-a   jurat-aɕɕë   **te-n-i**   ilt-ën-et.*
commander-PL   3SG-OBJ   like-NPST.3PL   say-PC.PST-P.3   hear-REFL-NPST[3SG]
'It is rumored that commanders like him.' (http://ru.corpus.chv.su/kusaru/127332.html)

b. *Epë   Kat⁺ə-na   pël-mest-ëp   **te-n-i**   ɕënë   **xipar-tɕtɕë**=xa.*
I   Kate-OBJ   know-NEG.NPST-1SG   say-PC.PST-P.3   new   news-COP.PST=PTL
'That I don't know Kate (as he said) was something new.'
(http://ru.corpus.chv.su/kusaru/143353.html)

As in the case of *tenine*, a compositional analysis of *teni* as an action nominalization of the verb *te* 'say' with an interpretation along the lines of 'that *they say*/*X says* that S' cannot be excluded. However, such an interpretation, again, is usually superfluous and may not correctly capture the meaning of certain examples (cf. #'that *they say* S is not true'), suggesting that *teni* is most appropriately analyzed as a special reportative complementizer for sentential subjects.

2.5.3. Nominalizations of te *'say' in other cases*
Nominalizations of *te* 'say' in other cases are marginal in the complementizer-like function. One such potential example is the instrumental form *tenibe*, which was accepted with the verb *kilëş* 'agree', as in (16a), and (marginally) with the verb *moktan* 'boast', as in (16b), where the form *teze* was preferred.[29] As is the case with *tenine* and *teni*, *tenibe*-clauses can be replaced with nominalized clauses marked with instrumental case.

(16) a. *pet⁺ə   [maşə   lajək   {**jorla-n-i-be** /   jorl-at   **te-n-i-be**}]*
Petya   Masha   good   sing-PC.PST-P.3-INS   sing-NPST[3SG]   say-PC.PST-P.3-INS
kilëş-r-ë.
agree-PST-3SG
'Petya agreed (with the claim) that Masha sings well.'

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[29] (The cognate of) *tenibe* seems to be the only form found in the corpus of Standard Chuvash in a complementizer-like function, and it occurs almost exclusively with the verb *kilëş* 'agree', as in (i).
(i) Standard Chuvash
*Manən   purnaɕ   pët-et   **te-n-i-pe**   Ivan Ivanitɕ   kallex **kilëş-me-r-ë**.*
1SG.GEN   life   finish-NPST[3SG]   say-PC.PST-P.3-INS   Ivan Ivanych   again   agree-NEG-PST-3SG
'Ivan Ivanych again disagreed that my life has finished.' (http://ru.corpus.chv.su/kusaru/130999.html)

b. *peťə* [*pilëk* {***il-n-i-be*** / *il-d-ëm* ***te-ze*** / (?***te-n-i-be***)}]

Petya   five   take-PC.PST-P.3-INS   take-PST-1SG   say-CV.SIM   say-PC.PST-P.3-INS

moktan-at.

boast-NPST[3SG]

'Petja₁ boasts (by saying) that he₁ has got an A ("five").'

Nominalizations of *te* 'say' in cases other than the instrumental are either not possible in complement clauses or require a translation with a lexical verb 'say', as shown in (17).[30] They also optionally allow an overt subject. This suggests that they are fully compositional (canonical).

(17) *peťə*   [{(*poskil*) *koʐak* *tar-za* ***te-n-i-ʐën*** / *koʐak*

Petya   neighbor   cat   run.away-CV.SIM   say-PC.PST-P.3-CSL   cat

tar-nə-ʐen}]   ***xojxr-at***.

run.away-PC.PST-CSL   be.sad-NPST[3SG]

'Petya is sad because (they say/the neighbor says that) his cat has run away.'

2.6. Participles of te *'say'*

Participles of *te* 'say' proper, i.e. non-finite forms heading relative clauses, can also function as complementizers in PC.[31] These are the (non-inflected) past participle *-nƏ* (*tenë*), as in (18a), and the present participle *-AgAn* (*tegen)*, as in (18b)–(18c), which are used more or less interchangeably. *Tenë*/*tegen*-clauses are used with nouns having propositional content such as *xɨbar* 'news, rumor', *şoxəş* 'thought' and others, which are traditionally classified as complement-taking in familiar European languages. *Tenë*/*tegen* is used instead of *teze*, which is disallowed with nouns, cf. (18a)–(18b).[32] Some examples from Standard Chuvash are given in (19a)–(19b).

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[30] The ablative form *tenëren* was only found in the lexicalized preposition-like function ('speaking of') in the Standard Chuvash corpus. The genitive form has not been attested.

[31] A similar construction seems to be found in Lezgian (Haspelmath 1993:374), see also Knyazev 2016 for Kalmyk.

[32] Occasionally, one finds examples of *teze*-clauses with noun predicates in the corpus, as in (i). One possibility is that in these examples the N-V combination is optionally reanalyzed as a complex predicate.

 (i) *Golos-a*   *ən-a*   *vëler-t-ëmër* ***te-se***   ***xipar***   *ɕiter-etɕë*.

   Golos-OBJ   he-OBJ   kill-PST-1PL   say-CV.SIM   news   bring-NPST.3PL

   'They tell (= bring the news to) Golos that they (lit. 'we') have killed her.'

   (http://ru.corpus.chv.su/kusaru/240483.html)

(18) a. [jonaʒar   jal-da   poʒar   {**pol-nə** / pol-za   **te-në**   (**t-egen**) /
      neighbor   village-LOC   fire   be-PC.PST   be-CV.SIM   say-PC.PST   say-PC.PRS

   *pol-za   **te-ze**}]   **xibar-a**   elt-r-ëm.
   be-CV.SIM   say-CV.SIM   news-OBJ   hear-PST-1SG

   'I heard the news that there has been a fire in the neighboring village.'

   b. [es   katɕ-a   kaj-za   **t-egen**   (***te-ze**)]   **xibar**   por.
      you.SG   groom-OBJ   go-CV.SIM   say-PC.PRS   say-CV.SIM   news   COP

   'There is news that you have got married.'

   c. peţ-ən   [maʂə   on-a   jorad-at   **t-egen**]   ʂoxəʂ   pol-ţɕ-ə.
      Petya-GEN   Masha   he-OBJ   like-NPST[3SG]   say-PC.PRS   thought   be-PST-3SG

   'Petya had an idea that Masha loves him.'

(19) Standard Chuvash

   a. tɕasax   estakada   ɕun-aţ   **te-në**   **xipar**   sarəl-nə.
      immediately   overhead.road   burn-NPST[3SG]   say-PC.PST   news   spread-PC.PST

   'Immediately the rumor was spread that the overhead railroad is on fire.'
   (http://ru.corpus.chv.su/kusaru/156504.html)

   b. Marʲja   Ivanovna   tux-sa   kaj-aj-m-ë   **te-në**   ʂuxəʂ
      Marya   Ivanovna   go.out-CV.SIM   go-POT-NEG-FUT.3SG   say-PC.PST   thought

   man-a   sexërlen-ter-se   ja-tɕ-ë.
   I-OBJ   fear-CAUS-CV.SIM   put-PST-3SG

   'The thought that Marya Ivanovna may not manage to leave frightened me.'
   (http://ru.corpus.chv.su/kusaru/128419.html)

Tenë/*tegen*-clauses alternate with clauses headed by the non-inflected participles of the embedded verb as, e.g., *polnə* in (18a). Interestingly, such clauses cannot be viewed as ordinary relative clauses as they do not contain gaps (i.e., the head noun 'news' is not relativized in the usual sense) and thus should be analyzed as generalized noun modifier clause constructions (GNMCC) (see Matsumoto et al. 2017).[33] As for the analysis of *tenë*/*tegen*-clauses, the status of *tenë*/*tegen* as a complementizer is not very clear given the availability of GNMCC in PC. The compositional semantics of *tenë*/*tegen*-clauses in (18a)–(18b) under a GNMCC analysis would be along the lines of 'X heard the news/there is news such that *they say*/*Y says* that S', which seems

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[33] For more information on such constructions in PC see Logvinova 2019b. Another example is given in (i).
(i) [peţə   maʂinə   **il-në**]   novoɕ   jal-da   tɕastɕas   salan-tɕ-ə.
    Petya car   take-PC.PST   news   village-LOC   immediately spread-PST-3SG
    'The rumor that Petya has bought a car has immediately spread through the village.' (Logvinova 2019b)

an acceptable paraphrase of those sentences. Yet, given that the respective sentences do not normally contain an explicit verb 'say' in the translation, it seems reasonable to analyze *tenë*/*tegen* as instances of non-canonical SAY, i.e., as a special form of the SAY-complementizer specialized for noun-modifying clauses (and probably expressing a reportative/'hearsay' meaning on a par with action nominalizations *tenine* and *teni*, discussed above).

This completes the survey of SAY-complementizers in PC. To summarize, I have shown that apart from the same-subject converb *teze*, used as a default complementizer with verbs of speech and thought, there are (participle-based) action nominalizations of SAY *tenine* and *teni* as well as the participles *tenë* and *tegen*, which are also used in a complementizer-like function. All of these forms have a rather restricted distribution (*tenine* is used with verbs of reception, *teni* with sentential subjects and *tenë*/*tegen* with complement-taking nouns) and also bear additional semantic content (expressing reportative/'hearsay' evidentiality), suggesting a semi-grammaticalized status. Yet, these forms still qualify as non-canonical/conventionalized SAY since they are generally interpreted non-compositionally. In section 4, I will focus on the complementizer *tenine* and will discuss its differences from *teze* concerning the interpretation of indexicals. But before doing so, I will examine some general properties of indexical shift in PC.

