Some Problems of Philosophy

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Medicine Hat Edition

DIANE GALL (BOOK EDITOR)

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Contents

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Medicine Hat, AB
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Introduction

This text is an anthology of chapters and excerpts written by some very good thinkers. I have been worried for years about the price of texts and the burden this places on students. I went out of my way to source more inexpensive texts and by and large was successful. But the perfect text eluded me; a text that would serve just what I was going to talk about and the attendant readings that student needed to read. There was always material left over in existing texts.

So, I decided to try this out. This is an experiment. We shall see.

PART I

THE VALUE OF PHILOSOPHY

1. On the Allegory of the Cave

PLATO

Republic

Book VII

SOCRATES – GLAUCON

AND NOW, I SAID, let me show in a figure how far our nature is enlightened or unenlightened:–Behold! human beings living in a underground den, which has a mouth open towards the light and reaching all along the den; here they have been from their childhood, and have their legs and necks chained so that they cannot move, and can only see before them, being prevented by the chains from turning round their heads. Above and behind them a fire is blazing at a distance, and between the fire and the prisoners there is a raised way; and you will see, if you look, a low wall built along the way, like the screen which marionette players have in front of them, over which they show the puppets.

I see.

And do you see, I said, men passing along the wall carrying all sorts of vessels, and statues and figures of animals made of wood and stone and various materials, which appear over the wall? Some of them are talking, others silent.

You have shown me a strange image, and they are strange prisoners.

Like ourselves, I replied; and they see only their own shadows, or the shadows of one another, which the fire throws on the opposite wall of the cave?

True, he said; how could they see anything but the shadows if they were never allowed to move their heads?

And of the objects which are being carried in like manner they would only see the shadows?

Yes, he said.

And if they were able to converse with one another, would they not suppose that they were naming what was actually before them?

Very true.

And suppose further that the prison had an echo which came from the other side, would they not be sure to fancy when one of the passers-by spoke that the voice which they heard came from the passing shadow?

No question, he replied.

To them, I said, the truth would be literally nothing but the shadows of the images.

That is certain.

And now look again, and see what will naturally follow if the prisoners are released and disabused of their error. At first, when any of them is liberated and compelled suddenly to stand up and turn his neck round and walk and look towards the light, he will suffer sharp pains; the glare will distress him, and he will be unable to see the realities of which in his former state he had seen the shadows; and then conceive some one saying to him, that what he saw before was an illusion, but that now, when he is approaching nearer to being and his eye is turned towards more real existence, he has a clearer vision, -what will be his reply?

And you may further imagine that his instructor is pointing to the objects as they pass and requiring him to name them, -will he not be perplexed? Will he not fancy that the shadows which he formerly saw are truer than the objects which are now shown to him?

Far truer.

And if he is compelled to look straight at the light, will he not have a pain in his eyes

which will make him turn away to take and take in the objects of vision which he can see, and which he will conceive to be in reality clearer than the things which are now being shown to him?

True, he now

And suppose once more, that he is reluctantly dragged up a steep and rugged ascent, and held fast until he's forced into the presence of the sun himself, is he not likely to be pained and irritated? When he approaches the light his eyes will be dazzled, and he will not be able to see anything at all of what are now called realities.

Not all in a moment, he said.

He will require to grow accustomed to the sight of the upper world. And first he will see the shadows best, next the reflections of men and other objects in the water, and then the objects themselves; then he will gaze upon the light of the moon and the stars and the spangled heaven; and he will see the sky and the stars by night better than the sun or the light of the sun by day?

Certainly.

Last of he will be able to see the sun, and not mere reflections of him in the water, but he will see him in his own proper place, and not in another; and he will contemplate him as he is.

Certainly.

He will then proceed to argue that this is he who gives the season and the years, and is the guardian of all that is in the visible world, and in a certain way the cause of all things which he and his fellows have been accustomed to behold?

Clearly, he said, he would first see the sun and then reason about him.

And when he remembered his old habitation, and the wisdom of the den and his fellow-prisoners, do you not suppose that he would felicitate himself on the change, and pity them?

Certainly, he would.

And if they were in the habit of conferring honours among themselves on those who

were quickest to observe the passing shadows and to remark which of them went before, and which followed after, and which were together; and who were therefore best able to draw conclusions as to the future, do you think that he would care for such honours and glories, or envy the possessors of them? Would he not say with Homer,

Better to be the poor servant of a poor master,

and to endure anything, rather than think as they do and live after their manner?

Yes, he said, I think that he would rather suffer anything than entertain these false notions and live in this miserable manner.

Imagine once more, I said, such an one coming suddenly out of the sun to be replaced in his old situation; would he not be certain to have his eyes full of darkness?

To be sure, he said.

And if there were a contest, and he had to compete in measuring the shadows with the prisoners who had never moved out of the den, while his sight was still weak, and before his eyes had become steady (and the time which would be needed to acquire this new habit of sight might be very considerable) would he not be ridiculous? Men would say of him that up he went and down he came without his eyes; and that it was better not even to think of ascending; and if any one tried to loose another and lead him up to the light, let them only catch the offender, and they would put him to death.

No question, he said.

This entire allegory, I said, you may now append, dear Glaucon, to the previous argument; the prison-house is the world of sight, the light of the fire is the sun, and you will not misapprehend me if you interpret the journey upwards to be the ascent of the soul into the intellectual world according to my poor belief, which, at your desire, I have expressed whether rightly or wrongly God knows. But, whether true or false, my opinion is that in the world of knowledge the idea of good appears last of all, and is seen only with an effort; and, when seen, is also inferred to be the universal author of all things beautiful and right, parent of light and of the lord of light in this visible world, and the immediate source of reason and truth in the intellec-

tual; and that this is the power upon which he who would act rationally, either in public or private life must have his eye fixed.

I agree, he said, as far as I am able to understand you.

Moreover, I said, you must not wonder that those who attain to this beatific vision are unwilling to descend to human affairs; for their souls are ever hastening into the upper world where they desire to dwell; which desire of theirs is very natural, if our allegory may be trusted.

Yes, very natural.

And is there anything surprising in one who passes from divine contemplations to the evil state of man, misbehaving himself in a ridiculous manner; if, while his eyes are blinking and before he has become accustomed to the surrounding darkness, he is compelled to fight in courts of law, or in other places, about the images or the shadows of images of justice, and is endeavouring to meet the conceptions of those who have never yet seen absolute justice?

Anything but surprising, he replied.

Any one who has common sense will remember that the bewilderments of the eyes are of two kinds, and arise from two causes, either from coming out of the light or from going into the light, which is true of the mind's eye, quite as much as of the bodily eye; and he who remembers this when he sees any one whose vision is perplexed and weak, will not be too ready to laugh; he will first ask whether that soul of man has come out of the brighter light, and is unable to see because unaccustomed to the dark, or having turned from darkness to the day is dazzled by excess of light. And he will count the one happy in his condition and state of being, and he will pity the other; or, if he have a mind to laugh at the soul which comes from below into the light, there will be more reason in this than in the laugh which greets him who returns from above out of the light into the den.

That, he said, is a very just distinction.

But then, if I am right, certain professors of education must be wrong when they say that they can put a knowledge into the soul which was not there before, like sight into blind eyes.

They undoubtedly say this, he replied.

Whereas, our argument shows that the power and capacity of learning exists in the soul already; and that just as the eye was unable to turn from darkness to light without the whole body, so too the instrument of knowledge can only by the movement of the whole soul be turned from the world of becoming into that of being, and learn by degrees to endure the sight of being, and of the brightest and best of being, or in other words, of the good.

Very true.

And must there not be some art which will effect conversion in the easiest and quickest manner; not implanting the faculty of sight, for that exists already, but has been turned in the wrong direction, and is looking away from the truth?

Yes, he said, such an art may be presumed.

And whereas the other so-called virtues of the soul seem to be akin to bodily qualities, for even when they are not originally innate they can be implanted later by habit and exercise, the virtue of wisdom more than anything else contains a divine element which always remains, and by this conversion is rendered useful and profitable; or, on the other hand, hurtful and useless. Did you never observe the narrow intelligence flashing from the keen eye of a clever rogue–how eager he is, how clearly his paltry soul sees the way to his end; he is the reverse of blind, but his keen eyesight is forced into the service of evil, and he is mischievous in proportion to his cleverness.

