Discussion

REPLY TO OSTERTAG

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Gary Ostertag's review of my book, *Bertrand Russell on Modality and Logical Relevance*,[1] turns everything he discusses upside down. Thus I am glad that he also ignores over nine tenths of my book.

Ostertag says, "It appears then, that Russell is, if anything, hostile to the idea that modality plays a fundamental role in logic" (his p. 169). Right. I agree three times (my pp. 1–2, 112–13, 165), and I quote Russell's hostility twice (my pp. 103, 112). But Ostertag bafflingly proclaims, "Dejnožka holds the very opposite. Not only does Russell embrace modality, he espouses a variety of modal logics" (his p. 169). Wrong. I repeatedly proclaim that Russell rejects all modal notions or modal entities, with the sole exception of goodness in his early ethics (my p. 80). And I never say he espouses a modal logic. What then do I find in Russell? *Logically implicit* modal logics! I say, "All seven of the modal logics I find implicit in Russell … seem closest to S5" (p. 16). I say, "I define seven modal logics which may be implicitly attributed to Russell" (p. 61). I indicate seven times that I am discussing logically implicit modal logics (my pp. 16, 17, 61 twice, 62, 66, 96 quoting Magnell on my views). Even Ostertag unwittingly quotes me as engaged only in formal "paraphrase" (my p. 61, his p. 171). I state the basic message in the Introduction of my book:

> Russell's idea is simple: to use notions of ordinary quantificational logic to define and analyze away modal notions. Modal notions are eliminated across the board. The individual ("existential") and universal quantifiers are used to simulate and replace modal notions…. Literally speaking, Russell has banished modality from logic. Yet functionally speaking, Russell has achieved a modal logic based on a rich and sophisticated theory of modality….

[1] Gary Ostertag, "Russell's Modal Logic?", *Russell*, n.s. 20 (2000): 165–72, reviewing Jan Dejnožka, *Bertrand Russell on Modality and Logical Relevance* (Aldershot, U.K.: Ashgate, 1999).

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> Russell refuses to allow ontological status to modal entities, and refuses to admit modal notions as logically primitive. *But if that were the whole story, then there would be no point in writing this book.… But this is only the beginning of the story.* (My p. 2, my new emphasis)

Thus I scarcely "ignore or gloss over … those contexts in which Russell is critical of modal notions" (Ostertag, p. 169). I quote them (my pp. 103, 112), and I embrace them as half—but only as half—of my basic message. The message is that Russell belongs to the crowd of twentieth-century analysts who banish metaphysical necessity, yet who develop sophisticated logical or linguistic eliminative interpretations of necessity to explain away the appearance of necessity. I indicate this message five times (pp. 1–2, 57–8, 100–1, 112–13, 165).

Ostertag says of the three definitions comprising MDL, "This is, of course, not quite right: we should be defining the first-order quantifiers in terms of modal notions, not the other way around. (Otherwise, we are interpreting the modal operators, not the quantifiers.)" (his p. 169). Wrong. Or else Ostertag is criticizing Russell. Russell's definitions are precisely how he interprets—and explains away—modal notions. And strictly speaking, Russell eliminatively defines *both* the existential quantifier *and* the MDL possibility operator as meaning the veridical "$F(x)$ is not always false" (my pp. 112–13). Thus the basic notions of Russellian quantification are veridical. And even the veridical notions are nothing. They are incomplete functions having only veridical meanings-in-use (my pp. 1–2, 23, 91, 112–13).

