CHAPTER 26

Now can be the end of the past or the beginning of the future

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1. Introduction

It is well known that tense systems differ across languages. In this squib, I focus on the distinction between two distinct binary systems: those that distinguish between past/non-past and those that distinguish between future/non-future. The empirical goal is to show that the distinction between past/non-past and future/non-future systems is not restricted to tense. It is also found in the encoding of definiteness on determiners as well as in the encoding of epistemic bias by sentence-final particles. I argue that one of the core differences between the systems under investigation has to do with the conceptualization of the present, a notoriously elusive category: it can be conceived of as the *beginning of the future* (deriving a past/non-past contrast); but it can also be conceived of as the *end of the past* (deriving a future/not-future contrast). This

squib is organized as follows. I start by introducing two languages that exemplify the two types of tense systems: Muna (Austronesian; a future/non-future system) and German (a past/non-past system). In section 3, I show how this contrast applies to definiteness and the lack thereof and in section 4, I show how it applies to the temporal interpretation associated with sentence-final particles. In section 5, I argue that all three domains can be analysed in terms of temporality. In section 6, I introduce the idea that the difference between the two types of systems can be understood as being conditioned by a difference in the conceptualization of the present. In section 7, I conclude.

2. Two ways of encoding tense

Languages differ in their tense systems. A common split is between languages that obligatorily have to mark future while present and past can remain unmarked. This is illustrated in 0 and 0 for Muna. Future events have to be marked by an irrealis marker (the infix [*um*]), but present and past events do not.

(1) a. Naewine a-k[um]ala we Raha
tomorrow 1SG-go[IRR] LOC Raha
'Tomorrow I will go to Raha.'

b. Indewi a-kala we Raha
yesterday 1SG.-go LOC Raha
'Yesterday I went to Raha.' Kroeger, 2005: 150 (3)

(2) a. Naefie na-gh[um]use
when 3SG-rain[IRR]
'When will it rain?'

b. Na-ghuse
3SG-rain
'It is/was raining.'
Kroeger, 2005: 150 (3)

In contrast, in German, past events have to be marked while present and future events may remain unmarked, as illustrated in 0.

(3) a. Es regne-te.
3SG rain-PAST
'It rained.'

b. Es regnet jetzt.
3SG rain now
'It is raining now.'

c. Es regnet morgen
3SG rain tomorrow
'It will rain tomorrow.'

Thus, the difference between the German and the Muna tense system boils down to a difference in markedness, as summarized in Table 1. Past is the marked category in German with present and future unmarked while future is the marked category in Muna, with past and present unmarked.

Table 1: Two different tense systems

	German	Muna
past	past marking	unmarked
present	unmarked	
future		future marking

3. Two ways of encoding definiteness

Consider now the encoding of definiteness, which – like tense systems – also displays differences in markedness. Consider first English where determiners encode (roughly) a distinction between old and new discourse referents (DRs) (Heim 1982). Specifically, the definite determiner is used for old DRs while the indefinite determiner is used for new ones (4a), as well as non-referential nominals (4b,c).

(4) a. On my walk this morning I saw **a bear**. …

b. …. **The bear** followed me.

c. I want to find **a unicorn**.

d. There might be **a spider** behind the cupboard.

This contrasts with Squamish (Salish), where no distinction between old and new DRs is made (Matthewson 1998, Gillon 2014). Rather the same form (*ta*) is used in both contexts, as shown in (5). In contrast, a special form is used for non-referential nominals, as shown in (6).

(5) a. Chen-t wa í-7imesh. Chen kw'ách-nexw
1SG.S-PAST IMPF REDUP-walk 1SG.S look-TR(LC)
ta míxalh. …
DET bear.
'I was walking. I saw a bear.' Gillon, 2006: 84 (7)

b. …Ta míxalh na mi ch'i-ch'áy-s-t-ts-as
DET bear RL come REDUP-follow-CAUS-TR-1SG.O-3ERG
'The bear followed me.' Gillon 2006: 84 (7)

(6) a. N-s-tl'i7 kwi-n-s yeltx
1SG.POSS-NOM-want COMP-1SG.POSS-NOM find
kwi kwtams.
DET husband
'I want to find a husband.' Gillon 2006: 135 (40d)

b. Yuu chaxw, …
take.care 2SG.EMPH
…iw'ayti na wa lesiw'ilh t-ta smant
…maybe RL IMPF under OBL-DET stone
kwi elhkay'.
DET snake
'Careful, there may be a snake under the stone.'
Kuipers, 1967: 138

In sum, the difference between the English and the Squamish definiteness system boils down to the a difference in markedness, as summarized in Table 2. Familiarity is the marked category in English with novel and non-referential nominals patterning together; in contrast, in Squamish non-referential nominals are distinguished from familiar and novel referents.

