

Time, change and freedom

An introduction to metaphysics

Quentin Smith
and L.Nathan Oaklander



London and New York

Contents

	Introduction by <i>Quentin Smith</i>	vii
Part I	The finite and the infinite <i>Quentin Smith</i>	
Dialogue 1	The beginning of time	2
Dialogue 2	The infinity of past and future time	14
Dialogue 3	The relational and substantival theories of time	30
Dialogue 4	Eternity	40
Part II	Time and identity <i>L.Nathan Oaklander</i>	
Dialogue 5	The problem of change	51
Dialogue 6	The passage of time	60
Dialogue 7	Personal identity	91
Dialogue 8	Personal identity and time	108
Part III	The nature of freedom <i>L.Nathan Oaklander</i>	
Dialogue 9	Fatalism and tenseless time	119
Dialogue 10	God, time and freedom	133
Dialogue 11	Freedom, determinism and responsibility	148
Appendix	Physical time and the universe <i>Quentin Smith</i>	163
Section A	Physical time in Einstein's Special Theory of Relativity	165
Section B	Physical time in current cosmologies	183
	Index	210

Introduction

Quentin Smith

The word “metaphysics” has become a part of popular culture and almost everybody thinks they know what “metaphysics” means. This is unfortunate for philosophers, for the popular meaning of “metaphysics” is very different from the philosophical meaning. Popular metaphysics deals with such topics as “out-of-the-body experiences,” levitation, astral projections, telepathy, clairvoyance, reincarnation, spirit worlds, astrology, crystal healing, communion with the dead and other such topics. Popular metaphysics consists of notions that for the most part are inconsistent with science or reason. Private and unverifiable experiences, fanciful speculations, hallucinations, ignorance of science and the misuse of logical principles are typical of the ingredients found in popular metaphysics. Given the difficulty and the enormous time and effort it requires to think in a logically systematic way and to understand current science, it is not surprising that more people are attracted to popular metaphysics than to philosophical metaphysics.

Philosophical metaphysics, the subject of this book, is at the far end of the spectrum from popular metaphysics. Philosophical metaphysics is both consistent with, and in part based upon, current scientific theory, and it uses logical argumentation to arrive at its results. For example, if current science informs us that the universe began to exist 15 billion years ago with an explosion called “the big bang,” then metaphysics will take this theory into account in formulating theories about the beginning of time and the universe. Moreover, philosophical metaphysics takes logical consistency as a necessary condition of truth. In popular metaphysics, one can say “I don’t care if there is a logical disproof of my theory; I still believe my theory because I feel in my heart that it is true.” But one cannot get away with this in philosophical metaphysics; if one’s theory has been shown to be logically self-contradictory, then one abandons the theory.

Philosophical metaphysics aims to answer two sorts of questions: (1) What is the basic nature of reality and what are the basic kinds of items that make up reality? (2) Why does the universe exist?

The question about the basic nature of reality has usually been called “ontology,” after the Greek word *ontos* (beings). Ontology is the study of beings, the study of What Is. The question about why the universe exists has for centuries been regulated to a second area of metaphysics, “philosophical theology,” after the Greek work *theos* for divinity. In the present book on *Time, Change and Freedom* we shall deal with ontology. In another volume, *Theism, Atheism and Big Bang Cosmology*, by W.L.Craig and Q.Smith,¹ philosophical theology is addressed, the study of why the universe exists and whether or not there are reasons to believe there is a divinity. In this second volume, I have shown that there can be an answer to the metaphysical question, “Why does the universe exist?” that does not appeal to any divinity, but to certain laws of nature, such as the laws of nature that Stephen Hawking has discussed in his book, *A Brief History of Time*.² Since the question of why the universe exists has been for centuries associated with the question of whether God exists, it has come to seem natural to associate the words “philosophical theology” with this branch of metaphysics. A more neutral title of this branch might be “explanative metaphysics,” the branch of metaphysics that attempts to determine if there is an explanation of why the universe exists.

The present volume is on ontology. What are the general features of reality, what sorts of beings make up reality and how are the various sorts of beings related to each other? From the very beginning, time has played a central role in ontological studies. Perhaps the earliest influential metaphysical theory was Plato’s. Plato divided reality into two sorts, depending on how it stood in relation to time. For Plato, true being or full being belongs to the everlasting, the permanent, whereas imperfect being, the impermanent, belongs to the realm of what comes to be and passes away in time. This reliance on time to divide basic categories of being became even more prominent in medieval metaphysics, where concepts related to time, specifically eternity, were understood as the paradigm of being itself. “To be” in the full and perfect sense is to be eternal, and anything else “is” at all only to the extent that it imitates the eternal mode of being. With modern thinking, we find less emphasis on eternity, but more emphasis on time as the central feature of reality. We find Kant saying that time is the fundamental way in which the mind understands reality, and in twentieth-century existential theory we find Heidegger saying that time is the meaning of Being itself.

