Analogies between Space and Time
(Sider, section 4.5)
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1. The traditional argument from analogy

Temporal parts theorist: space and time are analogous; things that exist at more than one place have proper spatial parts; therefore, things that exist at more than one time have proper temporal parts.

Opponent: space and time aren't analogous in *that* way!

2. Sider's strategy

Present four arguments for temporal parts which correspond to common arguments for spatial parts. The opponent has a choice:

(i) The opponent might claim that the arguments are unsound, but that corresponding arguments for spatial parts are sound. In that case the opponent needs to justify this difference of attitude.
(ii) The opponent might claim that the arguments are unsound in both the spatial and temporal cases. But then the opponent must either justify our belief that big things, like tables, have some proper spatial parts in some other way, or else say that there is no justification for this belief.

3. First argument

Spatial version	*Temporal version*
x is extended in space	*x* is extended in time
Therefore, *x* has proper spatial parts.	Therefore, *x* has proper temporal parts.

4. Fourth argument

Spatial version	*Temporal version*
When matter is organised in such a way that it fills a *V*-shaped spacetime region with the angle pointing 'downward' in time—i.e. when something splits in two—there are at least two material objects, each confined to one branch of the '*V*'.	When matter is organised in such a way that it fills a *V*-shaped spacetime region with the angle pointing 'outward' in space—i.e. when something goes away from somewhere and then comes back—there are at least two material objects, each confined to one branch of the '*V*'.
Therefore, some more general thesis about spatial parts is true.	Therefore, some more general thesis about temporal parts is true.

5. Third argument

Spatial version	*Temporal version*
If nothing existed outside of a subregion included in the region of space occupied by an object, there would be an object that occupied that region.	If nothing existed outside of a subregion included in the region of spacetime traced out by an object, there would be an object that traced out that region.
Whether a region of space is occupied by an object depends only on how things are inside that region.	Whether a spacetime region is traced out by an object depends only on how things are inside that region.
Therefore, every subregion that is included in the region of space occupied by an object isitself occupied by some object.	Therefore, every subregion that is included in the region of spacetime traced out by an object is itself traced out by some object.

6. Second argument

Spatial version	*Temporal version*
x is rough in place p_1 and smooth in place p_2.	x is rough at time t_1 and smooth at time t_2.
Therefore, x has a part at p_1 that is rough *simpliciter*, and a part at p_2 that is smooth *simpliciter*.	Therefore, x has a part at t_1 that is rough *simpliciter*, and a part at t_2 that is smooth *simpliciter*.

This is a particularly forceful version of the argument from “temporary intrinsics”, which is the next argument we will consider.