Very true, he said.

But what if there had been a circumcision of such natures in the days of their youth; and they had been severed from those sensual pleasures, such as eating and drinking, which, like leaden weights, were attached to them at their birth, and which drag them down and turn the vision of their souls upon the things that are below–if, I say, they had been released from these impediments and turned in the opposite direction, the very same faculty in them would have seen the truth as keenly as they see what their eyes are turned to now.

Very likely.

Yes, I said; and there is another thing which is likely. or rather a necessary inference from what has preceded, that neither the uneducated and uninformed of the truth, nor yet those who never make an end of their education, will be able ministers of State; not the former, because they have no single aim of duty which is the rule of all their actions, private as well as public; nor the latter, because they will not act at all except upon compulsion, fancying that they are already dwelling apart in the islands of the blest.

Very true, he replied.

Then, I said, the business of us who are the founders of the State will be to compel the best minds to attain that knowledge which we have already shown to be the greatest of all-they must continue to ascend until they arrive at the good; but when they have ascended and seen enough we must not allow them to do as they do now.

What do you mean?

I mean that they remain in the upper world: but this must not be allowed; they must be made to descend again among the prisoners in the den, and partake of their labours and honours, whether they are worth having or not.

But is not this unjust? he said; ought we to give them a worse life, when they might have a better?

You have again forgotten, my friend, I said, the intention of the legislator, who did not aim at making any one class in the State happy above the rest; the happiness was to be in the whole State, and he held the citizens together by persuasion and necessity, making them benefactors of the State, and therefore benefactors of one another; to this end he created them, not to please themselves, but to be his instruments in binding up the State.

2. The Value of Philosophy

BERTRAND RUSSELL

The Value of Philosophy

...[It] will be well to consider...what is the value of philosophy and why it ought to be studied. It is the more necessary to consider this question, in view of the fact that many men, under the influence of science or of practical affairs, are inclined to doubt whether philosophy is anything better than innocent but useless trifling, hair-splitting distinctions, and controversies on matters concerning which knowledge is impossible.

This view of philosophy appears to result, partly from a wrong conception of the ends of life, partly from a wrong conception of the kind of goods which philosophy strives to achieve. Physical science, through the medium of inventions, is useful to innumerable people who are wholly ignorant of it; thus the study of physical science is to be recommended, not only, or primarily, because of the effect on the student, but rather because of the effect on mankind in general. This utility does not belong to philosophy. If the study of philosophy has any value at all for others than students of philosophy, it must be only indirectly, through its effects upon the lives of those who study it. It is in these effects, therefore, if anywhere, that the value of philosophy must be primarily sought.

But further, if we are not to fail in our endeavour to determine the value of philosophy, we must first free our minds from the prejudices of what are wrongly called "practical" men. The "practical" man, as this word is often used, is one who recognises only material needs, who realises that men must have food for the body, but is oblivious of the necessity of providing food for the mind. If all men were well off, if poverty and disease had been reduced to their lowest possible point, there would still remain much to be done to produce a valuable society; and even in the existing world the goods of the mind are at least as important as the goods of the body. It is exclusively among the goods of the mind that the value of philosophy is to be found;

and only those who are not indifferent to these goods can be persuaded that the study of philosophy is not a waste of time.

Philosophy, like all other studies, aims primarily at knowledge. The knowledge it aims it is the kind of knowledge which gives unity and system to the body of the sciences, and the kind which results from a critical examination of the grounds of our convictions, prejudices, and beliefs. But it cannot be maintained that philosophy has had any very great measure of success in its attempts to provide definite answers to its questions. If you ask a mathematician, a mineralogist, a historian, or any other man of learning, what definite body of truths has been ascertained by his science, his answer will last as long as you are willing to listen. But if you put the same question to a philosopher, he will, if he is candid, have to confess that his study has not achieved positive results such as have been achieved by other sciences. It is true that this is partly accounted for by the fact that, as soon as definite knowledge concerning any subject becomes possible, this subject ceases to be called philosophy, and becomes a separate science. The whole study of the heavens, which now belongs to astronomy, was once included in philosophy; Newton's great work was called "the mathematical principles of natural philosophy." Similarly, the study of the human mind, which was, until very lately, a part of philosophy, has now been separated from philosophy and has become the science of psychology. Thus, to a great extent, the uncertainty of philosophy is more apparent than real: those questions which are already capable of definite answers are placed in the sciences, while those only to which, at present, no definite answer can be given, remain to form the residue which is called philosophy.

This is, however, only a part of the truth concerning the uncertainty of philosophy. There are many questions—and among them those that are of the profoundest interest to our spiritual life—which, so far as we can see, must remain insoluble to the human intellect unless its powers become of quite a different order from what they are now. Has the universe any unity of plan or purpose, or is it a fortuitous concourse of atoms? Is consciousness a permanent part of the universe, giving hope of indefinite growth in wisdom, or is it a transitory accident on a small planet on which life must ultimately become impossible? Are good and evil of importance to the universe or only to man? Such questions are asked by philosophy, and variously answered by various philosophers. But it would seem that, whether answers be otherwise discoverable or not, the answers suggested by philosophy are none of them demonstrably true. Yet, however slight may be the hope

of discovering an answer, it is part of the business of philosophy to continue the consideration of such questions, to make us aware of their importance, to examine all the approaches to them, and to keep alive that speculative interest in the universe which is apt to be killed by confining ourselves to definitely ascertainable knowledge.

Many philosophers, it is true, have held that philosophy could establish the truth of certain answers to such fundamental questions. They have supposed that what is of most importance in religious beliefs could be proved by strict demonstration to be true. In order to judge of such attempts, it is necessary to take a survey of human knowledge, and to form an opinion as to its methods and its limitations. On such a subject it would be unwise to pronounce dogmatically; but if the investigations of our previous chapters have not led us astray, we shall be compelled to renounce the hope of finding philosophical proofs of religious beliefs. We cannot, therefore, include as part of the value of philosophy any definite set of answers to such questions. Hence, once more, the value of philosophy must not depend upon any supposed body of definitely ascertainable knowledge to be acquired by those who study it.

The value of philosophy is, in fact, to be sought largely in its very uncertainty. The man who has no tincture of philosophy goes through life imprisoned in the prejudices derived from common sense, from the habitual beliefs of his age or his nation, and from convictions which have grown up in his mind without the co-operation or consent of his deliberate reason. To such a man the world tends to become definite, finite, obvious; common objects rouse no questions, and unfamiliar possibilities are contemptuously rejected. As soon as we begin to philosophise, on the contrary, we find, as we saw in our opening chapters, that even the most everyday things lead to problems to which only very incomplete answers can be given. Philosophy, though unable to tell us with certainty what is the true answer to the doubts which it raises, is able to suggest many possibilities which enlarge our thoughts and free them from the tyranny of custom. Thus, while diminishing our feeling of certainty as to what things are, it greatly increases our knowledge as to what they may be; it removes the somewhat arrogant dogmatism of those who have never travelled into the region of liberating doubt, and it keeps alive our sense of wonder by showing familiar things in an unfamiliar aspect.

Apart from its utility in showing unsuspected possibilities, philosophy has a

value—perhaps its chief value— through the greatness of the objects which it contemplates, and the freedom from narrow and personal aims resulting from this contemplation. The life of the instinctive man is shut up within the circle of his private interests: family and friends may be included, but the outer world is not regarded except as it may help or hinder what comes within the circle of instinctive wishes. In such a life there is something feverish and confined, in comparison with which the philosophic life is calm and free. The private world of instinctive interests is a small one, set in the midst of a great and powerful world which must, sooner or later, lay our private world in ruins. Unless we can so enlarge our interests as to include the whole outer world, we remain like a garrison in a beleaguered fortress, knowing that the enemy prevents escape and that ultimate surrender is inevitable. In such a life there is no peace, but a constant strife between the insistence of desire and the powerlessness of will. In one way or another, if our life is to be great and free, we must escape this prison and this strife.

