

Skeptical Remarks on the Relevance of Tense and Aspect

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There is considerable difference between languages in how they deal with the expression of the temporal situation of events. Tense and aspect are the most common ways of marking when an event took or takes place and how it extended or extends over time. (The previous sentence may serve as an example of some of the uses of tense in English.) However, different languages have different tenses and aspects, mix them with modality to greater or lesser extent, or even lack grammatical tense and/or aspect. This variation—which is fascinating enough in itself, of course—raises a number of questions. (1) What is the extent of actual and possible variation? (2) Do these differences lead to (interesting) differences in ways of thinking between speakers of (relevantly) different languages? And (3) Does this linguistic variation have any (other) effects or implications that are philosophically interesting and/or important? This short paper addresses all three questions (in order), but will only offer some skeptical remarks instead of (real) answers.

1.

Charting the extent of actual and possible variation in the way languages express events in time is not the straightforward classification into types of tense/aspect systems it may seem to be, and this has implications for any attempt to answer the second and third questions mentioned above. Identifying an influence of tense and/or aspect on thought, for example, requires some kind of correlation between types of tense/aspect and types of thought, which depends in turn on the classification of languages by tense/aspect type, but any such classification will be controversial for a number of reasons.

Firstly, even if two languages both have a past tense, this does not imply that the meanings, connotations, and uses of that tense is the same in those two languages. For this reason, it is now commonly recognized that there are no cross-linguistic tense or aspect types. That is, there is Japanese past tense, and English past tense, and so forth, but no (cross-

1 Paper presented at the workshop *Philosophy of Mental Time V: Time in Language*, January 28th, 2017, Tokyo, Japan. (The first and third questions raised in the introduction of this paper were the main topics of that workshop.)

linguistic) past tense *simpliciter*. The particular tenses/aspects or other grammatical features of particular languages can be categorized on the basis of shared features, but such classification is always bottom-up and bound to a particular context and purpose.²

Secondly, even the apparently most basic kind of classification—a distinction between languages that have tense and/or aspect and languages that don't—is a false dichotomy that obscures more than it clarifies. In principle, we can make a three-way distinction between languages that use adverbs (or adverbials), auxiliaries, or morphology to express time. If the term “tense” only refers to morphology then English has only two tenses: past and non-past; if it includes auxiliaries, then it also has a future tense (by means of the auxiliary verb “will” or “shall”). Classical Chinese, on the other hand, did not have tense at all, but did use adverbs to express aspect and some aspects also had tense-like connotations.³ For example, 已 *ji* and 嘗 *chang* mean (something like) “already” and “once”, respectively, and can be placed before the verb to create (something like) the perfect (“has done”) or pluperfect (“had done”). As is the case with many other Chinese characters, these characters also have other meanings depending on their place in a sentence and adjacent characters, and if the auxiliary/adverb distinction is defined in terms of semantic opacity versus transparency, then this could be a reason to argue that *ji* and *chang* are not adverbs but auxiliaries (that is, that those other meanings are their real meanings and thus that *ji* and *chang* as *apparent* adverbs are semantically opaque). This suggests that there is no clear (cross-linguistic!) boundary between adverbs and auxiliaries, and the boundary between affixes (as the most common kind of morphology) and auxiliaries is (probably) equally fuzzy.⁴ Consequently, the boundary between having and lacking tense/aspect is doubly ambiguous: firstly, there is an intermediate category (of auxiliaries) that can fall on either side of the boundary depending on definition, and secondly, there are no sharp boundaries between the three categories.

Thirdly, as illustrated by the example from Classical Chinese above, lacking tense in a strict sense does not imply a lack of other grammar with tense-like features. Some aspect adverbs/auxiliaries in Classical Chinese have tense-like connotations, and can therefore, in some cases, be used in the same way as tense is used in other languages. This fluidity of tense and aspect also includes modality, moreover. For that reason the three are usually treated together, and are collectively referred to with the acronym “TAM”. A widespread tense/modality ambiguity is the *realis/irrealis* distinction. These modalities mean real/actual and unreal/not actual, respectively, but there are many languages that also use this distinction to express the temporal situation of events (which is expressed with tense in other languages). (Conversely, many languages use the past tense also for counterfactuals, which is a modality rather than a tense.) If a language consistently uses modality to say what is said in

2 The insight that tense and aspect (etc.) is language-specific is mostly due to the work of Bybee (1985) and Dahl (1985). According to De Haan (2011), this is now commonly accepted by linguistic typologists.

3 Modern Chinese does not have tense either, but I'm more familiar with Classical Chinese grammar than with modern Chinese.

