

The Still Frames of Time and Explanation

Jacob Huls

Saint Louis University

1 Intro

What I'm going to argue for:

The principle of sufficient reason is *in tension* with the thesis of discrete time (unless theism is true).

What is *tension*?

Tension comes in degrees. Some examples of philosophical views that are *in tension* with each other:

- (i) Strong tension: God exists and God does not exist.
- (ii) Moderate tension: God exists and evil exists.
- (iii) Weak tension: God exists and the theory of evolution is true.

2 What is the Principle of Sufficient Reason and why think it's true?

Three examples:

- (i) The universe is fine-tuned to support life.
- (ii) Malaysian Airlines Flight 370 crashed into the Indian Ocean.
- (iii) You find a sock without a match in your dryer.

The principle of sufficient reason requires that (i), (ii), and (iii) all have explanations because the **Principle of Sufficient Reason (PSR) states:**

Every contingent fact has an explanation of its truth.

Explanations don't need to be ***forcing or necessitating***, though.

3 What is the thesis of discrete time and why think it's true?

The **Thesis of Discrete time (DT):**

Any finite interval of time is built up out of a finite number of indivisible units (called **chronons**).

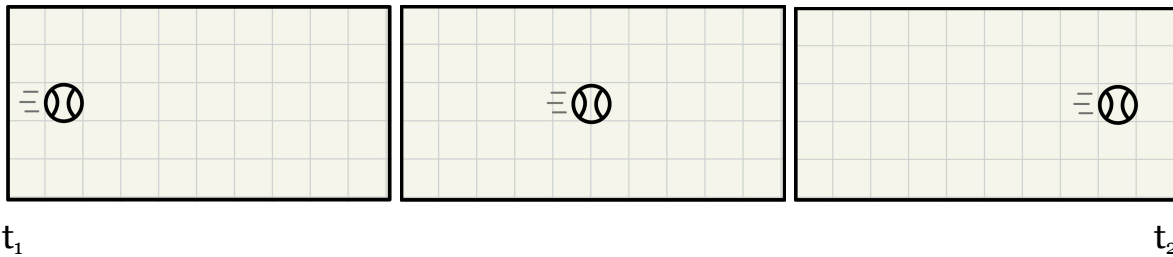
4 Why does it matter if they are in tension?

The Principle of Sufficient Reason is an important part of several arguments for the existence of God. So, if there's good evidence for DT, this might affect the plausibility of a few different arguments for the existence of God.

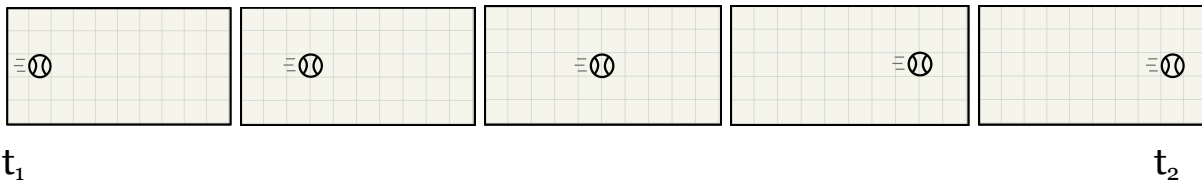
5 An argument that the PSR is *in tension* with DT

The following are still frames from two different videos of a baseball thrown through the air.

Video 1



Video 2



But if time is discrete, then it is as if temporal reality has still frames: the *chronons* are each their own still frames of reality.

Suppose **Video 1** shows *all* the chronons between t_1 and t_2 . Issue: it looks like it was possible for there to be more chronons between t_1 and t_2 such that **Video 2** is an accurate representation of all the chronons between t_1 and t_2 rather than t_1 .

But then why are there exactly 3 chronons between t_1 and t_2 ?

6 Looking for an explanation

<i>Things inside time</i>	<i>Things outside time</i>
<ul style="list-style-type: none">- Chronon size- Things inside of chronons- <i>Events</i>	<ul style="list-style-type: none">- Time itself- God

6.1 Chronon size

If chronons have a particular length, then maybe only three chronons can fit between t_1 and t_2 .

6.2 Things inside chronons

Maybe the baseball and its speed somehow causes there to be three chronons between t_1 and t_2 ?

6.3 Events

Maybe the event *a baseball being thrown* makes there be exactly three chronons between t_1 and t_2 ?

6.4 Time itself

Maybe *time itself* forces there to be 3 chronons between t_1 and t_2 .

6.5 God

God can survey all the possible number of chronons that possibly could have been between t_1 and t_2 . He can see that *it just doesn't matter* how many chronons there are between t_1 and t_2 . And, in response, he can choose a random number.