

CONTEMPORARY
DEBATES
IN PHILOSOPHY

CONTEMPORARY DEBATES IN
METAPHYSICS

EDITED BY THEODORE SIDER,
JOHN HAWTHORNE AND DEAN W. ZIMMERMAN

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Contemporary Debates in Metaphysics

Edited by

Theodore Sider, John Hawthorne,
and Dean W. Zimmerman



© 2008 by Blackwell Publishing Ltd

BLACKWELL PUBLISHING

350 Main Street, Malden, MA 02148-5020, USA

9600 Garsington Road, Oxford OX4 2DQ, UK

550 Swanston Street, Carlton, Victoria 3053, Australia

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First published 2008 by Blackwell Publishing Ltd

1 2008

Library of Congress Cataloging-in-Publication Data

Contemporary debates in metaphysics/edited by Theodore Sider, John Hawthorne, and Dean W. Zimmerman.

p. cm. — (Contemporary debates in philosophy)

Includes bibliographical references and index.

ISBN 978-1-4051-1228-4 (hardcover: alk. paper) — ISBN 978-1-4051-1229-1 (pbk.: alk. paper) 1. Metaphysics. I. Sider, Theodore. II. Hawthorne, John (John P.) III. Zimmerman, Dean W.

BD95.C66 2007

110-dc22

2007019836

A catalogue record for this title is available from the British Library.

The publisher's policy is to use permanent paper from mills that operate a sustainable forestry policy, and which has been manufactured from pulp processed using acid-free and elementary chlorine-free practices. Furthermore, the publisher ensures that the text paper and cover board used have met acceptable environmental accreditation standards.

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Introduction

Theodore Sider

There is something strange about metaphysics. Two strange things, really, although they are related. Metaphysics asks what the world is like.¹ But the world is a big and varied place. How can one meaningfully ask what apples, planets, galaxies, tables, chairs, air conditioners, computers, works of art, cities, electrons, molecules, people, societies... are like? The question is hopelessly general and abstract! One would normally ask first what apples are like, and then ask what planets and the rest are like separately. What meaningful questions are there about such a broad and heterogeneous subject matter? Furthermore, you'd think that you'd need to ask a biologist what apples are like, an astronomer what planets are like, and so on. What can a philosopher contribute?

Let's have a look.

Consider a certain apple. What is it like? Well, it's red, and it's round. But this information doesn't come to us from *philosophy*. We need to *observe* the apple to learn its color and shape.

Consider another thing, Mars. It has iron oxide on its surface, and it is 6.4185×10^{23} kg in mass. This information about Mars, again, isn't something that philosophy can tell us about; we learn it from astronomers.

So far, we have found no philosophical subject matter. But if we abstract from certain details, we find things in common between our two examples; we find a recurring pattern despite the diverse subject matters. Here are the facts we cited:

The apple is red Mars has iron oxide on its surface

The apple is round Mars is 6.4185×10^{23} kg in mass

Notice that in each case, an object is said to have a feature. For example, in the first case, the object is the apple, and the feature is *being red*. Philosophers call objects that have features *particulars*, and they call the features “had” by particulars *properties*. Thus, we have:

<u>The apple</u>	<u>is red</u>	<u>Mars</u>	<u>has iron oxide on its surface</u>
particular	property	particular	property
<u>The apple</u>	<u>is round</u>	<u>Mars</u>	<u>is 6.4185×10^{23} kg in mass</u>
particular	property	particular	property

In fact, this pattern is quite general. Think of other facts:

Fact	particular	property
This table is broken	the table	<i>being broken</i>
Electron <i>e</i> is negatively charged	electron <i>e</i>	<i>negative charge</i>
The stock market crashed	the stock market	<i>crashing</i>

The particular-property pattern keeps recurring. It appears that every fact about the world boils down to particulars having properties.² So it would seem that the world contains two different sorts of entities: particulars and properties. We have already uncovered a general fact about the world. Just as a scientist establishes generalizations about what the world is like in some limited sphere (for instance that charged particles repel one another or that the planets move in elliptical orbits), we have established a generalization – albeit a much broader and more abstract one – about the world. And we did it without detailed input from the sciences.

Of course, since this is philosophy we are talking about, there is controversy at every turn. The statement that there are two different sorts of objects in the world, particulars and properties, can be challenged. *Nominalists*, for example, believe in particulars, but not in properties.

According to a nominalist, there simply is no such thing as the property of being red.