Time plays an equally fundamental role in twentieth-century analytic metaphysics, which is the metaphysical tradition to which the present book belongs. We shall take time as the key to our entry into metaphysics and as the unifying theme of our discussions of the various sorts of beings. The understanding of the nature of substances, events,

persons, changes, eternity, divine foreknowledge, fatalism, the universe, all require that we understand how these kinds of items are characterized in terms of their temporal characteristics or their relation to time. If we want to understand the universe, we want to know if time began to exist or whether the past is infinite. If the universe began to exist, can there be empty time that elapsed before the universe came into existence? Questions about everyday objects also involve temporal notions. The understanding of things, events, changes, personal identity, free will and the like also requires an understanding of their relation to time. For example, a substance (such as a table) is a thing that endures through successive times, whereas an event is often understood as a substance possessing a property at a certain time. A change is a substance having one property at one time and losing that property at a later time. Metaphysical issues about freedom also involve time; for example, the question about whether we have free will and about whether we are “fated” to live our future lives in a certain way depends on how present time is related to future time. Indeed, the very questions, “What is reality?” or “What is being?” cannot be answered without bringing in the notion of time. For example, does reality consist only of the fleeting present, what is occurring now? Or is reality extended into the future and the past, such that the future and the past are equally as real as any time we choose to call “the present”? Furthermore, does reality divide into two realms, the eternal and the temporal, or does reality consist only of time and its occupants?

These and other metaphysical questions are addressed in the three parts of this book and the [Appendix](#).

[Part I](#) has the title “The finite and the infinite” and deals with issues pertaining to the finitude or infinitude of time. [Dialogue 1](#) discusses the beginning of time; [Dialogue 2](#), infinite past and future time, and [Dialogue 3](#), the question of whether time consists merely of the events in the universe or is an independent “substantial” reality that would continue to “flow on” even if there were no events. In [Dialogue 4](#), we shall consider several definitions of divine eternity and discuss whether or not it is possible for there to be an eternal being.

In [Part II](#), “Time and identity,” we shall turn to issues of change, temporal passage and personal identity. Things persist and retain their identity through time and change. But what is identity through time? What is change? These questions are addressed in [Dialogue 5](#). [Dialogue 6](#) on the passage of time addresses the issue of whether The Present is the sole reality or whether all times (be they 500BC, 1994 or 1999) are equally real. [Dialogues 7](#) and [8](#) are about the nature of personal identity and how personal identity is related to time.

In [Part III](#), “The nature of freedom,” three issues about freedom are discussed. In [Dialogue 9](#), there is a discussion of whether or not we are

fated to live our future lives in a certain way. [Dialogue 10](#) considers if it is possible for us to make free choices if God exists and foreknows every choice we will make. In [Dialogue 11](#), there is a discussion of whether or not all our decisions are caused by past events and, if so, whether that is compatible with our decisions being “free” in some sense.

The [Appendix](#), “Physical time and the universe,” addresses topics that are closely related to current scientific theories, especially Einstein’s Theory of Relativity and current cosmological theories. Physics, and especially physical cosmology, has developed extensive theories about time and the universe that are confirmed by the observational evidence. The task of the metaphysician is to interpret the significance of the physicist’s equations for an understanding of time and the universe. Many of the most unusual, or possible, features of the universe are originally based on physical theories rather than purely philosophical theories. We shall analyze the meaning of the scientific theories of time-travel into the past, of splitting universes, theories that our universe occupies a time series that branches off from a background “trunk-time,” that time could be closed like a circle, that what is real and present is relative to one’s reference frame, and related topics.

What will the reader learn from this book on metaphysics? The reader will not learn something in the same sense that she might in reading a textbook on chemistry or biology. There is no established body of knowledge in metaphysics. On virtually every subject, there is widespread disagreement among metaphysicians. One reason for this difference between science and metaphysics is that scientific theories lead to predictions of observations that can be used to settle disputes. For example, if one theory predicts that the earth revolves around the sun, and another theory predicts that the sun revolves around the earth, then there is a way to resolve the dispute, for example, by observing the sun and earth from the vantage point of a rocket in outer space. However, the subjects that are studied in metaphysics do not lead to predictions of observations and consequently, disputants in this field must rely on logical argument from premises and try to demonstrate logical fallacies in the argument of their opponent. The opponent typically responds by arguing that some of the premises are false, or by claiming that the conclusion does not follow from the premises, or by revising his own theory to render it immune to the argument. This process of argument and counterargument tends to go on indefinitely; consequently, progress in metaphysics is measured not by definitive results but by the increasing sophistication of the theories that defenders of opposing positions develop.