3. Indexical shift in Poshkart Chuvash

3.1. Some general discussion of indexical shift

SAY-complements are often ambiguous between direct and indirect speech since SAY-complementizers are also commonly used as quote markers (Matić & Pakendorf 2013). This is different from European languages, where direct speech is expressed by a specialized construction while indirect speech is marked by a complementizer (see, e.g., Comrie 1985:107ff, Coulmas 1986, a.o.). In view of this fact, in languages with SAY-complements direct and indirect speech are typically distinguished on the basis of indexical reference (see, e.g., Güldemann 2008). Specifically, in direct discourse indexicals are calculated from the perspective of the original speaker (i.e. the speaker whose speech/thought act is reported), whereas in indirect discourse they are calculated from the perspective of the current speaker, who is doing the reporting (see, e.g., Li 1986). This difference between direct and indirect speech is traditionally tied to the idea that direct speech "reproduces the original speaker's words or at least words that are presented as if they were original speech" (Evans 2013:68). By contrast, indirect speech presents the original speech as filtered through the perspective of the current speaker.[34]

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[34] It is generally agreed that *exact* or *verbatim* representation of the original speech in direct speech is unrealistic (see, e.g., Clark & Gerrig 1990). Nevertheless, direct speech is still widely recognized as a separate type of speech, distinguished by its ability to *resemble* the original utterance in relevant respects (Güldemann 2008:312; Deal

For example, in a direct report, as in (20b), the reference of the 1st person pronoun *man* refers to the original speaker, Petya's mother, reflecting the original speaker perspective (cf. the original speech act in (20a)). As mentioned in the Introduction, indexicals with such an interpretation (i.e., relative to the perspective other than that of the current speaker) will be referred to as *shifted*. By contrast, in an indirect report in (20c), the original speaker is referred to by the 3rd person pronoun *on*, from the perspective of the current speaker (note that PC allows embedded imperatives in indirect speech, see Kaufmann & Poschmann 2013). An additional feature of direct speech in (20b) is the use of vocative, which are impossible in indirect reports (see, e.g. Banfield 1973). Note that both direct and indirect speech in (20b)–(20c) are introduced by the same construction, involving the complement of the lexical verb *te-* 'say' or a *teze*-clause.[35]

(20) a. Context: Mother says to Petya:

    pet^jə,   *man*   *pat-n^j-a*   *kil*.

    Petya,   I.GEN   side-P.3-OBJ   come[IMP.2SG]

    'Petya, come to me.'

  b. Context: I report (20a) to Masha.

    aməş   "*pet^jə,*   **man**   *pat-n^ja*   *kil*"   {*te-r-ë* /   *te-ze*

    mother.P.3   Petya,   I.GEN   side-P.3.OBJ   come[IMP.2SG]   say-PST-3SG   say-CV.SIM

    kala-r^j-ə}.

    say-PST-3SG

    'Mother₁ said, "Petya, come to me₁."'

  c. Context: = (20b)

    aməş   *pet^j-a*   **on**   *pat-n^j-a*   *kil*

    mother.P.3   Petya-OBJ   he.GEN   side-P.3-OBJ   come[IMP.2SG]

    {*te-r-ë* /   *te-ze*   *kala-r^j-ə*}.

    say-PST-3SG   say-CV.SIM   say-PST-3SG

    'Mother₁ told Petya to come to her₁.'

It turns out that indexicals with a shifted interpretation do not always unambiguously identify direct speech. First, shifted indexicals may co-occur with features that are characteristic of indirect speech including substantial paraphrasing of the original utterance and extraction of such material (e.g., in wh-questions and relativization), see, e.g., Munro et al. 2012, Shklovsky & Sudo 2014,

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2020:11; Munro et al. 2012). Thus, for example, most formal semantics/generative approaches assume that direct speech requires at least some degree of faithfulness to the original words and thus disallows substantial paraphrasing of the original speech (see Anand 2006, Schlenker 2011, Munro et al. 2012).

[35] In the corpus of Standard Chuvash, examples with *teze* introducing direct speech are also marked with special punctuation, as in European languages.

Deal 2020.[36] Indexical shift in the presence of wh-extraction is illustrated in (21c). Consider first (21b), which is a speech report of the original utterance in (21a). Note that (21b) contains shifted 1st person agreement, which may indicate that it is a direct report, although not necessarily. Now consider (21c), which is a wh-question with an (in situ) wh-word corresponding to the instrumental phrase in the embedded clause in (21b). Crucially, (21c) still contains shifted agreement. Yet, it is unclear how (21c) could be a direct report of the original utterance of (21a) as the latter is a declarative sentence and does not contain any wh-words. A more appropriate interpretation is that (21c) is an indirect report, and that 1st person agreement may shift in indirect reports. By parity or reasoning, (21b) should also be analyzed as ambiguous between a direct report and an indirect report with shifted agreement.[37]

(21) a. Context: Boris says to me:

    (*ep*) *son^{j}ə-ba   ëɕl-e-p.*

    I   Sonya-INS work-NPST-1SG

    'I will work with Sonya.'

  b. Context: I report (21a) to Masha.

    boris   [(*ep*) *son^{j}ə-ba* *ëɕl-e-p*]   *te-ze*   *kala-r^j-ə.*

    Boris I   Sonya-INS work-NPST-**1SG** say-CV.SIM say-PST-3SG

    'Boris$_1$ said that he$_1$ will work with Sonya.' (lit.: 'Boris said I will work with Sonya.')

  c. Context: Masha asks me:

    boris   [(*ep) ***kam-ba*** *ëɕl-e-p*]   *te-ze*   *kala-r^j-ə?*

    Boris I   who-INS work-NPST-**1SG** say-CV.SIM say-PST-3SG

    'Who did Boris$_1$ say he$_1$ will to work with?' (lit.: 'Who did Boris say I will work with?')

An alternative interpretation of these facts is that direct reports in PC simply allow extraction, which is normally disallowed in European languages (cf. Munro et al. 2012). This would imply that (21a) is quoted only partially, with the instrumental phrase unquoted (see Maier 2016, 2017 for further discussion of unquotation).[38] This analysis, however, is problematic because in PC, an overt 1st person subject with a shifted interpretation is disallowed in the presence of wh-extraction, as shown in (21c); see also the discussion below. Yet, there is no a priori reason why unquotation should not also apply in this case.[39]

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[36] The opposite situation arises in so-called free indirect discourse, combining non-shifted indexicals with syntactic characteristics of direct speech (see, e.g., Banfield 1973, Coulmas 1986, Schlenker 2011).

[37] More precisely, only the sentence with a non-overt embedded subject must be ambiguous, whereas the sentence with an overt subject must be unambiguously a direct report (see the discussion below).

[38] For some general discussion (and criticism) of Maier's unquotation/mixed quotation analysis see Deal 2020.

[39] One may still argue, though, that partial quotation in PC can only apply to the embedded verb.

Second, indexicals within the same clause sometimes take different perspectives. To illustrate this with PC examples, consider (22b) and (23). In (22b), shifted 1st person agreement co-occurs with a 1st person pronoun *manba* with the current speaker perspective. Similarly, in (23) shifted agreement co-occurs with the 2nd person pronoun *sanba* referring to the current addressee. Examples with such "mixing" of perspectives have long been noted in the typological literature and have been analyzed as involving *partial* or *incomplete shift* (Rice 1986, Aikhenvald 2008, Evans 2013).[40] Such examples have also recently become the focus of generative approaches to indexical shift as apparent violations of the so-called *Shift Together* constraint (see below).

(22) a. Context: Boris says to Sonya:

(*ep*) *san-ba*   *ëɕl-e-p*

I   you.SG-INS work-NPST-1SG

'I will work with you.'

b. Context: Sonya reports (22a) to Masha.

boris   [**man-ba** *ëɕl-e-p*   *te-ze*]   *kala-rʲ-ə.*

Boris   I-INS   work-NPST-**1SG** say-CV.SIM   say-PST-3SG

'Boris₁ said that he₁ will work with me_current speaker.' (lit.: 'Boris said I will work with me.')

c. Context: =(22b)

boris   *man-a* [*ep* {***man-ba*** / ***san-ba***}   *ëɕl-e-p*   *te-ze*]

Boris   I-OBJ   I   I-INS   you.SG-INS work-NPST-**1SG** say-CV.SIM

kala-rʲ-ə.

say-PST-3SG

'Boris₁ said that he₁ will work with me_current speaker.' (= 'Boris told me, "I will work with you"')

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(23)   Context: Boris said to Masha, 'I will work with Sonya'. Masha report this to Sonya.

(*sonʲə,*) *boris*   *man-a*   [***san-ba***   *ëɕl-e-p*   *te-ze*]   *kala-rʲ-ə.*

Sonya   Boris   I-OBJ   you.SG-INS   work-NPST-**1SG**   say-CV.SIM   say-PST-3SG

'(Sonya,) Boris$_1$ told me that he$_1$ will work with you$_{current\ addressee}$.' (lit.: 'Boris told me I will work with you.')