One way of escape is by philosophic contemplation. Philosophic contemplation does not, in its widest survey, divide the universe into two hostile camps—friends and foes, helpful and hostile, good and bad—it views the whole impartially. Philosophic contemplation, when it is unalloyed, does not aim at proving that the rest of the universe is akin to man. All acquisition of knowledge is an enlargement of the Self, but this enlargement is best attained when it is not directly sought. It is obtained when the desire for knowledge is alone operative, by a study which does not wish in advance that its objects should have this or that character, but adapts the Self to the characters which it finds in its objects. This enlargement of Self is not obtained when, taking the Self as it is, we try to show that the world is so similar to this Self that knowledge of it is possible without any admission of what seems alien. The desire to prove this is a form of self-assertion, and like all self-assertion, it is an obstacle to the growth of Self which it desires, and of which the Self knows that it is capable. Self-assertion, in philosophic speculation as elsewhere, views the world as a means to its own ends; thus it makes the world of less account than Self, and the Self sets bounds to the greatness of its goods. In contemplation, on the contrary, we start from the not-Self, and through its greatness the boundaries of Self are enlarged; through the infinity of the universe the mind which contemplates it achieves some share in infinity.

For this reason greatness of soul is not fostered by those philosophies which assimilate the universe to Man. Knowledge is a form of union of Self and not-Self; like all

union, it is impaired by dominion, and therefore by any attempt to force the universe into conformity with what we find in ourselves. There is a widespread philosophical tendency towards the view which tells us that man is the measure of all things, that truth is man-made, that space and time and the world of universals are properties of the mind, and that, if there be anything not created by the mind, it is unknowable and of no account for us. This view, if our previous discussions were correct, is untrue; but in addition to being untrue, it has the effect of robbing philosophic contemplation of all that gives it value, since it fetters contemplation to Self. What it calls knowledge is not a union with the not-Self, but a set of prejudices, habits, and desires, making an impenetrable veil between us and the world beyond. The man who finds pleasure in such a theory of knowledge is like the man who never leaves the domestic circle for fear his word might not be law.

The true philosophic contemplation, on the contrary, finds its satisfaction in every enlargement of the not-Self, in everything that magnifies the objects contemplated, and thereby the subject contemplating. Everything, in contemplation, that is personal or private, everything that depends upon habit, self-interest, or desire, distorts the object, and hence impairs the union which the intellect seeks. By thus making a barrier between subject and object, such personal and private things become a prison to the intellect. The free intellect will see as God might see, without a *here* and *now*, without hopes and fears, without the trammels of customary beliefs and traditional prejudices, calmly, dispassionately, in the sole and exclusive desire of knowledge—knowledge as impersonal, as purely contemplative, as it is possible for man to attain. Hence also the free intellect will value more the abstract and universal knowledge into which the accidents of private history do not enter, than the knowledge brought by the senses, and dependent, as such knowledge must be, upon an exclusive and personal point of view and a body whose sense-organs distort as much as they reveal.

The mind which has become accustomed to the freedom and impartiality of philosophic contemplation will preserve something of the same freedom and impartiality in the world of action and emotion. It will view its purposes and desires as parts of the whole, with the absence of insistence that results from seeing them as infinitesimal fragments in a world of which all the rest is unaffected by any one man's deeds. The impartiality which, in contemplation, is the unalloyed desire for truth, is the very same quality of mind which, in action, is justice, and in emotion is that universal love which can be given to all, and not only to those who are judged use-

ful or admirable. Thus contemplation enlarges not only the objects of our thoughts, but also the objects of our actions and our affections: it makes us citizens of the universe, not only of one walled city at war with all the rest. In this citizenship of the universe consists man's true freedom, and his liberation from the thraldom of narrow hopes and fears.

Thus, to sum up our discussion of the value of philosophy: Philosophy is to be studied, not for the sake of any definite answers to its questions, since no definite answers can, as a rule, be known to be true, but rather for the sake of the questions themselves; because these questions enlarge our conception of what is possible, enrich our intellectual imagination, and diminish the dogmatic assurance which closes the mind against speculation; but above all because, through the greatness of the universe which philosophy contemplates, the mind also is rendered great, and becomes capable of that union with the universe which constitutes its highest good.

PART II

LOGIC

This is the intro for logic.

3. What is Logic?

MATTHEW KNACHEL

There's an ancient view, still widely held, that what makes human beings special—what distinguishes us from the "beasts of the field"—is that we are rational. What does rationality consist in? That's a vexed question, but one possible response goes roughly like this: we manifest our rationality by engaging in activities that involve *reasoning*—making claims and backing them up with reasons, acting in accord with reasons and beliefs, drawing inferences from available evidence, and so on.

This reasoning activity can be done well and it can be done badly; it can be done correctly or incorrectly. Logic is the discipline that aims to distinguish good reasoning from bad.

Good reasoning is not necessarily effective reasoning. In fact, as we shall see in a subsequent chapter on logical fallacies, bad reasoning is pervasive and often extremely effective—in the sense that people are often persuaded by it. In logic, the standard of goodness is not effectiveness in the sense of persuasiveness, but rather *correctness* according to logical rules.

For example, consider Hitler. He persuaded an entire nation to go along with a variety of proposals that were not only false but downright evil. You won't be surprised to hear that if you examine it critically, his reasoning does not pass logical muster. Hitler's arguments were effective, but not logically correct. Moreover, his persuasive techniques go beyond reasoning in the sense of backing up claims with reasons. Hitler relied on threats, emotional manipulation, unsupported assertions, etc. There are many rhetorical tricks one can use to persuade.

In logic, we study the rules and techniques that allow us to distinguish good, correct reasoning from bad, incorrect reasoning.

Since there are a variety of different types of reasoning and methods with which to evaluate each of these types, plus various diverging views on what constitutes correct reasoning, there are many approaches to the logical enterprise. We talk of

logic, but also of *logics*. A logic is just a set of rules and techniques for distinguishing good reasoning from bad. A logic must formulate precise standards for evaluating reasoning and develop methods for applying those standards to particular instances.

Basic Notions

Reasoning involves claims or statements—making them and backing them up with reasons, drawing out their consequences. **Propositions** are the things we claim, state, assert.

Propositions are the kinds of things that can be true or false. They are expressed by **declarative sentences**. We use such sentences to make all sorts of assertions, from routine matters of fact ("the Earth revolves around the Sun"), to grand metaphysical theses ("reality is an unchanging, featureless, unified Absolute"), to claims about morality ("it is wrong to eat meat").

It is important to distinguish sentences in the declarative mood, which express propositions, from sentences in other moods, which do not. Interrogative sentences, for example, ask questions ("Is it raining?"), and imperative sentences issue commands ("Don't drink kerosene."). It makes no sense to ask whether these kinds of sentences express truths or falsehoods, so they do not express propositions.

We also distinguish propositions from the sentences that express them, because a single proposition can be expressed by different sentences. "It's raining" and "es regnet" both express the proposition that it's raining; one sentence does it in English, the other in German. Also, "John loves Mary" and "Mary is loved by John" both express the same proposition.

The fundamental unit of reasoning is the argument. In logic, by "argument" we don't mean a disagreement, a shouting match; rather, we define the term precisely:

> **Argument** = a set of propositions, one of which, the conclusion, is (supposed to be) supported by the others, the premises.

If we're reasoning by making claims and backing them up with reasons, then the

claim that's being backed up is the conclusion of an argument; the reasons given to support it are the argument's premises. If we're reasoning by drawing an inference from a set of statements, then the inference we draw is the conclusion of an argument, and the statements from which it's drawn are the premises.

We include the parenthetical hedge—"supposed to be"—in the definition to make room for bad arguments. A bad argument, very roughly speaking, is one where the premises fail to support the conclusion; a good argument's premises actually do support the conclusion.

Analysis of Arguments

The following passage expresses an argument:

> You shouldn't eat at McDonald's. Why? First of all, because they pay their workers very low wages. Second, the animals that provide their meat are raised in deplorable conditions. Finally, the food is extremely unhealthy.

So does this passage:

> The universe is vast and complex. And yet does it not also display an astonishing degree of order? The planets orbit the sun according to regular laws, and animals' minutest parts are arranged precisely to serve their purposes. Such order and complexity cannot arise at random. The universe must therefore be the product of a Designer of enormous power and intellect, whom we call God.

Again, the ultimate purpose of logic is to evaluate arguments—to distinguish the good from the bad. To do so requires distinctions, definitions, principles, and techniques that will be outlined in subsequent chapters. For now, we will focus on identifying and reconstructing arguments.