Table 2: Two types of definitenss

	English	Squamish
familiar referents	*the*	*ta*
novel referents	*a*	
non-referential		*kwi*

4. Two ways of encoding epistemic bias

Finally, consider the encoding of **epistemic bias** by means of discourse particles. To see the relvant contrast, consider the two story-boards below. In Figure 1, Anne is wondering about her friend John, who she hasn't seen for a while. Coincidentally, she runs into him and notices that he is walking a dog. While she didn't know that John has a dog, she suspects that he does, based on her current evidence. Now Anne seeks to confirm her newly found belief that John has a dog.

Figure 1 New belief

In English, Anne can use a declarative clause followed by a sentence final particle *eh,* as in (7). Thus, in this context *eh* is used to request confirmation for the truth of the proposition. Hence Wiltschko and Heim 2016 classify this particle as a *confirmational.* In German, Anne will use the sentence-internal discourse particle *leicht,* but cannot use the sentence-final confirmational *goi*, as shown in (8).

(7) You have a new dog, **eh**?

(8) Requesting confirmation for a new belief (judgments for story board in Figure 1)

a. Du host **leicht** an neichn Hund?
   You have PRT a new dog?

b. *Du host an neichn Hund, **goi**?
   You have a new dog PRT

In contrast, the storyboard in Figure 2 illustrates a context where their mutual friend Greg tells Anne that John just got a new dog. Assuming that Anne trusts Greg, we can now assume that the belief that John has a dog is now part of Anne's set of beliefs. Soon after, Anne runs into John and notices that he is walking a dog.

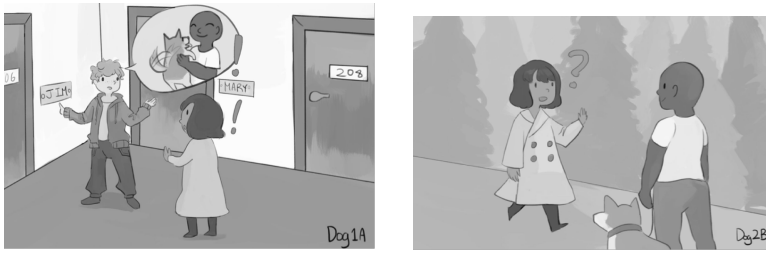

Figure 2 Old belief

In English, Anne can use the same utterance as in the first context (8), i.e., the use of the confirmational *eh* is well-formed. However, the situation is German is now reversed: to confirm an

old belief, Anne cannot use *leicht* but instead has to use the sentence-final confirmational *goi* as illustrated in 0.

(9) Requesting confirmation for a new belief (judgment for story board in Figure 2)

a. *Du host **leicht** an neichn Hund?
You have PRT a new dog?

b. Du host an neichn Hund, **goi**?
You have a new dog, PRT

In sum, the German discourse particles (*goi* vs. *leicht*) are sensitive to the familiarity or novelty of the belief. A similar contrast is found in Ktunaxa (language isolate) though in this language it is not expressed via two different particles, but instead via different intonational tunes on a sentence final particle (*qaqa)*, as shown in

(10) a. Hin ha't-i xa'łc̓in, **qáqá** → new belief
You have-INDIC dog PRT?
'You have a new dog, eh?'

b. Hin ha't-i xa'łc̓in, **qáqa** → old belief
You have-INDIC dog PRT?

If there is an accent on both syllables (*qáqá* in (10a)) the sentence is only felicitous if the speaker had no prior knowledge of the fact that the addressee has a dog (story board in Figure 1); if on the other hand the accent is on the first syllable only (*qáqa* in (10b)), the sentence is only felicitous if the speaker had a prior reason to belief that the addressee has a dog (story board in Figure 2). The two types of marking epistemic bias are summarized in Table 3.

Table 3: Two types of marking epistemic bias

	German	Ktunaxa	English
old belief	*goi*	*qáqa*	*eh*
new belief	*leicht*	*qáqá*	

We have now seen three domains where languages differ in the way they are marking contrast: tense, definiteness, and the marking of epistemic bias. I argue that all three domains can be understood in terms of time; and moreover, that the differences in contrast we have observed can be reduced to a difference in the way the present is conceptualized.