The most natural interpretation of the data in (22b) and (23) is that indexicals may shift even in the presence of other non-shifted indexicals within the same clause, that is, in indirect speech, assuming that the latter categorically disallows non-shifted indexicals. This is, in fact, how such examples are analyzed in typological studies such as Güldemann 2008 and Matić & Pakendorf 2013 (where they are classifies as indirect speech). Again, an unquotation analysis of the kind alluded to above (with the instrumental phrase unquoted) is precluded by the fact that in the presence of an overt subject, as in (22c), 1st person agreement no longer allows shifted interpretation unless the instrumental phrase, referring to the current speaker/reported addressee, is also shifted (i.e., is realized by the 2nd person pronoun), suggesting that this is a direct report. Yet, there is no apparent reason why unquotation of the 1st person pronoun in instrumental case should be precluded in this case. A more appropriate interpretation, again, is that shift of 1st person can occur with non-shifted indexicals, but only for agreement/null subjects, but not for overt pronouns (otherwise (22c) would be possible with *manba*).

One response to examples with shifted indexicals co-occurring with features of indirect speech, which gained prominence in functional typological literature, is to view the category of direct/indirect speech as a continuum with one pole representing canonical direct speech and the other canonical indirect speech, with various points in between, including so-called semi-direct or biperspectival speech, where the current and original speaker perspectives combine (see Evans 2013, Aikhenvald 2008, Güldemann & von Roncador 2002).

Another response, adopted in generative approaches, is to view indexical shift (in a narrow sense) as a phenomenon distinct from direct speech/quotation (see, e.g., Schlenker 2003; Anand & Nevins 2004; Munro et al. 2012; Shklovsky & Sudo 2014; Deal 2020) despite superficial similarity. In these approaches indexical shift is accounted for by abstract but syntactically active monster operators, which are located in the left periphery of embedded clauses and whose function is to manipulate coordinates of the context relative to which indexicals in the embedded clause are evaluated.[41] Specifically, the coordinates associated with the current speech act are replaced with the coordinates associated with the original speech/thought act, although technical implementation widely differs across different approaches (see Deal 2020 for an overview).

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[41] Schlenker (2003, 2011) takes a speech/attitude verb itself to be a monster.

One conceptual advantage of monster-based approaches over continuum approaches, also acknowledged in functionally oriented work (cf. Spronck & Nikitina 2019, see also Nikitina 2012), is that they take indexical shift to be a *grammatical* (or conventionalized) phenomenon, making it easier to account for the observed systematic variation across languages, which is subject to robust implicational hierarchies, as shown by Deal (2020).[42] By contrast, the former approaches tend to view the problematic examples above as deviations from core grammar, e.g., as special stylistic/pragmatic devices (although it is acknowledged that these patterns may sometimes become grammaticalized, cf. Evans 2013, Aikhenvald 2008).

Interestingly, despite some success of monster-based approaches in accounting for examples of indexical shift with wh-extraction, as in (22b), they have had considerably more difficulty with examples of partial shift, as in (23) and especially (22b), where the *same* person value (i.e., 1st person) has different perspectives within the same clause. This is because these approaches have generally assumed the so-called *Shift Together* constraint (Anand & Nevins 2004), requiring all indexicals within the scope of a monster to be evaluated relative to the same context (of the original speech act/attitude). How to account for these so-called *Shift Together* exceptions is still a widely debated question in the literature.[43]

Although my goal in this paper is largely orthogonal to the question of deciding between existing approaches to indexical shift, I am generally sympathetic with the treatment of indexical shift as a grammatical phenomenon in generative approaches and specifically with efforts within generative typology to understand the limits of variability of indexical shift across languages. My specific goal is to extend this typology with a more focused discussion of the question of the controller choice (with verbs of hearing and less common constructions), rarely addressed in this literature, and also of the role of the complementizer and its form on the possibility of shift (see some preliminary discussion in Messick 2017). In order to more easily connect the findings in this paper to the existing (generative) typological work on indexical shift, I will follow the standard practice of controlling for quotation (cf. Shklovsky & Sudo 2014, Deal 2020), for which I will

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[42] One important difference between Spronck & Nikitina's (2019) approach and generative approaches is that Spronck & Nikitina are skeptical about the usefulness of the direct/indirect distinction in cross-linguistic studies (which is generally assumed in generative literature), instead of which they suggest a "neutral" category of reported speech constructions identified by their semantic/pragmatic function and also by some prototypical syntactic properties including some conventional system of indexical shift. As they note, this is, in principle, compatible with monster-based accounts of indexical shift, even though Spronck & Nikitina do not endorse their specific formalisms.

[43] Various strategies have been proposed to deal with *Shift Together* exceptions: (a) 'partial' monster operators overwriting only some context coordinates, e.g. the Speaker but not the Hearer, etc. (see Deal 2020, Anand & Nevins 2004, Munro et al. 2012); (b) treating one of the 1st person markers in "mixed" configurations like (22b) not as true indexical but as a logophor with 1st person features (indexiphor) immune from context overwriting (see Anand 2006, Deal 2018, 2020); (c) dropping *Shift Together* altogether by allowing indexicals to depend freely on either the current context or the original context (cf. Schlenker 2003, 2011). See Deal 2010, Sundaresan 2018 for further discussion.

mostly use examples with partial shift like (22b) and (23), assuming that they provide a reliable diagnostic of the absence of quotation (see the discussion of unquotation above).[44]

Below I will go over some parameters of indexical shift in PC that are usually discussed in generative typological work such as Deal 2020.

3.2. Parameters of indexical shift in Poshkart Chuvash

3.2.1. Which indexicals shift

We already saw in (21b)–(21c) and (22b)–(22c) that whereas 1st person agreement can shift, 1st person (subject) pronouns cannot. In fact, overt pronouns in PC generally do not allow shift (outside quotation). This is further illustrated in (24a) where the 1st person pronoun *manba* cannot refer to the original speaker; instead one must use the 3rd person pronoun *onba*, which takes the current speaker perspective.[45] Similarly, in (24b), the 1st person locative pronoun *konda* 'here' cannot refer to Moscow, where the original speaker is located at the time of the original utterance; instead, one must use *onda* 'there', from the perspective of the current speaker.[46]

(24) a. Context: Boris said to Masha, 'Sonya will work with me.' I ask Masha:

      boris   [*kam*   {***man-ba** / **on-ba**} *ɕɕl-et*   *te-ze*]   *kala-rʲ-ə*?

      Boris   who.NOM I-INS   he-INS   work-NPST[3SG] say-CV.SIM say-PST-3SG

      'Who did Boris₁ say will work with him₁?'

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[44] Diagnostics for establishing the absence of quotation commonly used in generative works (e.g., wh-extraction) may be problematic in view of the fact they tend to presuppose some universal set of criteria for direct speech. Even though such diagnostics (e.g., unacceptability of wh-extraction) may be valid for familiar European languages, they cannot be assumed a priori for other languages, especially those for which a distinction between direct and indirect speech is questionable (see Munro et al. 2012 for some discussion). Note that this criticism does not imply that these diagnostics will not work for particular languages (cf. the discussion of PC above). This conceptual problem is avoided in approaches like that of Spronck & Nikitina (2019), who reject any universal syntactic criteria of direct speech.

[45] The example is possible on a reading where *manba* refers to the current speaker.

[46] Note that in the absence of wh-extraction, the original speaker perspective of *konda* becomes possible, as shown in (i); the proform *onda* 'there' with the current speaker perspective is also possible.

(i)   Context: One month ago, I was in Moscow and met Boris there. He said to me then, 'I am living here, in Moscow'. Now I am back in Poshkart reporting this to Masha.

     boris man-a   [{**konda** / **onda**} *porn-a-p*   *te-ze*]   *kala-rʲ-ə*.

     Boris I-OBJ   here   there live-NPST-1SG   say-CV.SIM   say-PST-3SG

     'When I was in Moscow Boris₁ told me that he₁ was living there (= in Moscow).'

b.   Context: While away in Moscow, Boris saw an acquaintance of his and called Sonya back to Poshkart to tell her about it. I am in Poshkart now asking Sonya:

(son^jə,) boris   san-a   [{***konda** / **onda**} kam-a   kor-d-əm]
Sonya Boris you.SG-OBJ here   there who-OBJ see-PST-1SG

te-ze   kala-r^j-ə?
say-CV.SIM say-PST-3SG

'(Sonya,) Who did Boris₁ told you he₁ met there?'

The absence of indexical shift with overt pronouns has also been observed for Mishar Tatar, another Turkic language, as discussed by Podobryaev (2014), who analyzes shiftability in Mishar Tatar as a specific property of *non-overt* (null) pronouns/agreement, including null possessive pronouns/agreeement (see also Sundaresan 2018).[47,48] Unfortunately, it is hard to establish the same restriction for PC with full generality since PC has mostly lost its 1st/2nd person possessive agreement, including in action nominalizations (cf. the discussion in section 2.1).

Interestingly, shift of 2nd person agreement (in declarative clauses) is disallowed, as shown in (25), where 2nd person cannot refer to the original addressee; instead, 3rd person agreement (from the current speaker perspective) must be used. Note also that, in contrast to declarative clauses, shifted 2nd person is possible in embedded imperatives, cf. (20c).[49] A further example of the same phenomenon is illustrated in (25), cf. also the possibility of jussive in such examples.

(25) Context: Petya is going to play chess with Boris. Masha says to Boris, 'You are going to beat him (Petya).' Petya reports this to Sonya.

maşə   boris-a   [man-a {*ɕёnder-e-**n** / ɕёnder-**et**}]   te-ze   kala-r^j-ə.
Masha Boris-OBJ I-OBJ win-NPST-**2SG** win-NPST[**3SG**] say-CV.SIM say-PST-3SG
'Masha told Boris₂ that he₂ will beat me_current speaker [in chess].'

