Deasy on Advanced Temporalizing

1. Formulation of the B theory

Temporal parity there is no fundamental distinction between present and non-present times

Propositional eternalism If a proposition is true, it is always true

- Note the reliance on a distinguished notion of proposition…

- … and the use of the tense operators. (The latter may be worrisome given that the behavior of tense operators is at issue.)

2. Analysis of tensed sentences

Usual B-analysis:

> Sometimes: there is a dinosaur iff$_{df}$ for some time, something located at that time is a dinosaur

So they'll also give this analysis:

> Sometimes: there are things that aren't instant-mates iff$_{df}$ for some time, some things located at that time aren't instant-mates

So the left hand side is false. But it's part of the B theory that

> Some things aren't instant-mates

Thus the "T" principle for 'sometimes' fails: $A \nvdash SA$.

One could also press an analog to Dorr's Puzzle 1. The following is true:

> $P\big(\sim\exists x Dx \wedge P \exists x Dx\big)$ ("Once, there were no dinosaurs, but there had previously been dinosaurs")

Given the B theorist's "analysis" of $P\exists x Dx$ we have:

> $A\big(P\exists x Dx \leftrightarrow \exists t \exists x (Dx \wedge t < t_0 \wedge Lxt)\big)$

But these tense-logically imply:

$$P\big(\sim\exists x Dx \wedge \exists x Dx\big)$$

3. Redundancy

Deasy's solution: the tense operators are redundant when applied to qualitative sentences.

Might related problems arise for nonqualitative sentences? Suppose an opponent of endurance accepts:

$$P\big(\text{lawyer(Obama)}\big) \text{ iff}_{\text{df}} \exists t\big(t < t_0 \wedge \text{lawyer-at(Obama}, t)\big)$$

This is true:

$$P\sim P\big(\text{lawyer(Obama)}\big) \qquad (\text{``Once, Obama hadn't previously been a lawyer''})$$

But given the link between analysis and 'Always', it would follow that:

$$P\sim\exists t\big(t < t_0 \wedge \text{lawyer-at(Obama}, t)\big)$$

4. Deasy against "two languages"

Tensed Quantifiers All English quantifiers are either tensed or equivalent to a disjunction of tensed quantifiers

The problem is that it is very hard to believe that B-theorists cannot express their characteristic theses in English. The natural view is that in order to express a truth concerning the existence simpliciter of dinosaurs, B-theorists simply need to use the unrestricted 'existential' quantifier in English—in other words, to utter some sentence of English with the logical form '$\exists x Dx$'. And it is not just B-theorists who cannot express their characteristic views in English given Tensed Quantifiers. For example, consider the sentences:

(46) The universe is expanding

(47) There are two English Queens named 'Elizabeth'

Given Tensed Quantifiers, whenever anyone assertively utters (46) or (47), they either express a falsehood, or express a truth but are not speaking English. However, that seems wrong: surely Neil deGrasse Tyson can

use (46) to express a truth without ceasing to speak English, and surely a student of history can use (47) to express a truth without ceasing to speak English. (p. 307)

But does (46) clearly involve any quantification over nonpresent entities?

And in (47), shouldn't the 'are' be 'have been'? Its logical form may then not fit the syntax of a Priorean language at all.

5. "At t" and explicit quantifier restriction

In 2022, there are no dinosaurs/There are no dinosaurs in 2022

In 1922, there were no computers/There were no computers in 1922

seem to imply

At some times/sometimes there are no dinosaurs

At some times/sometimes there were no computers

Deasy would deny:

At some times, there are$_u$ no dinosaurs

At some times, there were$_u$ no computers

But what does the unrestriction consist in? The "at some times" seems like an explicit restrictor.

For example, the sentence '$\exists x F x$' of the modal language is translated as '$\exists x(Ix@ \land Fx)$' ('$Ix@$' means 'x is in the actual world'). This suggests that the modal language lacks unrestricted quantifiers… if ordinary people can express unrestricted quantification when they say things like 'no swans are blue', surely they can also express unrestricted quantification when they say things like 'it is possible that no swans are white' and 'it is necessary that no bachelors are married'. (Dorr, 2010, p. 4)

"At some times" being an "explicit restrictor" seems to require the presence of temporal arguments or variables in its component sentence.

6. Partee on tense in natural language

According to Partee (1973), tenses behave more like pronouns than sentence operators.

> (3) I didn't turn off the stove.

> When uttered, for instance, halfway down the turnpike, such a sentence clearly does not mean either that there exists some time in the past at which I did not turn off the stove or that there exists no time in the past at which I turned off the stove. The sentence clearly refers to a particular time—not a particular instant, most likely, but a definite interval whose identity is generally clear from the extra-linguistic context…(Partee, 1973, pp. 602–3)

This is a "deictic" use of a tense. Partee argues that tenses can also be anaphoric:

> (9) Sam took the car yesterday and Sheila took it today.

> (10) Sheila had a party last Friday and Sam got drunk.

and can also function like bound variables:

> (23)   a. Richard always gave assignments that were due the next day.

> b. Every Englishman worships his mother.

7. Charitable versus rescue semantics

References

Dorr, Cian (2010). "How to Be a Modal Realist." Available at `https://philpapers.org/archive/DORHTB.pdf`.

Partee, Barbara Hall (1973). "Some Structural Analogies Between Tenses and Pronouns in English." *Journal of Philosophy* 70(18): 601–609.