The Thin Red Line, Molinism, and the Flow of Time

In addressing the centuries-old problem of the (in)compatibility of divine foreknowledge and human freedom, philosophers of religion encounter problems regarding the metaphysics and structure of time. As divine foreknowledge concerns past knowledge of what will happen in the future, this connection is entirely natural. Among the contemporary solutions to this problem, one of the most influential is Molinism (cf. Craig 1991, cap. XII, Flint 1998, Perszyk 2011). Molinists believe that conditionals of freedom (CFs), such as "if the agent *a* were in conditions *C,* she would freely choose to do φ" are true or false. CFs are eternally known by God. They are the objects of middle knowledge, in as much as it is intermediate between the knowledge of eternal and immutable truths and the knowledge of contingent truths. By knowing the eternal truths and the CFs concerning every possible agent before the creation of the world, God knows the best world to be created because, for every possible world, He has foreknowledge of how free agents will behave in that world and of the outcomes of their actions. Being perfectly good, God can therefore choose the best of all possible worlds. From the Molinist perspective, it is obviously crucial that the truth of CFs is compatible with human freedom. Some models of temporal logic developed for completely independent reasons have proved especially appropriate for representing the temporal structure of the world as Molinism conceives it. In particular, some models of the Thin Red Line (TRL), according to which there is a true future among the possible futures, seem to imply that at least some CFs are true or false, as Molinists maintain.

In the first part of the talk, I will show in detail which temporal model is apt to make CFs true. In particular, I will show that:

1) This model should be a branching model to account for the libertarian freedom of human agents
2) One of the possible future courses of events must be privileged over the others. It is the actual future, i.e the future that will be happen. This future is metaphorically marked in red and has been called since Belnap & Green (1994) "Thin Red Line". The compatibility between TRL and libertarian human freedom has been defended by several scholars (Barnes & Cameron 2009, Merricks 2009, Øhrstrøm 2009, Rosenkranz 2012, Borghini & Torrengo 2013.
3) A privileged future must exist for every bifurcation of the tree, not only for the actual future. This serves to account not only of the truth value of sentences such as: "Ann will read a novel and she will not go to the party", but also of sentences such as "Ann will read a novel and she will not go to the party but, if she had gone to the party, she would have drunk a beer" (the second conjunct of this sentence is a CF). In other words, we can sensibly ask not only what the human agents will do, but also what they would have done in counterfactual circumstances. Øhrstrøm (2009) has advanced a model that solves this problem. Øhrstrøm's idea is not to consider the TRL semantically as a history of the world but as a function (indicated here in lower case, trl) that takes times and yields histories. In other words, for every bifurcation, trl defines the TRL relative to that bifurcation.

Noting the resemblance between Molinism and TRL models, Restall (2011) has advanced some criticisms of Molinism that have also been leveled against TRL models. In particular, Restall believes that the implication between *p* and "it was true in the past that in the future *p*" (*p* → PF*p*) is not true in TRL models. Because Molinists must also accept that this implication is not true, Restall maintains that this is a problem for Molinists, given the plausibility of this implication. In the second part of the talk it is shown that Restall's criticism is wide of the mark. First of all, it will be demonstrated that many open future models (not just TRL) run into the problematic implication *p*

$\rightarrow$ PFp. In particular, I will show that this implication is not valid in the so-called Peircean model of the future – according to which no future courses of events is privileged over the others and a proposition such as Fp is true if p has a witness in every possible future course of events –, in Thomason's supervalutionist model – which is very similar to the Peircean model – and in the all-false model – according to which all contingent future propositions are false (cf. Todd 2016). As a matter of fact, this implication is valid only in the Ockhamist model because the propositions are evaluated at couples history/moment (and, so, the evaluation of Fp proceeds as if time were linear). So, the implication $p \rightarrow$ PFp is not a problem specific to the Molinist and TRL frameworks, but for *most* branching future models.

One can react in a number of ways to the failure of $p \rightarrow$ PFp in branching time semantics. For example, one might argue that this principle, however intuitive, is not inescapable, and that if abandoning it is the cost of a branching semantics, then that is a cost worth paying. Alternatively, one might try to modify the semantics to account for this principle. This is my preferred option, and in the last part of the talk, I sketch a semantic framework that captures Restall's intuition, namely, that $p \rightarrow$ PFp is an intuitive principle that should not be superficially abandoned. My core intuition is as follows: As time flows, some branches are pruned, that is, they are no longer available. It is the advance of time that determines contingent futures. When evaluating a formula, we must therefore take account not only of the instant of evaluation but also of the point (i.e., the instant) that the world is at. By consequence, only the histories that that passes through the present instant are available for evaluation. As the time flows, the number of available histories is reduced. I will show that, in this model, $p \rightarrow$ PFp is true when evaluated at moments previous to the present or at the present itself. It is not true, however, with respect to future moments. I believe that this is not a problem because it is plausible to construe the principle as concerning what is now happening and, then, what was retrospectively true that it would happen. If this interpretation is sound, my framework both preserves the branching structure of time and makes the principle true in those cases that align with Restall's intended meaning.

In proposing such modification to branching time semantics, I do not contend that this is the only possibility for accounting $p \rightarrow$ PFp, but I show that this new semantics can be adopted by advocates of the TRL and, as a consequence, by Molinists as well. I conclude that the principle stated by Restall is either a problem for most open future models (not just for Molinists) or can be accounted for by these models and so is not a problem for Molinists either.

References
Restall, Greg. "Molinism and the Thin Red Line." In *Molinism: The Contemporary Debate*, Oxford University Press, Oxford 2011: 227-238