

# Part I

## Foundations

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## 1

# Introduction

Metaphysics, or first philosophy, is that branch of philosophy concerned with the nature of reality in its most fundamental aspects: existence, the part/whole relation, space, time, causality, possibility and necessity, similarity and dissimilarity. It includes ontology, the study of what exists, as well as the investigation of the most general features of reality. Metaphysicians seek to understand the real structure and the unity of the world and to catalog the ways in which its parts relate to each other.

In this chapter, we begin with a short history of metaphysics (1.1), followed by a discussion of some reasons why metaphysics matters (1.2). We conclude with some guidance about how best to use this book (1.3).

## 1.1 A Brief History of Metaphysics

Metaphysics is the oldest branch of philosophy. The early, pre-Socratic philosophers of Ionia (off the coast of Turkey) and southern Italy proposed theories about the universal nature of things and about change and the explanations of change. Many of the early philosophers, including Empedocles (c. 490–430 BC) and Democritus (c. 460–370 BC), approached these questions from a materialistic point of view, assuming that wisdom comes primarily from understanding what things are made of. In the fourth century BC, the great Greek philosopher Plato (428/427 or 424/423–348/347 BC) developed a theory of “forms” as a deep explanation for what makes things of a kind similar to each other, as an alternative to the earlier materialism. Plato’s student, Aristotle (384–322 BC), built upon the work of all of his predecessors in creating the first comprehensive and systematic metaphysical theory in a work that acquired (for the first time) the title *Metaphysics*. Aristotle describes his subject as “primary” or “first” philosophy and as the study of being as such. Aristotle examined the nature of change and of powers to change, and he built

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a theory of categories to use in classifying all of the constituents of reality. Like Plato, Aristotle rejected simple materialism and emphasized the qualitative and holistic features of the world, especially of living organisms.

Both Plato and Aristotle founded schools of philosophy, and their students and their students' students extended their philosophical work over many generations. During the Hellenistic period (between the conquests of Alexander and the rise of Rome), three additional major schools of philosophy appeared—the Stoics, the Epicureans, and the Skeptics. Both the Stoics and Epicureans revived a more materialistic approach to understanding life and human action. During the Hellenistic and Roman periods, such metaphysical investigations continued, but gradually attention turned to ethics, politics, and the theory of knowledge (epistemology). The problem of defending the very possibility of knowledge against the challenge of the Skeptics became a major preoccupation, and Plato's Academy began to defend (at least in public) a moderate form of skepticism.

In Late Antiquity and the Middle Ages, philosophical work in the Mediterranean basin and in Europe fell predominantly into the hands of Christians, Jews, and Muslims, and during this period philosophers returned to metaphysics as their central focus. Aristotle's influence grew, as more of his work was translated and commented upon in both Arabic and Latin. The resulting philosophical movement, known as 'scholasticism', achieved the status of being the consensus view for many hundreds of years.

This consensus began to dissolve in the seventeenth and eighteenth centuries, as a result of the success of modern science, which returned in important respects to the materialism of Democritus and the Epicureans. At the same time, the French philosopher René Descartes (1596–1650) re-introduced a fixation on the problem of refuting the skeptics. Descartes recommended answering the skeptics by turning inward, building the foundations of science and philosophy firmly upon the indubitable contents of one's own mind and experience. This inward or subjective turn profoundly affected the course of metaphysics for hundreds of years, leading to the dominance of various forms of *idealism*, according to which all of reality is fundamentally mental or experiential in character.

In the early twentieth century, a number of philosophers began turning away from idealism and from any attempt to build an indubitable foundation for knowledge that would be immune to the challenge of the skeptic. The British philosopher G.E. Moore (1873–1958) argued that our ordinary knowledge of the world is rationally more secure than any skeptical challenge. Ludwig Wittgenstein (1889–1951), an Austrian who made his career in England, pointed out that doubt stands in no less need of justification than does belief. Wittgenstein concluded that skeptical doubts lacked adequate justification. Many philosophers, in Britain, the United States, and continental Europe, argued that science requires no foundation other than that provided by ordinary observations, which embody knowledge about our physical environment. Thus, philosophy began to turn outward again, in a way that supported the revival of more traditional approaches to metaphysics—materialistic, Platonic, and Aristotelian or scholastic.