4 Are function words in (Classical) Chinese and particles in Japanese affixes or auxiliaries? For some function words/particles either view is defensible.

other languages by means of tense, then it may be technically correct—from a grammatical point of view—to say that that language lacks tense, but this judgment may make little sense from other perspectives.

The foregoing raises the question whether there is any language that does not somehow grammaticalize the temporal situation and/or extension of events. Perhaps, Classical Chinese may seem to be an example of such a language. However, there is a limited (and quite small) number of adverbs used to mark aspect in Classical Chinese, and moreover, their use is guided by syntactic rules, and thus, aspect is grammaticalized in that language. (Tense, on the other hand, is not, but as mentioned above, some aspects have tense connotations.) If in some language there would be no fixed patterns at all to express temporal situation and extension, but just a very large number of possible clauses such as “yesterday”, “last week”, “until now”, “for a short time”, and so forth, then that language would lack grammaticalization of temporal situation and extension. Could there be (or have been) such a language? Perhaps, but the question is not as simple as it seems. If a language would have a relatively small number of (relatively opaque) set expressions to refer to time, would that count as grammaticalization or not? It is easy to imagine a historical process from complete lack of grammaticalization, to (increasingly opaque) set expressions, then fixed adverbial constructions, then auxiliaries, to the use of affixes to express time. Where in that development is the boundary between grammaticalization and lack thereof?

The question whether there could be (or have been) a language that completely lacks (or lacked) grammaticalization of the temporal situation and extension of events points at a part of the first question raised in the introduction of this paper that has not been addressed yet: What is the extent of *possible* variation? There is an obvious epistemological problem here: How to know what is possible? The most straightforward way of assessing possible variation is to base it on actual variation, but that approach is fundamentally flawed. Language change and extinction is an evolutionary process: there are (more or less) random mutations and “fitter” languages spread, while less “fit” languages die out. “Fitness” is not determined by linguistic criteria (or not by linguistic criteria alone, at least), but mostly by political and social factors. The details of the actual processes of linguistic development matter little; what does matter here is that the species that survive an evolutionary process of selection and change are not representative of all species that ever lived. Birds are not representative for all dead and living species that—like birds—belong to the clade of *Dinosauria*. Similarly, living languages are not (necessarily) representative of all dead languages.

Contrary to animal species, languages don’t leave a fossil record, so we have no way to know what languages lost the evolutionary game and what their characteristics were. And certainly, the 5% or less of all historic languages that are spoken today is no reliable guide to determine the extent of possible variation.⁵ Perhaps, when it comes to language, anything is possible. At the very least, lacking convincing contrary evidence, that is a less flawed default position than assuming that all languages that ever existed are like the handful of languages that haven’t died yet.

5 On the basis of a fairly simple evolutionary simulation model, I estimated the number of living languages as a percentage of all dead and living historical languages at 5% or less in (Brons 2014a).

So where does this leave us with regards to the first question? Actual variation in the way languages express events in time is of such a nature that any classification is bound to be *ad hoc* and (at least somewhat) arbitrary. And with regards to possible variation the sky may be the limit, and even if it is not, we have no way of knowing what the actual limits are: (almost?) anything might be possible.⁶

2.

The second question raised above is whether these cross-linguistic differences lead to (interesting) differences in ways of thinking between speakers of (relevantly) different languages? It should be obvious that I cannot really address this question without saying at least something about the *Hopi Time Controversy*, so I will.

The “standard” view of the Hopi Time Controversy seems to be something like the following: On the basis of insufficient evidence, Benjamin Lee Whorf claimed that Hopi lacks words and grammar referring to time, and that because of that, Hopi speakers have no concept of time. Ekkehart Malotki (1983) showed that Hopi does have tense and words referring to time, and that Hopi speakers do have a concept of time. There are several flaws in this story, however. Firstly, as John Lucy (1992) and others have pointed out, Whorf’s claim wasn’t nearly as extreme as it is usually presented: he merely claimed that Hopi has a *different* way of dealing with time and that Hopi speakers have a *different* conception of time. Secondly, the tenses that Malotki identifies in Hopi are more like a realis/irrealis distinction (see above) —and thus modality—than like tense (*e.g.* Comrie 1984). And thirdly, David Dinwoodie (2006) has pointed out some serious methodological problems in Malotki’s research (and argues convincingly that Malotki failed to support his claim that Hopi speakers have the same conception of time as speakers of English). If we discard the strawman arguments and methodologically flawed studies, we are left with almost (?) nothing. Perhaps, Hopi speakers have (or had) a (subtly) different conception of time, and perhaps this is because of a linguistic difference, or perhaps they don’t (and didn’t), but for now there is insufficient reliable evidence for either view.