The first task is to explicate arguments—to state explicitly their premises and conclusions. A perspicuous way to do this is simply to list declarative sentences expressing the relevant propositions, with a line separating the premises from the conclusion, thus:

1. McDonald's pays their workers very low wages.
2. The animals that provide McDonald's meat are raised in deplorable conditions.
3. McDonald's food is very unhealthy.
4. / ∴ You shouldn't eat at McDonald's. [1]

This is an explication of the first argumentative passage above. To identify the conclusion of an argument, it is helpful to ask oneself, "What is this person trying to convince me to believe by saying these things? What is the ultimate point of this passage?" The answer is pretty clear in this case. Another clue as to what's going on in the passage is provided by the word "because" in the third sentence. Along with other words, like "since" and "for," it indicates the presence of a premise. We can call such words **premise markers**. The symbol "/∴" can be read as shorthand for "therefore." Along with expressions like "consequently," "thus," "it follows that" and "which implies that," "therefore" is an indicator that the argument's conclusion is about to follow. We call such locutions **conclusion markers**. Such a marker is not present in the first argument, but we do see one in the second, which may be explicated thus:

1. The universe is vast and complex.
2. The universe displays an astonishing degree of order.
3. The planets orbit the sun according to regular laws.
4. Animals' minutest parts are arranged precisely to serve their purposes.
5. Such order and complexity cannot arise at random.
6. / ∴ The universe must be the product of a designer of enormous power and intellect: God.

Several points of comparison to our first explication are worthy of note here. First, as mentioned, we were alerted of the conclusion by the word "therefore." Second,

1. The symbols preceding the conclusion, "$latex / \therefore $" represent the word "therefore."

this passage required much more paraphrase than the first. The second sentence is interrogative, not declarative, and so it does not express a proposition. Since arguments are, by definition, collections of propositions, we must restrict ourselves to declarative sentences when explicating them. Since the answer to the second sentence's rhetorical question is clearly "yes," we paraphrase as shown. The third sentence expresses two propositions, so in our explication we separate them; each one is a premise.

So sometimes, when we explicate an argument, we have to take what's present in the argumentative passage and change it slightly, so that all of the sentences we write down express the propositions present in the argument. This is paraphrasing. At other times, we have to do even more. For example, we may have to introduce propositions which are not explicitly mentioned within the argumentative passage, but are undoubtedly used within the argument's reasoning.

There's a Greek word for argumentative passages that leave certain propositions unstated: **enthymemes**. Here's an example:

> There cannot be an all-loving God, because so many innocent people all over the world are suffering.

There's an implicit premise lurking in the background here—something that hasn't been said, but which needs to be true for the argument to go through. We need a claim that connects the premise to the conclusion—that bridges the gap between them. Something like this: An all-loving God would not allow innocent people to suffer. Or maybe: widespread suffering is incompatible with the idea of an all-loving deity. The premise points to suffering, while the conclusion is about God; these propositions connect those two claims. A complete explication of the argumentative passage would make a proposition like this explicit:

1. Many innocent people all over the world are suffering.
2. An all-loving God would not allow innocent people to suffer.
3. / ∴ There cannot be an all-loving God.

This is the mark of the kinds of tacit premises we want to uncover: if they're false,

they undermine the argument. Often, premises like this are unstated for a reason: they're controversial claims on their own, requiring evidence to support them; so the arguer leaves them out, preferring not to get bogged down.[2] When we draw them out, however, we can force a more robust dialectical exchange, focusing the argument on the heart of the matter. In this case, a discussion about the compatibility of God's goodness and evil in the world would be in order. There's a lot to be said on that topic. Philosophers and theologians have developed elaborate arguments over the centuries to defend the idea that God's goodness and human suffering are in fact compatible.[3]

So far, our analysis of arguments has not been particularly deep. We have noted the importance of identifying the conclusion and clearly stating the premises, but we have not looked into the ways in which sets of premises can support their conclusions. We have merely noted that, collectively, premises provide support for conclusions. We have not looked at *how* they do so, what kinds of relationships they have with one another. This requires deeper analysis.

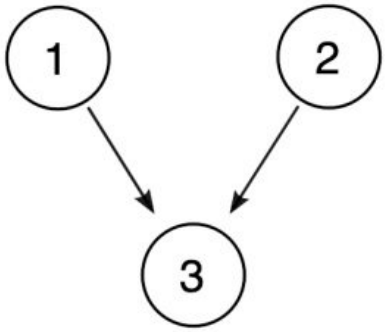
Often, different premises will support a conclusion—or another premise—individually, without help from any others. Consider this simple argument:

> ① America's invasion of Iraq was an act of aggression, not self-defense. In addition, ② it was unreasonable to expect that the benefits of the war would outweigh the inevitable horrors it would unleash. Therefore, ③ the Iraq War was not a just war.

Propositions 1 and 2 support the conclusion, proposition 3—and they do so independently. Each gives us a reason for believing that the war was unjust, and each stands as a reason even if we were to suppose that the other were not true; this is the mark of **independent premises**.

2. This is not always the reason. Some claims are left tacit simply because everybody accepts them and to state them explicitly would be a waste of time. If we argue, "Elephants are mammals, and so warm-blooded," we omit the claim that all mammals are warm-blooded for this innocent reason.
3. These arguments even have a special name: they're called "theodicies."

It can be helpful, especially when arguments are more complex, to draw diagrams that depict the relationships among premises and conclusion. We could depict the argument above as follows:



In such a diagram, the circled numbers represent the propositions and the arrows represent the relationship of support from one proposition to another. Since propositions 1 and 2 each support 3 independently, they get their own arrows.

Other relationships among premises are possible. Sometimes, premises provide support for conclusions only indirectly, by giving us a reason to believe some other premise, which is **intermediate** between the two claims. Consider the following argument:

> ① Poets are mere "imitators" whose works obscure the truth; hence, ② they have a corrupting influence on the souls of citizens. ③ Poets should therefore be banned from the ideal city-state.[4]

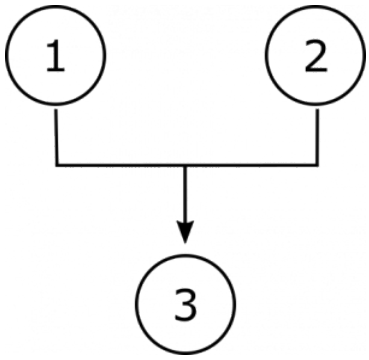
In this example, proposition 1 provides support for proposition 2 (the word "hence" is a clue), while proposition 2 directly supports the conclusion in 3. We would depict the relationships among these propositions thus:

4. An extremely compressed version of Plato's objections to poetry in Book X of *The Republic*.

Sometimes premises must work together to provide support for another claim, not because one of them provides reason for believing the other, but because neither provides the support needed on its own; we call such propositions **joint premises**. Consider the following:

> ① If true artificial intelligence is possible, then one must be able to program a computer to be conscious. ② But it's impossible to program consciousness. Therefore, ③ true artificial intelligence is impossible.

In this argument, neither premise 1 nor premise 2 supports the conclusion on its own; rather, the second premise, as it were, provides a key that unlocks the conclusion from the conditional premise 1. We can indicate such interdependence diagrammatically with brackets, thus:

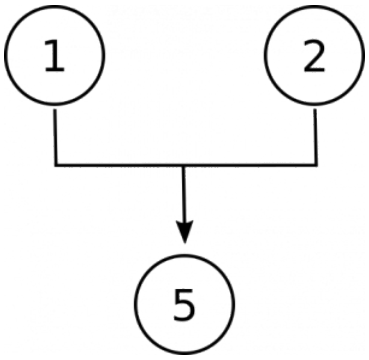


Diagramming arguments in this way can be helpful both in understanding how they work and informing any attempt to critically engage with them. One can see clearly in the first argument that any considerations put forward contrary to one of the independent premises will not completely undermine support for the conclusion, as there is still another premise providing it with some degree of support. In the second argument, though, reasons telling against the second premise would cut off support for the conclusion at its root; and anything contrary to the first premise will leave the second in need of support. And in the third argument, considerations contrary to either of the joint premises will undermine support for the conclusion. Especially when arguments are more complex, such visual aids can help us recognize all of the inferences contained within the argument.