For a brief period at the end of the nineteenth century and beginning of the twentieth century, metaphysics fell out of favor among philosophers. Some (such as Friedrich Nietzsche (1844–1900), Karl Marx (1818–1883), William James (1842–1910), and Søren Kierkegaard (1813–1855)), because of theories in psychology and cultural studies, raised

doubts about the ability of the metaphysician to escape the prejudices and interests of one's class and time or the idiosyncratic influence of one's personal constitution. Others (such as those in the Vienna Circle and Ludwig Wittgenstein) embraced an extreme empiricism, arguing that all meaningful assertions must be directly verifiable or falsifiable by the senses, a standard which relegated metaphysical theory to the category of the nonsensical. Yet another group limited the task of the philosopher to analyzing the underlying grammar and logic of ordinary language.

But the middle of the twentieth century witnessed one of the most remarkable rebirths in Western philosophy: a dramatic renaissance of interest in pure metaphysical theory. The impetus for this revival came in part from circles that had once been hostile to the metaphysical enterprise and in part from philosophers working within older traditions that had survived despite that hostility. Some philosophers of physics found themselves inquiring into the structure of space, time, and causation in ways that revived ancient debates. Some who had studied the logical structure of ordinary language found that they could not avoid questions about ontology—questions about which sorts of things really exist. Others returned to the Aristotelian and scholastic traditions that had survived. Significant circles of metaphysical research began in the 1940s in Australia, at Oxford and Cambridge, and at Harvard. Logical research that had dominated philosophy in the early twentieth century matured naturally into metaphysical investigations into the nature of possibility and necessity and of time. By the early twenty-first century, metaphysics had reclaimed its place at the very center of philosophy.

## 1.2 Why Do Metaphysics?

The practice of metaphysics is controversial within philosophy itself. This controversy stems from two primary sources: skepticism and pragmatism. Anti-metaphysical skeptics question whether it is possible to reach knowledge or even reasonable opinion about metaphysical questions. Our response to the skeptic is simply that the proof is in the pudding. The best rebuttal of those who claim that metaphysics is impossible is simply to do it.

The pragmatic challenge to metaphysics is perhaps even more widespread. Even if metaphysics is possible, the pragmatist asks, why is it important? There are many more urgent philosophical questions, questions about ethics and politics (the good and the right), and questions of epistemology (what do we know, and how do we know it?).

Our response to the pragmatist is twofold. First, we would argue, with Aristotle, that philosophy begins with a sense of wonder and curiosity about the world, a wonder and a curiosity that inevitably led to puzzling over the metaphysical questions: what sorts of things really exist, and how do these things relate to one another? Much of what we do in science and scholarship generally is motivated by pure curiosity about our selves and our world. Not everything can be evaluated in terms of cash value.

Second, metaphysical questions are relevant to other questions, both in value theory and in epistemology and philosophy of science, as we will argue in this chapter. Even when philosophy is primarily engaged in ethical or epistemological reflection, the issues of metaphysics cannot be avoided.

### 1.2.1 Fatalism and alternative possibilities

The making of decisions is a characteristic feature of human life. Much of our time is consumed in considering and deliberating about what to do, and our emotions are much engaged with questions of the correctness of our past, present, and future choices. The practice of making choices seems to presuppose that the future could take any one of many alternative courses, and that which course it takes is to some extent up to each of us. This presupposition is metaphysical in nature. Suppose that we inhabit the one and only one possible world—that is, suppose that nothing has happened in the past or could happen in the future other than the one way in which things must, of necessity, unfold. On such a fatalistic picture, human decision-making would seem to be pointless and devoid of significance.

If the future is indeed open, this fact would raise further metaphysical questions. How and why is the future open in a way that the past is not? Why does it make sense to deliberate about what to do in the future, but not to deliberate about what to have done in the past? What does the direction of time consist in, and how do we know which direction is which? What does it mean to say that something is possible, impossible or necessary? Are there merely possible things that do not actually exist, but might have existed? These are questions in the area of metaphysics known as *modality*. The underpinnings of modality, dispositions and powers, are discussed in Part II, on dispositions (Chapters 4–6). We turn to the questions of modality proper in Part V, Chapters 14–16.