But this is not to say that there are no right answers in metaphysics. There are right answers, but the issues are so complex and difficult to resolve that it is extremely hard for us humans— fallible products of

evolution that we are—to arrive at definitive and universally accepted answers to the questions. Perhaps the problem is that the human species is intelligent enough to ask metaphysical questions and to develop arguments for certain metaphysical positions, but not intelligent enough to provide definitive answers to these questions. Some may conclude from this that we should concentrate on questions that are easier to answer, such as scientific questions, but this conclusion is unworkable. It is unworkable because *we cannot help but adopt and live by various metaphysical beliefs*. For example, we must live as if there is an eternal God or as if all that exists is matter and organisms that exist in time. And we must live as if we have free will or as if we are “fated” to do everything we do. Metaphysics deals with the rock-bottom issues that no one can escape, unless they live their lives in a coma. The only choice is to adopt a sophisticated and well thought out metaphysical theory or to accept glib and simpleminded answers to the questions. The point of this book is to stimulate the reader to develop a well thought out metaphysical theory on the various metaphysical topics discussed in this book. What will be *learned* from this book is not a body of truths but rather a set of arguments and counterarguments for various metaphysical positions. For example, the reader will learn some of the main arguments for the thesis that we have free will and some of the main arguments that we do not have free will. We hope that the reader will assess these arguments and counterarguments on her own and try to make up her own mind on each of the issues.

The disputational nature of metaphysics explains why we have adopted a dialogue form for [Parts I to III](#) of this book. A dialogue presents metaphysics in its true nature, as a sustained debate between opposing philosophers on each of the various metaphysical topics. To present arguments for only one side of the issue, as do many metaphysical books, creates an impression of bias and disguises the truly controversial nature of the subjects.

However, we do not use the dialogue form in the [Appendix](#). The [Appendix](#) explains, interprets and draws conclusions from Einstein’s Theory of Relativity and current physical cosmology. As we draw closer to the sciences, there is less room for debate and disagreement. There is widespread agreement about the fundamentals of Einstein’s theory and hence a dialogue or debate form would be inappropriate for explaining his theory. There may be some disagreement about how to interpret Einstein’s theories, but these disagreements are not so pervasive and intractable that a dialogue and debate format is required. Thus, the [Appendix](#) is an expository essay that lays out the fundamentals of Einstein’s theory and contemporary physical cosmology and discusses the metaphysical implications of these ideas.

This book aims to present original theories we have developed and yet at the same time be accessible to beginners in the field. The new theories advanced will make it of interest to philosophy professors and graduate students, and its accessibility to beginners will make it suitable for use by the general public and in undergraduate courses on metaphysics, philosophy of science and the introduction to philosophy. In an effort to make the book as accessible as possible, we have placed a glossary, study questions and suggestions for further reading at the end of each dialogue and at the end of the [Appendix](#). We have provided the diving board, but once the reader takes the dive into the abyss of metaphysical complexities, the reader's own reasoning powers will be the only guide. The rational struggle for metaphysical truth is a struggle unto death and perhaps the one absolutely certain metaphysical thesis is that death—after allowing us to skirmish for a brief while—will proclaim its silent victory. But the time is not yet, so let us enter the skirmish.

NOTES

- 1 W.L.Craig and Q.Smith (1993) *Theism, Atheism and Big Bang Cosmology*, Oxford: Oxford University Press.
- 2 Stephen Hawking (1988) *A Brief History of Time*, New York: Bantam Books.

Dialogue 10

God, time and freedom

SOPHIA: Several of the topics we have discussed over the past few days are connected to an issue that has puzzled me quite a bit recently.

IVAN: What issue is that?

SOPHIA: It is really a whole host of issues which can be conveniently summarized under the rubric, the dilemma of human freedom and God's knowledge of the future (called "divine foreknowledge").

PHIL: Could you explain the dilemma to us?

SOPHIA: Yes, but before I do I want to explain why it is such an important topic for those who have ever pondered the question, "Does God exist?"

PHIL: Go ahead.

SOPHIA: Philosophers have wondered how divine foreknowledge and human freedom could be compatible, and if they are not compatible the existence of God is in serious jeopardy.

PHIL: Why would the incompatibility of foreknowledge and freedom cast doubt on the existence of God?

SOPHIA: For one thing, God is defined, in part, as omniscient and therefore, whatever there is to know, God knows it. Thus, if it turns out that there are truths about reality, such as, "I will play with my children tonight" that God did not know, then God would not be God. After all, God knows all, so he must know what I will do and when I will do it. He must know not only what I will do tonight, but what I will do tomorrow, and every day, hour and minute thereafter. If God didn't have such knowledge then God would not be omniscient, and if God lacked omniscience then he (or she) would not exist.

PHIL: Agreed. God is essentially omniscient.

SOPHIA: It is also evident that if God exists, then humans must possess freedom of the will. The reason for this stems directly from the

need for humanly free agents in virtually all solutions to the problem of evil.

PHIL: Could you quickly run through the problem of evil and explain why free will is necessary for its resolution?