5. Three domains of temporality

In this section, I show that all three domains of contrast (tense, definiteness, and epistemic bias) can be analyzed as being temporal in nature. This is of course straightforward for tense, which concerns itself with encoding a temporal relation between event time and utterance time (abstracting away from reference time denoted by verbal aspect). Roughly, past tense encodes that the event time was prior to the utterance time, present tense encodes that the event time coincides with the utterance time, and future encodes that the event time is likely to follow the utterance time (though future also takes us into the realm of possible worlds; (Iatridou 2000, Matthewson 2006).

Both definiteness and epistemic bias can be analysed as being temporal in nature. Instead of ordering the event time relative to the utterance time, they order the utterance time relative to the time of *grounding*. Grounding is the process whereby either a discourse referent or a proposition enters the individual set of beliefs of an interlocutor which in turn is used to establish *common ground* (Clark and Brennan 1991). Consider first definiteness and

the grounding of discourse referents: in English, a definite DP is used when the discourse referent is in the common ground prior to the utterance time. Thus, this is the equivalent to past tense in the domain of definiteness marking. In contrast, an indefinite DP is used when the discourse referent enters the common ground at the time of utterance or if there is no discourse referent. This is the definiteness equivalent to present tense and future, respectively. Hence, English is a language which cares about the timing of when the discourse referent enters the common ground (before or at the time of utterance). Hence definiteness marking in English is similar to a past/non-past system in the domain of tense. In contrast, in Squamish determiners are not sensitive to the timing of grounding. Rather, the important distinction is whether the nominal denotes a discourse referent or not. This is the definiteness equivalent to a future/non-future system.

Now consider the marking of epistemic bias by means of confirmationals. As with definiteness, the relevant temporal relation is between the utterance time and the grounding time. German *goi* and Ktuanxa *qáqa* are used if the speaker has reasons to belief the proposition expressed in the host clause prior to the time of utterance. This is equivalent to past tense or definite determiners. In contrast, if the reason to belief the proposition arises only at the time of the utterance German uses the discourse particle *leicht* and in Ktunaxa stress changes to *qáqá*. This is the equivalent of present tense. Hence, German and Ktunaxa, where confirmationals are sensitive to the timing of grounding propositions, are equivalent to past/non-past contrasts. In contrast, English *eh* is not sensitive to the timing of grounding the belief. Hence English is akin to a future/non-future tense system as well as the Squamish determiners which do not care about the timing of grounding.

We have now seen that temporality plays a role not only in the expression of tense, but also for definiteness and for the marking of

epistemic bias. Instead of ordering an event time relative to the utterance time, these domains are concerned with ordering grounding time relative to utterance time. The parallels of the three domains of temporality are summarized in Table 4

Table 4: Three domains of temporality

	tense	definiteness	epistemic bias
past	Ev time < Utt time (= past tense)	Grounding time < Utt time (= definite determiner)	Grounding time < Utt time (= marking of previous belief)
present	Ev time = Utt time (= present tense)	Grounding time = Utt time (= indefinite determiner)	Grounding time = Utt time (= marking of current belief)
future	Ev time > Utt time (= future)	no grounding (= indefinite determiner)	no grounding ??

A note is in order for the encoding of epistemic bias. We have seen that in English sentence-final particles are not sensitive to the distinction between old and new beliefs. But given what we observe with tense and definiteness systems, we may expect there to be a distinction between beliefs and non-beliefs (akin to the difference between referential and non-referential DPs). Whether or not this prediction is fulfilled, and how such a system would look like is subject to future investigation.

6. The conceptualization of the present

We have now seen that the three domains of investigation (tense, definiteness, and epistemic bias) can all be analyzed in terms of temporality. In this section I show that the differences in contrast within each of these domains are also amenable to a unified

analysis. Specifically, I argue that they reduce to a difference in the conceptualization of the present. If the present is conceived of as the beginning of the future, then it belongs to the same ontological domain as the future and hence will contrast with the past, as schematized in Figure 3. If, on the other hand, the present is conceived of as the end of the past, then it belongs to the same ontological domain as the past and hence will contrast with the future, as schematized in Figure 4.

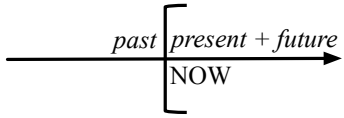

Figure 3 NOW as the beginning of the future

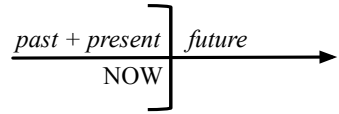

Figure 4 NOW as the end of the past

Applying this analysis to tense, definiteness and epistemic bias yields the following results. Consider first tense. In a system where the present is conceptualized as the beginning of the future, past events will be treated differently as ongoing or future events. This derives a past/non-past system as in Figure 5. In contrast, in a system where the present is conceptualized as the end of the past, ongoing events can be treated like those that have already happened. This derives a future/non-future system as in Figure 6.