### 1.2.2 Causation: rights, responsibilities, and knowledge

The practices of deliberation and decision-making also seem to presuppose that we have some kind of influence over future events: that we can, in some cases, cause things to happen or prevent their occurrence. If there were no such causation, then, even if the future were open to many alternatives, much of our deliberating would be pointless, since none of our actions would have consequences. Perhaps things just happen, for no reason whatsoever. Is the impression we have that some things cause other things a mere illusion?

If none of our actions or decisions had consequences, this would have radical implications for our understanding of our moral responsibility. We generally take care to ensure that our actions do not impinge, without adequate justification, on the rights and welfare of others. Whenever we do harm others, we think of ourselves as being under burdens of guilt, remorse, and the obligation to make amends and to compensate our victims. Conversely, we believe that choosing to benefit others creates some reciprocal responsibilities of gratitude and thanksgiving. Without cause and effect, all of these practices would be rendered unintelligible. The nitty-gritty details of causation matter morally. For example, are we morally responsible for the consequences of our omissions? Can omissions have consequences?

Since Edmund Gettier's famous paper (Gettier 1963), most philosophers have accepted that there is a difference between knowledge and justified or reasonably held true belief—knowledge involves some real and non-accidental connection between the act of knowledge and the thing known. In most cases, this connection seems to involve causation:

our sense experience, for example, must be influenced by the features of the object being sensed if it is to constitute perceptual knowledge.

We deal with causation in Part VIII, Chapters 26–28.

### 1.2.3 The foundations of science: laws, space, and time

Some prominent scientists have expressed skepticism about the value and the very possibility of metaphysics, in light of the robust success of the natural sciences. Given the coherent and well-supported account of the world provided by modern physics and cosmology, what is the point of indulging in the archaic practice of metaphysical speculation and argumentation, a practice which provides little evidence of secure forward progress?

However, the very success of modern science itself presses forward certain metaphysical questions. What are the laws of nature that play so prominent a role in modern physics? Are those laws of nature necessary or contingent? Can they themselves be explained by more fundamental facts or are they the rock bottom? David Armstrong (1983, 1993) and Fred Dretske (1977) have argued that an adequate understanding of the laws of nature must consider them to involve objective relations between *universals* (natural properties like mass and charge). Others (Ramsey 1928/1978, Lewis 1973a), following in the tradition of Scottish philosopher David Hume (1711–1776), argue to the contrary that laws consist merely in certain kinds of regularities among particular facts. We consider various theories about the laws of nature in Chapters 4 and 5.

Moreover, the description of reality current in physics is often incomplete or indeterminate with respect to certain unavoidable questions. Are space and time infinitely divisible or are they made up of very small, indivisible units? Are there absolutely fundamental units of matter (electrons, quarks, or whatever) or is every kind of material thing decomposable into still smaller units? Does time itself have an absolute beginning or end? Could the universe be infinite in extent? Are the distinctions between past, present, and future of absolute significance or do they have meaning only in relation to a particular location in space and time or a particular relative velocity? Scientific theories do not typically entail answers to these questions, and yet it seems that, if the world is as science describes it, such questions must have answers. It is the vocation of the metaphysician to tackle such questions as these. We consider these foundational questions about space and time in Part VI, Chapters 17–21.

### 1.2.4 Mind and body

Modern physics has been apparently quite successful in telling us about the fundamental building blocks of matter: electrons, photons, quarks, and all of the associated fields and forces (nuclear, electromagnetic, and gravitational). Human beings and the most characteristic features of our experience and action—conscious experience, feelings and emotions, our sense of free will and agency, the normative standards of reasonableness and morality—play no role in the physicist’s “complete” description of the world. This raises a host of questions about the relationship between what the American philosopher Wilfrid Sellars (1912–1989) called the “manifest image of the world” and its “scientific

image”. (Sellars 1962). Do the personal states of conscious experience, thought, decision, and intention pull any weight in explaining the actual course of events or are they all merely *epiphenomena*, a colorful decoration of a reality that is fully determined (insofar as it is determined at all) by the micro-physical facts? Do the special properties of consciousness somehow “emerge” from the underlying physical facts, introducing some genuine novelty, some “addition of being”? The relation between mind and body arises in two contexts in this book: in Chapter 13 (on idealism and the nature of perception), and in Chapters 22 and 25, on composite things (like persons and sentient organisms).