SOPHIA: According to the problem of evil, at least in its simplest form, the existence of God and the existence of evil are incompatible. For if an all-perfect God created the universe, then presumably his creation would be perfect. For how could a perfect artisan create something that was imperfect? Any imperfection in the creation would reflect some defect in its creator, but God is without defect. Therefore, it would seem to follow that if God exists, and created the universe, then the universe must be perfect. And yet, God's creation (the universe) is not perfect. Leaving aside natural evil, or the human suffering that is the result of natural disasters such as earthquakes, famine, tornados, floods and the like, it is clear that there is moral evil. Moral evil is the pain and suffering that results from humans inflicting evil upon one another. Given that the universe is not perfect, it seems to follow that God is not the all-perfect creator of the universe. Since, however, God is defined as the all-perfect creator of the universe, we appear to be forced to the conclusion that God does not exist.

PHIL: Aren't there many ways out of this argument?

SOPHIA: Yes, but the most prevalent is the free will solution. According to it, the evil found in the universe is not the result of God. Rather, it is due to the misuse of a faculty that God has given us, namely, the faculty of *free will*. Thus, human freedom is essential for those who try to make sense of evil in a universe created by an all-good God. So, if God is to exist as an all-knowing, all-good being, the universe must contain humanly free agents, and God must have foreknowledge of how humanly free agents will act. In short, both divine foreknowledge and human freedom are necessary for the existence of God.

IVAN: I see, but tell me what difficulties arise when we begin to reflect on the conceptions of foreknowledge and freedom.

SOPHIA: One is that divine foreknowledge and human freedom are incompatible. In other words, if God knows what we are going to do before we do it, then our actions are not free. But if our actions are free, then God could not have known them before they occur.

PHIL: You are going to have to explain why there is an incompatibility because I don't see it. I know you will listen to

what I have to say until I am finished talking, but it hardly follows from my knowing what you will do, that your listening to me is not free. To know that something will take place is not the same thing as determining or causing it to happen. Why, then, are you worried about the compatibility of God's foreknowledge and human free will?

SOPHIA: In part because of the great difference that exists between God's knowledge of what I will do and your knowledge of what I will do. You *can*, but God *cannot* be mistaken. For all you *know* I could decide not to continue listening to you. At any time I could walk out of the room while you are talking, and if I do then you did not really have knowledge of my future action at all. I do not doubt that your very rational and highly probable (but possibly mistaken) belief that I will continue to listen is compatible with my action being free. What I do doubt is whether or not God's *infallible*, unmistakably true belief of what I will do in the future is compatible with my future actions being free.

IVAN: Why does that puzzle you? Why do you think God's infallible knowledge would render human freedom illusory?

SOPHIA: In order to answer this question we need to define some terms. Let's begin with the notion of "freedom." There are two different conceptions of human freedom that we need to distinguish. According to the first, an individual freely chooses to perform an action A when the individual wants to do action A, and there is nothing that prevents her from doing A. On this conception, to act freely involves nothing more and nothing less than acting in accordance with what one wishes, wants or chooses to do. Thus, if I want to leave the room, but am compelled to remain (because I am suddenly tied up!), then my staying in the room is not a free action, but if I want to leave the room and nobody prevents me from doing so, then my action is free.

IVAN: That is one notion of freedom, but it differs from the one we considered when we were discussing the topic of fatalism. If you remember, yesterday we were assuming that a human action is free only if at the time just before we do it, it is in our power to do otherwise. For example, I am now talking with you of my own free will because I choose to talk to you. But it was in my power not to have this conversation, since a moment ago I could have decided to do something else, say, go out for a jog. Indeed, at any time during our

conversation it is within my power to stop talking, and for that reason my talking to you now may be said to be done freely.

SOPHIA: This seems to be a somewhat stronger notion of freedom, since I may be doing what I want and yet not have the power to do otherwise. For example, I may have chosen to stay here and talk to you, but unbeknownst to me the door to the room is bolted shut, so I could not leave the room even if I wanted. In this case, since it is physically impossible for me to leave the room, we might plausibly maintain my remaining is not a free action, even though I am doing what I want.

IVAN: Suppose we assume that the power to do otherwise is necessary for human freedom. Why is that conception of freedom incompatible with divine foreknowledge?

SOPHIA: To see why we need to consider another definition. Suppose we define God's omniscience, his all-knowingness, in the following way: for any proposition *P*, God knows whether *P* is true or false. Thus, for any proposition about the past (e.g., I awoke at 7:30 a.m., August 1, 1993), the present (I am talking to Ivan at 2:00 p.m., August 1, 1994) or the future (e.g., I will give an exam in Phl. 101 on October 3, 1995), God knows whether it is true or false.

IVAN: That seems plausible enough. If God really knows everything, then he must know what *has* happened, what *is* happening and what *will* happen. To limit God's knowledge in any way would be an imperfection, but God is an all-perfect being. Thus, if God is omniscient, then God knows the truth or falsity of every proposition.

SOPHIA: Finally, we need an intuitively obvious assumption about the past, namely, that the past is not in our power to change. Thus, if something has already happened then humanly free agents such as you and I do not have it within our power to undo it. For example, having awoken at 7:30 a.m., it is no longer possible that I could have I awoken at 7:00 a.m.. This assumption is expressed colloquially by the expression, "Don't cry over spilt milk." Since the past is closed or fixed, we can regret our past actions and feel pride over our past accomplishments, but we cannot change them.