(26) Context: Masha says to Boris, 'Beat Petya in chess.' Petya reports this to Sonya.

maşə   boris-a   [man-a {ɕёnder / ɕёnder-dёr}   te-ze]   kala-r^j-ə.
Masha Boris-OBJ I-OBJ win[IMP.**2SG**] win-JUSS.3SG say-CV.SIM say-PST-3SG
'Masha told Boris₁ to beat me/that he₁ should beat me_current speaker [in chess].'

To summarize, the only shiftable indexical (in declarative complements) in PC is 1st person subject-verb agreement. This pattern appears to be along the general lines of the implicational hierarchy of shiftable indexicals in Deal 2020 (see also Sundaresan 2018), according to which 1st person is more likely to shift than 2nd person (which, in turn, is more likely to shift than locative HERE). Yet, taken together with the shiftability of 2nd person in PC only in embedded imperatives but not otherwise, it may constitute a previously undocumented pattern.

3.2.2. Which verbs and complement types allow shifting

As I just showed, indexical shift in PC is restricted to subject-verb agreement. Thus, we only find shift in SAY-complements or in clauses introduced directly by the verb *te* 'say' as (participle-based) nominalizations have lost 1st/2nd person agreement (see section 2.2) and other kinds of non-finite clauses do not show agreement (cf. footnote 7).[50,51] Example (25b) illustrates shift with the lexical verb *te* 'say'. We already saw shift in a *teze*-clause with the verb *kala* 'say', cf. (1a), (21c), (22b) and (23). Example (27a) further illustrates shift with the propositional attitude verb *şotla* 'think'. Shift in a *tenine*-clause (i.e., in reception reports) was briefly illustrated in the Introduction (cf. (1b)) and will be discussed in section 4 in some detail.[52]

(27) a. Context: = (21)

(*son^{j}ə,*) *boris* [*san-ba* *ëɛl-e-p*] {*t-et* / *te-r-ë*}.

Sonya Boris you.SG-INS work-NPST-**1SG** say-NPST[3SG] say-PST-3SG

'(Sonya,) Boris$_1$ said/says that he$_1$ will work with you$_{current\ addressee}$.'

b. Context: Boris says to Petya, 'I will beat you in chess.' Petya reports this to Sonya.

boris [*man-a* *ɛënder-e-p* *te-ze*] *şotl-at*.

Boris I-OBJ win-NPST-**1SG** say-CV.SIM think-NPST[3SG]

'Boris$_1$ thinks he$_1$ that he will beat me$_{current\ speaker}$ [in chess].'

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[50] The same is true of the future participle, used in (same-subject) purpose clauses headed by *teze* (see footnote 13).

[51] The loss of 1st/2nd person possessive marking (in nominalizations) and the lack of shifting of overt pronouns in PC cannot be the (only) reason why we do not see shift in nominalized clauses, as in languages like Uyghur (Shklovsky & Sudo 2014) and Mishar Tatar (Podobryaev 2014) shift is still impossible in such clauses despite the availability of 1st/2nd person possessives and/or shifted overt pronouns (I thank one of the reviewers for clarifying this point).

[52] Shift in other SAY-complements such as *teni* and *tenë/tegen*, as in (i), is also possible, although it was not investigated in detail. Observe that in (i) shifted 1st person agreement is controlled by the ablative source (*Boris*) rather than by the matrix subject, just like in *tenine*-clauses (cf. (1b)). See section 4 for further discussion.

(i) Context: Boris said to me, 'I will work with Sonya.' I report this to Sonya.

ep *boris-ran* [*san-ba* *ëɛl-e-p* *te-në* / *t-egen*] *xibar-a* *elt-r-ëm*.

I Boris-ABL you.SG-INS work-NPST-**1SG** say-PC.PST say-PC.PRS news-OBJ hear-PST-1SG

'(Sonya,) I heard the news from Boris$_1$ that he$_1$ will work with you$_{current\ addressee}$.'

3.2.3. Optionality of shift

Whereas 1st person agreement in PC (without an overt subject pronoun) can shift it *need not* do so, as shown by the fact that examples like (28a) allow the embedded subject to refer to the current speaker. Nonetheless, speakers somewhat disprefer (28a) in a non-shifted context and instead opt for (28b), with an overt subject, which is unambiguously non-shifted (recall that overt pronouns in PC do not allow shift, cf. (22c)).[53]

(28) a. *boris*　　*man-a*　[*san-ba*　　*ëɕl-e-p*　　　*te-ze*]　　　*kala-rʲ-ə.*
　　　　Boris　　I-OBJ　　you.SG-INS　work-NPST-**1SG**　say-CV.SIM　　say-PST-3SG
　　　　'Boris₁ told me that {I_current speaker / he₁} will work with you_current addressee.'

　　 b. *boris*　　*man-a*　[*ep*　*san-ba*　　*ëɕl-e-p*　　　*te-ze*]　　　*kala-rʲ-ə.*
　　　　Boris　　I-OBJ　　I　　you.SG-INS　work-NPST-**1SG**　say-CV.SIM　　say-PST-3SG
　　　　'Boris₁ told me that {I _current speaker / *he₁} will work with you_current addressee.'

This completes the overview of the basic parameters of indexical shift in PC.[54] To summarize, indexical shift in PC: (i) is restricted to 1st person subject verb agreement; (b) occurs only in (finite) clauses introduced by SAY-complementizers or directly be the lexical verb *te* 'say'; (c) is optional. Now we may turn to the main puzzle related to the choice of controller for the shifted 1st person with *teze* and *tenine*.

4. The puzzle: shifted first person in communicative reception reports

4.1. Introducing the puzzle

Shifted agreement is possible not only in *teze*-clauses, as we saw in examples like (23) and (27b), but also in *tenine*-clauses, as illustrated for the verbs of receptions *elt* 'hear' and *pël* 'know, learn' in (29a), see also (1b). In contrast to *teze*-clauses, shifted 1st person in such examples is controlled by the (ablative) source. The same pattern is observed for two other reception verbs *ṣan* 'believe (the claim)', as in (29b), and *vula* 'read', as in (29c), except that in these cases the source (controlling shifted agreement) is realized as an NP in objective case or as an ablative-marked dependent of the locative argument of the verb (rather than as an ablative argument of the verb). The crucial feature of the examples with *tenine*-clauses with shifted agreement (controlled by the

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[53] The pattern in PC, with an ambiguity in examples like (28a), is also found in other languages, including Mishar Tatar (Podobryaev 2014), Zazaki (Anand & Nevins 2004) and Amharic (Schlenker 2003), as opposed to languages like Matses (Munro et al. 2012) and Uyghur (Shklovsky & Sudo 2014), where a shifted interpretation is obligatory (for further discussion see Deal 2020 and Sundaresan 2018).

[54] Apart from the three parameters discussed in section 3.2, Deal (2020) also identifies another parameter of indexical shift, namely, whether a given indexical has a *de se* interpretation. This parameter was not tested in the present work.

source NP), such as (29a)–(29c), is that they disallow the complementizer *teze*. This is despite that fact that *in the absence of shift*, verbs of reception (with the exception of *pël* 'know, learn') in principle allow *teze*-clauses, as we saw in (8b), (10b) and (11), see also the contrasting pair for *elt* 'hear' in (1b)–(1c) from the Introduction.

(29)   a.   Context: My sister said to me, 'I will marry Petya.' I report this to Petya.

      (*petʲə,*)   *ep*   **eki-ren**   [*san-a*   *katɕ-a*   *tog-a-**p***
      Petya   I   sister-ABL   you.SG-OBJ   groom-OBJ   go.out-NPST-**1SG**

      te-n-in-e   /   ***te-ze***}]   *pël-d-ëm*   /   *elt-r-ëm.*
      say-PC.PST-P.3-OBJ   say-CV.SIM   know-PST-1SG   hear-PST-1SG

      '(Petya,) I heard/learned from my sister₁ she₁ will marry you_current addressee.'

    b.   Context: Petya said to me, 'I will get an A from Luiza.' I say to Luiza:

      [*sern-den*   *pilëk*   *il-e-**p***   {***te-n-in-e***   /   ***te-ze***}]
      you.PL-ABL   five   take-NPST-**1SG**   say-PC.PST-P.3-OBJ   say-CV.SIM

      ep   ***petʲ-a***   *ʂan-d-əm.*
      I   Petya-OBJ   believe-PST-1SG

      'I believed Petya₁ that he₁ will get an A ("five") from you.'

    c.   Context: Masha wrote to Petya, 'I will marry Sonya's friend.' Sonya reports this to me.

      petʲə   ***maʂə-ran***   *ɕiru-ra*   [*man*   *joldaʐ-a*   *katɕ-a*   *tog-a-**p***
      Petya   Masha-ABL   letter-LOC   I.GEN   friend-OBJ   groom-OBJ   go.out-NPST-**1SG**

      te-n-in-e   /   ***te-ze***}]   *vula-rʲ-ə.*
      say-PC.PST-P.3-OBJ   say-CV.SIM   read-PST-3SG

      'Petya, read in a letter from Masha₁ that she₁ will marry my_current speaker friend.'