Many of these questions fall within the scope of the philosophy of mind, but answers to these questions often depend upon prior answers to purely metaphysical questions. If certain events can be accurately described in human terms (psychological and social—normative and rational), what must reality be like in its most fundamental aspects to make these higher level descriptions true? What does it take for complex entities to exist and to have real properties or features? What are properties and features, and what is it for something to *have* them? Is this merely a linguistic matter, a matter of how we describe things or how they appear to us or is the having of properties part of the fundamental constitution of things? The nature of properties is the subject of Chapters 7 and 8.

### 1.2.5 Personal identity and persistence

Are there large, complex, and enduring things or is everything microscopic and fleeting in existence? This classical question of metaphysics has great import in our everyday lives since we ourselves, we human beings, are, if we exist at all, large, complex, and enduring things. If the world consists only of subatomic particles or instantaneous events, then we are all mere fictions or illusions. This of course raises the question: if we are illusions, who is deluded? Are we human beings dreams dreamt by protons and electrons? The ancient African thinker Augustine of Hippo (354–430) and Descartes argued that it is impossible for each of us to be deceived in thinking that he or she exists, since, in order to be deceived, we must first exist.

Further, the unreality of human persons would have profound implications for our lives, since much of what we value in life consists in the qualities of our relationships to other persons. We care about the endurance and maturing of our friendships over time, but this concern would have no real object if human persons themselves never endure beyond a single instant, if what we popularly call a ‘person’ is merely a chain of ephemeral entities.

The foundations for an account of persons and personal identity are laid, first of all, in Chapter 8 on particulars. Since persons and other organisms are apparently complex things, with many material parts, Chapters 22 and 23 (on Composition) are essential to understanding how such composite things can exist. The question of personal identity through time is a special case of persistence, the subject of Chapter 25.

The set of fundamental truths provides us with a complete description of the world in terms of the most basic, irreducible facts. Derived truths can be derived from the set of fundamental truths by means of logic and ontological definitions, definitions specifying in terms of the arrangements of fundamental entities what the existence of derived entities consists in. For example, suppose that tables are not fundamental entities. Then all



truths about tables would be derivable from the fundamental truths—say, truths about the arrangements of bits of wood—given a suitable definition of what it is for some bits of wood to constitute a table. A fundamental thing is something mentioned or referred to in some fundamental truths; derived things show up only in connection to derived truths. We examine the nature of grounding and fundamentality in Chapter 3.

### 1.3 How to Use the Book

**THE TABLE OF METAPHYSICAL THESES AND ANTITHESES** We intend in this book to explore, as completely as possible, the “logical space” of metaphysics: to say at least something about every possible theory on the important questions in metaphysics. We try to present the best arguments for and against each position, as fairly and impartially as we can. Undoubtedly, the careful reader will be able to detect that our own sympathies lie in a broadly Aristotelian region, but we hope that those with more Humean or Platonic sympathies will find little or no grounds for complaint.

We’ve used a unique method of labeling our theses and antitheses in order to represent perspicuously this ongoing ambition. We have listed all of the theses and antitheses of the book (along with the necessary definitions of technical terms) in Appendix A. The theses are numbered first by chapter: so, thesis 3.1T is the first thesis to be considered in Chapter 3. The negation of 3.1T is labeled ‘3.1A,’ with the letter ‘A’ indicating that it is the antithesis of the thesis 3.1T. Thesis 3.2T is the second major thesis considered in Chapter 3, and 3.2A is its antithesis.

Metaphysical theories that adopt a particular position on one of the theses or antitheses can often be usefully subdivided, depending upon the stance that they take on some subsidiary issue. So, for example, the antithesis 13.3A, perceptual realism, is divided into two sub-theories: indirect realism (13.3A.1T) and its antithesis, direct realism (13.3A.1A). Direct realism is further subdivided into perceptual dualism (13.3A.1A.1T) and unitary direct realism (13.3A.1A.1A):

13.3A Perceptual Realism.

