

The Measure of Mind: Propositional Attitudes and Their Attribution, by Robert J. Matthews. Oxford: Oxford University Press, 2007. Pp. x + 248. H/b £30.00.

This fascinating book is about propositional attitudes. In it, Robert Matthews pursues, with great rigour and tenacity, the question how we should understand our practice of attributing propositional attitudes and, in particular, the specific question how subjects must be built (given the best available accounts of the building materials) if they are to serve as proper targets for that practice.

Many philosophers have been struck by the thought that putative assignments of propositions to subjects' attitudes are somehow akin to assignments of numbers to their weights. One of Matthews' central aims is to develop that thought into a serious hypothesis. He seeks to use work on the theory of measurement proper as the basis for a (broadly) measurement theoretic (MT) account of our practice of attitude attribution and to provide reasons for thinking that the latter account is adequate to the practice. In so doing, he hopes to present a hypothesis able to challenge (what he thinks of as) the hegemony of (what he refers to as) the Received View (RV, his majusculation).

A central component of RV is the following claim:

For any subject S , attitude [*type*] A , and proposition P , there exists a computational/functional relation R and an explicit (mental) Representation [*i.e. a representation expressive of propositional content*] M such that M expresses P , and [*as a matter of at least nomic necessity*] S has A to P if and only if S bears R to M . (p.20, my italicised interpolations.)

This is a remarkably strong claim. One might wonder at the forces that have conspired to make it the received view. According to Matthews, one of the main forces at work here is inability to come up with architecturally less demanding alternatives that are as well suited to the demands of our practice, given the best available accounts of how targets for that practice might be constructed out of natural (e.g. physical) materials. It is Matthews' contention that the measurement theoretic approach he develops can provide such an alternative. For on his view, that approach is both more minimal in its architectural requirements and also better able to track the vagaries of our practice than is RV. In particular, the only immediate architectural demand imposed by the measurement theoretic approach is that interrelations amongst subjects' attitudes and actions should be *represented* by interrelations amongst the propositions assigned to those attitudes and actions, so that reasoning about the latter structure can deliver information about the former.

The book consists of two (near) halves, the first containing a frontal assault on arguments that have been offered in favour of RV and the second containing the development of the measurement theoretic alternative as well as an account of attitude types as types of *aptitude*. Straddling the halves is an assault on a view that Matthews takes to be potentially supportive of RV, according to which propositional attitudes have a relational structure. We are therefore presented with four moving parts: argument that RV is unsupported; development of the measurement theoretic approach to the assignment of contents to propositional attitudes; proposal of an aptitude based account of propositional attitudes; and argument against a relational view of propositional attitudes. Although it's important to Matthews' overall position, I propose to ignore the third part (except to suggest that it might usefully be compared with a similar account developed by Anthony Kenny (*The Metaphysics of Mind*, Oxford: Clarendon Press, 1989)) and to take the other parts in order.

In my view, the first half of the book is largely successful, at least in its stated aim of showing an absence of support for RV. One strand of argument here concerns the alleged indirect empirical support provided to RV by its role in successful theorising in the cognitive sciences. For instance, it has been argued (i) that RV plays an indispensable role in underwriting much work in generative linguistics, (ii) that the work it underwrites there constitutes the best available account of linguistic competence, (iii) that an indispensable role in our best available account suffices for acceptance, and so (iv) RV should be accepted. By considering the details of the role played by RV in the generative programme, Matthews is able to cast doubt on the first step in the argument, the claim that it is indispensable. Rather, he argues, what has been indispensable is the attribution of attitudes with (broadly) propositional content, for instance the attribution of cognisance of grammatical principles; and it would be question-begging to assume that those attitudes must be understood according to RV. This is made especially clear, according to Matthews, by the fact that computational implementations of grammatical competence proposed within the generative programme, for instance in theories of parsing, often fail to provide explicit representations (or, indeed, Representations) for each of the grammatical principles competence with which they are designed to implement. Instead, principles are often implemented ‘architecturally’, via e.g. the structure of the system’s processes and procedures.

Although it seems to me to be true that, as a matter of historical fact, the development of grammatical theory and the development of theories of its implementation have been insulated in this way, it is an open question what the reason for that has been and, in particular, whether the insulation is principled. A defender of RV might respond here that, *ceteris paribus*, provision of a theory of implementation that failed to match explicit representations there with what the grammatical theory claims to be cognised contents should occasion revision of the grammatical theory (or, at least, withdrawal of the implementation theory). But at this stage of inquiry all else is not equal: our theories of grammar have not yet developed to a stage at which they should be fine-tuned to fit our theories of implementation; and our theories of implementation are not yet sufficiently well developed that they can reasonably demand such fine-tuning. Hence, the fact that scientific practice is not slavishly adherent to RV does not yet show that the View is not an indispensable component of the science, if only (at present) as a regulative ideal.