Note that the examples in (29a)–(29c) above only show that shifted agreement in *tenine*-clauses with verbs of reception *can* be controlled by the source NP and that *teze*-clauses are prohibited in such examples. We may wonder whether shifted agreement *must* be controlled by the source NP or it can also be controlled by the matrix subject and whether in the latter case *teze*-clauses become possible. It turns out that subject-control of shifted agreement in reception reports in PC is largely unavailable, for both *teze*- and *tenine*-clauses; the relevant meaning is rendered using a 3rd person agreement (from the current speaker perspective). This is illustrated for *elt* 'hear' and *pël* 'know, learn' in (30) and (31a)–(31b).[55]

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(30) Context: The teacher says to Petya, 'You sing best of all.' I report this to Masha.

peťə   *uţeiteľ-dan*   [(*vəl*)   *ţei*   *lajək*   {**jorl-a-**p* /   *jorl-**at***}

Petya   teacher-ABL   he   most   good   sing-NPST-**1SG**   sing-NPST[**3SG**]

te-n-in-e]   *elt-r-ë*   /   *pël-ţe-ë*.

say-PC.PST-P.3-OBJ   hear-PST-3SG   know-PST-3SG

'Petya₁ heard from the teacher that he₁ sings best [of all].'

(31) Context: People tell Petya that he snores while sleeping. I report this to Masha.

a. ****peťə***   [*ɕur-nə*   *ţeox-nʲa*   *xarlad-a-**p***   {*te-n-in-e* /   *te-ze*}

Petya   sleep-PC.PST   time-P.3.OBJ   snore-NPST-**1SG**   say-PC.PST-P.3-OBJ   say-CV.SIM

elt-se.

hear-CV.SIM

Intended: 'Petya₁ heard that he₁ snores while sleeping'

b. ***peťə***   [*ɕur-nə*   *ţeox-nʲa*   *xarlad-**at***   *te-n-in-e*]

Petya   sleep-PC.PST-P.3   time-P.3.OBJ   snore-NPST[**3SG**]   say-PC.PST-P.3-OBJ

elt-se.

hear-CV.SIM

'Petya₁ heard that he₁ snores while sleeping'

A similar pattern is observed for the verb *vula* 'read', as shown in (32a). The pattern shown by * şan* 'believe (the claim)' in (32b) is along the same general lines, with a clear preference for the use of 3rd person agreement over (subject-controlled) 1st person agreement. In contrast to the other reception verbs, however, subject control was not totally rejected in this case (at least by one speaker). Since I have limited data for this verb, it is unclear whether the apparent acceptability of subject control with *şan* 'believe (the claim)' in (32b) reflects a genuine difference of this verb from the other reception verbs. In what follows, I will largely disregard this peculiarity of *şan* 'believe (the claim)', with the understanding that some proposed generalizations/constraints pertaining to the verbs of reception in PC (such as (35a) below) may not apply to this particular verb and may need to be refined.

(32) a. Context: Masha wrote to Petya, 'You sing best of all.' I report this to Sonya.

peťə   ***maşə-ran***   *ɕiru-ra*   [*ţei*   *lajək*   {**jorl-a-**p* /   *jorl-**at***}

Petya   Masha-ABL   letter-LOC   most   good   sing-NPST-**1SG**   sing-NPST[**3SG**]

te-n-in-e]   *vula-rʲ-ə*.

say-PC.PST-P.3-OBJ   read-PST-3SG

'Petya₁ read in a letter from Masha that he₁ sings best of all.'

b. Context: The teacher says to Petya, 'You will get an A.' I report this to Sonya.

[*pilëk*   {*il-et*   /   *ʔil-e-p*}   *te-n-in-e*   (*ʔte-ze*)]

five   take-NPST[**3SG**]   take-NPST-**1SG**   say-PC.PST-P.3-OBJ   say-CV.SIM

pet͡ɕə   *ut͡ɕitelʲ-a*   *ʂan-t͡ɕ-ə*.

Petya   teacher-OBJ   believe-PST-3SG

'Petya₁ believed the teacher that he₁ will get an A ("five").'

The distribution of *teze-* and *tenine*-clauses is summarized in Table 1. With verbs of speech and thought, the complementizer takes the converbial form *teze* and shifted 1st person is controlled by the matrix subject (rows A–B).[56] With verbs of reception, illustrated by *elt* 'hear', shifted 1st person is obligatorily controlled by the (ablative) source and the complementizer takes the nominalized form *tenine* (rows D–E), whereas in the absence of shift both *teze* and *tenine* are in principle possible (row C).

Table 1. Acceptability of *teze* and *tenine* depending on the verb type and the presence of indexical shift

	Verb class & controller for shifted 1st person	**Acceptability of complementizer**	
		teze	*tenine*
A	SAY/THINK + no shift	OK	*
B	SAY/ THINK + shift to the matrix subject	OK	*
C	HEAR + no shift	[(?)]OK	OK
D	HEAR[57] + shift to the matrix subject	*	*
E	HEAR + shift to the (ablative) source	*	OK

It is difficult to assess how cross-linguistically unusual the pattern in Table 1 is since there is little data on indexical shift in reception reports (cf. Özyıldız et al. 2018). Moreover, alternation of SAY-complementizers, to my knowledge, has not been discussed in connection with indexical shift. Nevertheless, it is noteworthy that the pattern in PC is at least different from the patterns reported for Turkish (Özyıldız et al. 2018) and Uyghur (Sudo 2010).[58] In Uyghur, 1st person in reception reports (with 'hear') must shift to the matrix subject (the hearer), whereas shift to the ablative source is disallowed, as shown in (33a), which is the opposite of the pattern in PC. In a

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[56] The unacceptability of *tenine* with 'say' (with and without shift) is illustrated in (ia)–(ib), cf. (1a) and (5a) with *teze*.
(i) a. **boris*   *man-a*   [*san-ba*   *ëɕl-e-p*   ***te-n-in-e***]   ***kala-rʲ-ə***.
        Boris   I-OBJ   you.SG-INS   work-NPST-**1SG** say-PC.PST-P.3-OBJ   say-PST-3SG
        Intended: '(Sonya,) Boris₁ told me that he₁ will work with you[current addressee].'
    b. **lionilə*   *man-a*   [*boris san-ba*   *ëɕl-et*   ***te-n-in-e***]   ***kala-rʲ-ə***.
        Lionila   I-OBJ   Boris you.SG-INS   work-NPST[3SG] say-PC.PST-P.3-OBJ   say-PST-3SG
        Intended: '(Sonya,) Lionila told me that Boris will work with you[current addressee].'
[57] Potentially excluding the verb *ʂan* 'believe (the claim)', see (32b).
[58] Özyıldız et al. (2018) also cite Polinsky 2015 on Tsez, where 1st person indexicals can shift to the matrix subject with verbs of hearing, and Sundaresan 2018 on Tamil, where subject control of shifted 1st person is significantly harder for 'hear' than for speech/thought verbs. The availability of control by the source is not reported in these works.

similar construction in Turkish, 1st person can shift either to the ablative source or to the subject (apart from the non-shifted interpretation), as in (33b), which a less restrictive pattern than in PC.[59]

(33) a. Uyghur

*ahmet   aygül-din   [qaysi   imtihan-din   öt-**tim**]   dep   angla-di?*
Ahmet   Aygül-ABL   which   test-ABL   pass-PST.**1SG**   COMP   hear-PST.3

'Which test did Ahmet$_1$ hear from Aygül$_2$ that he$_{1/*2}$ passed?' (adapted from Sudo 2012)

b. Turkish

*ayşe   mercan'-dan   [kahraman-**ım**   diye]   duy-du.*
Ayşe   Mercan-ABL   hero-COP.**1SG**   COMP   hear-PST.3SG

'Ayşe$_1$ heard from Mercan$_2$ that she$_{1/2}$ /I$_{current\ speaker}$ was a hero.' (adapted from Özyıldız et al. 2018)

The pattern in PC appears puzzling for two main reasons. First, because subject control of shifted 1st person in reception reports in PC is largely precluded, as opposed to Turkish and Uyghur. Second and more importantly, because the form of the complementizer in reception reports (*teze* vs. *tenine*) is crucially dependent on the presence of (source-controlled) shifted agreement, i.e., *teze* is disallowed in shifted complements of reception verbs (row E in Table 1). The observed pattern cannot be explained either by a general ban on non-subject control of shifted 1st person (which might be an option, e.g., for Uyghur), or by a general incompatibility of *teze* with reception verbs. It thus calls for an account involving an *interaction* between non-subject (source) control and the form of the (SAY-)complementizer. Such an account is presented below.

4.2. The choice of controller for shifted 1st person

Before proposing language-specific constraints for PC, summarized below in (35), I will make a general assumption about the choice of controller for shifted 1st person. Most theories of indexical shift assume that shifted 1st person is controlled by the agent of speaking or the experiencer, often jointly referred to as the "author" or attitude holder. This assumption accounts for the crosslinguistic availability of shift not only in speech reports but also in attitude reports, which do not involve an agent, cf. (27b). A useful notion here, unifying the agent of speaking and the experiencer, is the *logophoric center*, commonly understood as the (unique) participant who is the "source of the report" or "with respect to whose consciousness the report is made" (Sells 1987: 445).[60] The logophoric center is a more general notion than the agent of speaking/experiencer as

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[59] The complementizer *diye* in (33b) is morphologically a non-finite form of the verb *demek* 'say', which Özyıldız et al. (2018) analyze as synchronically verbal (see section 5 for further discussion).
[60] The logophoric center in Sells 1987 also involves "point of view" (PIVOT), which is not relevant for control of shifted 1st person in PC.

it potentially applies to control of shifted 1st person by implicit arguments, independently of their theoretical status, and by participants that cannot be overtly realized (as verb dependents), cf. (29c). In addition, it implies that there is only one such participant per clause, which is relevant for reception reports (see immediately below). The assumption is given in (34).