13.3A.1T Indirect Realism.

13.3A.1A Direct Realism.

13.3A.1A.1T Perceptual Dualism.

13.3A.1A.1A Unitary Direct Realism.

In other cases, the metaphysical theories that share a common commitment cannot be simply divided in a binary way, based on their position on some one subsidiary issue. Instead, there may be three or more different ways of making a given position more determinate. In those cases, we follow the name of a thesis with a period and a numeral (1, 2, 3, or 4), without adding any additional T’s or A’s. For example, we break down Reductive Nominalism (8.1T) into four sub-theories:

8.1T.1 Predicate Nominalism

8.1T.2 Concept Nominalism

8.1T.3 Class Nominalism

8.1T.4 Resemblance Nominalism

**THE TABLE OF METAPHYSICAL PRINCIPLES** A second ambition that we have for the book is to keep track with great care the metaphysical first principles that we appeal to in developing arguments for or against a particular position. We have listed all of the metaphysical principles that appear in more than one section of the book in Appendix B. The principles are divided into six major categories: principles of methodology (PMeth 1 through 4), principles of knowledge or epistemology (PEpist 1 through 5), principles of truth (PTruth 1 and 2), principles of metaphysics (PMeta 1 through 6), principles of natural philosophy (PNatPhil 1 and 2), and axioms of mereology, the formal theory of parts and wholes (MA 1 through 6), for a grand total of 25 principles. Some of the principles take more than one form or are associated with a number of corollaries. The first principle of methodology, Ockham's Razor, has six corollaries (and one addendum), while the second principle, scientific realism, takes two distinct forms, objectivity (PMeth 2.1) and reliability (PMeth 2.2).

There are also a number of other first principles that occur only once in the text: these are always given a name (distinguished by boldface type). Chapter 29, the final chapter, includes a table in which the principles appealed to by each of four philosophical "packages" are listed. The four packages, Aristotelian, Ludovician (for David Lewis), Fortibrachian (for David Armstrong), and Flatlander (for Quine, Chisholm, Plantinga, and van Inwagen), represent bundles of philosophical theses and antitheses that cohere together naturally in terms of their rationales and methodological commitments, as the table helps to reveal.

**THE ORGANIZATION OF THE BOOK** This book is divided into eight parts, with a total of 29 chapters. The first three chapters, including this one, are introductory in character. Chapters 2 and 3 introduce the two notions of *truthmaking* and of *grounding*, ideas that lie at the heart of a significant number of metaphysical projects. They can be skipped by those who are willing to plunge into the project of positive metaphysics, armed only with an intuitive grasp of such notions as something's making a proposition true, or of one truth holding in virtue of or wholly grounded by another. The chapters provide useful details about the methodological foundations of much of the rest of the text.

Part II comprises three chapters, each developing an account of dispositions: conditionals (Chapter 4), laws of nature (Chapter 5), and intrinsic powers (Chapter 6). This part is really foundational for the rest of the book and cannot be omitted.

After completing Chapter 6, the reader can take a number of different paths. Part III, on universals and particulars, is largely independent of the rest of the book, as is Part IV, on the scope of existence and the question of idealism. Parts V and VI, on modality (possibility and necessity) and space and time, are highly interdependent and should ideally be read as a unity. The final two parts, VII (on the unity of things) and VIII (on causation), depend on much of what has gone before them and should be read at the end, as should the conclusion, Chapter 29.

We have also written a much shorter introduction to metaphysics, *Metaphysics: The Fundamentals* (Wiley-Blackwell 2015), which could serve very well as an introduction and orientation to this volume. In almost every case where there is overlap between the two volumes, we go into more detail and consider more theoretical alternatives in this volume. Our discussions in Part IV and of the structure of space and the nature of causation are almost entirely without precedent in the earlier work. *Metaphysics: The*

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*Fundamentals* contains a final chapter (“The Concluding Unmetaphysical Postscript”) in which we defend metaphysics against various skeptical challenges. We assume, in this volume, that our reader has already exorcised such skeptical demons.