STEVE: Yes, the past is closed but the future is open. We can change it, or rather we can make it what we want it to be by our free choices. Admittedly, once we actually make a choice, some of our possibilities for the future are gone, but the choice of what possibilities to actualize is, to a great extent, up to us.

SOPHIA: It does seem reasonable to think that way, and I can't help believing that it is true. Nevertheless, on the basis of the definitions and assumption just mentioned, there is reason to believe that we do not have free will.

IVAN: What is the argument?

SOPHIA: I want to get it right, so I hope you do not mind if I explain it in a series of steps.

IVAN: Go right ahead. Perhaps you could put it on the blackboard.

SOPHIA: OK. Here it is:

- 1 Since God is omniscient, he now knows, at 10:00 a.m., January 27, 1993 (t_1) that I will stop talking at 11:00 a.m. January 28, 1993 (t_3). In other words, *before* I complete this conversation, it is a *fact* that God *knows* that I will stop talking at t_3 .
- 2 If, however, I am really free at t_2 (that is, if I could do something other than stop talking at t_3), then it is within my power to bring it about that what God knows is false, or it is within my power to change the past, by annulling a fact about the past, namely, that at t_1 God knew that I would stop talking at t_3 .
- 3 But neither of those possibilities is acceptable. Since God is omniscient he cannot make mistakes (or hold false beliefs) about what he foresees in the future. And since the past is fixed, it is not within my power to do other than what, as a matter of past fact, God knew I would do.
- 4 Thus, on the reasonable assumption that God's omniscience implies foreknowledge of human actions, it follows that neither I, nor any other humanly "free" agent, has it within their power to do anything other than what God knows we will do.

In short, if God knows *before* I perform a certain action what action I will perform, then it is not in my power to perform any other action than the one he knows. For I can neither render God's knowledge, his true justified beliefs, erroneous, nor can I, at t_3 , change what he knows at t_1 , since to do so would be to change the past and that is impossible. Thus, either human freedom is an illusion (or we must understand it differently), or God is not omniscient (or we must understand it differently).

IVAN: So what you are saying amounts to this: if at a certain past time (t_1) God truly believes that I would do X at t_3 , then I do not have it within my power to do otherwise. For, at t_2 it is already a fact that God truly believes that I will do X at t_3 . It became a fact (at t_1) when he believed it, and once something is a fact it is always a fact. This follows from the assumption

that the past is closed, fixed and unalterable. If, however, neither I nor anyone else has the power to change facts about the past, I cannot do other than what God knew that I would do. Given that the ability to do otherwise is a condition of freedom, it follows from this argument that I am not free.

SOPHIA: Yes, that is one way of formulating the difficulty. Shall we consider some attempts to resolve it?

IVAN: Yes.

SOPHIA: Boethius, Aquinas and others have claimed that God is eternal, meaning that he exists outside of time. On their view God does not, strictly speaking, have foreknowledge. Foreknowledge presupposes that God knows what we will do *before* we do it, but if God is outside of time then God sees and knows everything timelessly. We could say that he sees everything as we see the present, but from the fact that I am now seeing you listen to me it does not follow that you have not freely chosen to listen. In other words, since my perception of you as listening is compatible with your previously having the power to not listen, my present perception of you listening is compatible with human freedom. And since God sees all of history as present, God's seeing what I will do is compatible with my freely having chosen to do it.

PHIL: Let me see if I get it. Boethius argued, in effect, that divine *foreknowledge is a misnomer*. God is all-knowing, but he does not have foreknowledge because he is *not in time*. God's eternity is not an everlasting eternity (always has and always will exist), but God's eternity is *timeless, outside of time altogether*. Thomas Aquinas, who thought God was eternal, expressed this view by saying: "He who goes along the road does not see those who come after him; whereas he who sees the whole road from a height sees at once all those traveling on it."¹ In other words, what is for us the future, and known only as we make our way towards it, is for God a part of the entire temporal history of the universe which he sees all at once.

Viewing God's relation to time, and the sequence of events in time in this way provides a solution to the problem of divine foreknowledge and human freedom. For the fact that some action is known in the present, when it is occurring, has no tendency to show that it was not done freely. If I now see a student walk into the classroom, that in no way implies that she was not free to do otherwise the moment before she entered. Similarly, God's seeing what I will do in the future is

analogous to my seeing what you are doing in the present, and so does not curtail freedom of action.

SOPHIA: That's the view exactly.

IVAN: Boethius's solution raises many interesting questions, the most pressing of which is whether or not a consistent interpretation of God's *timeless* eternity can be given. For clearly, if God does not exist outside of time, then this particular solution will not work. Unfortunately, our discussion of a few days ago cast considerable doubt on the possibility of understanding God's eternity to be timeless.