(34) Shifted 1st person is controlled by the logophoric center of the sentence (typically the agent of speaking or the experiencer)

In the case of speech or attitude reports (e.g., with 'say'/'think') the issue of the choice of controller does not arise as the logophoric center is unambiguously the subject. In reception reports (e.g., with 'hear'), however, the situation is different since there are two potential controllers, namely, the agent of speaking, realized by the (ablative) source, and the experiencer, realized by the subject (i.e., the hearer/recipient). As we saw in (29a)–(29c), reception reports in PC allow for the first possibility, i.e., control of shifted 1st person by the source. The second possibility, while not readily available in PC (cf. (30)–(32)), is also cross-linguistically attested, at least in Turkish and Uyghur, as we saw in (33). To account for this possibility, Özyıldız et al. (2018) propose that reception reports have two possible construals, namely: (a) speech reports, where the logophoric center/the controller of shifted 1st person, is the (ablative) source by virtue of being the agent of speaking/the "author" of the reported context; and (b) attitude reports, where the matrix subject (the hearer) is the logophoric center by virtue of being construed as the attitude holder (the ablative NP merely expressing the source of the speech signal without being the "author").

The question we need to address now is why control of shifted 1st person by the matrix subject is largely unavailable in reception reports in PC, as we saw in (30)–(32). To block this possibility, I wish to propose a constraint specific to PC, given in (35a). According to (35a), if a construction involves a participant who is the agent of speaking, including the (ablative) source, this participant *must* be the controller of shifted 1st person (and hence, by (34), the logophoric center).[61] The constraint in (35a) requires the source to be the controller of shifted 1st person (as well as the logophoric center) in PC reception report, precluding control by the matrix subject.

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[61] As I alluded to above, the constraint in (35a) may not be generalized to reception reports with the verb *şan* 'believe (the claim)', given the potential availability of subject-control in examples like (32b). A potential way to accommodate these data would be to assume that the constraint in (35a) is lexically restricted to particular reception verbs excluding *şan* 'believe (the claim)'. An alternative is to assume that (35a) specifies a *possible* logophoric center in the construction, whereas other conditions specify other possible logophoric centers including attitude holders. On this view, one might, conversely, assume that those other conditions are lexically restricted in a way that excludes the subject of all reception verbs except *şan* 'believe (the claim)' as possible logophoric centers. The special status of the subject of *şan* 'believe (the claim)', under the latter view, might be related to the availability of subject control with the verb *şan* 'believe' on the attitude report reading, as in (i). The matter requires further study.

(i) [kožag-a tob-a-**p** te-ze] şan-at **pet'ə**.
    cat-OBJ find-NPST-**1SG** say-CV.SIM believe-NPST[3SG] Petya
    'Petya₁ believes that he₁ will find the cat.'

Note that the constraint in (35a) does *not* require the source to be the logophoric center *in general* (i.e., in the absence of shift) but only when it controls shifted 1st person, in other words, indirectly by virtue of the assumption in (34). Even though a direct requirement (that the source must be the logophoric center), coupled with (34), would also block subject-control in (30)–(32), it would also incorrectly predict that *teze*-clauses are *generally* disallowed with reception reports (see below).

(35)   PC-specific constraints

a. *Agent-restriction on shift*: If the source/the agent of speaking is implied by the construction, then it must be the controller of shifted 1st person (and hence the logophoric center).

b. *Subject-orientation requirement of* teze: The grammatical subject of the construction with a *teze*-clause complement must be the logophoric center.

c. *Agent-preference on SAY-complements* (violable constraint): If the source/the agent of speaking is implied by the construction with a SAY-complement, then it is preferably the logophoric center.

The question now is why source-control of shifted 1st person in reception reports is only possible with *tenine*- but not with *teze*-clauses, as we saw in (29a)–(29c), despite the fact that *teze* are in principle possible with reception verbs. To account for this, I wish to propose a further constraint in (35b). According to (35b), *teze*-clauses are associated with an independent syntactic requirement, namely, that the grammatical subject of the construction must be the logophoric center of the sentence (the subject-orientation requirement). Note that the constraint in (35b) applies to *teze*-clauses in general, independently of the presence of shift. This constraint may seem unusual from the perspective of European languages, where non-control clauses (including that-clauses) are usually not taken to impose semantic restrictions on their subject (or other arguments). Yet, there is evidence for this constraint in PC, which comes from the distribution of *teze*-clauses.

As we saw in section 2, *teze*-clauses are disallowed as sentential subjects, in which case one must use *teni*-clauses or nominalized clauses in the nominative (cf. (14a)). They are also disallowed as sentential complements of nouns, which require *tenë*/*tegen*-clauses or participial clauses (cf. (18a)–(18b)). These distributional restrictions directly follow from the constraint in (35b). In the case of sentential subjects, the grammatical subject of the construction cannot possibly be the logophoric center as the clause itself is the subject. In the case of complements of nouns, the grammatical subject (of the complement-taking predicate) cannot be the logophoric center presumably because nouns do not have grammatical subjects (at least in the usual sense).[62]

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[62] A potential exception is a case where the complement-taking noun forms a complex predicate with a higher verb. This is in fact where we find counterexamples to the distributional restriction on *teze*-clauses, see footnote 32.

The existence of the subject-orientation requirement for *teze*-clauses can be traced to the fact that, as we saw in section 2.1, *teze* is morphologically the same-subject *-sA* converb of the verb *te* 'say'. Assuming that *teze*-clauses in complementation constructions originate from regular converbial clauses, it is plausible that the earlier subject-orientation requirement associated with the converb has been preserved in *teze*-clauses in the form of the constraint in (35b). The fact that *tenine*-clauses are not associated with a subject-orientation requirement is presumably due to the fact that action nominalizations, as opposed to clauses headed by the *-sA* converb, can have their own independent subjects (overt or pro-dropped), see section 2.2.[63]

Given the constraint in (35b), the unacceptability of *teze*-clauses in reception reports with source-control of shifted 1st person, as we saw in (29a)–(29c), can now be understood as a result of the *conflicting requirements* on shifted 1st person and *teze*-clauses. The presence of source-control, by virtue of the assumption in (34), entails that the source is the logophoric center. At the same time, since the complement is realized by a *teze*-clause, the constraint in (35b) requires the logophoric center to be the matrix subject. The two requirements cannot be simultaneously satisfied, resulting in the unacceptability of *teze*-clauses in the relevant examples. To resolve the conflict, one must use a special form of the complementizer which does not have a subject-orientation requirement, namely *tenine* (or other nominalized forms of *te* 'say', cf. footnote 52). Another way to "resolve" the conflict, is to switch from source-control to subject control. This possibility, however, is precluded for reception verbs in PC by the constraint in (35a).[64]

Still another way to resolve the conflict between *teze*-clauses and source-control in reception reports in PC is to use a non-shifted complement. The proposed account correctly predicts that in such a case, neither of the constraints on shifted 1st person in (34) and (35a), forcing the source to be the logophoric center, will apply. Thus, nothing will prevent the subject-orientation requirement in (35b) from being satisfied since the matrix subject (the hearer/recipient) can now be the logophoric center. This accounts for the fact that *teze*-clauses are in principle compatible with verbs of reception in PC in the absence of shift, cf. (1c), (8b), (10b) and (11). The account follows

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[63] Further potential evidence for the constraint in (35b) comes from Standard Chuvash examples with verbs taking non-agentive subjects such as *pëlter* 'mean' in (i), cf. footnote 16. Such examples predominantly contain *tenine*-clauses, suggesting that *teze*-clauses might be avoided here precisely because they would require an animate subject (given that the logophoric center must be animate). The hypothesis remains to be tested in future work.
(i) Standard Chuvash

Ku	*ëntë*	*pirën*	*jal*	*tɕëlx-i-pe*	"*kil-te*	*ni-kam*	*ta*	*ɕuk,*	*antɕax*
this	PTL	we.GEN	village	language-P.3-INS	home-LOC	PTL-WHO	PTL	NEG.COP	but

xuɕi-sem	*tɕilajləxa*	*kaj-m-an*"	***te-n-in-e***	***pël-ter-et****.
host-PL	for long	go-NEG-PC.RES	say-PC.PST-P.3-OBJ	know-CAUS-NPST[3SG].

'In (the language of) our village this (= the lock hanging from the gate) means that there is no one at home but the hosts have not gone out for long.' (http://ru.corpus.chv.su/kusaru/420016.html)

[64] Assuming that *şan* 'believe (the claim)' is not subject to the constraint in (35a), see (32b) and also footnote 61, we correctly predict that it will allow subject-control in both *teze*- and *tenine*-clauses. This is because while source-control requires *tenine* (as *teze* would violate the constraints in (34) and (35b)), the converse is not true, since *tenine*-clauses should in principle be allowed with both source- and subject control (see also footnote 67).

Özyıldız et al. 2018 in assuming that reception reports are optionally construed as attitude reports with the subject being the logophoric center. Note that the presence of the source in this case does not prevent this possibility since the constraints in (34) and (35a) require the source to be the logophoric center *only* when it controls shifted 1st person.

Finally, the question that remains is why *teze*-clauses, while in principle compatible with verbs of reception (except *pël* 'know, learn') in the absence of shift, are still dispreferred with them (compared to *tenine*-clauses), cf. (10b), (11) and also (1c). To account for this, we need one more constraint given in (35c). According to (35c), if a construction with a SAY-complement (whether shifted or not) involves a participant who is the agent of speaking/source, then this participant is preferably be the logophoric center. The formulation of this constraint is similar to (35a) except that: (a) it applies to SAY-complements in general; and (b) it is a soft constraint, whose violation does not lead to unacceptability.[65] The constraint in (35c) might be related to the fact that non-canonical SAY in PC (including *teze*) is not fully grammaticalized and still retains traces of its original meaning, as suggested by its restriction to non-factive/hearsay contexts (see section 2).

