

## ARE VERBS TENSED OR TENSELESS?

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Many philosophers seem to have accepted rather uncritically the view that there is a viable philosophical distinction between tensed and tenseless verbs. This distinction is frequently invoked to help support various claims concerning the nature of ordinary language, as well as claims about canonical scientific or philosophical languages. In this paper I shall present reasons for thinking that the customary way of distinguishing tensed from tenseless verbs has either little value or little sense. Then I shall suggest a more plausible way of drawing that distinction.

## I

Philosophers often like to distinguish tensed from tenseless *sentences*. This distinction usually serves at least two purposes. First, it allows us to distinguish two classes of sentences within ordinary discourse – namely, (a) those sentences whose truth-conditions are necessarily relativized to their times of production (the tensed sentences), and (b) those whose truth-conditions are not so relativized (the tenseless sentences).<sup>1</sup> For example, a specification of the truth-conditions of the tenseless sentence '7 is a prime number' will not contain any indication of the time of production of this sentence. But the tensed sentence 'Wilfrid was sitting' is true if and only if Wilfrid is sitting prior to its time of production [the sentence to the right of this biconditional should be understood as tenseless].

The distinction between tensed and tenseless sentences has also been used to support the distinction between ordinary language and a canonical scientific or philosophical language. One of the supposed advantages of a canonical language is that it avoids certain sorts of ambiguities naturally attending the use of tensed sentences, by replacing such expressions with tenseless counterparts. By this process of de-tensing, the canonical langu-

age is rendered suitable for those enterprises in which clarity and precision of expression are essential.<sup>2</sup> The elimination of tensed sentences is usually accomplished by making explicit in the tenseless language various kinds of information regarded as implicit either in those sentences or in their contexts of production.

In drawing these distinctions, philosophers frequently appeal to an additional distinction between tensed and tenseless *verbs*. Grammarians and linguists often regard a tensed verb as merely a grammatically inflected verb. But according to many philosophers, tenseless verbs are also inflected. The customary philosophical distinction between tensed and tenseless verbs is that tensed and tenseless forms of a verb differ in sense. More specifically, tensed verbs, unlike tenseless verbs, are supposed to be temporally significant or informative in some way.

What is supposed to convince us of this is that

- (1)       The glass was full

for example, tells us not only about a state of the glass, but it also seems to tell us *when* the glass was in this state – namely, prior to the production of (1). Some sentences, however, do not appear to be temporally informative in this way. For example, sentences from mathematics like

- (2)       7 is a prime number

state various sorts of relations, but do not indicate when these relations hold. To drive this point home, we are usually urged to notice that substituting 'was' or 'will be' for 'is' in (2) results in an odd sentence, one that reports mathematical relations as holding for periods of time. This, we are told, suggests that the 'is' of (2) is different in sense from the 'is' of 'is, was or will be'.<sup>3</sup>

Philosophers often invoke the distinction between tensed and tenseless verbs to explain how we de-tense ordinary language in order to construct its tenseless counterpart. We are told that in the canonical tenseless languages, tensed verbs are replaced by temporally uninformative tenseless verbs, and the temporal information packed into the tensed verb is conveyed instead by adverbial expressions like 'at (before, after) *t*'. Since in both natural and canonical languages, tenseless verbs are usually formulated in the grammatical present tense (called the 'tenseless present'), I will henceforth bracket occurrences of tenseless verbs in those cases

where this mnemonic device will be useful.<sup>4</sup> The brackets in these cases indicate that those verb-occurrences are supposed to be devoid of temporal import. Thus

- (3) The glass [is] full

with the tenseless 'is', does not indicate at what time or relative to what time the glass is full. By contrast,

- (4) The glass is full

is supposed to indicate that the glass is full simultaneously with the time of production of (4), in virtue of having the temporally informative present-tense occurrence of 'to be'.

It is not clear whether philosophers embracing the distinction between tensed and tenseless verbs think that we must draw that distinction in order to distinguish tensed from tenseless sentences. Since I have argued in another paper<sup>5</sup> that the distinction between tensed and tenseless verbs is not essential to the distinction between tensed and tenseless sentences, I will not belabor that point here. What I want to show in this paper is first, that there are good reasons to suppose that tensed and tenseless forms of a verb do *not* differ in sense; second, that to suppose that they *do* so differ undermines the project of supplanting ordinary language with a canonical tenseless language; and third, that although tensed and tenseless forms of a verb do not differ in sense, there is another (and less impressive) distinction between tensed and tenseless verbs.