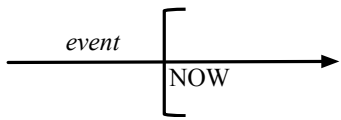

Figure 5 Past/non-past system

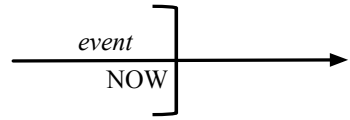

Figure 6 Future/non-future system

Next consider definiteness. Here, the event ordered relative to the utterance time is the grounding event, i.e., placing the DR into the common ground. In a system where the present is conceptualized as the beginning of the future, grounding prior to the utterance time will be treated differently as grounding that is happening at the time of the conversation. This derives a system where definite determiners are used for familiar referents as found in English (Figure 7). In contrast, in a system where the present is conceptualized as the end of the past, grounding at the time of conversation can be treated just like grounding prior to the conversation. This derives a system where familiar and novel discourse referents are treated alike but differently from non-referential (i.e., ungrounded) individuals, as found in Squamish (Figure 8).

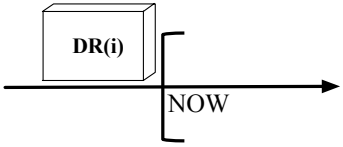

Figure 7 Familiar vs. novel system

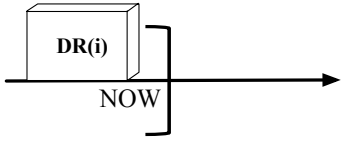

Figure 8 Referential vs. non-ref. system

Finally, consider the marking of epistemic bias. As with definiteness, the event that is ordered relative to the utterance time is the grounding event. But now what is grounded is the belief that p (Bel(p) below) rather than an individual referred to. In a system where the present is conceptualized as the beginning of the future, grounding prior to the utterance time will be treated differently as one that is happening at the time of the conversation. This derives a system where the marking of epistemic bias is sensitive to whether grounding happened prior to the time of conversation (Figure 9). In contrast, in a system where the present is conceptualized as the end

of the past, grounding at the time of conversation can be treated just like grounding prior to the conversation. This derives a system where marking of epistemic bias is not sensitive to the timing of grounding (Figure 10).

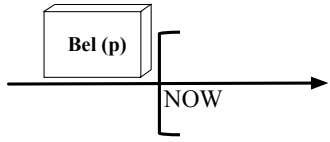

Figure 9 Sensitive to grounding time

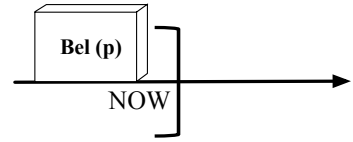

Figure 10 Insensitive to grounding time

7. Conclusion

The purpose of this squib was twofold. First, I argued that temporality plays a role not just for the grammatical categories tense and aspect, but also for definiteness and the marking of epistemic bias. While tense marking is concerned with the ordering of event time relative to the utterance time, definiteness an the marking of epistemic bias are concerned with the ordering of the time of grounding relative to the utterance time. Second, I showed that in each of the three domains languages differ as to whether or not the encoding of a present event (including grounding events) pattern with the encoding of a past event. I argued that this difference can be captured by the assumption that the present can be viewed as either the end of the past, in which case it patterns with past events, or as the beginning of the future, in which case it doesn't pattern with past events. This distinction leads to a different pattern of contrast as summarized in Table 5.

Table 5: Two patterns of contrast in three domains of temporality

NOW conceptualized as…	TENSE	DEFINITENESS	EPISTEMIC BIAS
… end of past	future/ non-future	referential/ non-referential	not sensitive to timing
…beginning of future	past/ non-past	definite/ indefinite	old/new belief

On a final note, observe that the distinction in the conceptualization of the present must be grammatical in nature, rather than being rooted in our cognitive model of time. This is because we observe that in the same language, two different patterns are attested. For example, in English, definiteness marking displays a definite/indefinite contrast which relies on a conceptualization of the present as the beginning of the future. In contrast, the marking of epistemic bias does not distinguish between old and new beliefs and hence relies on a conceptualization of the present as the end of the past. This provides us with new evidence that the grammatical encoding of temporal relations does not tell us anything about our perception of time.

Acknowledgments:

This paper is dedicated to Henry. Whichever way the present is conceived of by you, may it continue to be filled with much appreciation of the wonders of language.

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