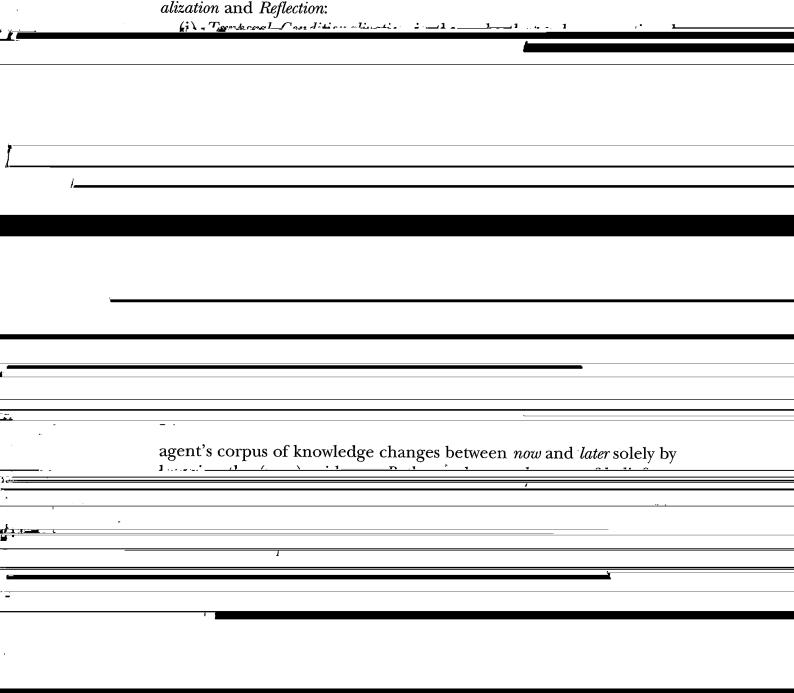
COMMENTS AND CRITICISM

STOPPING TO REFLECT*

ur note is prompted by a recent article by Frank Arntzenius, "Some Problems for Conditionalization and Reflection." Through a sequence of examples, that article purports to show limitations for a combination of two inductive principles that relate current and future rational degrees of belief: *Temporal Conditionalization* and *Reflection*:



restrictions or limitations beyond what is already assumed as familiar in problems of stochastic prediction.

To the extent that a rational person does not know *now* exactly what she or he will know in the future, anticipating one's future

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	satisfied (as its	the failure of	ils), but then Re	flection fails unles	s what	
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value of $P_{later}(A)$ and knowing it is this quantity, one may calculate T exactly and thus know the outcome of the n+1st toss which is heads

then know that *later* has arrived. Thus, *later*, he is not in a position to use the extra information that he would get from knowing when T

or if $A = H_i$ then $y_t(A) = \frac{P_{now}(H_t | P_{later}(A) = r)}{P_{now}(H_t | P_t(A) = r)} = 1$. Thus, $P_{now}(A | P_{later}(A) = r) = r$. That is, even though *later* is not a stopping time,

 $P_{later}(A) = r$) = r. That is, even though *later* is not a stopping time, Reflection holds in this case since, given that $P_{later}(A) = r$, no new $\{relevant\}$ -evidence about A is conveyed through knowing that later

value $E_P(X|C)$ exist with respect to the probability P. Let A be an event and let X = P(A|Y) be a random variable, a function of the random variable Y. Then, as a consequence of the law of total probability, with C also a function of Y,

$$(1.1) \quad P(A|C) = E_P[X|C].$$

Assume that the agent's degrees of belief now include his later degrees of belief as objects of uncertainty. That is future events such

 $2s \, ^{\circ}P_{\bullet,\bullet}(A) = r^{\circ}$ and $^{\circ}P_{\bullet,\bullet}(A|C) = d^{\circ}$ are proper subjects where

agent's current degrees of belief. Suppose that, now, the agent anticipates using (i) Temporal Conditionalization in responding to the new evidence Y = v that he knows he will learn at the standing time. Let V = v

this is known to happen at the Since D (F) COL -- Items I'm

not change this value, that is,

$$(2.1) \quad P_{t_1}(E) = P_{t_1}(E | P_{t_2}(E) = r)$$

for a set of r-values of probability 1 under P_{t_1} . But, since it is known at t_1 that E will be forgotten at t_2 , P_{t_1} $(0 < P_{t_2}$ (E) < 1) = 1. Hence Reflection fails as 0 < r < 1 in (2.1).

Proof of Result 3. Assume that the agent's information sets form a filtration over time and that Temporal Conditionalization holds between now and later but that later is not a stopping time for the