## II

The respect in which tensed and tenseless forms of a verb differ in sense is supposed to be suggested by comparison of such tenseless sentences as

- (2) 7 is a prime number  
 (5) Red is a color

with their allegedly unusual variants

- (2') 7 was (is, will be) a prime number  
 (5') Red was (is, will be) a color

Sentences of the second sort, we are told, are unusual in the sense that

timeless properties or relations are not treated as timeless. Due to the presence of tensed verbs in such sentences as (2') and (5'), these sentences report those timeless properties or relations as obtaining at particular times. Similarly, the tensed verb in the more ordinary

- (1) The glass was full

succeeds somehow in telling us when the glass referred to is full.

I would like to question what is taken to be the hard data in cases such as these. Very generally, it is taken to be a clear fact of ordinary language that tensed verbs or tensed sentences, in virtue of being tensed, date or otherwise locate the properties they ascribe or the relations they report as obtaining either at or relative to times or various sorts of events. This picture of tensed ordinary language is seriously mistaken. To see why, let us consider the picture in more detail.

Many philosophers maintain that tensed verbs have a referential or indexical character, and that in the context of the tensed sentences in which they occur, they somehow succeed in picking out or indicating moments of time.<sup>6</sup> The details of these analyses vary, but the sort of claim being made is usually that a verb like the past-tense ' $\phi$ d' means ' $\phi$ s [tensed or tenseless] prior to  $t$ ', where  $t$  is the time of production of the verb. Taken as a claim about sentences rather than verbs, we are often told that ' $S \phi$ d', for example, means ' $S \phi$ s prior to  $t$ ', where  $t$  is the time of production of the sentence.<sup>7</sup>

But if we admit that tensed verbs or tensed sentences pick out times in this way, we are in deep trouble. Consider the following sentences.

- (6) Jones is smiling  
(7) J. F. K. was assassinated

According to the view under consideration, when these sentences are produced at time  $t$ , they express the propositions (or have the sense of)<sup>8</sup>

- (6') Jones is smiling at  $t$   
(7') J. F. K. is assassinated prior to  $t$

while later replicas at  $t'$  of (6) and (7) express the propositions

- (6'') Jones is smiling at  $t'$   
(7'') J. F. K. is assassinated prior to  $t'$

Thus only simultaneous replicas of tensed sentences can express the same proposition. But it is plainly at odds with the facts of ordinary discourse to suppose that no successive replicas of a tensed sentence can express the same proposition. In ordinary tensed discourse, if I say 'J. F. K. was assassinated', you can later agree with me (i.e., express the proposition I expressed) or I can later repeat myself (and not just produce the same string of morphemes) by saying 'J. F. K. was assassinated'. But if the proposition expressed by a tensed sentence is relativized in this way to its time of production, each successive replica of (7), for example, places J. F. K.'s assassination prior to a different time.<sup>9</sup>

A predictable rejoinder to this is that the proposition expressed by a tensed sentence might be relativized to a *variable* interval of time (i.e., some sort of *specious present*), so that successive replicas of a tensed sentence might refer to or contain a reference to the same specious present, an interval including all the times of production of those replicas. In this way, non-simultaneous replicas of a tensed sentence could indeed express the same proposition.

But this position seems to me to be fundamentally implausible. If  $t_i$  is the interval of time whose extremities correspond to the beginning and end of the production of a tensed sentence  $S$ , then for some interval  $n$ , we might say that the specious present for  $S$  is  $t_{i-n} \dots t_{i+n}$ . We would not, for example, fix the boundaries of the specious present by selecting two *distinct* intervals  $n$  and  $m$  and regard the specious present as the period of time  $t_{i-n} \dots t_{i+m}$ . That would be as *ad hoc* and methodologically suspect a procedure as fixing the birthday of Christ with a margin for error of  $+15$ ,  $-3$  months, rather than  $\pm n$  months for some number  $n$ , or perhaps even worse, measuring the end of a close football game with a margin of  $+n$ ,  $-m$  seconds, for two distinct intervals  $n$  and  $m$ .

I am suggesting, then, that any reasonable method of fixing the boundaries of a particular specious present for a tensed sentence  $S$  will compute that interval by measuring, by the *same* amount of time, pastward and futureward from the temporal extremities of  $S$ 's actual production (i.e., the time during which noises, marks, or thoughts are produced). But then no two successive replicas of a tensed sentence will express the same proposition, if the proposition expressed by that sentence is relativized to the specious present. If the specious present for a replica of  $S$ , produced at  $t_i$ , is  $t_{i-n} \dots t_{i+n}$ , then for a subsequent replica of  $S$  produced at  $t_k$ , the

specious present for that replica will be  $t_{k-n} \dots t_{k+n}$ . And as long as  $i \neq k$ , these two stretches of time will be distinct. Even if we measure the specious present for the sentence produced at  $t_k$  as  $t_{k-m} \dots t_{k+m}$ , for some interval  $m$  such that  $n \neq m$ , the specious presents of the replicas of  $S$  at  $t_i$  and  $t_k$  will still be different.

