Theodore Sider
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Those who write or read books of the world are familiar with the big questions of existence, like 'Are there universals?'; 'Are there numbers?'; 'Are there holes?', and also with the catchy questions about the nature of beings, such as 'Are properties abstract or concrete?'; 'Do material things have temporal parts or not?' and so on. But there is a new wave of theorizing in metaphysics that raises new questions. Some of them are about the nature of reality itself: 'Is reality objectively structured or is it more like an amorphous lump?'; 'Does reality have a layered structure, or is it "flat"?' Other questions are concerned with the nature of metaphysics itself: 'Is metaphysics a meaningful enterprise at all?'; 'Are metaphysical debates substantive, deep, objective or non-substantive, shallow and in some sense subjective?'

The latter sorts of questions about the structure and the objectivity of reality and the substantivity of metaphysical and ontological disputes are usually called *metaontological* or *metametaphysical*. Basically we are given two kinds of answers to these questions. A *deflationist* says that "reality lacks ontological structure" (v), and (some of) the ontological debates are not substantive. A *realist* tries to prove the contrary. (Note that metametaphysics is not another discipline, it is part of metaphysics (as metamathematics is part of mathematics). So if a deflationist says that reality is structureless and that (some) metaphysical debates are merely verbal, then she does pronounce metaphysical theses.)

Sider presents and defends a full-blooded *realism* about the structure of reality. His big picture consists of the following claims about reality, among others: it is structured; the structure of reality is objective; and last but not least its objectivity does not imply that we have no conceptual or linguistic resources to attach to and correctly represent this structure. In metaphysics we *can* and *should* represent this structure correctly. As Sider says: 'good metaphysics must fit the underlying structure' (viii). His main aim is not to answer the question what this fundamental structure is, but to give us 'a *model* of metaphysics; a model of how, in a world with objective structure, language could be attached to that structure and metaphysicians could reasonably speculate on its nature' (83).

Sider emphasizes that the connection between ordinary language and the structure of reality is not too tight; there are good reasons to believe that that language we generally use for describing the world around us is not suitable to discern its fundamental structure. Therefore we need another language. For the correct representation of the structure we should introduce a language which is capable of expressing the structure-grasping concepts. Sider calls this a *fundamental* language.

What makes a language fundamental? Using the ancient metaphor from Plato, a successful theory must 'carve nature at its joints'. So for doing metaphysics at its best, we should write and talk in the language containing only *joint-carving* expressions. David Lewis, one of the

great advocates of realism, maintains that a realist ideology should contain predicates corresponding to *natural properties*, an elite minority of properties. These natural or sparse properties are fundamental and they are responsible for many important features of beings. About the benefits of positing sparse properties Lewis says the following: 'Sharing of them makes for qualitative similarity, they carve at the joints… there are only just enough of them to characterize things completely and without redundancy.' (*On the Plurality of Worlds*, Blackwell, 1986, 60) Lewis insists on a primitivism concerning the natural/non-natural distinction. He thinks, moreover, that naturalness is not an all-or-nothing feature. Beyond the perfectly natural properties there are less natural ones. Just a familiar example: *being green* is more natural (even if it is not so perfectly natural as *being negatively charged*) than *being grue* (the disjunctive property being green and observed before 3000 A.D. or blue and observed after 3000 A.D.), which is non-natural. The point is that the difference between their naturalness is objective.

Sider is one of the best disciples of Lewis in this sense. He gives an account of structure and so fundamentality (there is no genuine difference between these notions) without analyzing it: still, a lack of analysis does not mean that we cannot know anything about it. For example, we know what it is good for. Chapter 1 and chapters 3 to 5 are concerned with the theoretical virtues of positing the notion of structure. Only by utilizing the terms structure and joint-carvingness are we able to clarify many of our metaphysical, epistemological, and semantic concepts: similarity, intrinsic properties, laws and explanation, reference, the nature of metaphysical debates, and many others.

In chapter 2, Sider presents his version of a *Quinean* epistemology of metaphysics: 'Believe the ontology and ideology of your best theory!' (14) Sider, following Lewis, breaks away from Quine's psychological conception of ideology and maintains its objectivity. Ideology is on a par with ontology. More complex ideology goes with a more complex world. Since the question of a larger ontology is strongly connected to ideological complexity, if we believe in the existence of composite objects having proper parts, we need make use of the added notion of *parthood*, and so on (and also vice versa).