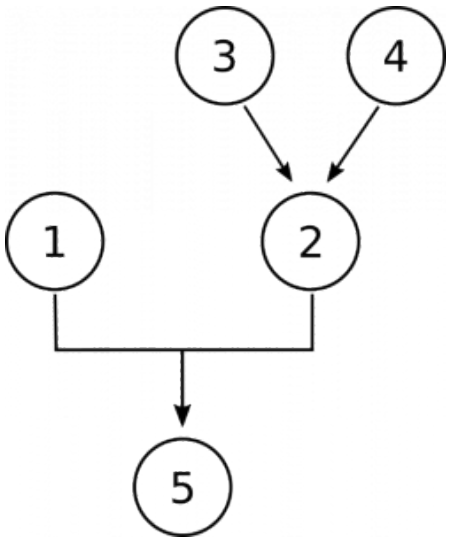
Perhaps it will be useful to conclude by considering a slightly more complex argument. Let's consider the nature of numbers:

> ① Numbers are either abstract or concrete objects. ② They cannot be concrete objects because ③ they don't have a location in space and ④ they don't interact causally with other objects. Therefore, ⑤ numbers are abstract objects.

The conclusion of this argument is the last proposition, that numbers are abstract objects. Notice that the first premise gives us a choice between this claim and an alternative—that they are concrete. The second premise denies that alternative, and so premises 1 and 2 are working together to support the conclusion:



Now we need to make room in our diagram for propositions 3 and 4. They are there to give us reasons for believing that numbers are not concrete objects. First, by asserting that numbers aren't located in space like concrete objects are, and second by asserting that numbers don't interact with other objects, like concrete objects do. These are separate, independent reasons for believing they aren't concrete, so we end up with this diagram:



Logic and Philosophy

At the heart of the logical enterprise is a philosophical question: What makes a good argument? That is, what is it for a set of claims to provide support for some other claim? Or maybe: When are we justified in drawing inferences? To answer these questions, logicians have developed a wide variety of logical systems, covering different types of arguments, and applying different principles and techniques. Many of the tools developed in logic can be applied beyond the confines of philosophy. The mathematician proving a theorem, the computer scientist programming a computer, the linguist modeling the structure of language—all these are using logical methods. Because logic has such wide application, and because of the formal/mathematical sophistication of many logical systems, it occupies a unique place in the philosophical curriculum. A class in logic is typically unlike other philosophy classes in that very little time is spent directly engaging with and attempting to answer the "big questions"; rather, one very quickly gets down to the business of learning logical formalisms. The questions logic is trying to answer are important philosophical questions, but the techniques developed to answer them are worthy of study on their own.

This does not mean, however, that we should think of logic and philosophy as merely tangentially related; on the contrary, they are deeply intertwined. For all the formal bells and whistles featured in the latest high-end logical system, at bottom it is part of an effort to answer the fundamental question of what follows from what. Moreover, logic is useful to the practicing philosopher in at least three other ways.

Philosophers attempt to answer deep, vexing questions—about the nature of reality, what constitutes a good life, how to create a just society, and so on. They give their answers to these questions, and they back those answers up with reasons. Then other philosophers consider their arguments and reply with elaborations and criticisms—arguments of their own. Philosophy is conducted and makes progress by way of exchanging arguments. Since they are the primary tool of their trade, philosophers better know a little something about what makes for good arguments! Logic, therefore, is essential to the practice of philosophy.

But logic is not merely a tool for evaluating philosophical arguments; it has altered the course of the ongoing philosophical conversation. As logicians developed formal

systems to model the structure of an ever-wider range of discursive practices, philosophers have been able to apply their insights directly to traditional philosophical problems and recognize previously hidden avenues of inquiry. Since the turn of the 20th century especially, the proliferation of novel approaches in logic has sparked a revolution in the practice of philosophy. It is not too much of an exaggeration to say that much of the history of philosophy in the 20th century constituted an ongoing attempt to grapple with new developments in logic, and the philosophical focus on language that they seemed to demand. No philosophical topic—from metaphysics to ethics to epistemology and beyond—was untouched by this revolution.

Finally, logic itself is the source of fascinating philosophical questions. The basic question at its heart—what is it for a claim to follow from others?—ramifies out in myriad directions, providing fertile ground for philosophical speculation. There is logic, and then there is *philosophy of logic*. Logic is said to be "formal," for example. What does that mean? It's a surprisingly difficult question to answer.[5] Our simplest logical formulations of conditional sentences (those involving "if"), lead to apparent paradoxes.[6] How should those be resolved? Should our formalisms be altered to better capture the natural-language meanings of conditionals? What is the proper relationship between logical systems and natural languages, anyway?

Traditionally, most logicians have accepted that logic should be "bivalent": every proposition is either true or false. But natural languages contain vague terms whose boundaries of applicability are not always clear. For example, "bald": for certain subjects, we might be inclined to say that they're well on their way to full-on baldness, but not quite there yet; on the other hand, we would be reluctant to say that they're not-bald. There are in-between cases. For such cases, we might want to say, for example, that the proposition that Fredo is bald is neither true nor false. Some logicians have developed logics that are not bivalent, to deal with this sort of linguistic phenomenon. Some add a third truth-value: "neither" or "undetermined," for instance. Others introduce infinite degrees of truth (this is called "fuzzy logic"). These logics deviate from traditional approaches. Are they therefore wrong in some

5. John MacFarlane, in his widely read PhD dissertation, spends over 300 pages on that question. See: MacFarlane, J. 2000. "What Does It Mean to Say That Logic Is Formal?" University of Pittsburgh.
6. For a concise explanation, see the Wikipedia entry on paradoxes of material implication.

sense? Or are they right, and the traditionalists wrong? Or are we even asking a sensible question when we ask whether a particular logical system is right or wrong? Can we be so-called logical "pluralists," accepting a variety of incompatible logics, depending, for example, on whether they're useful?

These sorts of questions are beyond the scope of this introductory text, of course. They're included to give you a sense of just how far one can take the study of logic. The task for now, though, is to begin that study.

EXERCISES

First, explicate the following arguments, paraphrasing as necessary and only including tacit premises when explicitly instructed to do so. Next, diagram the arguments.

1. Numbers, if they exist at all, must be either concrete or abstract objects. Concrete objects–like planets and people–are able to interact with other things in cause-and-effect relations. Numbers lack this ability. Therefore, numbers are abstract objects. [*You will need to add an implicit intermediate premise here!*]
2. Abolish the death penalty! Why? It is immoral. Numerous studies have shown that there is racial bias in its application. The rise of DNA testing has exonerated scores of inmates on death row; who knows how many innocent people have been killed in the past? The death penalty is also impractical. Revenge is counterproductive: "An eye for an eye leaves the whole world blind," as Gandhi said. Moreover, the costs of litigating death penalty cases, with their endless appeals, are enormous.
3. A just economic system would feature an equitable distribution of resources and an absence of exploitation. Capitalism is an unjust economic system. Under capitalism, the typical distribution of wealth is highly skewed in favor of the rich. And workers are exploited: despite their essential role in producing goods for the market, most of the profits from the sales of those goods go to the owners of firms, not their workers.
4. The mind and the brain are not identical. How can things be identical if they

have different properties? There is a property that the mind and brain do not share: the brain is divisible, but the mind is not. Like all material things, the brain can be divided into parts—different halves, regions, neurons, etc. But the mind is a unity. It is my thinking essence, in which I can discern no separate parts.[7]

5. Every able-bodied adult ought to participate in the workforce. The more people working, the greater the nation's wealth, which benefits everyone economically. In addition, there is no replacement for the dignity workers find on the job. The government should therefore issue tax credits to encourage people to enter the workforce. [*Include in your explication a tacit premise, not explicitly stated in the passage, but necessary to support the conclusion.*]

7. A simplified version of an argument from Rene Descartes.

4. Evaluating Arguments

NATHAN SMITH

One particularly relevant application of logic is assessing the relative strength of philosophical claims. While the topics covered by philosophers are fascinating, it is often difficult to determine which positions on these topics are the right ones. Many students are led to think that philosophy is just a matter of opinion. After all, who could claim to know the final answer to philosophical questions?