Another problem with resorting to an account of the specious present to explain how successive replicas of a tensed sentence can express the same proposition is that no plausible account of the specious present would let that interval span great lengths of time – say, several centuries. But it would seem that just you and I can agree within a period of several minutes that Caesar crossed the Rubicon by saying ‘Caesar crossed the Rubicon’, so can I agree about this with someone who said ‘Caesar crossed the Rubicon’ in the 16th Century.

In order to avoid relativizing the propositions expressed by tensed sentences to the times of production of the sentences, by saying that their verbs somehow pick out those times, we might say simply that tensed verbs have temporal connotations, merely in virtue of being tensed, but do not actually indicate any particular times, and that tenseless verbs are devoid of such connotations. Thus neither tensed nor tenseless verbs will have an indexical character on this view. But tensed verbs will presumably still convey temporal information of a very general sort, while tenseless verbs will not convey any such information. They will really be, as Quine says, ‘timeless’.

While it is not clear how the details of such a view might be worked out, there is a good reason to suppose that any such position will be indefensible. In particular, it is very hard to see how some verbs could have timeless forms – that is, how they could be stripped entirely of temporal connotations.

If, for example, we convert the tensed sentence

(8) The ambassador’s plane crashed in Munich

to the tenseless sentence

(8’) The ambassador’s plane [crashes] in Munich before  $t$

we do not seem to have deprived the verb of its temporal connotations. Presumably an object cannot crash without doing so at some time, and

every use of the verb 'to crash' presupposes this. Thus even if the phrase 'before *t*' were deleted from (8'), we would know that the event reported in that sentence must occur at some time if it occurs at all.

This case may be contrasted with cases involving sentences from mathematics. In

- (2) 7 is a prime number  
 (9) 2 plus 2 is 4

the verb 'is' has no such temporal connotations. Although sentences such as (2) and (9) may be said to be *true at t*, they are not true *of* particular moments of time, to the exclusion of other times (if they are true of any times at all). In general, temporal information of any kind would either be irrelevant to our understanding of those sentences, or simply too restrictive.

Many philosophers, however, regard verbs like 'to crash' as having both tensed and tenseless forms. In principle we are supposed to be able to provide tenseless renderings of any tensed sentence, and part of this process is the conversion of tensed verbs into their tenseless forms. But since it is not clear how any form of verbs like 'to crash' can be stripped entirely of temporal connotations, it may not be very promising to argue that tensed verbs have temporal connotations and that tenseless verbs do not.

If we weaken and say that *some* tenseless verbs have temporal connotations, but not the kind that give tensed sentences their unique character, we are left with the formidable task of making fine distinctions between properties of words which are terribly obscure to begin with.

None of this augers well for attempts to explain how tensed and tenseless forms of a verb differ in sense. Nevertheless, philosophers frequently argue that some tenseless verbs *do* have temporal connotations, and try to distinguish timeless from non-timeless forms of tenseless verbs. I would now like to consider these analyses, the defects of which will help us to understand why attempts to construct canonical counterparts to ordinary language are undermined by the supposition that tensed and tenseless forms of a verb differ in sense.

### III

Even if we assume that there is an intelligible and acceptable account of what the temporal import of verbs consists in, it is not obvious, as we have

just seen, how some verbs can be timeless. Although we can perhaps get a rough intuitive idea of the sense in which the verbs in

- (5) Red is a color  
 (9) 2 plus 2 is 4

for example, are supposed to have no temporal import, the exigencies of constructing a canonical tenseless language are such that verbs in other sorts of contexts must also be considered tenseless – for example, ‘crashes’ in (8’) or ‘drowns’ in

- (10)  $(\exists t)$  ( $t$  [is] earlier than 3/23/74 & Mary [drowns] in the lake at  $t$ )  
 (11) Mary [drowns] in the lake before 3/23/74

If a tenseless verb is devoid of temporal import, then these verb-occurrences are not tenseless, since their use presupposes that the event reported occurs at some time or other. Thus it is not clear how the verbs in the tenseless sentences (8’), (10) and (11) can be as free of temporal import as the verbs in (5) and (9) are supposed to be.