PHIL: I also wonder if this conception of God's eternity can be reconciled with the tensed theory of time, according to which those events which are NOW have a special ontological status. After all, if God sees all events at once, how can the ontological distinctions between past, present and future events be preserved? Furthermore, if God sees the history of the universe in one timeless act, how can he know which ones are happening *now*, and without such knowledge how can God be omniscient?

SOPHIA: The questions you raise are certainly worthy of discussion, and they bring to mind another problem with Boethius's view.

ALICE: What problem do you have in mind?

SOPHIA: Clearly, Boethius's solution rests on an analogy between what is presented or seen by humans and what is seen by God, but the analogy is faulty. What is presented to humans is *temporally present*; it is (roughly) *simultaneous* with the act of seeing. However, what is presented in God's timeless act of seeing is not temporally present. Thus, there is a fundamental disanalogy between what God perceives as a (never-changing) present, and what humans perceive as an (always-changing) present.

What's worse, suppose the analogy were correct, so that what God perceives is temporally present. In that case, since God perceives all of time, it would follow that all of time, that is, all of the events in the history of the universe, would exist NOW and that is absurd.

PHIL: If your reasoning is sound then the Boethian view does seem to be faced with a dilemma which could be put this way: either God's perception of total world history is analogous to our perception of presently existing events or it is not. If it is not, then it is unclear why God's (timeless) perception of human actions should be thought to solve the foreknowledge dilemma. On the other hand, if it is analogous then it follows

that what is presented to God is either simultaneous with his act of presentation or possesses the property of *being present* (or both). And that is absurd, since it implies that the entire course of history is occurring NOW. Perhaps there is a plausible interpretation of the Boethian view, but as it stands I find it unacceptable.

IVAN: If the Boethian solution is inadequate, what is to be done? Maybe there is some way to preserve the compatibility of God's omniscience and human freedom if we maintain that God's eternity is a temporal eternity.

SOPHIA: There is one solution that is a bit radical, but worth mentioning. It assumes God's eternity is temporal, and it brings into focus an alleged connection between the foreknowledge issue and the nature of time.

IVAN: What solution is that?

SOPHIA: Before I spell it out, let me put the dilemma of freedom and foreknowledge in a slightly different light so as to bring out more clearly its connection to issues in time.

IVAN: Fine, go ahead.

SOPHIA: Suppose we conceive of God's foreknowledge as involving a telescope that allows God to peer into the future and observe what we will do before we do it. In other words, just as God can see what has occurred, and what is now occurring, he can see what will occur. It has appeared to some that if God had foreknowledge in this sense, then the future, like the past, would *fully exist*, and thus be closed, fixed and unalterable. In that case, however, human freedom would be lost. On the other hand, if we are free then arguably the future must be an open realm of possibilities that have no actual reality until the time some of them come into existence.

IVAN: I think I see your point. Suppose we look at it this way. Human freedom and responsibility require there be a fundamental difference between the past and the future: the future must be open and the past closed. According to J.R.Lucas, for example, only the tensed view of time which treats the past as fixed and the future as open

allows for freedom and responsibility and creativity, and since they [our past deeds] cannot be undone or conjured out of existence, it acknowledges the everlasting significance of our deeds...We are by our decisions in the face of other men's actions and chance circumstances weaving the web of history on the loom of natural necessity. What is already

woven *is* part of the fabric of the universe, but what is still unweaved has as yet no substantial reality.²

SOPHIA: That sounds right. If we are assuming that freedom demands an open future, the dilemma of reconciling divine foreknowledge and human freedom may be stated this way. How can God have foreknowledge of an open future (that is, of what as yet does not belong to reality), if, at present, the future is nothing more than a set of possibilities, “nothing substantial,” but only a “species of unreality.” Put differently, if the future does not yet exist, and the telescope into the future through which God looks can yield nothing definite, but only an indefinite number of possible futures, how can God know what I or anyone else will *actually* do? And without such knowledge how can God be the all-knowing being he or she is supposed to be? On the other hand, if the future does exist, God can know it; but then how can we be free to create it?

ALICE: I think I see the problem now. Freedom requires that the future does not (yet) belong to the sum total of reality, whereas divine foreknowledge requires that the future does already belong to the sum total of reality. Thus, freedom excludes foreknowledge and foreknowledge excludes freedom.

SOPHIA: Yes, that’s it. There have been a variety of solutions that have been offered to this version of foreknowledge dilemma, but let me just mention two.

IVAN: What are they?

SOPHIA: One interesting view, a secular version of which was championed by Aristotle, shares with the Boethian solution the idea that God does not have foreknowledge. On this view, God does not have foreknowledge because the future does not exist and so there is nothing about the future for God to know. God exists in time, and knows the truth or falsity of all propositions about the present and the past. However, propositions about the future, such as “I will go to the movies tomorrow,” are neither true nor false (and so are not known by God), because there is nothing in reality for them to correspond to.

IVAN: Doesn’t this view come in conflict with the belief in God’s omniscience?

SOPHIA: Not really. We defined God’s omniscience in terms of knowing all true propositions. This view does not conflict with our definition because propositions about the future are not true. God does know all true propositions, he just does not

know what will happen in the future. There is nothing to be known about the future. Thus, we have preserved the open future, an alleged requirement for human freedom, and God's omniscience.

