# Emery on Presentism and Relativity

Ted Sider Philosophy of Time

## 1. The argument from relativity against presentism

MU: some event that is space-like separated from us

...according to the presentist, for any entity, that entity exists if and only if it presently exists. So, according to the presentist [and given special relativity], there is no fact of the matter as to whether MU exists. But that is absurd. For any muon, either that muon exists or it doesn't. (Emery, p. 966)

- 1. If presentism is true, then for all x, x is present if and only if x exists
- 2. For some x, there is no fact of the matter as to whether x is present
- 3. For no x is there no fact of the matter whether x exists
- 4. Therefore, presentism isn't true

## 2. Concerns about the argument

• Reliance on validity of:

p if and only if q

There is no fact of the matter whether p

Therefore, there is no fact of the matter whether q

- Reliance on 'is present'
- How to justify second premise without begging the question?
- Tricky issues about the logic of vagueness

## 3. A new argument

- 1. If presentism is true, everything is definitely simultaneous with this snap
- 2. Something is distant from this snap
- 3. Nothing is both distant from and definitely simultaneous with this snap
- 4. Therefore, presentism isn't true

# 4. A second new argument

"There is no attractive theory that is spirit of both presentism and special relativity."

**One hyperplane** The only objects that exist are those that the eternalist would regard as belonging to one particular hyperplane of simultaneity, in a foliation determined by one particular frame of reference

(Has "excess structure" analogous to a simultaneity relation)

Here-now Only objects that are located here-now exist

(Not in the spirit of presentism)

**Past light cone** The only objects that exist are those located at some one point, plus everything in its past light cone

(Not in the spirit of presentism)

### 4.1 The parallel argument against actualism

- 1. If actualism is true, then for all x, x is actual if and only if x exists
- 2. For some x, there is no fact of the matter as to whether x is actual
- 3. For no x is there no fact of the matter whether x exists
- 4. Therefore, actualism isn't true

The modal relativist believes that there is no fact of the matter as to which entities are actual. From the perspective of this world, all and only entities that exist in this world are actual. From the perspective of a possible world in which purple cows exist, purple cows are actual. Depending on one's situation, some modal perspectives will be more natural to use than others. But crucially, according to the modal relativist, there is no fact of the matter as to which modal perspective is correct. There is no privileged modal perspective. (pp. 966–7)

Think, for instance, of some particular purple cow, COW. Does COW actually exist? According to the modal perspective that is natural for us to use, he does not. According to the modal perspective that is natural for COW to use, he does. And, according to modal relativism, no modal perspective is privileged. (p. 967)

The law-neutrality norm Insofar as you have more than one way of describing what there is and the accepted laws of physics hold according to all of them, you ought not adopt a theory according to which one of those ways is privileged

#### 4.2 Justification of the possibilist quantification

#### 4.3 A response