In response to this, one might argue that there are two kinds of tenseless verbs. First, there is the class of *atemporal* verbs, including such verbs as those in (2), (5) and (9). And second, there is the class of *omnitemporal* verbs, including such verbs as ‘drowns’ in (10) and (11). The difference is that while atemporal verbs are completely devoid of temporal import, omnitemporal verbs are, as it were, merely temporally *neutral*. If ‘ $\phi$ ’ is an atemporal occurrence of a verb, then somehow temporal considerations are inappropriate both to its sense and to its use. But if ‘ $\phi$ ’ is an omnitemporal occurrence of a verb, then it is defined as ‘ $\phi$ d or is  $\phi$ ing or will  $\phi$ ’.<sup>10</sup>

One interesting feature of the distinction between omnitemporal and atemporal verbs is that omnitemporal verbs seem to be tensed rather than tenseless.<sup>11</sup> Certainly the omnitemporal ‘drowns’, for example, is not devoid of temporal import in the way we imagine the ‘is’ in (5) and (9) to be. More importantly, though, it turns out merely to be an *abbreviation* for ‘drowned or is drowning or will drown’, where each of these verb inflections is tensed. But the reason tensed verbs are regarded as unsuitable for use in canonical languages is that all such verbs are held to be temporally perspectival in some undesirable way, and the point of de-tensing verbs for



canonical languages is to rid tensed verbs of their allegedly perspectival character. But since an omnitemporal verb derives its sense from the temporally perspectival tensed verbs whose disjunction it abbreviates, omnitemporal verbs should retain most, if not all, of the semantic deficiencies of the tensed verbs they are designed to replace. And since one important respect in which tensed and tenseless verbs are supposed to differ is that the latter are free of these semantic deficiencies, the distinction between omnitemporal and atemporal verbs does not support the distinction between tensed and tenseless verbs generally. We cannot, that is, plausibly construe omnitemporal verbs as the subset of *tenseless* verbs having temporal connotations. Moreover, since tensed verbs are regarded as too temporally biased (as Quine would say) or anthropocentric (as Smart would say)<sup>12</sup> for use in canonical languages, omnitemporal verbs will likewise be unsuitable for such languages.

Some might be tempted to argue that, although the disjuncts of an omnitemporal verb are by themselves too temporally perspectival for a canonical language, the temporal perspectives of tensed verbs *cancel out* in omnitemporal verbs, and that this semantic phenomenon accounts for the temporal neutrality of omnitemporal verbs and explains how tensed and omnitemporal forms of a verb differ in sense. That is, since (for example) the past-tense ' $\phi$ d' at time  $t$  means ' $\phi$ s prior to  $t$ ', the omnitemporal ' $\phi$ s' at  $t$  will mean ' $\phi$ s prior to or simultaneous with or later than  $t$ ', and thus has no particular temporal bias. But we have seen that it is implausible to suppose that tensed verbs are temporally informative in this way. Thus this account of the temporal neutrality of omnitemporal verbs is likewise implausible.

Not only does the distinction between atemporal and omnitemporal verbs fail to support the distinction between tensed and tenseless verbs, but it also fails to lend plausibility to the claim that ordinary language can be replaced by a canonical language. First, we have seen that some verbs – like 'to drown' and 'to crash' – cannot be stripped entirely of their temporal import, and thus cannot plausibly be understood as atemporal. Accordingly, if we construe detensing as a process of depriving tensed verbs of their temporal import, then we will not be able to construct a full-fledged tenseless analogue to ordinary language. Moreover, the plausibility of constructing a canonical analogue to ordinary language is not enhanced by claiming that such verbs as 'to drown' and 'to crash' are

omnitemporally tenseless in the canonical language. As we have also seen, if tensed verbs are semantically defective in a way inappropriate for a canonical language, then omnitemporal verbs are similarly defective.

But there is an even more important drawback to resorting to an account of omnitemporal verbs to explain how we construct a canonical analogue to ordinary language. The problem is that many verbs, which like 'to drown', cannot be construed as having atemporal forms, do not have omnitemporal forms either. Although these verbs have past, present and future grammatical inflections, *semantically* they do not have forms in all three tenses. Consider, for example, an *achievement* verb like 'to win'. The past and future-tense forms of the verb can be used, respectively, to report and predict victories. That is, we can say 'John won the race' or 'John will win the race', and in each case we ascribe a victory to John. But the present-tense 'John is winning the race' does not report a victory of John's. Rather it says that John is in the lead. Thus, 'won, is winning, or will win' is grammatically but not semantically omnitemporal. While the tenseless sentence 'John [wins] the race' would be satisfied by a present victory, the omnitemporal 'John won, is winning, or will win the race' would not.

Moreover, we do not avoid this problem by replacing 'is winning' with the *simple* or non-continuous present-tense form of 'to win', since neither form of the verb can be used to report a victory. The sentence 'John wins the race', standing alone, does not ascribe a victory to John, as the sentence 'John is smiling' attributes a smile to John. In fact, it is not clear what the sense of 'John wins the race' is. Such an expression is appropriate only as part of a clause like 'if (when, as soon as) John wins the race.'

Thus we cannot explain the process of converting tensed sentences into tenseless sentences by observing that tensed verbs are replaced either by their atemporal or omnitemporal tenseless forms. First, omnitemporal verbs, when they can be formed at all, are really tensed, or at least too semantically defective for a tenseless sentence. And second, many verbs in sentences we would want to de-tense have neither atemporal *nor* omnitemporal forms.