There is a growing body of evidence that language influences thought and ways of perceiving the world. Speakers of a language that employs cardinal directions rather than the left/right distinction, for example, always have to pay attention to their spatial orientation. (And asking an adult speaker of such a language whether she can point north is about as insulting as asking an adult speaker of English whether he can tie his shoe laces.) This is an example of what John Lucy (1997) called a *domain-centered* approach to empirically answering the question of influence of language on thought. Domain-centered approaches try to determine whether specific domains of human experience are classified, individuated, or encoded differently in different languages. The two most intensively studied domains are

⁶ It is possible that neuroscience will reveal some limits, but this would require that those “limits” aren’t the result of neuroplasticity. In other words, if some linguistic feature appears to be neurologically impossible, it needs to be shown that this impossibility is (universally) innate rather than an effect of the subject’s native language creating (and blocking) pathways in the brain.

spatial orientation (as in the above example), and color terms, but there also is a sizable literature on spatial construals of (and spatial metaphors for) time (see Núñez & Cooperrider 2013 for an overview). The relevance thereof is rather limited here, however. The central question of this section is about tense and aspect; it is a question about the influence of grammar or linguistic structure rather than of some conceptual domain, and consequently, that question would have to be answered by what Lucy called a *structure-centered* approach.

The best example (and perhaps even the only good example) of a structure-centered approach is the *Mass Noun Thesis*, the idea that languages that lack articles and plurals only have mass nouns and, therefore, that speakers of those languages perceive the world as consisting of stuffs rather than of objects. Elsewhere, I have shown that the Mass Noun Thesis is almost certainly false, but also suspect for other reasons (see Brons 2014b), but there is some evidence that the lack or presence of articles and plurals in a language subtly but statistically significantly influences the classification of ambiguous cases by children as either objects or stuffs (Imai & Gentner 1997). Most interesting about the Mass Noun Thesis in the present context is that there is an analogy with the conceptualization of time.

In case of the Mass Noun Thesis, interpreters with a two-category language and folk-ontology (with objects and stuffs) attributed a one-category language and folk-ontology (with just stuffs) to some others. Upon closer inspection, it turned out that those interpreted others also have a two-category folk-ontology, and that the difference between the interpreters' and the others' conceptual schemes is merely a difference of the relative "gravitational pull" of the two categories: the interpreters have folk-ontologies that very slightly gravitate towards classification as objects in ambiguous cases; while the interpreted others have folk-ontologies that very slightly gravitate towards classification as stuffs.

In case of the conceptualization of time, the two competing models are linear and cyclical time, and interpreters that have both conceptions of time attribute a one-conception-of-time view with just cyclical time to some others. (That speakers of English have a cyclical conception of time in addition to a linear conception follows from the fact that there is nothing peculiar about talking about "the *return* of spring" or saying that "it will be Christmas *again* next year".)⁷ As in the case of the Mass Noun Thesis, the perceived difference between interpreter and interpreted other is probably exaggerated;⁸ that is, the interpreted other has both conceptions of time (like the interpreter), and the difference is merely one of focus or "gravitational pull". Dominant spatial *construals* of time appear to be universally linear—although not necessarily straight, and there is considerable other variation—which suggest that linear *conceptions* of time are universal as well.

There is empirical evidence that it is the structure of someone's native language that explains the subtle difference in pull towards objects or stuffs when interpreting ambiguous material clues. Extending the analogy, we would need empirical evidence that it is the

7 For other evidence for the cyclical conception of time in case of native speakers of English, see Chrysikou & Ramey (2006).

8 And like the Mass Noun Thesis, this is probably an example of "othering", the construction of a essential division between self and other or in-group and out-group by interpreting the other as inferior and or radically alien. See Brons (2014b) on the Mass Noun Thesis as an example of othering and Brons (2015) for an analysis of othering in general.

structure of someone's native language that explains the subtle difference in pull towards cyclical or linear conceptualizations of time. Probably, the closest to a grammaticalization of a cyclical conception of time would be a language that distinguishes present tense from non-present tense, where the latter combines past and future tense. This appears to be an unlikely combination, however, and I have been unable to find any such language. What might be a more likely option is the use of the realis modality for the present and the irrealis modality for both past and future. Unfortunately, I haven't been able to find such a language either. Furthermore, even if there is (or was) such a language—and I see no reason to assume there cannot be—then there are further complications. Firstly, there is no obvious equivalent to the testing procedure used in the case of the Mass Noun Thesis. And secondly—and more importantly—while it is not *prima facie* implausible that linguistic structure influences the relative “gravitational pull” of the two conceptualizations of time, there probably are other factors in play, and it may be very difficult to isolate those.