It's not likely that anyone will ever know the final answer to deep philosophical questions. Yet there are clearly better and worse answers; and philosophy can help us distinguish them. This chapter will give you some tools to begin to distinguish which positions on philosophical topics are well-founded and which are not. When a person makes a claim about a philosophical subject, you should ask, "What are the arguments to support that claim?" Once you have identified an argument, you can use these tools to assess whether it's a good or bad one, whether the evidence and reasoning really support the claim or not.

In broad terms, there are two features of arguments that make them good: (1) the structure of the argument and (2) the truth of the evidence provided by the argument. Logic deals more directly with the structure of arguments. When we examine the logic of arguments, we are interested in whether the arguments have the right architecture, whether the evidence provided is the right sort of evidence to support the conclusion drawn. However, once we try to evaluate the truth of the conclusion, we need to know whether the evidence is true. We'll look at both of these considerations in what follows.

Inference and Implication: Why Conclusions Follow from Premises

An argument is a connected series of propositions, some of which are called premises and at least one of which is a conclusion. The premises provide the rea-

sons or evidence that supports the conclusion. From the point of view of the reader, an argument is meant to persuade the reader that, once the premises are accepted as true, the conclusion follows from them. If the reader accepts the premises, then she ought to accept the conclusion. The act of reasoning that connects the premises to the conclusion is called an **inference**. A good argument supports a rational inference to the conclusion, a bad argument supports no rational inference to the conclusion.[1]

Consider the following example:

1. All human beings are mortal.
2. Socrates is a human being.
3. So, Socrates is mortal.

This argument asserts that Socrates is mortal. It does so by appealing to the fact that Socrates is a human being, together with the idea that all human beings are mortal. There is clearly a strong connection between the premises and conclusion. Imagine a reader who accepts both premises but denies the conclusion. This person would have to believe that Socrates is a human being and that all human beings are mortal, but still deny that Socrates is mortal. How could such a person maintain that belief? It just doesn't seem rational to believe the premises but deny the conclusion!

Now consider the following argument:

1. I saw a black cat today.
2. My knee is aching.
3. ∕ ∴ It is going to rain.

Suppose that it does, in fact, rain and the person who advances this argument believes that it is going to rain. Is that person justified in their belief that it will rain? Not based on the argument presented here! In this argument, there is a very weak connection between the premises and the conclusion. So, even if the conclusion

1. This does not mean that bad arguments cannot be psychologically persuasive. In fact, people are often persuaded by bad arguments. However, a good philosophical assessment of an argument ought to rely purely on the rationality of its inferences.

turns out to be true, there is no reason why a reader ought to accept the conclusion given these premises (there may be other reasons for thinking it is going to rain that are not provided here, of course). The point is that these premises do not provide the right sort of evidence to justify the conclusion.

So far, I have described the connection between premises and conclusion in terms of the psychological demand placed on a reader of the argument. However, we can describe this connection from another perspective. We can say that the premises of an argument **logically imply** a conclusion. Either way of speaking is correct. What they assert is that good arguments present a strong connection between the truth of the premises and the truth of the conclusion. In the next few sections, we will examine three different types of logical connection, each with its own rules for evaluation. Sometimes logical implication is guaranteed (as in the case of **deductive arguments**), sometimes the logical connection only ensures the conclusion is probable (as with **inductive** and **abductive arguments**).

Deductive Arguments

Deductive arguments are the most common type of argument in philosophy, and for good reason. Deductive arguments attempt to demonstrate that the conclusion *follows necessarily* from the premises. As long as the premises of a *good* deductive argument are true, the conclusion is true as a matter of logic. This means that if I know the premises are true, I know with one-hundred percent certainty that the conclusion is also true! This may be hard to believe; after all, how can we be absolutely certain about anything? But notice what I am saying: I am not saying that we know the conclusion is true with one-hundred percent certainty. I am saying that we can be one-hundred percent certain the conclusion is true, *on the condition that* the premises are true. If one of the premises is false, then the conclusion is not guaranteed.

Here are two examples of good deductive arguments. They are both valid *and* have true premises. A **valid argument** is an argument whose premises guarantee the truth of the conclusion. That is, if the premises are true, then it is impossible for the conclusion to be false. A valid deductive argument whose premises are all true is called a **sound argument**.

1. If it rained outside, then the streets will be wet.
2. It rained outside.
3. / ∴ The streets are wet.

1. Either the world ended on December 12, 2012 or it continues today.
2. The world did not end on December 12, 2012.
3. / ∴ The world continues today.

Hopefully, you can see that these arguments present a close connection between the premises and conclusion. It seems impossible to deny the conclusion while accepting that the premises are all true. This is what makes them valid deductive arguments. To show what happens when similar arguments employ false premises, consider the following examples:

1. If Russia wins the 2018 FIFA World Cup, then Russia is the reigning FIFA world champion [in 2019].
2. Russia won the 2018 FIFA World Cup.
3. / ∴ Russia is the reigning FIFA world champion [in 2019].

1. Either snow is cold or snow is dry.
2. Snow is not cold.
3. / ∴ Snow is dry.

You may recognize that these arguments have the same structure as the previous two arguments. That is, each expresses the same connection between the premises and conclusion, and they are all deductively valid. However, these latter two arguments have at least one false premise and this false premise is the reason why these otherwise valid arguments reach a false conclusion. In the case of these arguments, the structure is good, but the evidence is bad.

Deductive arguments are either valid or invalid because of the form or structure of the argument. They are sound or unsound based on the form, plus the content. You might become familiar with some of the common forms of arguments (many of

them have names) and once you do, you will be able to tell when a deductive argument is invalid.

Now let's look at some invalid deductive arguments. These are arguments that have the wrong structure or form. Perhaps you have heard a playful argument like the following:

1. Grass is green.
2. Money is green.
3. / ∴ Grass is money.

Here is another example of the same argument:

1. All tigers are felines.
2. All lions are felines.
3. / ∴ All tigers are lions.

These arguments are examples of the fallacy of the *undistributed middle term*. The name is not important, but you may recognize what is going on here. The two types of objects in each conclusion are each a member of some third type, but they are not members of each other. So, the premises are all true, but the conclusions are false. If you encounter an argument with this structure, you will know that it is invalid.

But what do you do if you cannot immediately recognize when an argument is invalid? Philosophers look for counterexamples. A **counterexample** is a scenario in which the premises of the argument are true while the conclusion is clearly false. This automatically shows that it is *possible* for the argument's premises to be true and the conclusion false. So, a counterexample demonstrates that the argument is invalid. After all, validity requires that if the premises are all true, the conclusion cannot possibly be false. Consider the following argument, which is an example of a fallacy called *affirming the consequent*:

1. If it rained outside, then the streets will be wet.
2. The streets are wet.
3. / ∴ It rained outside.

Can you imagine a scenario where the premises are true, but the conclusion is false?

What if a water main broke and flooded the streets? Then the streets would be wet, but it may not have rained. It would still remain true that *if* it had rained, the streets would be wet, but in this scenario even if it didn't rain, the streets would still be wet. So, the scenario where a water main breaks demonstrates this argument is invalid.

The counterexample method can also be applied to arguments where there is no clear scenario that makes the premises true and the conclusion false, but we will have to apply it a little differently. In these cases, we need to imagine another argument that has exactly the same structure as the argument in question but uses propositions that more easily produce a counterexample. Suppose I made the following argument:

1. Most people who live near the coast know how to swim.
2. Mary lives near the coast.
3. / ∴ Mary knows how to swim.

I don't know if Mary knows how to swim, but I do know that this argument does not provide sufficient reasons for us to know that Mary knows how to swim. I can demonstrate this by imagining another argument with the same structure as this argument, but the premises of this argument are clearly true while its conclusion is false:

1. Most months in the calendar year have at least 30 days.
2. February is a month in the calendar year.
3. / ∴ February has at least 30 days.

To review, deductive arguments purport to lead to a conclusion that must be true if all the premises are true. But there are many ways a deductive argument can go wrong. In order to evaluate a deductive argument, we must answer the following questions:

- Are the premises true? If the premises are not true, then even if the argument is valid, the conclusion is not guaranteed to be true.
- Is the form of the argument a valid form? Does this argument have the exact

same structure as one of the invalid arguments noted in this chapter or elsewhere in this book?[2]

- Can you come up with a counterexample for the argument? If you can imagine a case in which the premises are true but the conclusion is false, then you have demonstrated that the argument is invalid.