Philosophers have proposed two additional methods for defining tenseless verbs in terms of tensed verbs. Like omnitemporal verbs, these 'tenseless' verbs are unsuitable for canonical tenseless languages, since they are

as semantically defective as the tensed verbs from which they derive their sense, and since the purpose of eliminating tensed sentences in the canonical language is to avoid just these defects. Nevertheless, these verbs are sufficiently interesting to warrant some discussion.

The first of these suggestions for defining tenseless verbs in terms of tensed verbs is to take the tenseless ' $\phi$ s' as equivalent to the tensed 'is  $\phi$ ing and always has been  $\phi$ ing and always will be  $\phi$ ing'.<sup>13</sup> Such a definition is supposed to reflect the fact that tenseless sentences are true (false) at all times, if true (false) at some time.<sup>14</sup>

The second kind of 'tenseless' verb appears to be just a special case of omnitemporal verbs, and was suggested by Goodman.<sup>15</sup> Such verbs are defined as *conjunctions* of their present, past and future-tense forms, and are supposed to be equivalent to the negations of certain other omnitemporal verbs. Goodman's example (changing the symbolism slightly) is ' $aDb$ ' (i.e.,  $a$  [is discrete from]  $b$ ), defined as ' $\sim(aOb)$ ' (i.e.,  $a$  [overlaps]  $b$ ). Obviously, since

$$'aOb' =_{df} '(a \text{ overlapped } b) \vee (a \text{ is overlapping } b)^{16} \vee (a \text{ will overlap } b)'$$

' $aDb$ ' is

$$\sim [(a \text{ overlapped } b) \vee (a \text{ is overlapping } b) \vee (a \text{ will overlap } b)]$$

or equivalently,

$$[\sim(a \text{ overlapped } b) \ \& \ \sim(a \text{ is overlapping } b) \ \& \ \sim(a \text{ will overlap } b)]$$

and, presumably, by a tacit application of the principle that both tensed and tenseless forms of a verb may be analogously defined,<sup>17</sup> ' $aDb$ ' is

$$(a \text{ was discrete from } b) \ \& \ (a \text{ is discrete from } b) \ \& \ (a \text{ will be discrete from } b)$$

Actually, this tacit principle, which seems to be required to get Goodman's results, is false. As tense logic has made clear, it matters considerably where we place a negation sign in a past or future-tense expression. Taking only the past-tense case, in English the unformalized 'John did not attend school' is ambiguous between 'it was not the case (i.e., at some time  $t$ ) that John is attending school' and 'it *never* was the case that John is attending school'. These would be formalized, respectively, by the

Prior-type expressions ' $P \sim(p)$ ' and ' $\sim P(p)$ ', where ' $P(p)$ ' is 'it was the case that  $p$ ', ' $p$ ' is a schematic latter replaceable by present-tense sentences, and where ' $P(p)$ ' is true at a moment  $M$  if and only if ' $p$ ' is true at some moment before  $M$ . Expressions of the form ' $\sim P(p)$ ' correspond formally to the tensed ' $\sim(a \text{ overlapped } b)$ ', which, if reparsed into that form, would read inelegantly as 'it is (now) not the case that it was the case that  $a$  is overlapping  $b$ ' (i.e.,  $a$  never overlapped  $b$ ). But to make Goodman's trick work, the tilde in ' $\sim(a \text{ overlapped } b)$ ' must, as it were, be inside the parentheses (as part of the verb), if we want to end up with ' $a$  was discrete from  $b$ '. It is consistent with the past-tense ' $a$  was discrete from  $b$ ' that  $a$  overlapped  $b$  at some other time in the past. But ' $\sim(a \text{ overlapped } b)$ ' means ' $a$  never overlapped  $b$ ', or, in other words, ' $a$  was always discrete from  $b$ '.

We can make this more perspicuous as follows. In standard tense logic ' $P(p)$ ' is often defined as ' $\sim H \sim(p)$ ', where ' $H(p)$ ' is 'it has always been the case that  $p$ '.<sup>18</sup> Thus ' $\sim H \sim(p)$ ' reads 'it is not the case that it has always been the case that it is not the case that  $p$ ', or more intuitively, 'it has not always been the case that it is not the case that  $p$ ' – that is, 'it was the case that  $p$ '. Goodman wants to get from ' $\sim P(aOb)$ ' to ' $P(aDb)$ '. But if anything is to get us to ' $P(aDb)$ ' it is likely to be ' $P \sim(aOb)$ '. ' $\sim P(aOb)$ ', on the other hand, is equivalent to ' $\sim \sim H \sim(aOb)$ ', or by double negation, ' $H \sim(aOb)$ ', and presumably is equivalent to ' $H(aDb)$ '. This problem also afflicts the future-tense case, as we can see by adjusting the symbolism slightly, substituting the future-tense operator ' $F$ ' (it will be the case that ...) for ' $P$ ', and ' $G$ ' (it will always be the case that...) for ' $H$ '.