If there is a single decisive factor in the gravitation towards cyclical or linear conceptualizations of time, then that factor probably is the context of discourse. If that context is seasonal or otherwise focused on recurring events (such as rituals), then—most likely—a cyclical conceptualization of time is brought to the foreground, while in relevant other contexts a linear conceptualization dominates. Perhaps, this explains the different findings by the linguist Malotki and the anthropologist Dinwoodie in the Hopi case (see above). The difference in focus between anthropological and linguistic research may lead the research subjects to foreground a different conception of time. All of this is rather speculative, of course, but my aim here is merely to illustrate a problem, not to solve it.

Because of these complications, and because there probably are no languages that have the required structural characteristics (and also because the linear conceptualization of time may very well be universally dominant as suggested by the research on spatial construals of time) the case of linear and cyclical conceptualizations of time seems a rather unlikely candidate to show the influence of tense and/or aspect on the way people think and perceive the world (that is, on the question that this section is about). There may not be any more likely candidates either. The available evidence suggests that linguistic differences matter when they force speakers to pay attention to different details of the world around them; language influences what is (or must be made) salient. But that means that there is a certain ambiguity or multifacetedness required, a multitude of features from which a salient subset can be selected leading to multiple possible perspectives or classifications. Dependent on what is (made) salient, an ambiguous stuff/object clue is classified as either stuff or object. However, in speaking of the temporal situation or extension of events (that is, that which tense and aspect are about) there isn't much—if any—relevant ambiguity or multifacetedness. Tense, for example, grammaticalizes what is obvious (or salient) to the speaker—and usually also to the listener—anyway, and there is no multitude of features of temporal location from which different salient subsets could be selected. And if this is right, then it is very unlikely that tense and/or aspect have any significant influence on how we think or perceive the world around us. Psychologically, tense and aspect don't matter.

Half a century ago, the writings of Benjamin Lee Whorf, Thomas Kuhn, and others inspired metaphysical interpretations of the notion of conceptual schemes. These scheme theories generally consisted of two ideas, both of which were commonly attributed to Whorf and Kuhn: (a) there are non-intertranslatable or incommensurable conceptual schemes, and (b) this implies that the world as we perceive it is constructed by *our* conceptual scheme, and thus that people with different conceptual schemes literally live in different worlds. The most famous attack on these ideas is Donald Davidson's (1974) "On the Very Idea of a Conceptual Scheme". Elsewhere (see Brons 2011), I have shown that that attack is a strawman argument, however—neither Whorf nor Kuhn held (a) and/or (b). Nevertheless, even if Davidson's argument is a strawman argument, it does succeed—I think—in refuting (a) and (b).⁹

If we amend the untenable (a) and (b) to account for Davidson's and others' counter-arguments we are left with something like the following. (a') There are different conceptual schemes and translation between schemes can sometimes be difficult (and require extensive explanation) but is never impossible. And (b') we live in the same world and different conceptual schemes just produce (often subtly) different perspectives on that same world.¹⁰ Arguably, (a') and (b') are much closer to Whorf's and Kuhn's ideas (*e.g.* Brons 2011), but—obviously—they are not nearly as exciting as (a) and (b), and certainly do not suggest far-reaching philosophical implications. Furthermore, if we combine (a') and (b') with the rather deflationary suggestion of the previous section that there is little reason to believe that differences in tense and/or aspect are *psychologically* relevant, there seems to be even less room left for a positive answer to the third question posed in the introduction of this paper: Does linguistic variation with regards to tense and/or aspect have any effects or implications that are philosophically interesting and/or important?

But let's not jump to conclusions. If variation in tense and/or aspect is philosophically relevant, then the most likely area to find that relevance is the philosophy of time. And if we ignore questions about the experience of time that are better answered by psychologists or neuroscientists than by philosophers, then the most fundamental philosophical problems within that area have to do (directly or indirectly) with the passage of time. Some philosophers believe that time really passes; others believe that the passage of time is mere phenomenal appearance. Philosophers of the first kind are typically, but not necessarily, *A-theorists*, *presentists*, and *3Dists*; philosophers of the second kind are typically, but not

⁹ Davidson (1974) did not refute the much weaker relativism and perspectival realism (the idea that different "conceptual schemes" are different perspectives on the same objective reality) that Kuhn and Whorf actually adhered to, and neither did Davidson refute those ideas elsewhere. In the contrary, he used the term "conceptual scheme" in a weak, non-metaphysical sense that is not fundamentally different from Whorf and Kuhn's ideas (see, for example, Davidson 1997: 128), and Samuel Wheeler (2014) interprets Davidson's metaphysics as a kind of perspectival realism (but he doesn't use that term), which appears to be equally coherent with Whorf and Kuhn's ideas.