Put that baldly, the statement is misleading. It suggests that nominalists think that there is no such thing as a red object. But nominalists are not *crazy*. They agree that red objects exist; they just deny that *redness* exists.

The nominalist's position can be made clearer by thinking about the sentence 'The apple is red'. The nominalist agrees that the sentence is true. But now, consider the two parts of the sentence: its subject, 'The apple', and its predicate, 'is red'. What the nominalist thinks is that, whereas the subject does stand for an object (namely, the particular in question, the apple), the predicate does *not* stand for an object. The predicate 'is red' is of course *meaningful*; it's just that it doesn't stand for an *object*. Just as a comma is meaningful without standing for an object, predicates can be meaningful without standing for objects. The apple is red, even though there is no such thing as its redness.

We talk *as if* there are lots of things, when really, those things don't exist. We talk, for instance, as if there are such things as holes. We'll say: "Look at the size of that hole in the wall!" "Bring me the piece of cheese with three holes in it." "I can't wear that shirt because there is a hole in it." But surely there aren't *really* such things as holes, are there? What kind of object would a hole be? Surely what really exist are the physical objects that the holes are "in": walls, pieces of cheese, shirts, and so on. When one of these physical objects has an appropriate shape - namely, a perforated shape - we'll sometimes say that "there is a hole in it." But we don't really mean by this that there literally exists an extra entity, a hole, which is somehow made up of nothingness. The nominalist thinks that all subject-predicate sentences are a bit like sentences about holes. It might seem at first that the predicates refer to entities, but they really don't.

Are nominalists right? Do properties exist or don't they? This is no easy question, and Chris Swoyer and Cian Dorr (chapter 1) come to opposite conclusions on this and related matters. But in this brief look at nominalism, we have at least glimpsed what metaphysicians are after: patterns in apparently diverse phenomena, and generalizations that accurately describe these patterns. This book contains chapters in a number of areas of metaphysics; in each area, the goal is to find generalizations about abstract patterns:

Necessity

Scientists tell us of the laws of nature. Physicists tell us of the laws of physics, for example that like-charged particles must repel one another. Chemists tell us of the laws of chemistry, for example that if methane reacts with oxygen, it must produce carbon dioxide and water. Economists tell us of the laws of economics, for example that when demand increases then prices must increase as well. In each case, we have scientists telling us what *must* happen in certain conditions. What exactly are these laws of nature; what is the status of these "musts"? Laws of society exist because governing bodies have legislated them. But there is no governing body that has legislated the laws of nature. Physicists try to *discover* the laws of physics; they do not create them (chapter 2). And if everything happens as these laws of nature specify, human actions must conform to their dictates. How then can we have free will (chapter 7)? Further, there are other cases of "mustness". Every bachelor must be male; every prime number other than two must be odd. In what does the mustness of these facts consist (chapter 3)?

Time

Objects of all sorts, the objects of physics, chemistry, biology, and other sciences, last over time. This raises many

philosophical questions. What does it mean for the *same* object to exist over time? A person at age 50, for instance, is the same person as she was as a child, even though nearly all of the matter that made up her body as a child no longer is with her at age 50. What makes a person the same over time? And indeed, what is it for time to pass at all (chapters 4–6)?

Ontology

Different sciences describe different objects. Physics describes subatomic particles, biology describes organisms, and so on. But must we believe that the objects from each science really exist? Consider organisms, for example. Could we not stick with the physicist's objects, and say that the only objects that really exist are subatomic particles? We could still agree that there are distinctively biological *phenomena*, even though there do not exist distinctively biological *objects*. For even if human organisms (for example) do not exist, there are nevertheless certain systems of particles that exhibit biological behavior. These are the systems involving particles that one ordinarily thinks of as being *parts* of a single biological organism. Thus, we have very general *ontological* questions (existence questions) about objects with parts (chapter 8). Other ontological questions include the question discussed above of whether properties exist, the question of whether numbers exist, and even the “metaontological” question of what it *means* to investigate whether objects of a certain sort “really” exist (chapter 9).