Thus it appears that Goodman cannot sustain the view that some tenseless verbs are definable as a conjunction of their past, present and future-tense forms, where we derive the conjunction in the manner explained above. Without the suspicious principle that tensed and tenseless forms of a verb may be analogously defined, what we can infer from

[ $\sim(a \text{ overlapped } b) \ \& \ \sim(a \text{ is overlapping } b) \ \& \ \sim(a \text{ will overlap } b)$ ]

is

$(a \text{ was always discrete from } b) \ \& \ (a \text{ is discrete from } b) \ \& \ (a \text{ will always be discrete from } b)$

which is actually an example of the *first* additional kind of tenseless

verb mentioned above. Thus the special case of omnitemporal verbs is not a conjunction of simple past and future-tense expressions with a present-tense expression, and the two additional suggestions for defining tenseless verbs reduce to one.

## IV

We have seen the implausibility of supposing that tensed verbs refer to times, and also the implausibility of supposing that tenseless verbs generally are totally devoid of temporal import. How, then, are we to explain the differences between differently tensed versions of a given sentence, for example,

- (12) Caesar crossed the Rubicon
- (13) Caesar is crossing the Rubicon
- (14) Caesar will cross the Rubicon

and how are we to explain the sense in which such sentences can be adapted to a tenseless canonical language?

If there is any plausible distinction at all between tensed and tenseless verbs, other than the mere grammatical distinction between inflected and non-inflected verbs, it would seem to be this. A verb *V* is tensed in a tensed sentence *S* if and only if *V* indicates the respect(s) in which the truth-conditions of *S* are relativized to *S*'s time of production. Any other verb could then be considered tenseless. For example, since the verb in (12) is in the grammatical past tense, we know that for (12) to be true, Caesar must cross the Rubicon prior to its time of production. And of course neither the verb in (12) nor the sentence itself must refer to (12)'s time of production in order to indicate this feature of its truth-conditions.

On this construal of tensed verbs, then, we must not make the familiar mistake of supposing that different inflections of a tensed verb necessarily differ in sense. In the case of (12)–(14), we should understand the different verbs as having the same sense, but as indicating different sorts of temporal restrictions on the truth-conditions of those sentences. This seems even more plausible when we consider that (12)–(14) can be used to express the same proposition about Caesar (namely, that Caesar crosses the Rubicon) – for example, when produced, respectively, after, during and before Caesar's crossing of the Rubicon.

De-tensing such sentences as (12)–(14) will then simply be the process

of stripping these sentences of certain temporal restrictions placed on their truth-conditions.<sup>19</sup> We would convert (12), for example, into a sentence whose truth-value does not depend on when, relative to its time of production, what it reports happens to occur. We might want to bracket or make other sorts of morphological adjustments to the verb of the tenseless version of (12), to avoid confusing this sentence with the tensed (12). But we should not suppose, further, that we have altered the sense of the verb as a result. Moreover, as long as no temporal modifiers are appended to the tenseless version of (12), we have no reason to suppose that tensed and tenseless versions of that sentence express different propositions. We have, after all, seen the implausibility of supposing that the proposition expressed by a tensed sentence is relativized to its time of production.

Grammatical verb inflections, then, are at best merely guides to the truth-conditions of tensed sentences. In some cases, however, an inflected verb does not correspond in the usual way to the tense of the sentence in which it occurs. Consider, for example, the following familiar sort of future-tense sentence.

(15) Tomorrow I am lecturing in Chicago

This sentence is tensed in the way in which sentences are tensed in languages having no inflected verbs, such as Chinese and the future tense of Finnish.<sup>20</sup> In such languages, the tense of sentences is usually indicated by temporal adverbs, which function very much like the tense modalities of tense logic. The tense of (15) is determined by the future-tense adverb 'tomorrow', within whose scope the rest of the sentence lies.

Although the verb 'to lecture' is inflected in the grammatical present tense in (15), this case poses no problems for the distinction between tensed and tenseless verbs stated above. If we want to regard the verb as tensed in this case, we might stipulate that a tensed verb indicates temporal restrictions on the truth-conditions of the tensed sentence in which it occurs except when it lies within the scope of a temporal modifier, or perhaps we could understand the relevant sentence containing the verb as not including temporal modifiers within whose scope the verb falls. Preferably, I think, we might simply say that the verb in (15), despite its inflection, is tenseless, just as we would presumably regard the grammatically future-tense verb in

- (16) Add 2 and 2 and you will get 4

as tenseless.