What is new and essential to this approach is the role of joint-carvingness: truths themselves are not sufficient to render an account of the fundamental structure of reality; for working out the best theory, we need not merely truths but fundamental truths containing joint-carving terms. Further, joint-carvingness determines our choice between different theories and voting for the best and simplest one having a minimal ideology. Thus it makes *Occam's razor* very sharp indeed.

In certain cases – mainly in specific scientific and semantical explanations – Sider assumes the indispensability of *imperfectly* joint-carving notions. He maintains that they are just 'reasonably joint-carving' and as such metaphysically non-fundamental. For example, *reference* is an explanatory notion which "excludes the bizarre interpretations" (28–29). However, it is controversial how such a (semantic) notion is based in the fundamental: is it not part of the underlying structure at all, or does the structure have more-or-less fundamentality?

Are there any fundamental expressions other than predicates? Mainly in chapter 6, Sider argues for a broader conception of ideological joint-carvingness than that of Lewis: in a

fundamental language there are other kinds of terms, like *quantifiers*, sentential *operators*, and *connectives*. This Siderian broader conception becomes especially important when in chapter 9 Sider defends ontological realism from the arguments presented by ontological deflationists. As mentioned above, deflationists say that ontological debates are not substantive. And what makes a debate substantive? According to Sider, it is a sufficient condition of substantivity if the debate is cast in joint-carving terms. Among the joint-carving terms, the most important one in this context is the *existential quantifier*. Sider's main argument – the argument from the indispensability of using quantifiers – against ontological deflationists is the following: 'Questions framed in indispensable vocabulary are substantive; quantifiers are indispensable; ontology is framed using quantifiers; so ontology is substantive – that's the best argument for ontological realism' (188). Since quantifiers form part of the fundamental ideology and since, as Sider argues in this chapter (I think successfully), in all ontological debates we use the existential quantifier, ontology cannot be non-substantive.

In chapter 7, Sider presents the main features of fundamentality. Here and in the next chapter Sider strongly emphasizes *purity* – the thesis that fundamental facts should involve nothing but fundamental notions. Nevertheless, there are many more facts beyond the fundamental ones. Consider the facts about cities, smiles, and candies expressed by non-joint-carving terms. These non-fundamental facts consist of (at least in part) non-fundamental notions. The teaser is answering the question: 'What about the connection between these different kinds of facts?' Sider's main thesis is that none of the facts about connection can be fundamental. In his words: 'facts about the *connection* between fundamental and non-fundamental should not be taken themselves to be fundamental; otherwise the domain of fundamental facts becomes infected with facts about cities, smiles, and candy' (144). The right way is working out a precise *metaphysical semantics*. In this kind of semantics we can give the truth-condition of any non-fundamental sentence solely in fundamental terms.

Later, in chapter 8, Sider presents and criticizes other realist approaches, or those who insist that fundamentality (which is perfectly fundamental according to Sider) can be clarified in terms of *grounding* or *truthmaking*. On such a picture, fundamental entities are those which are ungrounded or truthmakers. Sider argues that all of his friends and rivals – among them Kit Fine, David Armstrong, and Jonathan Schaffer – lead us astray: neither the Finean conception of fact- or propositional grounding nor Schaffer's entity-grounding nor the various theories of truthmaking are able to render an account of the connections between the non-fundamental and the fundamental, since ultimately each of them violates purity.

Thus according to Sider all connecting truths involving non-fundamental terms cannot be fundamental. At the same time they must be fundamental to avoid the violation of purity. It should be said, though, that the thesis that facts about grounding and truthmaking must be fundamental is controversial. (Recently, Karen Bennett has presented a compelling argument for the non-fundamentality of grounding in "By Our Bootstraps", *Philosophical Perspectives* 25 [2011]: 27–41.) Moreover, as I have noted above, the notions of grounding and truthmaking have some explanatory benefit insofar as each of these terms can be used to clarify the notion of fundamentality.

Finally, Sider applies his big picture to first-order metaphysical problems (chapters 10–13): metaphysics of logic, time and modality. He argues for an ideologically very simple worldview without using tense and modal terms in the fundamental language.

Sider's book is a great and important milestone in contemporary metaphysics. I highly recommend it to all metaphysicians, although the reader has a mountain to climb. The book is rich in complex arguments requiring careful study, whether you are a realist or a deflationist.

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