Within these and other areas of metaphysics, certain themes recur. For example, metaphysicians tend to fall into two camps: those who go around trying to *reduce* phenomena, and those who prefer instead to “leave the world as they found it.” Consider the law of nature saying that like-charged particles repel one another. Of one thing

we can be sure: the existence of such a law guarantees a *regularity*: everywhere and at any time, every pair of like-charged particles will indeed repel each other. Jonathan Schaffer (chapter 2.2) is a member of the reductionist camp. He wants to say that, roughly, there is nothing more to this law beyond the regularity. The law reduces to the regularity. What the physicists discover is simply that it is *universally true* that every two charged particles in fact repel each other. John W. Carroll disagrees (chapter 2.1); he is from the anti-reductionist camp. According to him, reductionists like Schaffer leave out something crucial. They leave out the *mustness*, the *necessity*, of laws. It doesn't just *happen* to be the case that charged particles repel one another. When you give two particles the same charge, they *must* repel each other. So there's something more to a law than just the fact that objects everywhere act in accordance with the law; you need to add necessity to a regularity to get a law.

Another example: time's passage. We ordinarily think of time as something that "moves". J. J. C. Smart (chapter 5.2) takes a reductionist approach to time's passage. According to him, time is just another dimension like space. And like space, it is not really correct to describe time as moving. What we ordinarily think of as time's passage just arises from the fact that at any given moment in time, we can only remember what has occurred in one direction through time (the direction we call the "past"). But objects in this direction are not "gone." Just as objects that are spatially distant - for example, objects on Mars - are just as real as objects around *here*, so, objects that are temporally distant - for example, dinosaurs - are just as real as objects around *now*. Dean Zimmerman, on the other hand, resists this reduction (chapter 5.1). Our ordinary belief about the matter is correct: time has passed since the time of the dinosaurs, and the dinosaurs are now gone. And this does not just

mean that they are far away in time, just as Mars is far away in space. The dinosaurs simply do not *exist*.

A second (and related) recurring theme in metaphysics is the relationship between a scientific outlook and our ordinary beliefs. What science tells us doesn't always fit neatly with our ordinary beliefs about the world. In cases of conflict, should we revise science so that it doesn't conflict with our ordinary beliefs? Should we revise the ordinary beliefs in light of science? Or is it a mistake to think that they conflicted in the first place?

Time's passage again provides an example. The picture of time we get from physicists, especially from Einstein's theories of relativity, is Smart's picture of space-like time. But where, in this picture, is there room for our ordinary belief that time passes? According to Smart, our ordinary belief must be revised to fit it into the scientific picture, whereas according to Zimmerman, it is the scientific picture that must be revised, or at least augmented.

Or consider the problem of free will and determinism. Science tells us of a world governed by laws of nature. An electron has no choice about where to move; if another charged particle is in its vicinity, it cannot help but be repelled. The laws of nature must be obeyed. But on the face of it, this threatens our ordinary conception of ourselves as having free choices. We *blame* evildoers because we think that their choices were not inevitable; they *freely chose* to do wrong. Robert Kane (chapter 7.1) argues that these two pictures genuinely conflict. If the laws of nature fully determined what each and every object in the world was going to do, then there would be no room for any human freedom. (Fortunately, there is reason to think that the laws of nature that scientists have actually discovered are not quite so restrictive.) Kadri Vihvelin, on the other hand, tries to fit human freedom into the world of science, even a scientific world in which all human behavior

is determined (chapter 7.2). But Vihvelin does not think that this calls for a revision of our ordinary beliefs about freedom. (In this way her position is unlike Smart's.) According to Vihvelin, it was a mistake to think that the two world-pictures were in conflict in the first place.

What should we trust when doing metaphysics: science or ordinary beliefs? The question leads some to extremes. At one end, we find those who think that all metaphysics can do is report science. At the other end, we find those who think that metaphysics should ignore science and listen only to ordinary beliefs. Each extreme is questionable.

The first extreme ignores the fact that science does not settle all metaphysical questions, and also the fact that scientists are influenced by their metaphysical presuppositions. We need a metaphysics that goes beyond reporting science in order to address the unsettled questions and evaluate the presuppositions.

The second extreme subdivides. It includes those who think that science and ordinary beliefs can never conflict, because they address "different worlds" (the "world of ordinary life" and the "world of science"). And it includes those dogmatists who think that ordinary beliefs can never seriously be doubted. The problem with each subdivision is that neither ordinary beliefs nor science is intended to be about a *novel* subject matter. Each is about *the world*. Ordinary folks, naturally, have beliefs about the world; but they hope to learn more about it through science. In addition to believing that objects move in space over time, that actions take time, and that objects take up space, ordinary believers also expect science to tell us the underlying nature of space and time. Nor do scientists step into another world when they don their lab coats. The point of science is to understand how the world, the one world, the world in which ordinary folks live, works.