Inductive Arguments

Almost all of the formal logic taught to philosophy students is deductive. This is because we have a very well-established formal system, called first-order logic, that explains deductive validity.[3] Conversely, most of the inferences we make on a daily basis are inductive or abductive. The problem is that the logic governing inductive and abductive inferences is significantly more complex and more difficult to formalize than deductive inferences.

The chief difference between deductive arguments and inductive or abductive arguments is that while the former arguments aim to guarantee the truth of the conclusion, the latter arguments only aim to ensure that the conclusion is *more probable*. Even the conclusions of the best inductive and abductive arguments may still turn out to be false. Consequently, we do not refer to these arguments as valid or invalid. Instead, arguments with good inductive and abductive inferences are **strong**; bad ones are **weak**. Similarly, strong inductive or abductive arguments with true premises are called **cogent**.

Here's a table to help you remember these distinctions:

2. Chapters 3 and 4 of this *Introduction* address types of fallacies. Fallacies are just systematic mistakes made within arguments. You can learn more examples of invalid argument forms in these chapters.
3. Chapter 3 introduces formal logic.

Terms used when evaluating several kinds of arguments

Quality of Inference	Deductive	Inductive	Abductive
Bad inference	Invalid	Weak	Weak
Good inference	Valid	Strong	Strong
Good inference + true premises	Sound	Cogent	Cogent

Inductive inferences typically involve an appeal to past experience in order to infer some further claim directly related to that experience. In its classic formulation, inductive inferences move from observed instances to unobserved instances, reasoning that what is not yet observed will resemble what has been observed before. Generalizations, statistical inferences, and forecasts about the future are all examples of inductive inference.[4] A classic example is the following:

1. The Sun rose today.
2. The Sun rose yesterday.
3. The Sun has risen every day of human history.
4. / ∴ The Sun will rise tomorrow.

You might wonder why this conclusion is merely probable. Is there anything more certain than the fact that the Sun will rise tomorrow? Well, not much. But at some point in the future, the Sun, like all other stars, will die out and its light will become so faint that there will be no sunrise on the Earth. More radically, imagine an asteroid disrupting the Earth's rotation so that it fails to spin in coordination with our 24-hour clocks—in this case, the Sun would also fail to rise tomorrow. Finally, any inference about the future must always contain a degree of uncertainty because we cannot be certain that the future will resemble the past. So, even though the inference is very strong, it does not provide us with one-hundred percent certainty.

Consider the following, very similar inference, from the perspective of a chicken:

4. You may notice that the inference from the previous section about Mary being able to swim could be rephrased as a kind of inductive argument. If it is true that most people who live near the coast can swim and Mary lives near the coast, then it follows that Mary probably can swim. This demonstrates an important difference between deductive and inductive arguments.

1. When the farmer came to the coop yesterday, he brought us food.
2. When the farmer came to the coop the day before, he brought us food.
3. Every day that I can remember, the farmer has come to the coop to bring us food.
4. / ∴ When the farmer comes today, he will bring food.

From a chicken's perspective, this inference looks equally as strong as the previous one. But this chicken will be surprised on that fateful day when the farmer comes to the coop with a hatchet to butcher her! From the chicken's perspective, the inference may appear strong, but from the farmer's perspective, it's fatally flawed. The chicken's inference shares some similarities with the following example:

1. A recent poll of over 5,000 people in the USA found that 85% of them are members of the National Rifle Association.
2. The poll found that 98% of respondents were strongly or very strongly opposed to any firearms regulation.
3. / ∴ Support of gun rights is very strong in the USA.

While the conclusion of this argument may be true and certainly appears to be supported by the premises, there is a key weakness that undermines the argument. You may suspect that these polling numbers present unusually high support for guns, even in the USA.[5] So, you may suspect that something is wrong with the data. But if I tell you that this poll was taken outside of a gun show, then you should realize that data may be correct, but the sample is clearly flawed. This reveals something important about inductive inferences. Inductive inferences depend on whether the sample set of experiences from which the conclusion is inferred are *representative* of the whole population described in the conclusion. In the cases of the chicken and gun rights, we are provided with a sample of experiences that are not representative of the populations in the conclusion. If we want to generalize about chicken farmer behavior, we need to sample the range of behaviors a farmer engages in. One chicken may not have enough data points to make a generalization about farmer behavior. Similarly, if we want to make a claim about the gun control preferences in the USA, we need to have a sample that represents all Americans, not just those

5. See, for instance, recent Gallup polling: 2019. "Guns." http://news.gallup.com/poll/1645/guns.aspx.

who attend gun shows. The sample of experiences in a strong inductive argument must be representative of the conclusion that is drawn from it.

To review, strong inductive inferences lead to conclusions that are made more likely by the premises, but not guaranteed to be true. They are typically used to make generalizations, infer statistical probabilities, and make forecasts about the future. To evaluate an inductive inference, you should use the following guidelines:

- Are the premises true? Just like deductive arguments, inductive arguments require true premises to infer that the conclusion is likely to be true.
- Are the examples cited in the premises a large enough sample? The larger the sample, the greater the likelihood it is representative of the population as a whole, and thus the more likely inductive inferences made on the basis of it will be strong.

Abductive Arguments

Abductive arguments produce conclusions that attempt to explain the phenomena found in the premises. From a commonsense point of view, we can think of abductive inferences as "reading between the lines," "using context clues," or "putting two and two together." We typically use these phrases to describe an inference to an explanation that is not explicitly provided. This is why abductive arguments are often called an "inference to the best explanation." From a scientific perspective, abduction is a critical part of hypothesis formation. Whereas the classic "scientific method" teaches that science is deductive and that the purpose of experimentation is to test a hypothesis (by confirming or disconfirming the hypothesis), it is not always clear how scientists arrive at a hypothesis. Abduction provides an explanation for how scientists generate likely hypotheses for experimental testing.

Even though Sherlock Holmes is famous for declaring, in the course of his investigations, "Deduction, my dear Watson," he probably should have said "Abduction"! Consider the following inference:

1. The victim's body has multiple stab wounds on its right side.
2. There was evidence of a struggle between the murderer and the victim.

3. / ∴ The murderer was left-handed.

You should recognize that the conclusion is not guaranteed by the premises, and so it is not a deductive argument. Additionally, the argument is not inductive, because the conclusion isn't simply an extension from past experiences. This argument attempts to provide the best explanation for the evidence in the premises. In a struggle, two people are most likely to be standing face to face. Also, the killer probably attacked with his or her dominant hand. It would be unnatural for a right-handed person to stab with their left hand or to stab a person facing them on that person's right side. So, the fact that the murderer is left-handed provides the most likely explanation for the stab wounds.

You use these sorts of inferences regularly. For instance, suppose that when you come home from work, you notice that the door to your apartment is unlocked and various items from the refrigerator are out on the counter. You might infer that your roommate is home. Of course, this explanation is not guaranteed to be true. For instance, you may have forgotten to lock the door and put away your food in your haste to get out the door. Abductive inferences attempt to reason to the most likely conclusion, not one that is guaranteed to be true.

What makes an abductive inference strong or weak? Good explanations ought to take account of all the available evidence. If the conclusion leaves some evidence unexplained, then it is probably not a strong argument. Additionally, extraordinary claims require extraordinary evidence. If an explanation requires belief in some entirely novel or supernatural entity, or generally requires us to revise deeply held beliefs, then we ought to demand that the evidence for this explanation is very solid. Finally, when assessing alternative explanations, we should heed the advice of "Ockham's Razor." William of Ockham argued that given any two explanations, the simpler one is more likely to be true. In other words, we should be skeptical of explanations that require complex mechanics, extensive caveats and exceptions, or an extremely precise set of circumstances, in order to be true.[6]

Consider the following arguments with identical premises:

6. While Ockham's Razor is a good rule of thumb in evaluating explanations, there is considerable debate among philosophers of science about whether simplicity it is a feature of good scientific explanations or not.