¹⁰ (b') is *perspectival realism* (see also previous footnote). For the beginnings of an argument for perspectival realism, see Brons 2012; 2013.

necessarily, *B-theorists*, *eternalists*, and *4Dists*. Other combinations are possible and there are further options that are not included in these lists, but my aim here is just to give a quick sketch, not a complete and detailed map of the terrain.

For *A-theorists* and/or *presentists*, but not for *B-theorists* and/or *eternalists*, there is something special about the present. According to *A-theorists* all temporal locations are related to the present moment and the temporal location of some event is, therefore, a one-place property like “occurring now”, “occurring three days in the future”, “occurred one year in the past”, and so forth. According to *B-theorists*, on the other hand, all temporal locations are related to other temporal locations and the temporal location of some event is, therefore, a two-place property like “occurring one day later than”, “occurring one month earlier than”, and so forth. *Presentists* maintain that only the present exists. *Eternalists* claim that the past and future also exist. From the latter idea it is a small step to *4Dism* (or four-dimensionalism), the idea that things are four-dimensional space-time worms with temporal parts. The opposing view is *3Dism* (or three-dimensionalism), which denies that things have temporal parts.

As mentioned, the most fundamental disagreement at the basis of these related disputes concerns the passage of time. If time really passes, then the *B-theory*, *eternalism*, and *4Dism* become a lot harder to defend. And if, on the other hand, time really doesn’t pass and the passage of time is just our experience (*i.e.* mere phenomenal appearance), then the *A-theory*, *presentism*, and *3Dism* become a lot less plausible. What the two sides (if we continue to simplify the debates) do not disagree about, however, is how time appears to us—that is, they agree that we experience time as passing. Hence, linguistic variation would only help settle (part of) these debates if it would tell us something about whatever lays beyond appearances.

Perhaps it can in some cases. Whorf argued that “the person most nearly free to describe nature with absolute impartiality would be a linguist familiar with very many widely different linguistic systems” (1956: 214).¹¹ Extending this idea, if there is significant variation in the perspectives different languages offer on the same “thing” (broadly understood), then combining those perspectives gives us the best or most complete understanding of the real nature of that thing.¹² However, any perspective offers only a partial view, and if there is no reason to believe that all available views are all possible views, then even combining perspectives cannot produce a complete view. This would be the case if all perspectives converge for physical or biological reasons, for example.

More to the point, if the experience of time as passing is biological necessity (because of the way our brains work), then there is nothing linguistic variation can teach us about the reality beyond that phenomenal experience. There is considerable variation between

11 This sentence is part of (the original of) the most quoted passage from Whorf’s writings, but is nearly always replaced with ellipsis. This is the case in Davidson (1974), for example. Considering that this sentence contradicts Davison’s interpretation of Whorf, this probably means that Davidson did not read Whorf himself and just copied the quote (with the ellipsis) from some other source.

12 This, again, is perspectival realism. (See the two footnotes before the previous note.) If Davidson is right that these perspectives (not his term!) on some “thing” are necessarily veridical (see Brons 2016 for a summary of Davidson’s argument), then combining all possible perspectives exposes the *objective* nature of that “thing”. (“Thing” again in the broadest possible interpretation.)

languages (see section 1), but this variation does not seem to lead to significant differences in the experience and conceptualization of time between speakers of different languages (see section 2), so this is a case of converging perspectives indeed. And unfortunately, the observed variation itself cannot tell us whether this convergence is due to a biological necessity of experiencing time as passing, or that time really passes. Consequently, tense and aspect are philosophically irrelevant. (Unless there is some other philosophical debate in which tense and/or aspect could play a decisive role, of course, but I cannot think of any.)

Perhaps, tense and aspect were not the best candidates to assess the philosophical relevance of linguistic variation to start with. If that is the case, no more far-reaching conclusions follow. However, there don't seem to be very many grammatical features with obvious psychological and/or philosophical "counterparts". The grammar of nouns (articles, plurals, and mass *versus* count nouns) and its alleged folk-ontological implications (see section 2) is one example. The grammar of time (as discussed here) is another. Both of these cases have deflationary conclusions (although only provisionally in the second case)—the grammar of nouns is (mostly) irrelevant, and so are tense and aspect. It is undeniably relevant—both philosophically and psychologically—that languages differ in many respects, but it may be irrelevant *how* exactly they differ. (But this doesn't make linguistic variation any less fascinating, of course.)

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