A moderate view of the relation between science and ordinary beliefs seems in order: metaphysics must listen to, but is not exhausted by, science. This, however, leaves the exact nature of the relation wide open. Perhaps ordinary beliefs are *epi-temic starting points* - claims with which we are entitled to *begin* our inquiries, but which may later be revised, perhaps because they conflict with science, perhaps because they conflict with one another. Perhaps not all ordinary beliefs should be taken equally seriously. We might, for example, grant more weight to beliefs that are fundamental to the structure of our thought about the world (recall the discussion of particulars and properties above), and grant little (if any) weight to ordinary beliefs about matters more properly addressed by the sciences. Perhaps the mere fact that a belief is an *ordinary* one counts for nothing at all; perhaps we should instead trust *reason*, a faculty capable of guiding both philosophically sophisticated scientists and scientifically informed philosophers.

Any metaphysician is bound, sooner or later, to face the following challenge. Science has been wildly successful. It has led to increasingly successful theories, technological advances, and consensus as to the truth. The history of metaphysics, on the other hand, has been as much one of wild goose chases as progress. Metaphysicians (like all philosophers!) continue to disagree about the same issues for millennia, and have not sent anyone to the moon.

This leads some philosophers to doubt that metaphysics has any value at all. A certain empiricist tradition in epistemology says that the only route to truth is through the senses, and ultimately through science. If you can't do an experiment to settle a question, the question isn't worth asking. At best, it is an idle question whose answer we will never know; at worst, the question is meaningless.

The empiricist is moved by an admirable desire to rid philosophy of undisciplined speculation. But the only

empiricism that flatly rules out all metaphysics is one based on a naive view of science. Real scientists do not just “summarize what they see.” Scientists must regularly choose between many theories that are consistent with the observed data. Their choices are governed by criteria like simplicity, comprehensiveness, and elegance. This is especially true in very theoretical parts of science, for instance theoretical physics, not to mention mathematics and logic.

A realistic picture of science leaves room for a metaphysics tempered by humility. Just like scientists, metaphysicians begin with observations, albeit quite mundane ones: there are objects, these objects have properties, they last over time, and so on. And just like scientists, metaphysicians go on to construct general theories based on these observations, even though the observations do not logically settle which theory is correct. In doing so, metaphysicians use standards for choosing theories that are like the standards used by scientists (simplicity, comprehensiveness, elegance, and so on).

Emphasizing continuity with science helps to dispel radical pessimism about metaphysics; the humility comes in when we remember the discontinuities. Observation bears on metaphysics in a very indirect way, and it is far less clear how to employ standards of theory choice (like simplicity) in metaphysics than it is in science. But metaphysicians can, and should, acknowledge this. Metaphysics is speculative, and rarely if ever results in certainty. Who would have thought otherwise?

Exactly what one should say about empiricism and metaphysics is a deep philosophical question in its own right, and it's unlikely that anyone will decisively answer it anytime soon. But that shouldn't, on its own, deter you from thinking about metaphysics. Philosophy is the one discipline in which questions about the value of that discipline are

central questions within that very discipline. The philosopher must therefore live with uncertainty about whether her life's work is ultimately meaningful - that is the cost of the breadth of reflection demanded by philosophy. Philosophy's reflective nature is generally a good thing, but the down side is that it can lead to paralysis. Don't let it. You don't need to have answers to all meta-questions before you can ask first-order questions (just as you don't need to sort out the philosophy of biology before doing good work in biology). The meta-questions are certainly important. But the history of philosophy is full of sweeping theories saying that this or that bit of philosophy is impossible. Take heart in the knowledge that these have all failed miserably.

Notes

1 As opposed to, for example, what the world *ought* to be like (ethics), what we *know* about the world (epistemology), how we *think of* and *talk about* the world (philosophy of mind and language), and so on.

2 Some facts consist of multiple particulars having a "multi-place" property, also known as a relation. Philadelphia is 100 miles from New York: the particulars Philadelphia and New York have the *100 miles from* relation.

CHAPTER ONE

ABSTRACT ENTITIES

[1.1 "Abstract Entities," Chris Swoyer](#)

[1.2 "There Are No Abstract Objects," Cian Dorr](#)

"Concrete" entities are the entities with which we are most familiar: tables, chairs, planets, protons, people, animals, and so on. "Abstract" entities are less familiar: numbers (for example, the number seven), properties (for example, the property of *being round*), and propositions (for example, the proposition *that snow is white*). Do abstract entities really exist? No one has ever seen, touched, or heard an abstract entity; but Chris Swoyer argues that they exist nevertheless. Cian Dorr argues that they do not.