Bessenyőtelek község látképe.

A SEMANTIC CONSTRAINT ON THE LOGIC OF MODAL CONDITIONALS

(1) If you are riding a motorbike to Besenyőtelek, you ought to/should/must take the Füzesabony Exit off the M3 motorway.

Assume Kratzer's (1981, 1991) possible-worlds semantics of modal conditionals, according to which the truth conditions of (1) are as follows:

Start with an initial modal base M consisting of possible scenarios; among the Besenyőtelek-headed, motorbike-involving scenarios within M, those that a contextually supplied ordering source deems closest to the actual world are scenarios in which the motorist gets off the M3 motorway at Füzesabony. Assume a deontic ordering source—about permissions and obligations—invoking driving directions for getting around in Hungary.

This account is saddled by a fundamental problem (to be dubbed 'The Problem') made familiar in the linguistics literature by Frank (1997) and Zvolenszky (2002), who appeal to sentences like the following:

(2) If you are riding a motorbike to Besenyőtelek, you ought to/should/must be riding a motorbike.

We expect the schema 'if p then it must be that p' to be sometimes false. More generally, we expect 'if p then it must be that q', where p entails q to be sometimes false. (2) is an obvious example. In no circumstance do we expect driving directions to impose a requirement that one ride a motorbike—something entailed by riding a motorbike to Besenyőtelek. The Problem: instances of these schemas—(2) included—turn out to be truths of deontic logic. The reason: once we restrict our modal base to scenarios in which someone is headed to Besenyőtelek on a motorbike, each scenario will involve a motorbike ride. If we then enter the standard possible-

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worlds definition of modal statements (also incorporated in Kratzer's analysis above)—according to which 'it must be that p' is true if and only p is true in all (of the closest) possible scenarios—then the condition for 'it must be that p' is automatically fulfilled. It therefore looks like the standard analysis of modality fails to provide a *sufficient* condition for 'it must be that p' (on a deontic reading).

The obvious remedy seems to be: why restrict ourselves to Besenyőtelek-headed, motorbike-riding scenarios when evaluating the consequent of (2)? We could instead evaluate 'you must ride a motorbike' against scenarios of all sorts, so (2) will no longer come out true because the deontically best scenarios will not all involve motorbike-riding. But this is wrong-headed because a parallel move (keeping the antecedent from restricting the modal base against which the consequent is evaluated) would yield the wrong truth conditions for garden-variety modal conditionals like (1).

To handle The Problem, Frank (1997) proposes a different solution, which Zvolenszky (2002) criticizes on the grounds that it leads to a similar, related problem: We expect the schema 'if p then it must be that p/not-p' to be sometimes true. More generally, we expect 'if p then it must be that q/not-q' where p entails q to be sometimes true. In effect, Frank puts a ban on any link between non-modal antecedents and modal consequents that fit these schemas. But links like this do sometimes exist. If, for example, one thinks that every driving maneuver of Annie Hall's is a traffic violation, then one finds the following conditional to be true, even though it cannot be accommodated in Frank's framework:

(3) If Annie Hall is making a U-turn, then she should not be making a U-turn.
That is, 'If Annie Hall is making a U-turn, then traffic laws are against her making a U-turn'.

Zvolenszky (2002) suggests a radical solution: The Problem forces us to give up on the idea that the deontic truths of a given possible world be cashed out in terms of non-modal goings-on of the deontically closest possible worlds (scenarios): we cannot provide a sufficient condition for the modal in terms of the non-modal.

The plan is to pick up at this juncture and provide more general arguments for why the radical solution is inevitable in the light of the following:

▪ The Problem is entirely general, no amount of tinkering with the semantics of conditionals would help avoid the radical solution. Indeed, a recent crack at the semantics of so-called anankastic conditionals like (4) (von Fintel and Iatridou 2005) is subject to The Problem, with both of the following turning out true:

(4) If you want to get to Besenyőtelek by motorbike, you should ride a motorbike.
(5) To get to Besenyőtelek by motorbike, you should ride a motorbike.
(As before, we assume deontic readings to the effect that driving directions require motorbike-riding.)

▪ In fact, various attempts at solving The Problem—for example Jackson (1985) and Geurts (2004)—are tantamount to opting for the radical solution.
▪ The history of deontic logic shows that The Problem has been present from the very beginning, but went unattended because the primary emphasis was not so much on developing an adequate semantics, but on providing an adequate syntax: specifying syntactic rules for capturing inference relations among modal claims. Actually, The Problem is just as profound as the deontic paradoxes (the Good Samaritan and Gentle Murder paradoxes) which have had their share of attention. Indeed, The Problem arises based on very basic, universally accepted assumptions about the semantics of modal conditionals.

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