Introduction, basic data. Tatar (Turkic, Russia) has a set of verbal suffixes that appear to mark combinations of tense, aspect, and evidentiality (henceforth, TAE). Composite TAE morphemes have been described in a number of unrelated languages (Bulgarian: Koev 2017, Smirnova 2013; Turkish: Şener 2011; Cuzco Quechua: Faller 2004; Aymara: Klose 2014, a.o.). However, Tatar is of descriptive and theoretical interest due to the fact that it has future-oriented TAE morphemes in addition to the past-oriented morphemes. In unembedded contexts, two of the Tatar TAE suffixes appear to mark past time reference and direct (*-DI*) vs. indirect (*-GAn*) evidence (1); two others appear to mark future time reference and direct (*-(y)AçAK*) vs. indirect (*-(y)Er*) evidence (2).

(1) a. **Past event time, direct evidence:** You saw Mansur get on a train to Kazan.
Mansur Qazan-ğa {*bar-**dı**-∅ / #bar-**ğan**-∅*}.
Mansur Kazan-DAT go-DI-3SG / go-GAN-3SG
'(I have direct evidence that) Mansur went to Kazan.'

b. **Past event time, indirect evidence:** You found a ticket to Kazan in Mansur's desk.
Mansur Qazan-ğa {*bar-**ğan**-∅ / #bar-**dı**-∅*}.
Mansur Kazan-DAT go-GAN-3SG / go-DI-3SG
'(I have indirect evidence that) Mansur went to Kazan.'

(2) a. **Future event time, direct evidence:** You planned a party and assigned your friends different things to bring. Your friend Güzäl is assigned to bring cookies to the party.
Güzäl peçeniye al-ıp {*kil-**äçäk**-∅ / #kil-**er**-∅*}.
Güzäl cookie take-IP come-ACAK-3SG / come-ER-3SG
'Güzäl will (definitely) bring cookies.'

b. **Future event time, indirect evidence:** You planned a party and asked your friends to bring snacks. Güzäl has a delicious cookie recipe that she usually brings to parties. You haven't asked her to bring the cookies, nor has she told you that she'll bring them.
Güzäl peçeniye al-ıp {*kil-**er**-∅ / #kil-**äçäk**-∅*}.
Güzäl cookie take-IP come-ER-3SG / come-ACAK-3SG
'Güzäl will bring cookies.'

Of these TAE suffixes, only *-GAn* and *-(y)AçAK* can occur in semantically embedded contexts like (i) relative clauses, (ii) embedded nominalized clauses, and (iii) adverbial clauses. In these embedded contexts, the TAE suffixes **no longer contribute any evidential information**: their only contribution is temporal. Furthermore, in these contexts, *-GAn* is compatible with a wider range of temporal interpretations than we would expect if it simply denoted past tense (as the unembedded data suggests). I propose (based on data like (3)) that *-GAn* denotes aspect. Since *-(y)AçAK* patterns like *-GAn* morphosyntactically, I assume that this suffix also denotes aspect. (Cognate morphemes have been labeled as perfect and prospective aspects in other Turkic languages, e.g. Bashkir *-(y)AsAK*; Karachay *-GAn*; Kumyk *-GAn*, *-(A)žAK*; Tuvan *-GAn*, Uzbek *-Gȧn*, *-(y)ȧǰȧk* (Johanson 2000, Johanson & Csató 1998).)

(3) *Timur [Alsu cırla-**ğan** cır-nı] yaz-dı-∅.*
Timur *[* Alsu sing-GAN song-ACC *]* write-DI-3SG
a. 'Timur wrote the song that Alsu **sang** [yesterday].'
b. 'Timur wrote the song that Alsu **is singing** [right now].'

Existing theories. Existing theories of evidentiality cannot account for the Tatar data.
• **Modal** theories of evidentiality propose that evidentials have a modal component in their semantics (Matthewson, et al. 2007, Izvorski 1997, a.o.). However, this could not account for the fact that

the evidential readings of the Tatar TAE suffixes disappears in semantically embedded contexts. These theories also do not explain why evidentiality and tense/aspect are linked.