To return to the organization of this volume, in Part III, we turn to four chapters on the ancient problems of universals and particulars. Chapter 7 includes our treatment of the arguments for and against the existence of *universals*—things that are common to things that are similar to one another. Chapter 8 examines the alternative view of Nominalism, according to which everything real is particular and unshareable, including the form of Nominalism that posits individualized properties or *tropes*. In Chapter 9, we consider the internal constitution of ordinary things and the ways in which they can be distinguished from one another. We take up the special case of relational and quantitative properties in Chapter 10.

Part IV includes three chapters in which we consider theories about the nature of reality as a whole. We look first (in Chapter 11) to the question of how many things exist: none, one or more than one? Then, we consider (in Chapter 12) the place in reality of the non-existent, the merely possible, and the impossible. Finally, we examine (in Chapter 13) the case for supposing that all of reality is fundamentally mental or *ideal* by looking carefully at the structure of human sense perception.

In Part V, we take up the questions of *modality*: necessity, possibility, contingency, and actuality. Chapter 14 contains our treatment of David Lewis’s theory of possible worlds as concrete, material universes. In Chapter 15, we examine the opposing view, according to which possible worlds are abstract representations, properties or states of affairs. Chapter 16 concerns the problems of *de re* possibility, the realm of possibility that concerns the potentialities of particular things rather than of the whole world, and of our knowledge of modality.

We deal in Part VI with the nature of space and time, with two chapters devoted to space and three to time. In Chapter 17, we consider whether space is a thing in its own right or whether it consists merely in the holding of spatial relations between bodies. We look in Chapter 18 at the structure of space: whether it consists fundamentally in dimensionless points or in extended regions. In Chapter 19, we ask similar questions about the structure of time: does it consist primarily of durationless instants or in extended periods? Chapters 20 and 21 concern two competing theories about the flow or passage of time, the A and B Theories. According to the A Theory, the differences between past, present, and future are absolute and fundamental, while for the B Theory the differences consist entirely in differences in one’s perspective from within time.

In Part VII, we take up the question of the unity of things, both at one time and through time. Chapters 22 and 23 concern the unity of composite things, things made up at a single time of many distinct parts. When do things make up a single whole (Chapter 22), and what is it for them to do so (Chapter 23)? The next two chapters concern the unity of things that persist through change and time. We take up the nature of change in Chapter 24 and the nature of those things that persist through change in Chapter 25.

The final part, Part VIII, concerns the metaphysical problems of causation. In Chapter 26, we consider the question of whether causation exists at all. Assuming there is such a thing as causation, we must then consider what things does causation relate: truths or concrete events? Is it a relation between existing things or merely a logical relation between truths (Chapter 27)? Finally, we examine the relations between causation and

time in Chapter 28. How do earlier events influence later ones: by a direct connection across time, or by being part of a single, temporally extended process?

The book concludes with Chapter 29, in which we describe the four competing philosophical packages that have emerged in the course of the rest of the work.

Importantly, the reader should be aware that the divisions in the book are not meant to demarcate disconnected sub-fields of metaphysics, but are rather helpful divisions that make the metaphysical task a bit more manageable. One's views in one area can impact one's views in another; we do our best to make those connections clear when they are especially important. Further, and maybe more importantly, there are rarely if ever deductive arguments with unassailable premises for or against a metaphysical position. What one is faced with, rather, is a stock of evidence that one must weigh in order to form a considered opinion. Therefore, one must not only think about the evidence for and against a particular system but also make comparative judgments about which system does best on the evidence taken together. This is very difficult to do well, especially in light of the explosion of activity in metaphysics in recent years, and the interconnect-edness of the various regions in that sprawl.

There are two important consequences of this picture of metaphysics. First, the reader who has yet to form views in one or another area would do well to abstain from forming an opinion in that area until she has fully digested the connections to other areas and the strengths and weaknesses of views there. And second, despite the length of this book, we have been unable to carry every dispute to its furthest boundaries. We truncate the journey, sometimes by a good deal, in almost every direction. For those readers committed to a view that is underexplored or shortchanged, we ask your forgiveness.