Abstract. If we agree with Michael Jubien that propositions do not exist, while accepting the existence of abstract sets in a realist mathematical ontology, then the combined effect of these ontological commitments has surprising implications for the metaphysics of modal logic, the ontology of logically possible worlds, and the controversy over modal realism versus actualism. Logically possible worlds as maximally consistent proposition sets exist if sets generally exist, but are equivalently expressed as maximally consistent conjunctions of the same propositions in corresponding sets. A conjunction of propositions, even if infinite in extent, is nevertheless itself a proposition. If sets and hence proposition sets exist but propositions do not exist, then whether or not modal realism is true depends on which of two apparently equivalent methods of identifying, representing, or characterizing logically possible worlds we choose to adopt. I consider a number of reactions to the problem, concluding that the best solution may be to reject the conventional model set theoretical concept of logically possible worlds as maximally consistent proposition sets, and distinguishing between the actual world alone as maximally consistent and interpreting all nonactual merely logically possible worlds as submaximal.

Keywords: Abstract entity; Jubien, Michael; logically possible world; modal logic; modal actualism; modal (platonic) realism; ontology; ontological commitment; proposition; set.

1. Sets and Propositions

All putative abstract entities are not created equal. We can have good reasons for including some but not other abstracta in a preferred theoretical ontology. If propositions exist, it need not follow that sets or universals, properties and relations exist; equally, if universals, sets or numbers exist, it need not follow that propositions exist.

Michael Jubien, in ‘Propositions and the Objects of Thought’, argues that propositions as abstract platonic entities do not pass ontological scrutiny by Ockham’s razor.1 Jubien does not challenge the existence of

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such other categories of abstracta as universals, properties, relations, sets and related mathematical objects, which he claims to accept on independent grounds. Jubien maintains that propositions are not needed because the meanings of sentences can be adequately explained as the derivatively intentional expressions of states of affairs and of such intrinsically intentional attitudes as belief in or desire for the existence of particular states of affairs, without invoking the existence of propositions as abstract meanings in the sense of Bolzano’s *Sätze an sich* or Frege’s *Gedanken*.2

Jubien’s rejection of abstract propositions can be upheld in a number of ways. If we do not strictly need to include abstract propositions in the ontology in order to account for the meanings of sentences or to explain the possibility of translating the meanings of sentences from one language into another, then there may not be adequate justification for supposing that propositions exist. We need not, however, on the same grounds, cast doubt on the ontic status of other received categories of abstract entities.

2. Jubien’s Analysis of Propositions

If we agree with Jubien that propositions do not exist, while accepting the existence of abstract sets in a realist mathematical ontology, then the combined effect of these ontological commitments has surprising implications for the metaphysics of modal logic, the ontology of logically possible worlds, and the controversy over set theoretical modal realism versus actualism.3

The conventional concept of a logically possible world is that of a maximally consistent proposition set, definable by means of a Lindenbaum-style

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