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How many meanings for 'may'? The case for modal polysemy

Modals such as 'may' and 'can' are flexible expressions. On the one hand, they can be used to express different flavours of modality. For instance,

(1) Holmes may travel to Paris,

can be read epistemically (it is possible, for all we know, that ...) or deontically (Holmes is permitted to ...). On the other hand, modals exhibit flexibility even within a given modal flavour. Consider several utterances of (1), in which 'may' is used epistemically. One of these utterances might express that, for all *Moriarty* knows, Holmes may travel to Paris, while another might express that, for all *Watson* knows, Holmes may travel to Paris. So modals are doubly flexible: *between* modal flavours, and *within* modal flavours.

The standard semantics of modals, due to Angelika Kratzer (1977, 1981), takes both dimensions of modal flexibility to be a matter of *context-sensitivity*. We argue, on the contrary, that the flexibility between modal flavours is a matter of *polysemy*, and not of context-sensitivity.

First, we consider the different mechanisms that allow a single expression to have several semantic values: ambiguity and its subspecies homonymy and polysemy on the one hand, and context-sensitivity on the other hand. We discuss the differences between these mechanisms and develop criteria to distinguish polysemy from context-sensitivity. In addition to linguistic intuition, we can appeal to the following (defeasible but reasonable) criteria: the different meanings of a polysemous expression typically (1) exhibit linear patterns of development from one core meaning to the others, following typical mechanisms such as metaphorical extension or pragmatic strengthening; (2) are few in number; and (3) can correspond to different logical forms. The different semantic values of a context-sensitive expression, by contrast, (1) are historically and explanatorily on a par; (2) are many (often infinitely many) in number; and (3) correspond to only one logical form.

Next, we use these criteria to show that the flexibility modals exhibit between flavours is most naturally analysed as polysemy. When the criteria are applied, 'may' and 'can' pattern with expressions that are polysemous (and context-sensitive), such as 'long' and 'healthy', rather than with merely context-sensitive expressions, such as 'I' and 'today'. While our criteria are not fully decisive, they make polysemy the default approach: absent strong reasons to the contrary, we should adopt the view that modals are polysemous between their different flavours.

To defend the default view, we then go on to argue against three influential arguments for a context-sensitive and univocal account of modals.

We begin by discussing two arguments from Kratzer (1977), according to which an ambiguity account leads to an undesirable explosion of meanings and cannot respect the intuition that several occurrences of a modal such as 'may' have a common kernel of meaning. We argue that these arguments are ineffective against an account of modals that posits polysemy (rather than homonymy), and that uses such polysemy to account for the flexibility between flavours (and not within flavours).

The third argument for univocality (put forward e.g. by Hacquard 2011) runs as follows: (i) modals in many languages can express several flavours of modality; (ii) if those modals were not univocal, this widespread flexibility would be an improbable and inexplicable lexical accident; so (iii) we should hold that these modals are univocal. We employ data from typology and diachronic linguistics to question both premises of this argument. First, we use a recent typological study by van der Auwera and Ammann (2011) to question premise (i). The study shows that the flexibility of modals with respect to modal flavours is not as widespread across languages as is often assumed, and is in fact only typical for European languages. We then use findings in diachronic linguistics (e.g., Bybee et al. 1994) to question premise (ii) (granting, for the sake of the argument, that (i) goes through): as we argued in connection with our first criterion for polysemy, the meanings of polysemous expressions are related in typical historical and systematic ways. Just as we would not be surprised to find the polysemy of 'healthy' replicated in many of its translations, cross-linguistic polysemy of modals would come as no surprise.

Finally, we show how the plausibility of modal polysemy impacts two current philosophical debates. In the debate about *epistemic modals,* the assumption of univocality has been used by Schaffer (2011) to argue against a relativist position. Relativists (e.g. Egan 2007) hold that the semantic value of (1) is invariant across contexts and that it is a non-classical proposition, whose truth-value can shift with the context. According to Schaffer, the "unity of the modals" counts against this view; our argument enables us to reject this alleged unity.

In the debate about *metaphysical modality,* the polysemy of modals makes more plausible a deeper distinction between possibility and conceivability, as against some recent arguments by David Chalmers (2010, 2012). It thereby supports views of metaphysical modality (e.g. Shoemaker 1998, Bird 2007) on which metaphysical necessity is an even more deeply empirical matter than Kripke (1972) has argued.

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