A second strand of argument seems to me more successful. Our practice of attitude attribution appears to support attribution of propositional attitudes that fail to fit RV, as for instance in Dennett’s nice example of a chess programme that ‘wants to get its Queen out early’, despite embodying no explicit representation that does the work of the attributed attitude. Such ‘emergent’ attitudes land the proponent of RV with a problem. For the View is to a large extent sustained by a perceived inability of alternatives to sponsor key properties of propositional attitudes, in particular their causal powers. And since ‘emergent’ attitudes have the key properties, whilst resisting capture in the View’s net, they supply a sort of proof that alternatives to the View exist.

There is room for skirmish at this point, although Matthews works hard to keep it to a minimum. One response that he fails to consider is that ‘emergent’ attitudes might require, for their emergence, a suitable grounding in a View consistent system. Accordingly, the argument might limit RV’s authority—a more or less trivial upshot of the acceptance of ‘emergent’ attitudes—without yet inducing secession. However, in the absence of argument that View consistent attitudes are required to

play that role with respect to emergent attitudes this indicates merely a formal gap in Matthews' presentation. And it is a nice question whether such an argument could be provided that wasn't what Matthews has ably sought and found lacking: namely, a compelling argument in favour of RV.

I cannot do justice here to the detail and care involved in Matthews' presentation of his case against RV. In my opinion, this half of the book is essential reading for anyone committed to the proper assessment of RV.

The second half of the book seeks to develop the measurement theoretic approach of the assignment of contents to attitudes and to connect that approach with a view of the attitudes as aptitudes towards 'states of affairs'. Matthews provides a sure-footed guide to the relevant intricacies of measurement theory. The central task of measurement theory is to articulate the conditions that must be met by two systems (typically, a structured system of environmental features and a mathematical system) if the latter is to be useable in measuring the former—i.e., if there is to be a tractable method of specifying important aspects of the structure of the former system by appeal to the structure of the latter. To a first approximation, the central idea that Matthews pursues can be put as follows. Our ordinary practice of attributing propositional attitudes to subjects involves the assignment of propositional contents to their attitudes in much the same way that our ordinary (and indeed scientific) practice of measuring the qualities of subjects (e.g., their weights, sizes, etc.) involves the assignment of numbers to those qualities. And the way both practices work is by providing a structure—i.e. propositional contents and numbers, respectively—that can serve as a proxy for the target structure—i.e. attitudes and measurable qualities, respectively—so that reasoning about the former can furnish one with information about the latter. For instance, in reasoning about weights, one can use the fact that 10 is a larger number than 3 in order to derive the conclusion that something weighing 10 kilos has a larger weight than something weighing 3 kilos. Similarly, in reasoning about attitudes, one can use the fact that the proposition *that 10 is a larger number than 3* entails the proposition *that 3 is a smaller number than 10* in order to derive the conclusion that someone who believes the former will, *ceteris paribus*, believe the latter.

Notice that a measurement theory of this sort is, without more ado, no more a theory of the *attitudes* than a measurement theory for weights is, without an account of how weights are assigned to objects—what is often characterised as an 'empirical procedure' for determining weights—a theory of *weights*. It is here that the aptitude account finds its place in the overall position: with it Matthews aims to provide an account of how assignments of propositional contents can find their place in an account specifically of the psychologies of the targets of that assignment, how they can be assignments specifically to the psychological attitudes of subjects.

This half of the book is more speculative than the first (itself a prophylactic against what Matthews sees as the unwarranted speculation driving RV). But Matthews provides the sharpest and most developed account that I have come across of how the measurement theoretic approach should be developed. As Matthews admits, there is much work yet to be done. One aspect of the account that I found especially in need of development was that pertaining to the interactions of attitudes of different types. I couldn't find, in Matthews' presentation, a clear account of how cognisance of structural relations amongst propositional contents could enable one to keep track of structural relations amongst attitudes of different types with those contents—e.g., beliefs and desires—, relations that would appear to depend on the attitude types involved and not simply on propositional contents considered (so to

speak) in the abstract. (It may be that he thinks that this is to be modelled on the way that different forces combine in mechanics, perhaps due to specific laws governing the domain in question rather than to intrinsic features of the way the domain is represented.) But it would be premature to object to the approach on that sort of ground. I think that anyone with a serious interest in how an MT account of the attitudes is to be developed should read this half of the book.

Matthews seeks to derive a number of more or less radical conclusions from the MT approach. One of the most radical of those consequences I shall pass over in silence: Matthews claims that (assuming the MT approach) there is no reason to suppose that beliefs are themselves up for (non-derivative?) assessment as true or false, except in the sense spelled out in what has come to be called ‘success semantics’, that mode of assessment applying (non-derivatively?) only to elements in our scheme for representing beliefs. For that thesis appears to derive what support it has from a slightly less radical thesis: that (again assuming the MT approach) despite the relational form of propositional attitude attributions, there is no reason to suppose that beliefs themselves have a relational structure. I wish to end by commenting briefly on the latter purported consequence of the MT approach.