Sometimes verbs in *present*-tense sentences are inflected in the grammatical *future* tense, as in

- (17) Those melons will be 69 cents each

In standard contexts, (17) would be understood as being in the present tense, and its verb would not indicate what temporal restrictions are placed on its truth-conditions. Accordingly, we should regard the verb in (17) as tenseless.

Newspaper headlines furnish additional examples of tensed sentences whose grammatical verb inflections do not match the tense of those sentences in the usual way. For example the simple (rather than continuous) present tense is used for headlines in the (semantic) *past* tense, as in

- (18) Nixon confers with Angew

Moreover, the infinitive form of the verb is used in future-tense headlines, for example,

- (19) Nixon to confer with Agnew

If the verbs in (18) and (19) are tenseless, they will not indicate when, relative to the times of production of those sentences, what those sentences report must occur in order to be true.<sup>21</sup> Since (18) and (19) would occur in the special context of a newspaper headline, whose grammatical conventions are understood in advance, I suspect we would want to regard their verbs as tensed.

#### V. CONCLUSION

We have seen that we cannot de-tense a sentence like (15) simply by changing its verb, since the tense of such a sentence is determined by a temporal adverb. More importantly, we have seen that de-tensing is a process of removing certain temporal restrictions from the truth-conditions of tensed sentences, and that tensed and tenseless forms of a verb do not differ in sense. Once we understand this, and once we realize that it is an historical accident that the tense of sentences in English is often indicated by means of the grammatical device of inflecting verbs, tensed

verbs no longer seem to be the sort of item that needs to be purged from ordinary language in constructing its tenseless analogue. Indeed, although the distinction between tensed and tenseless verbs may still be of philosophic interest, this distinction hardly seems to deserve the pivotal role assigned to it in the literature.<sup>22</sup>

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#### NOTES

<sup>1</sup> See my paper, 'Tensed Sentences and Free Repeatability', *Philosophical Review* 82 (April 1973) for an extended discussion of this issue. In this paper I shall understand a *sentence* to be an instance of a concatenation of morphemes, which has a truth-value, and whose visual or sound pattern is replicable.

<sup>2</sup> See, for example, N. Goodman: *The Structure of Appearance*, Bobbs-Merrill 1966; W. V. O. Quine: 'Mr. Strawson on Logical Theory', reprinted in *The Ways of Paradox*, New York 1966; *Word and Object*, Cambridge 1967; *Philosophy of Logic*, New Jersey 1970; B. Russell: *An Inquiry Into Meaning and Truth*, Baltimore 1967; *Human Knowledge*, New York; J. J. J. Smart: *Between Science and Philosophy*, New York 1968; *Philosophy and Scientific Realism*, London 1963; 'The River of Time', in *Essays in Conceptual Analysis* (ed. by A. Flew), London 1966.

<sup>3</sup> See, for example, J. McGilvray, 'The Functions of Tenses', *Nous* 7 (May 1973), 164-178; J. J. C. Smart, *Philosophy and Scientific Realism*, p. 133; R. Gale, *The Language of Time*, London 1968, p. 199. For a recent criticism of this technique, see P. Mott, 'Dates, Tenseless Verbs and Token-Reflexivity', *Mind* 82 (January 1973), 73-85. Although Mott rejects this technique as a means of determining whether or not a verb is tensed, he does not reject the traditional distinction between tensed and tenseless verbs.

<sup>4</sup> Some philosophers do not indicate tenselessness with the tenseless present. Russell (*Meaning and Truth*, p. 102), for example, has used a grammatically past-tense verb as a semantically tenseless verb, presumably for the sake of elegance. And other philosophers, to avoid confusion with tensed verbs, and to avoid using brackets, italics, or other indicators, use artificial verb forms, such as the archaic 'be' for the tenseless 'is'. See, e.g., W. Sellars, 'Time and the World Order', in *Minnesota Studies in the Philosophy of Science*, Vol. III, Minneapolis 1962 (ed. by H. Feigl and G. Maxwell). It is important to remember that these various artifices are either part of the syntax of the canonical language or mnemonic devices. In ordinary language tenseless verbs do not have special forms or special grammatical inflections.

<sup>5</sup> 'Tensed Sentences and Free Repeatability', *op. cit.*

<sup>6</sup> See Goodman, Quine, Russell, Smart, *op. cit.*; also B. Mayo, 'Infinitive Verbs and Tensed Statements', *Philosophical Quarterly* 13 (October 1963), 289-297; H-N. Casteñeda: 'Indicators and Quasi-Indicators', *American Philosophical Quarterly* 4 (April 1967), 85-100; 'Omniscience and Indexical Reference', *The Journal of Philosophy* 64 (1967), 203-210; M. Fisk, 'A Pragmatic Account of Tenses', *American Philosophical Quarterly* 8 (January 1971), 93-98; J. McGilvray, *op. cit.* For early statements of this view, see, e.g., Aristotle, *De Interpretatione*, Chapt. 3; J. Buridan, *Sophisms on Meaning*



and Truth, New York 1966 (transl. by T. K. Scott); William of Sherwood, *Introduction to Logic*, Minneapolis 1966 (transl. by N. Kretzmann).