IVAN: I suppose that this is a possible view to take, and it would remove the dilemma, but it seems rather radical. After all, if God planned the universe then presumably he would know what would happen. Moreover, it seems intuitively true that every proposition is either true, or if not true, then false. The view you are suggesting must deny this principle.

SOPHIA: Yes it must, and for that reason it may be thought objectionable.

ALICE: Are there any other solutions to the foreknowledge dilemma?

SOPHIA: Yes, another is associated with the fourteenth-century philosopher, William Ockham. He maintained that God can know that a proposition about the future is true, even though the state of affairs in virtue of which it is true is not yet settled or actual. If this view can be rendered plausible, we could preserve the openness of the future, human freedom, and divine foreknowledge. For the will is free so long as I can do otherwise, and I can do otherwise so long as what I will do is not settled before I act.

ALICE: I must admit, this view is attractive. If God can know today that, for example, I am going to the movies tomorrow, even though the future is now bereft of content, the foreknowledge and freedom dilemma seems readily solvable. What I find puzzling is how God can know, at t_1 , that "I will go to the movies tomorrow (at t_3)" is true at t_1 . There is no tenseless state of affairs such as *I go to the movies later than t_1* or *I am at the movies at t_3* . Nor does there exist, at t_1 , the tensed state of affairs *I will go to the movies*. Thus, if the future does not exist and the tenseless theory of time is false, there simply is no basis for God's knowing, at t_1 , that a proposition about the future is true. That is, he does not know whether "I will go to the movies tomorrow (at t_3)" or "I will not go to the movies tomorrow (at t_3)" is true *today*. Without such knowledge, however, the Ockhamist attempt to reconcile foreknowledge with the open future conception of freedom is unsuccessful.

IVAN: I agree there is a serious problem here if one denies reality to the future. On the other hand, it seems to me that there is a relatively easy solution to the problem you have been raising if we adopt the tenseless theory of time.

SOPHIA: What is your solution?

IVAN: In order to explain it, I need to clear away some errors that have infested the discussion. So far we have assumed that human freedom requires an “open future,” which we interpreted to mean that the present and the past exist, but the future does not exist.

SOPHIA: Yes, we have made that assumption.

IVAN: I don’t think that assumption is a reasonable one to make, since I don’t think it is required for our human freedom. Let me explain. When we say that the past is closed and the future is open, I suggest that what we mean or should mean is that the past “already exists,” but the future does not already exist. The past “already exists” because the events of which it is composed occur *before* now. Of course, if one believes the future is as closed as the past and consequently, that it “already exists,” then one is likely to assume that future events exist *before* the times at which they occur. Clearly, if the future “already exists” in that sense then our entire lives are like a film in which events are laid out beforehand. All our deeds and decisions are fixed in advance and we are only puppets in the universal drama. However, neither the tenseless theory of time nor causal determinism is incompatible with the view that the future is open, i.e., with the view that the future does not *already* exist. Thus, we need not deny the reality of the future to preserve freedom.

ALICE: Could you explain why neither the tenseless view nor determinism imply that the future is closed?

IVAN: Some of my argument goes over material covered in our discussion of fatalism, but it is important to restate it here. On the tenseless view, to say, at time t , that the future is real, is to say that “There are events later than time t .” Of course it does not follow that events later than t *already exist* at t ; nor do the events that occur at times later than t somehow “pre-exist” at t . Thus, the tenseless view does not imply that the future already exists, i.e., that future events exist before they take place.

Furthermore, the tenseless view does not imply that future events are causally determined but only that they are determinate, having (tenselessly) the properties that they do at a certain clock time.

PHIL: Could you more fully explain the distinction between causally determined and determinate?

IVAN: Certainly. To say that a future event is causally determined is to say that it is correlated with some past event or events by

laws of regular sequence. Thus, for example, as I see a rock flying through the air toward a mirror, the future event of the mirror breaking is causally determined. More generally, if the future is determined then there is a sufficient explanation of future events in terms of past events and laws of nature. To say that the future is determinate is a much weaker thesis. The determinateness of the future implies only that propositions about the future are either true or false. If the future is determinate then future events exist with the properties that they have at the time and place at which they have them, but that does not imply determinism. Events cannot be determined without being determinate, but they can be determinate without being determined. For example, it may be the case that I will eat breakfast at 6:00 a.m. on October 23, 1995, and yet it not be the case that there are prior events that causally determine me to do so.

Moreover, even if the tenseless view did entail determinism, which it does not, it would not follow that such a view entails that the future history of the universe pre-exists in the present, since determinism does not imply that the future is already laid up in the present. That a future state or event is uniquely specified by a present state (or set of events) does not detract from the future state being later than the present state. In other words, the existence of causally sufficient conditions for the future does not imply that the future is present. Thus, in so far as the openness of the future means that the future does not already exist in the present, neither the tenseless theory nor determinism involves a denial of the openness of the future.

