# Moving spotlight and

Ted Sider Philosophy of Time

## FRAGMENTALISM

Moving spotlight picture: ontology of the B theory + distinguished presentness

## 1. Problems with understanding the dispute between the spotlight theory and the B theory

## 1.1 Completeness

"The dispute is over whether a "tenseless" description of reality is *complete*". E.g.:

Does 'The battle of Midway occurred before 2022' entail 'The battle of Midway is past'?

But entailment could be a matter of character or content. The *character* of a sentence is a function from contexts of utterance to the contents that the sentence would have, if uttered in those contexts.

Character of 'I am human':

Context		Content
Ted	$\rightarrow$	That Ted is human
Dean	$\longrightarrow$	That Dean is human

Character of 'The battle of Midway is past':

Context		Content
202 I	$\rightarrow$	That the battle of Midway is before 2021
2022	$\longrightarrow$	That the battle of Midway is before 2022

Character of 'I was sitting':

Context		Content
(Ted, 2021)	$\longrightarrow$	That Ted is sitting before 2021
(Dean, 2021)	$\longrightarrow$	That Dean is sitting before 2021
(Ted, 2022)	$\longrightarrow$	That Ted is sitting before 2022
(Dean, 2022)	$\longrightarrow$	That Dean is sitting before 2022

Fine (2005*b*, pp. 264–5)

Character vs content is from Kaplan (1989). **Character-entailment** character r entails character r' iff for any context of utterance, if the content of r in that context is true, then so is the content of r' in that context

The character of 'The battle of Midway occurred before 2022' doesn't entail the character of 'The battle of Midway is past'. But in the present context, the content of the former entails the content of the latter, since those contents are identical.

## **1.2 Propositions**

"The dispute is over whether there are any tensed propositions"

But "propositions" could be regarded as contents or characters.

## 1.3 Facts

"The dispute is over whether there are tensed *facts*"

But what is the relevant notion of fact?

#### 1.4 Metaphysically inflationary resources

"In reality, A" (or, " $\mathscr{R}A$ ") means that A holds in "reality itself", that A is a	
"metaphysical fact". Many truths are not true in reality.	See Fine (2001)

See Sider (2011, 11.5–11.8)

The dispute is then over whether any tensed claims hold in reality.

"'*A*' is metaphysically saturated" means that all of *A*'s parameters have been filled.

- Orientation: 'The Empire state building is to the left' is unsaturated
- Belief: 'God exists' is saturated (no parameter for believer needed)
- Morality: whether 'action A is morally wrong' is saturated is controversial
- Simultaneity: if the special theory of relativity is true, 'event  $e_1$  is before event  $e_2$ ' is unsaturated

The dispute is then over whether tensed claims are saturated.

## 2. Types of spotlight theories

Different A theories result from different claims about what is saturated:

Theory	tensed	atemporal	Notes
Presentism	$\sim \exists x \operatorname{Dino}(x), \operatorname{Sits}(\operatorname{Ted})$		$P\exists x\phi \nvDash \exists xP\phi$
"Williamson"	$\sim \exists x \operatorname{Dino}(x), \operatorname{Sits}(\operatorname{Ted})$		$P\exists x\phi \vdash \exists xP\phi$
Spotlight	$Present(t_0)$	$\exists x \text{Dino}(x), \text{Sits-at}(\text{Ted}, t_0)$	"A-change" only for presentness
Forrest	In-pain(Ted)	$\exists x \text{Dino}(x), \text{Sits-at}(\text{Ted}, t_0)$	"A-change" only for "activities"
Growing block	$\exists x \hat{D}ino(x), Sits-at(Ted, t_0)$	· · · · · ·	$\phi \vdash G\phi$ , if $\phi$ is "positive"

(Tensed/atemporal = is/is not affected by tense operators; all views reject temporal parts.)

## 3. Fine's fragmentalism

Idea: statements from the points of view of different times, such as that *Ted is sitting* and that *Ted is standing*, can *all* be true in reality.

One naturally assumes that in a correct account of reality all apparent contradictions will be ironed out. If something is both hot and cold, it must be because one part is hot and the other cold, or because it is hot and cold at different times, or because being hot is somehow compatible with being cold. But on the present view, this fundamental assumption is given up. It is taken to lie in the character of reality that certain apparently contradictory aspects of it cannot be explained away. Reality may be irredeemably incoherent.