<sup>7</sup> A variant of this view takes tensed verbs or tensed sentences to refer to (or contain references to) their own tokenings, or to some mental event accompanying those tokenings. See, e.g., H. Reichenbach, *Elements of Symbolic Logic*, New York 1947, pp. 284–287; J. J. C. Smart, *Philosophy and Scientific Realism*, *op. cit.*, p. 134; B. Russell, *The Analysis of Mind*, London 1921. This account of tensed verbs or tensed sentences suffers from defects similar to those afflicting the view that tensed verbs or sentences involve reference to times, and will not be discussed separately. For additional sorts of criticisms of these alternative accounts of temporal indexicality, see, e.g., A. N. Prior, *Past, Present and Future*, Oxford 1967; Castañeda, 'Indicators and Quasi-Indicators', *op. cit.*, and Gale, *op. cit.*.

<sup>8</sup> I shall understand the terms 'sense' and 'proposition' here as roughly equivalent, but for ease of exposition I shall stick to talk about propositions.

<sup>9</sup> Castañeda (*op. cit.*) argues that tensed verbs are indexical in character, but denies that the proposition expressed by a sentence containing indicators can be expressed by a sentence with no indicators. Thus no sentence of the form of (6'), for example, expresses exactly the same proposition expressed by (6). But on Castañeda's account, tensed sentences still pick out their times of production. Thus, although we cannot, on his view, re-express such sentences in the way I have suggested above, successive replicas of a tensed sentence still would necessarily express different propositions. Castañeda, then, is also committed to the view that we cannot express the same proposition about Jones (or J.F.K.) by producing (6) [or (7)] at different times.

<sup>10</sup> Sellars, *op. cit.*, draws a similar distinction. Using his terminology, we could say that atemporal verbs are *perspective-free* while omnitemporal verbs are *perspective-neutral*, where the perspective, of course, is temporal.

<sup>11</sup> See Sellars, *op. cit.*, pp. 533–534.

<sup>12</sup> See *Word and Object*, p. 170, and *Philosophy and Scientific Realism*, p. 142.

<sup>13</sup> C. J. F. Williams mistakenly attributes this view to Prior, in his review of *Past, Present and Future* and *Papers on Time and Tense*, *Ratio* 11 (December 1969), 145–158. In any case he seems to endorse it himself. I also made the mistake of holding this view in my paper 'Toward a Theory of Recurrence', *Nous* 5 (May 1971), 191–197.

<sup>14</sup> This intuition about the truth-value invariability of tenseless sentences is mistaken. Some tenseless sentences might contain non-temporal indexicals like 'here' or the personal pronoun 'I' and thus have different truth-values at different places or for different producers of the sentence.

<sup>15</sup> *The Structure of Appearance*, p. 367.

<sup>16</sup> Goodman, like many philosophers, uses the simple present tense (i.e., 'a overlaps b') for the present-tense disjunct. But 'a overlaps b' is not a complete present-tense sentence in ordinary English.

<sup>17</sup> For example, that as ' $\sim(a \text{ [overlaps] } b)$ ' is equivalent to ' $(a \text{ [is discrete from] } b)$ ', ' $\sim(a \text{ overlapped } b)$ ', e.g., is equivalent to ' $(a \text{ was discrete from } b)$ '.

<sup>18</sup> In some systems 'H(p)' is defined as ' $\sim P \sim (p)$ '.

<sup>19</sup> Whether some tensed sentences still resist de-tensing is an issue which I shall not discuss here.

<sup>20</sup> See Y. R. Chao, *A Grammar of Spoken Chinese*, Berkeley 1968; M. Aaltio, *Finnish for Foreigners*, Helsinki 1966; M. Lehtinen, *Basic Course in Finnish*, Bloomington 1963. See also P. Kiparsky, 'Tense and Mood in Indo-European Syntax', *Foundations of Language* 4 (1968), 30–57, and R. Gale, *op. cit.*, pp. 45ff.

<sup>21</sup> Newspaper headlines, like other sorts of recorded tensed sentences, have different truth-conditions at different times. For example some future-tense headlines were once true but are now false. But the truth-conditions of an inscribed tensed sentence, whether in a newspaper or in a book, are often not relativized to the sentence's actual time of *production*. Instead, the sentence is determined to be true or false relative to the time at which it is entertained by a reader (or listener). And for the purposes of making truth-value assignments to tensed sentences, it is this time at which the sentence is entertained that we must count as its time of 'production'.

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