ALICE: What does all this have to do with a resolution of the foreknowledge and freedom dilemma?

IVAN: I see a way of maintaining that (1) the future is open, (2) causal determinism is the case, (3) the tenseless theory is true, (4) humans have free will and (5) God has foreknowledge! Clearly if each of these propositions is true, we have reconciled divine foreknowledge with human freedom.

SOPHIA: Agreed, but can they be reconciled?

IVAN: I believe so. Will you agree that if the tenseless theory is true, then God can have foreknowledge?

SOPHIA: Certainly. If all past, present and future events are equally real, then God can at any time see any and all of them.

IVAN: Then the solution to the foreknowledge dilemma is simple. Suppose God knows at t , that I will (at t_3) make a conscious

choice, based on my wants and desires. For example, God knows that at 2:00 p.m. on August 30, 1993, I want to go to the movies at 9:00 p.m. on August 30, 1993, and he knows that I (freely) choose to go to the movies at 9:00 p.m. on August 30, 1993. In knowing those two facts he knows that I will freely choose to go to the movies. Since God knows what I will freely choose to do, and his knowledge is infallible, it must be the case that I freely choose to do it.

SOPHIA: You are erroneously assuming that an action is free if you are doing what you want. For if your going to the movies is determined by prior circumstances then your choice was not free. Don't you know that free will and determinism are incompatible? Of course, if your conception of freedom is right, then your solution is viable. But I reject your conception of freedom.

IVAN: So the crucial question concerns whose conception of freedom is the correct one. Shall we proceed to discuss that issue?

SOPHIA: Let's. To do so will allow us to connect the free will-determinism issue with another we considered recently, namely, the nature of the self.

NOTES

- 1 St Thomas Aquinas (1952) *The Summa Theologiae*, trans. by the Fathers of the English Dominican, Chicago: *Encyclopaedia Britannica*, Ia, q. 14, A. 13, reply obj. 3, p. 88.
- 2 J.R.Lucas (1989) *The Future: An Essay on God, Temporality and Truth*, New York: Blackwell, pp. 8–9.

GLOSSARY OF TERMS

Causal determinism For every event that occurs there is some condition (event) or set of conditions (events) sufficient to bring about that event.

Closed past Once an event has happened, it is fixed, necessary and cannot be otherwise.

Determinate An object is determinate if its properties are completely specifiable at each moment of its existence.

Foreknowledge Knowledge of an event at a time before the time at which the event occurs.

Free will solution An attempt to solve the problem of evil by maintaining that the evil that exists in the universe is not due to God, but to the choices of humanly free agents.

Open future The future does not already exist.

Problem of evil How can an all-good, all-knowing, all-powerful God create a universe that contains so much evil in it?

Two conceptions of freedom (1) An action is free if it is what we want to do. (2) An action is free only if it could have been otherwise.

STUDY QUESTIONS

- 1 What are two different formulations of the dilemma of freedom and foreknowledge?
- 2 What is the relation between the problem of evil and the dilemma of freedom and foreknowledge?
- 3 What is the Boethian solution to the problem of divine foreknowledge and how might it be criticized?
- 4 What are two other solutions to the foreknowledge dilemma? Do you find either acceptable?
- 5 In what ways, if any, do the different solutions to the foreknowledge dilemma depend on one's views on time and freedom?

FURTHER READING

*Craig, William Lane (1991) *Divine Foreknowledge and Human Freedom*, Leiden: E.J.Brill.

Offers a solution to the foreknowledge dilemma within the context of a tensed theory of time.

Fischer, John Martin (ed.) (1989) *God, Foreknowledge, and Freedom*, Stanford, CA: Stanford University Press.

A collection of articles on the issues raised in this dialogue.

Hasker, William (1989) *God, Time, and Knowledge*, Ithaca, NY: Cornell University Press.

Avoids the problem of freedom and foreknowledge by restricting the sense in which God's omniscience applies to the future.

*Lucas, J.R. (1989) *The Future: An Essay on God, Temporality, and Truth*, New York: Blackwell.

A defense of the "open future" version of the tensed theory according to which the past and present are real, but the future contains nothing but possibilities.

Mellor, D.H. (1986) "History Without the Flow of Time," *Neue Zeitschrift für systematische Theologie und Religionsphilosophie* 28:68–76.

Explains how the foreknowledge dilemma can be resolved on the tenseless theory.

Rowe, William L. (1993) *Philosophy of Religion: An Introduction* (2nd edn) Belmont, CA: Wadsworth Publishing Company, pp. 154–69.

Contains a useful discussion of the conception of freedom upon which the problem of divine foreknowledge is based, and discusses some of the main solutions to it.

*Zagzebski, Linda Trinkhaus (1991) *The Dilemma of Freedom and Foreknowledge*, New York: Oxford University Press.

This book discusses the major solutions offered to the foreknowledge dilemma, proposes three possible solutions of its own, and raises a new foreknowledge dilemma.