It appears to me that the following argument, were its premises acceptable, would provide a decisive argument in favour of a relational construal of propositional attitudes:

- P1. (Putative) attributions of propositional attitudes are made using utterances expressive of (contents with) genuinely relational logical forms.
 - P2. Utterances expressive of (contents with) genuinely relational logical forms require for their truth genuinely relational truth makers.
 - P3. If there are truth makers for (putative) attributions of propositional attitudes, those truth makers are propositional attitudes.
 - P4. Some such attributions of propositional attitudes are true.
-
- C1. Propositional attitudes genuinely have relational form.

The question, then, is which of the premises of the argument does Matthews wish to reject? Prima facie, he accepts P1. For he characterises his position as one on which relational metaphysics does not follow from relational semantics. However, it may be that he accepts P1 only on a reading according to which an utterance’s expression of a genuine logical form is a matter only of how competent speakers would *represent* that utterance, and so not immediately a matter of the utterance’s *actual* logical form. In that case, he might be in the market for accepting P1 whilst rejecting P2. (For discussion of some of the options in this area, see Steven Gross ‘Can Empirical Theories of Semantic Competence Really Help Limn the Structure of Reality?’, *Noûs*, 40, 2006, pp. 43–81.) But as far as I can tell, Matthews provides no argument in favour of that reading of P1, or (more tellingly) against a reading of P1 able to sustain interaction with P2. Neither does he challenge, or provide argument against, P3. He accepts that the truth makers, if any, for (putative) attributions of propositional attitudes are propositional attitudes, so that we can find out about the attitudes by discerning the truth makers for the attributions (i.e., on Matthews view, the truth makers required on a MT account of those attributions). Moreover, the fact that Matthews wishes to draw conclusions about the attitudes from a study of the way we represent those attitudes in our practice of attributing them suggests that he must think that at least some such attributions are true, and so that he accepts P4. It appears, then,

that Matthews must reject P2: he must hold that attributions of propositional attitudes have genuinely relational logical form but do not (for that reason) require relational truth makers. Is there space for such a view?

Matthews thinks that reflection on ordinary measurement claims, for instance the claim that this journal weighs 5 grams,' reveals space for his view. For he holds that such claims have genuinely relational form but are made true by monadic facts. But, on the assumption that such claims really do have relational form, is there any reason to accept the claim about their truth makers? One reason that is sometimes offered is that we cannot view such claims as relating objects—e.g. this journal—with numbers—e.g. 5—because scales are arbitrary. Thus, if we allow that the journal is related to 5, we must also allow that it is related to every number related to 5 by a suitable scalar transformation. But why should the latter result be found problematic? All it shows is that the information carried by measurement claims depends essentially upon specification of a particular relation in addition to specification of its relata. Another source of the claim about truth makers is the fact that such assignments of numbers to objects are designed to keep track of relations amongst monadic properties of those objects. Hence, it is argued, all that can be required for the truth of the assignments is that the objects instance those monadic properties. But the fact that objects' instancing monadic properties suffices for the truth of the measurement claims does not entail that those claims do not have relational truth makers unless their instancing of the monadic properties is insufficient for their also instancing relational properties. And the fact that the instancing of the monadic properties suffices for the truth of claims with genuinely relational logical form strongly suggests that it also suffices for the instancing of relational properties.

Perhaps, however, Matthews is really concerned to sustain only a weaker claim. Perhaps his claim is that attitude attributions are made true by the obtaining of relations other than those indicated by their logical forms. But it is difficult to see how claims about logical form can come apart in this way from claims about truth makers. For the claim that the logical form of an utterance expresses the obtaining of a relation between a subject and, say, the semantic value of its complement clause appears indistinct from the claim that the truth of the utterance requires that relation to obtain.

Finally, Matthews' claim might be weaker still. It might be the claim that, although the 'superficial' logical forms of attitude attributions appear to express the obtaining of attitudinal relations between subjects and the values of complements—e.g. the obtaining of the *belief* relation between subject and value—the true logical form is different. Perhaps the idea is that the true logical forms instead give expression to relations between subjects and *representatives* (or *measures*) of their beliefs, themselves the values of complements. But even with respect to this weak claim, it is difficult to see why the latter relations between subjects and complement values are not belief relations.

Although I have been unable in these brief comments to make clear sense of Matthews' non-relational view of propositional attitudes, the view demands further scrutiny. I hope it is obvious from the foregoing that I believe the same to be true of the rest of Matthews' fine book.

*Department of Philosophy
University of Warwick
Coventry CV4 7AL
United Kingdom*

GUY LONGWORTH