Ostertag calls MDL "trivial" and stipulative (his p. 170), and says it "adds nothing" to the standard understanding of *Principia*. Wrong. I explain the controversial Parmenidean basis of MDL in Chapters 3–4. Ostertag infers it is trivial to call *Principia* a modal logic, and goes on to doubt that MDL is S5. Folks, MDL is not the modal logic! I indicate that eight times (my pp. ix, 3, 16, 62, 80, 96, 194, 196). MDL is *never* on the list of modal logics (my pp. 16, 80). MDL is the "basic element" (my p. 16), the "building block" (my pp. 16, 80), the "stepping-stone" (my p. 3) to the modal logic FG–MDL* that *Principia* implicitly becomes, *if* you plug in

(1) Russell's MDL definitions, *and*
(2) Russell's ingenious further definition of *propositional* necessity ("analyticity") as MDL necessity ("analyticity") with respect to *all* propositional constituents in his 1905 paper "Necessity and Possibility" (my pp. 3, 111)—*pace* Ostertag's "Russell doesn't go on to say" (his p. 167 n. 5)—*and*
(3) truth in virtue of logical form. (See my pp. 3, 62–3.)

The key formalization of Russell's further definition is due to Gregory Landini. I state it three times (my pp. 3, 62–3, 111). Thus while Russell espouses no modal logic, he provides the keys to the kingdom and leads us to the door. This is a wholly new interpretive landscape. The texts do not merely imply we can

rewrite "$(\forall x)Fx$" as "$(\Box x)Fx$" to say "F is necessary with respect to x" in MDL. They imply we can prefix every logical truth in *Principia* with "$\Box$" in FG–MDL* (but not the existence assumption or the axiom of infinity). FG–MDL* is S5. *Pace* Ostertag, MDL is not S5, or even a logic at all. And if MDL were a logic, it would be S2 at most, as I explain at length (my pp. 194–7). MDL is just the building-block, and Ostertag *criticizes* it for being a "fragment" of a logic!

Thus Ostertag completely misses the main modal logic I find implicit in Russell. Yet I discuss or mention FG–MDL* seventeen times (see my index). FG–MDL* is *always* on the list of modal logics (my pp. 16, 80). I call it "Russell's second and more mature modal logic" twice (my pp. 3, 63).

Did Ostertag merely mix up the names "MDL" and "FG–MDL*"? No. He correctly reports that MDL predicates modalities of propositional functions, not of propositions; in fact, that seems to be his main criticism of my supposed view that MDL is S5. It would be incredible for him to deny that FG–MDL* is a propositional modal logic. And obviously, for any proposition P in FG–MDL*, if P is possible in virtue of its logical form, then P is necessarily possible in virtue of its logical form. And that was my simple argument that S5 is implicit in Russell (my pp. 64–5).

I quote Prior and Fine only as independently confirming that quantificational logic is S5. My *arguments* were on pp. 64–5; see 64, 97–8 on Russell's intent. If Prior and Fine limit their proof to propositions of one variable, that only brings it closer to Russell's MDL necessity with respect to one propositional constituent. Then you just add Russell's further definition.

If Ostertag had grasped all of this, he might have grasped why I say that Russell has an implicit modal logic which can be used in turn to paraphrase his casual possible worlds talk.

Ostertag says reasonability in my reasonable paraphrase test is "vacuous" (his p. 161). Wrong. What I say is, "Test (i) is met to the extent that a certain modal logic is *logically implicit* in Russell's thinking" (my p. 61; my new emphasis). Logical implication is not a vacuous test. Reasonability only concerns reasonably understanding the texts to begin with. Since the alethic texts are generally straightforward, the test devolves to whether the texts logically imply the axioms of FG–MDL* (my pp. 61–2). Landini's formal paraphrase is very straightforward. By the way, you cannot stand outside reason and rationally define it. As Frege says, that would be like washing the fur without wetting it. Does Ostertag think all primitive terms are vacuous, or only this one?

Ostertag says that Russell's epistemic account of propositional necessity is "curiously neglected by Dejnožka" (his p. 168 n. 8). Wrong. I discuss that account five times (my pp. 23, 69, 110–11, 120, 197), and I paraphrase it as MDL–E, one of the six modal logics Ostertag chose not to discuss (his p. 171). It's even in the index. Thus Ostertag omits all seven modal logics.