Given the constraint in (35c), the dispreference for *teze*-clauses in non-shifted complements of reception verbs is accounted for as a result of the conflict between the preference for the source participant to be the logophoric speaker (= (35c)) and the subject-orientation requirement of *teze*, forcing the logophoric center to be the matrix subject (= (35b)). In this case, the conflict does not lead to the unacceptability of *teze*-clauses, as (35c) is a violable constraint. Thus, it will be resolved in favor of the (hard) constraint in (35b), resulting in the construal of the subject as the attitude holder/logophoric center. The latter construal, however, is still against the preferred logophoric center for reception reports, according to (35c), namely the source. This accounts for the observed dispreference for *teze*-clauses in reception reports (*tenine* has no subject-orientation requirement, hence the source may become the preferred logophoric center, in accordance with (35c)).[66]

This completes the proposed account of the patterns in Table 1. The account is summarized in Table 2 (with verbs of reception illustrated by 'hear'). As we can see, the unacceptable patterns involving complements with shifted 1st person in reception reports (B, C and D) violate either of the two hard constraints in (35a) and (35b) or both. Patterns B and D, involving subject control, violate the agent restriction on the controller of shifted 1st person (=(35a)), and, in addition, the agent-preference for SAY-complements (= (35c)). Pattern C, involving control by the (ablative) source, violates the subject-orientation requirement on *teze* (= (35b)). The acceptable patterns A

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[65] A further difference is that the constraint in (35c) should probably apply to all reception verbs in PC, since they all show preference for *tenine*-clauses (even though it will be redundant in the case of *pël* 'know, learn', which must be lexically-specified as incompatible with *teze*-clauses).
[66] Note that the constraint in (35c) will also be (redundantly) violated in shifted complements of reception verbs with subject control, which are independently blocked by the interaction of the constraints in (34)–(35a) and (35b).

(subject control in *teze*-clauses with 'say'/'think') and E (source-control in *tenine*-clauses with reception verbs) do not violate any of constraints. As for non-shifted complements, the dispreferred pattern G (*teze* with reception verbs) violates the agent preference in (35c); the acceptable patterns F (*teze* with 'say'/'think') and H (*tenine* with reception verbs) do not violate either of the constraints in (35b) and (35c), the constraint in (35a) not being applicable.[67]

Table 2. Summary of the account of the (un)acceptability of *teze* and *tenine* depending on the verb type, the presence of shifted 1st person and the choice of the controller for shifted 1st person

		agent restriction on shift (= (35a))	subject orientation of *teze* (= (35b))	agent preference on SAY (violable) (= (35c))
	complements with shifted 1st person			
A	Nom_1 […$1sg_1$] *teze* $V_{say/think}$	✓	✓	✓
B	*Nom_1 Abl_2 […$1sg_1$] *teze* V_{hear}	*	✓	(*)
C	*Nom_1 Abl_2 […$1sg_2$] *teze* V_{hear}	✓	*	✓
D	*Nom_1 Abl_2 […$1sg_1$] *tenine* V_{hear}	*	–	(*)
E	Nom_1 Abl_2 […$1sg_2$] *tenine* V_{hear}	✓	–	✓
	complements without shifted 1st person			
F	Nom […$_{no\ shift}$] *teze* $V_{say/think}$	–	✓	✓
G	?Nom Abl […$_{no\ shift}$] *teze* V_{hear}	–	✓	(*)
H	Nom Abl […$_{no\ shift}$] *tenine* V_{hear}	–	–	✓

5. An alternative: syntactic decomposition of SAY-complementizers

Before concluding this paper, we need to consider an alternative account of the puzzle in Table 1. Suppose that shifted 1st person in PC must be uniformly controlled by the immediately higher subject (instead of the constraints in (34) and (35a)). Now, we may derive the apparent source-control of shifted 1st person with *tenine*-clauses in reception reports (illustrated below with the verb *elt* 'hear') if we assume that *tenine* is in fact not a complementizer but (synchronically) an action nominalization of *te* 'say' with its own (null) subject being as the real controller of shifted 1st person, which is, in turn, controlled by the (ablative) source, as schematized in (36a). For concreteness, I adopt Özyıldız et al.'s (2018) analysis of Turkish *diye*-clauses (cf. (33b)), taking the subject of *tenine* to be the null (LOG)ophor controlled by the logophoric center/source.[68] To

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[67] One may note that the constraints in (34)–(35) do not rule out *tenine*-clauses in (shifted or non-shifted) complements with 'say'/'think' (see footnote 56). To exclude such examples an additional constraint is needed. A natural suggestion is that *teze*, being a more specialized form (cf. (35b)), blocks the use of *tenine*, which is a less specialized form.

[68] See Clements 1975 and Hyman & Comrie 1981 for the existence of logophoric pronouns controlled by the ablative source. I thank one of the reviewers for pointing this out to me.

rule out subject control of shifted 1st person, we may further assume that LOG/the subject of *te* 'say' is restricted to the agent of speaking/source (when it is implies by the construction), cf. (35a).

(36) a. Nom(holder/hearer)$_1$ … Abl(source)$_2$… [LOG$_{*1/2}$ […V-1sg$_{*1/2}$] V$_{tenine}$] V$_{hear}$ ✓

   b. Nom(holder/hearer)$_1$ … Abl(source)$_2$… [LOG $_{*1/*2}$ […V-1sg$_{*1/*2}$] V$_{teze}$] V$_{hear}$ ✓

   c. Nom(holder/hearer)$_1$ … Abl(source)$_2$… [LOG $_{*1/*2}$ […V$_{no\ shift}$] V$_{teze}$] V$_{hear}$ ✗

   d. Nom(holder/hearer)$_1$ … Abl(source)$_2$… […V-1sg$_{*1/*2}$ COMP$_{teze}$] V$_{hear}$ ✓

   e. Nom(holder/hearer)$_1$ … Abl(source)$_2$… […V$_{no\ shift}$ COMP$_{teze}$] V$_{hear}$ ✓

Whereas this decompositional account might work for *tenine,* a similar account for *teze* (as synchronically the same-subject converb of *te* 'say'), would lead to problems. While it would correctly predict that neither source-control (due to the subject-orientation of the converb) nor subject control (due to the agent restriction on LOG) in *teze*-clauses with verbs of reception are possible, as shown in (36b), it would wrongly predict the unacceptability of *teze*-clauses in *non-shifted* complements, as in (36c). This is because on the decompositional analysis of *teze* the problem with shifted complements in (36b) arises due to the conflicting requirements on LOG itself, independently of shift. To avoid this problem, we would need to assume that *teze* is an (unanalyzed) complementizer in the absence of shift, as in (36e), but a converb in the presence of shift, as in (36b). Alternatively, we may take *teze* to be a complementizer even in shifted complements, as in (36d), and assume that shifted 1st person itself is subject to the agent restriction, in addition to the subject orientation requirement, to account for the unavailability of both subject- and source-controlled shift (in reception reports). Both of these solutions have their drawbacks. The former must abandon an otherwise desirable analysis of *teze* as the same lexical item (in shifted and non-shifted contexts). The latter must invoke the agent restriction redundantly, i.e., as applied both to the shifted 1st person (in the case of *teze*) and to LOG (in the case of *tenine*). In addition, both fail to explain why *teze*-clauses are generally dispreferred with reception verbs.

Apart from these problems with *teze,* there is a further problem with the syntactic decomposition of *tenine,* which arises from what at first glance looks like evidence *in favor of* a decompositional analysis. Before discussing this problem, we need to consider another issue. As shown in (37), repeated from (1b), examples with shifted *tenine*-clauses (with *elt* 'hear')

sometimes contain an optional nominative 3rd person pronoun *vəl*, referring to the ablative source. We might wonder *vəl* in such examples must be analyzed as the subject of *tenine*, thereby providing indirect support for the decompositional analysis of *tenine*.

(37) (*son^jə,*) *ep*   *boris-ran*   [(***vəl***)   *san-ba*   *ëɕl-e-p*   ***te-n-in-e***]

     Sonya   I   Boris-ABL   he   you.SG-INS   work-NPST-**1SG**   say-PC.PST-P.3-OBJ

     elt-r-ëm.

     hear-PST-1SG

     '(Sonya,) I heard from Boris₁ (= heard him say) that he₁ will work with you.'

Although the status of *vəl* in examples like (37) is not totally clear, its analysis as the subject of *tenine* appears problematic at least for two reasons. First, *vəl* is categorically disallowed when the (most deeply embedded) complement clause has a lexical subject, as shown in (38), which would be unexpected if *vəl* were the subject of *tenine*. Second, for some speakers optional *vəl* is in principle allowed (though dispreferred) in *teze*-clauses, as in (38b), where it could not possibly be analyzed as the subject of *teze* under the decompositional analysis since the *-sA* converb disallows overt subjects.[69] These facts suggest that *vəl* in (37) (and (38b)) is the subject of the embedded verb, in other words, is an instance of a 3rd person pronoun controlling 1st person agreement, a rare but not unattested pattern (see Messick 2017, Sundaresan 2018, Nikitina 2012 for similar patterns in Dravidian and African languages). Thus, examples with optional *vəl* such as (37) do not provide evidence in favor of the decompositional analysis of *tenine*.