• **Learning Time** theories of evidentiality (Koev 2017, Klose 2014, a.o.) propose that indirect evidential readings are derived by placing the time at which the speaker learned the scope proposition *p* (the LT) after the time that *p* occurred (the ET). Since these times are disjunct, the speaker cannot have direct evidence for *p*. However, Learning Time theories cannot account for the future-oriented Tatar TAE morphemes (2). In future-oriented expressions, the LT is always prior to the ET; there cannot be a contrast between overlap/non-overlap of LT and ET as in the past. It is therefore impossible to relate the LT and ET such that one could distinguish between direct and indirect evidence for a future event, i.e., the distinction between (2a) and (2b).

Analysis. I analyze the Tatar TAE morphemes *-GAn* and *-(y)AçAK* as underlyingly **aspectual morphemes**. I assume an event ontology in which events are preceded by causal pre-states and followed by result post-states (Bohnemeyer 2014, a.o.). (Reference to event pre- and post-states has been motivated separately by e.g. Ramchand 2008 and Altshuler 2016 on English *now*). I propose that *-GAn* marks **completive aspect** (the described event is viewed from a reference time *i* in its post-state) while *-(y)AçAK* marks **prospective aspect** (the event is viewed from a reference time *i* in its pre-state). I give basic denotations in (4). $\gg$ (adopted from Bohnemeyer 2014) indicates a causal relation; i.e., in (4a), the event *e* stands in a causal relation to the (result) state *s*.

(4) a. **Completive aspect**
$[\![\text{-}GAn]\!] = \lambda P_{<v,st>}\lambda i\lambda w.\ \exists e[\exists s[e \gg s\ \&\ i \subset \tau(s)\ \&\ P(e)(w)]]$

b. **Prospective aspect**
$[\![\text{-}(y)AçAK]\!] = \lambda P_{<v,st>}\lambda i\lambda w.\ \exists e[\exists s[s \gg e\ \&\ i \subset \tau(s)\ \&\ P(e)(w)]]$

Morpheme	**Gloss**
-DI (1a)	SIMPLE PAST
-GAn (1b)	COMPLETIVE ASPECT
-(y)AçAK (2a)	PROSPECTIVE ASPECT
-(y)Er (2b)	FUTURE

Proposed semantics of the Tatar TAE suffixes.

The evidential interpretation of these morphemes is derived by the fact that the propositions observed in event pre- and post-states are the same sorts of propositions that Tatar speakers report as "indirect" or "direct" evidence for *p* (licensing the use of *-GAn* or *-(y)AçAK*, respectively). For example, propositions that could be true in the post-state of *Güzäl make cookies* (5) include (i) Güzäl has cookie batter on her clothes; (ii) Güzäl's kitchen smells like cookies; (iii) There are cookies in Güzäl's kitchen, etc. I assume that the evidential readings associated with *-DI* and *-(y)Er* arise through implicature; i.e. if a speaker says *-GAn* rather than *-DI*, their addressee infers they have stronger evidence for *p* than the propositions that are true in the event's post-state.

(5) *Güzäl peçeniye yas-**kan**-∅.*
Güzäl cookie make-GAN-3SG
'(I have indirect evidence that) Güzäl made cookies.'

This aspectual analysis additionally accounts for the lack of evidential readings in embedded contexts. Evidential expressions are known to reflect the evidence that the speaker has at the utterance time (UT). However, in embedded contexts, the reference time *i* (in unembedded contexts, the UT) is valued by another linguistic expression in the utterance. The UT is therefore no longer within the pre-/post-state of *e*.

Conclusion. I propose that the primary semantic contribution of the Tatar TAE morphemes is temporal, rather than evidential. I derive the evidential readings of the suffixes *-GAn* and *-(y)AçAK* from their aspectual semantics, linking the morphemes' evidential and temporal meanings.

Selected references. Bohnemeyer, J. (2014). Aspect vs. relative tense: the case reopened. *NLLT*, 32:917-954. • Johanson, L. & É. Csató, eds. (1998). *The Turkic Languages*. • Ramchand, G. (2008). *Verb Meaning and the Lexicon*.