Under such a view, reality will be fragmentary. Certain of the facts constituting reality will 'cohere' and some will not. Any fact is plausibly taken to belong to a 'fragment' or maximally coherent collection of facts; and so reality will divide up into a number of different but possibly overlapping fragments. (Fine, 2005b, pp. 280-1)

### 3.1 Coherence and fragments

How to understand coherence and fragments?

A coheres with B iff  $\mathscr{R}(A \wedge B)$ 

Problem: conjunctions never hold in reality

Coherence as primitive. Then what is a fragment?

A fragment is a collection C of facts that is pairwise coherent and is not a proper sub-collection of any other such collection

Problem: collections in which any two facts hold at some time, but at no time do they all hold.

'Coherent' is multigrade (see note 13); and:

A fragment is a collection of facts that are collectively coherent and isn't a proper sub-collection of any other such collection

Problem: suppose nothing exists but *a*, that *a* is *F* at one moment, and that *a* is both *F* and *G* at a second moment. *a* is *F* should be a fragment (corresponding to the first moment) but it is a proper sub-collection of  $\{a \text{ is } F, a \text{ is } G\}$ . (The problem is that every fact that holds in the first moment also holds at the second moment.)

Response 1: negations hold in reality. Response 2: 'coherence' builds in maximality (this amounts to taking 'fragment' as primitive). Response 3: tensed facts hold in reality.

Problem with Response 3: let *a* be *G* at *every* other moment. These tensed facts then hold at all moments:  $F_1Ga, F_2Ga, ..., P_1Ga, P_2Ga, ....$  To be sure, H*Ga* holds at the center only; but H facts arguably shouldn't hold in reality, since they would be redundant.

### 3.2 Truth in reality and mere truth

Given fragmentalism, 'In reality, A' isn't factive (since otherwise there would be true contradictions.

How, then, to define (mere) truth? Not this way:

A proposition is merely true iff it is either true in reality or grounded in propositions that are true in reality

for both *A* and  $\sim A$  could then both be true.

Even if reality contains both the fact that I am sitting and the fact that I am standing, it will not be correct for me simultaneously to assert both that I am sitting and that I am standing. For any such assertion will only relate to those aspects of reality that 'cohere' with the existence of the

given assertion; and so, it will only be correct for me to assert that I am sitting if, at the time of the assertion, I am sitting. (Fine, 2005*b*, p. 282)

Possible view:

'A' is true in fragment F iff for some facts  $B_1, \ldots, i$ ) each  $B_i$  holds in reality, and ii) each  $B_i$  is part of F, and iii)  $B_1, \ldots$  together (nonstrictly) ground A.

Problem: ground presupposes (mere) truth, because it's factive. Reply: nonfactive ground suffices.

"Problem": contradictory facts A and B hold individually in reality, and together (nonfactively) ground  $A \wedge B$ . Reply: is there really a problem?

Problem: some facts hold in a fragment in virtue of other fragments, e.g., maybe, SA.

## 3.3 Cross-temporal facts

Where do facts about temporal order and distance fit in?

- Relations between fragments?
- Relations between facts in fragments?
- Do such facts hold in reality? If so, are they in their own fragment?

(Perhaps they're in a fragment along with e.g., mathematical truths—the "sempiternal" fragment.)

### 3.4 Tense operators

Do past- and future-tensed facts hold in reality? If so, fragments "mirror" one another, e.g.:

x is F, x was G one minute ago, x was H two minutes ago, ...

x will be F in one minute, x is G, x was H one minute ago, ...

x will be F in two minutes, x will be G in one minute, x is  $H, \ldots$ 

If temporal relations between fragments hold in reality, the mirroring seems redundant.

Perhaps we would dispense with the temporal relations. Roughly: if one fragment says that  $A, B, \ldots$  hold five minutes ago, and another fragment says that  $A, B, \ldots$  hold, then the second fragment is thereby five minutes before the second.

But there is still redundancy. The past- and future-tensed claims can be deleted from all but one fragment:

x is F, x was G one minute ago, x was H two minutes ago, ...
x is G, ...
x is H, ...

#### 3.5 Spotlight fragmentalism

Include in the sempiternal fragment, "B" statements like "x is F at t"; introduce a primitive property of presentness; and introduce fragments of the form [t is present], for all t. Every moment is nontrivially present relative to itself.

## References

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