(38) a. *ep*   *lionilə-ran*   [(***vəl***)   [*Boris*   *san-ba*   *ëɕl-et*]   ***te-n-in-e***]

     I   Lionila-ABL   he   Boris   you.SG-INS   work-NPST[3SG]   say-PC.PST-P.3-OBJ

     elt-r-ëm.

     hear-PST-1SG

     'I heard from Lionila (= heard her say) that Boris₁ will work with you_current addressee.'

   b. *boris*   *man-a*   [(^?***vəl***)   *san-ba*   *ëɕl-e-p*   ***te-ze***]   *kala-r^j-ə.*

     Boris   I-OBJ   he   you.SG-INS   work-NPST-1SG   say-CV.SIM   say-PST-3SG

     'Boris₁ told me that he₁ will work with you_current addressee.'

Now, interestingly, *tenine*-clauses can also have apparent *lexical* subjects, as in (40), which would be difficult to analyze as subjects of the (most deeply) embedded verb, assuming that lexical

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[69] The relevant example illustrating this is shown in (i).

(i) *pet^jə₁*   [{***vəl*** / ___₁/*₂} *divan*   *ɕinɕe*   *virt-sa*]   *televizor*   *pog-at.*

     Petya   he   sofa   on   lie-CV.SIM   TV   watch-NPST[3SG]

     'Petya is watching TV lying on the sofa.'

subjects cannot control 1st person agreement.[70] Given that the relevant NP in such examples must be the subject of *tenine*, these examples provide indirect support for the decompositional analysis of *tenine* in (36a).[71] Note, however, that examples like (39) have a rather different meaning compared to ordinary reception reports considered so far. Specifically, they are *second-hand reports*. For example, in (39) the current speaker reports the secondary original speaker's (i.e., Lionila's) report of the primary original speaker's (i.e., Boris's) original utterance 'I will work with Sonya', as schematized in (41a), cf. a corpus example from Standard Chuvash in (40).

(39) Context: Boris says to someone, 'I will work with Sonya.' Lionila reports this to me, 'Boris said that he will work with Sonya'. I report Lionila's report to Sonya.

ep lionilə-ran	[***boris***	[*san-ba*	*ɛɕl-e-p*]	***te-n-in-e***]	*elt-r-ëm.*
I Lionila-ABL	Boris	you.SG-INS	work-NPST-**1SG**	say-PC.PST-P.3-OBJ	hear-PST-1SG

'(Sonya,) I heard from Lionila that Boris₁ said that he₁ will work with you_{current addressee}.'

(40) Standard Chuvash

[***Aslaməşë***	[*aslati*	*avət-nə*	*tɕux-ne*	*tɕüretɕe ɕumëntɕe*	*te*
grandma.P.3	thunderstorm	growl-PC.PST	time-P.3.OBJ	window near	PTL

lar-ma jura-mastʲ]	***te-n-in-e***]	*as-a*	*il-tɕ-ë.*
sit-INF suit-NEG.NPST[3SG]	say-PC.PST-P.3-OBJ	mind-OBJ	take-PST-3SG

'[The girl] remembered her grandma saying that one mustn't sit next to the window during a thunderstorm.' (http://ru.corpus.chv.su/kusaru/75040.html)

The fact that *tenine*-clauses with lexical subjects are interpreted as second-hand reports raises the following problem. Assuming that syntactic decomposition of SAY should go hand in hand with semantic compositionality (which appears to be an implicit assumption in Matić & Pakendorf 2013), the decompositional account would predict that *tenine*-clauses in ordinary reception reports such as (37) should *also* be interpreted as second-hand reports, on a par with examples containing *tenine* with a lexical subject, such as (40), except that in the former case the primary and secondary original speakers would coincide, the current speaker reporting the original speaker's self-report of his/her own speech act, as in (41bi). For example, (37) would be

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[70] *Tenine*-clauses with lexical subjects are also possible with the verb *kala* 'say' but are omitted for reasons of space.
[71] The analysis in (36a) leaves unexplained the curious fact that *tenine* can have its own lexical subject only if it embeds a clause with a *null* subject (plus shifted 1st agreement), as clauses with *overt* subjects, as in (i), are disallowed (cf. (38a)). Note that the action nominalization of the verb *kala* 'say' (in construction with a *teze*-clause) does not show this restriction. The reason for the restriction illustrated in (i) is unclear to me and is left for future work.

(i) *ep* [***lionilə***	[*boris san-ba*	*ɛɕl-et*]	{****te-n-in-e*** /	***te-ze***	***kala-n-in-e***}]
I Lionila	Boris you.SG-INS	work-NPST[3SG]	say-PC.PST-P.3-OBJ	say-CV.SIM	say-PC.PST-P.3-OBJ

elt-r-ëm.
hear-PST-1SG
'(Sonya,) I heard that Lionila said that Boris will work with you_{current addressee}.'

compositionally interpreted as reporting the original speaker's (Boris's) report of his original utterance 'I will work with Sonya', i.e., 'I said that I will work with Sonya', rather than the original utterance itself. Crucially, however, this does not accurately represent the meaning of (37), which is a first-hand report, cf. (41bii). Note that the problem with the decompositional analysis of *tenine* in (41b) (=(36a)) is not that it predicts that second-hand reports are *possible* paraphrases for examples like (40), as such paraphrases may well be available. The problem rather is that it predicts that such second-hand reports are the *only* possible paraphrases, which seems wrong.[72]

(41) a. Nom_1 Abl_2 [Nom_3 [clause …] *tenine*] V_{hear}

 'X$_1$ heard from Y$_2$ that Z$_3$ said that S' (second-hand report)

b. Nom_1 Abl_2 [LOG_2 [clause …] *tenine*] V_{hear}

i. 'X$_1$ heard from Y$_2$ that Y$_2$ said that S' (second-hand report)

ii. 'X$_1$ heard from Y$_2$ that S' (first-hand report)

The only way to counter this criticism seems to reject the assumption that syntactic decomposition of *tenine* should correlate with semantic compositionality and instead assume that *tenine* is syntactically decomposable/analyzable (i.e., an action nominalization of *te* 'say') while semantically non-compositional (i.e., a complementizer-like element). There is nothing a priori wrong with this move. In fact, it has been suggested that an expression may lose semantic compositionality while still being syntactic analyzable (see, e.g., Bybee 2010:25), as, e.g., in the case of an idiom like *pull strings*, which must still be analyzed as containing independent words/constituents (to account for the regular past tense morphology and other morphosyntactic properties). Similarly, it is sometimes suggested in the grammaticalization literature (e.g., Heine & Kuteva 2002:3) that desemanticization (i.e., loss of compositionality) usually *precedes* decategorialization (i.e., loss of analyzability). An analysis along these lines may probably be pursued for *tenine* (and perhaps also for *teze*) to account for the observed shift patterns in Table 1. Nevertheless, the constraint-based account provided in section 4 appears to be a far more attractive alternative. It looks conceptually simpler, requires fewer specific theoretical assumptions and is probably better suited for further cross-linguistic testing. Thus, while the choice between the two accounts must ultimately be decided by further empirical work, the constraint-based account in general looks superior to the decompositional account.

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[72] I thank one of the reviewers for the clarification of this issue.

6. Conclusion

Poshkart Chuvash presents an interesting system of SAY-complementizers. Apart from the cross-linguistically most common type based on the same-subject converb of SAY (see Matić & Pakendorf 2013), namely *teze*, PC has several other complementizers based on participial forms of SAY, including the action nominalizations *teni* and *tenine* and participles (proper) *tene* and *teken*, all of which have a specialized distribution. This paper focused on the difference between *teze* and *tenine* (the complementizer restricted to verbs of reception, e.g., 'hear'), in their interaction with the properties of indexical shift (limited in PC to 1st person agreement in finite clauses). The specific puzzle was that, whereas with verbs of speech and thought shifted agreement is controlled by the matrix subject and requires the complementizer *teze*, with verbs of reception shifted agreement must be controlled by the (ablative) source and requires the complementizer *tenine*, although in the absence of shift both *teze* and *tenine* are in principle possible. The paper proposed an account for this puzzle based on the interaction of three PC-specific constraints: (a) the restriction of the controller of shifted 1st person to the agent of speaking/source (the logophoric center); (b) the restriction of the logophoric center to the subject specifically in *teze*-clauses; and (c) the preference for the logophoric center to be the agent/source in (all) SAY-complements.

The discussion in this paper has shown that the distribution of SAY-complementizers cannot be fully understood without considering patterns of indexical shift in a language and more specifically properties of controller choice for shifted indexicals. At the same time, it has also shown that the patterns of indexical shift cannot be fully understood without taking into account the problem of the controller choice for shifted indexicals and the form of the complementizer. Curiously, these two problems — the form of the (SAY-)complementizer and the choice of controller for shifted indexicals — are rarely discussed in the relevant fields, let alone together. This work ultimately aims to draw attention of the researchers in both fields to these important but currently understudied parameters of SAY-based complementation.

Glosses

1,2,3	person	neg	negation
abl	ablative	nom	nominative
ascr	ascriptive	npst	non-past
acc	accusative	obj	objective
aux	auxiliary	pass	passive
cop	copula	pf	perfective
cv	converb	pl	plural
csl	causal	p	possessive
fut	future	pred	predicative
gen	genitive	prs	present
imp	imperative	pst	past
ins	instrumental	pc	participle
ipf	imperfective	refl	reflexive
juss	jussive	sg	singular
loc	locative	sim	simultaneous

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