1. There have been hundreds of stories about strange objects in the night sky.
2. There is some video evidence of these strange objects.
3. Some people have recalled encounters with extraterrestrial life forms.
4. There are no peer-reviewed scientific accounts of extraterrestrial life forms visiting earth.
5. / ∴ There must be a vast conspiracy denying the existence of aliens.

1. There have been hundreds of stories about strange objects in the night sky.
2. There is some video evidence of these strange objects.
3. Some people have recalled encounters with extraterrestrial life forms.
4. There are no peer-reviewed scientific accounts of extraterrestrial life forms visiting earth.
5. / ∴ The stories, videos, and recollections are probably the result of confusion, confabulation or exaggeration, or are outright falsifications.

Which is the more likely explanation?

To review, abductive inferences assert a conclusion that the premises do not guarantee, but which aims to provide the most likely explanation for the phenomena detailed in the premises. To assess the strength of an abductive inference, use the following guidelines:

- Is all the relevant evidence provided? If critical pieces of information are missing, then it may not be possible to know what the right explanation is.
- Does the conclusion explain all of the evidence provided? If the conclusion fails to account for some of the evidence, then it may not be the best explanation.
- Extraordinary claims require extraordinary evidence! If the conclusion asserts something novel, surprising, or contrary to standard explanations, then the evidence should be equally compelling.
- Use Ockham's Razor; recognize that the simpler of two explanations is likely the correct one.

EXERCISES

Exercise One

For each argument decide whether it is deductive, inductive or abductive. If it contains more than one type of inference, indicate which.

Example:

1. Every human being has a heart,
2. If something has a heart, then it has a liver
3. / ∴ Every human being has a liver

Answer: This is a *deductive* argument because it is attempting to show that it's impossible for the conclusion to be false if the premises are true.

1.
   1. Chickens from my farm have gone missing,
   2. My farm is in the British countryside,
   3. / ∴ There are foxes killing my chickens

2.
   1. All flamingos are pink birds,
   2. All flamingos are fire breathing creatures,
   3. / ∴ Some pink birds are fire breathing creatures

3.
   1. Every Friday so far this year the cafeteria has served fish and chips,
   2. If the cafeteria's serving fish and chips and I want fish and chips then I should bring in £4,
   3. If the cafeteria isn't serving fish and chips then I shouldn't bring in £4,
   4. I always want fish and chips,
   5. / ∴ I should bring in £4 next Friday

4.
   1. If Bob Dylan or Italo Calvino were awarded the Nobel Prize in Literature, then the choices made by the Swedish Academy would be respectable,

2. The choices made by the Swedish Academy are not respectable,
3. / ∴ Neither Bob Dylan nor Italo Calvino have been awarded the Nobel Prize in Literature

5.
1. In all the games that the Boston Red Sox have played so far this season they have been better than their opposition,
2. If a team plays better than their opposition in every game then they win the World Series
3. / ∴ The Boston Red Sox will win the league

6.
1. There are lights on in the front room and there are noises coming from upstairs,
2. If there are noises coming from upstairs then Emma is in the house,
3. / ∴ Emma is in the house

Exercise Two

Give examples of arguments that have each of the following properties:

1. Sound
2. Valid, and has at least one false premise and a false conclusion
3. Valid, and has at least one false premise and a true conclusion
4. Invalid, and has at least one false premise and a false conclusion
5. Invalid, and has at least one false premise and a true conclusion
6. Invalid, and has true premises and a true conclusion
7. Invalid, and has true premises and a false conclusion
8. Strong, but invalid *[Hint: Think about inductive arguments.]*

5. Informal Fallacies

CASSIANO TERRA RODRIGUES

As we have seen in previous chapters, one important feature of an argument is whether it is valid or not (in the case of deductive arguments), or if it's strong or weak (in the case of inductive and abductive arguments). This chapter outlines some of the important mistakes that can be made within arguments, ensuring they are either invalid, unsound, or weak within a determined context. Within philosophy, such mistakes are called **fallacies**. Particular focus here will be concentrated upon *informal* fallacies; that is, mistakes not exclusively related to the logical form of the argument, but including also its *content*. This means even deductively valid arguments can still be interpreted as fallacious if their premises are deemed unjustified for whatever reasons, including rhetorical reasons (Walton 1995).

Committing flaws in reasoning is in fact very common. Sometimes fallacies just pass unnoticed. But sometimes they are intended, whether because the arguer is uninterested in being reasonable or wishes to induce someone else to make a rational error. The importance of studying fallacies then appears: without being able to identify flaws in reasonings, we would accept—or refuse to accept—any conclusions without good reasons to do so, and would have to base our beliefs purely on the trust of others. A common practice of course, but is it reliable?

More than just identifying flaws, the *primary* purpose of studying fallacies is to avoid falling foul of them. By showing why and when a certain way of reasoning does not support the truth of the conclusion, that is, does not offer enough convincing evidence for it, the study of fallacies becomes inescapable. Further, identifying these fallacies requires more than relying upon formal logic, it also involves a good deal of discourse analysis. That is, we are required to ask key questions related to the content of the relevant arguments: Who speaks? To whom? From which perspective? With what purpose? For this reason, the study of fallacies must take into account not only failures in logic, but misuses of argumentative techniques. What is argumentatively appropriate in one context may not be in another. The appropriateness will depend on, among other things, the purpose of the argument and the intended audience.

None of this means, however, that we cannot develop general standards for when we ought to recognise good reasoning and bad reasoning. Indeed, as has been noted in previous chapters, it's of paramount importance that we can provide understandable and publicly accessible standards for evaluating all manner of arguments and reasoning. Let us pay attention to three basic characteristics of good reasoning:

1. A good argument is *logically* well-framed. This is the minimum requirement: the premises of a good argument offer reasons for the conclusion. However, different individuals can have different ideas about what counts as a good reason or not—good reasons for one person can be inadequate for another. So, while necessary, this requirement isn't sufficient.
2. As there may be disagreement about the premises, a good argument starts from *acceptable* premises, or premises that are warranted, and not only for the reasoner, but mainly for the *audience*. Of course, even though not true or plausible at all, certain premises may be acceptable, depending on the audience or even on the function of the argument in a given context. Considerations of form *and* content necessarily have to be taken together then.
3. The premises must contain *relevant information* for the conclusion—if not *all* that is relevant, at least enough to make the conclusion acceptable. Concealing relevant information is a well-known form of deceiving people, just as taking certain information for granted when it has been widely contested is a mistake.

Fallacies contain errors in one or more of the senses given above. Of course, there are uncountable reasons for accepting a conclusion, such as social, cultural, and psychological reasons. However, the criteria for identifying good arguments are nevertheless *logical* criteria—that is, they are rational criteria, publicly open to evaluation. So, anyone could identify fallacies by paying attention to the following:

1. Do the premises support the conclusion, or only offer very weak support for the conclusion?
2. Are the premises well-supported?
3. Do the argument's premises include all the important relevant information?

To avoid being fallacious, an argument must be able to answer all of these questions

in the positive. Bearing this in mind, we do not need to attempt to provide an exhaustive list of each and every possible fallacy. All we must do is learn how to identify when and how those criteria are not met, so we can understand when and how arguments fail to be good. So, let us examine a taxonomy of fallacies, that is, how they are classified, and then a list of some common fallacies.

Taxonomy of Fallacies

Our taxonomy of fallacies aims to categorise fallacies into distinct groups, highlighting the distinctive problems that members of each group possess. Our most general division is the above mentioned distinction between *formal* and *informal* fallacies. As mistakes in the *form* of deductive arguments have already been covered in Chapter 3, in this chapter we focus on mistakes of the second kind: *informal fallacies*.

Informal fallacies are so called because their errors lie not in their logical form. Instead, to appreciate what is wrong with them, we must look at the argument's content, and thus we must examine if the reasoning within the argument meets our other criteria presented above—relevant information and acceptable premises. Such informal fallacies are normally divided into the following three general categories (Kahane and Tidman 2002, 349):

1. ***Relevance fallacies***: Fallacies of this kind do not present relevant information, or present irrelevant information for the conclusion.
2. ***Ambiguity fallacies***: Such fallacies employ unclear or equivocal terms or propositions, so that it becomes impossible to grasp a precise sense of what is being argued for. One may be led to think there may even be no sense at all, due to the indeterminacy of meaning.
3. ***Fallacies of presumption***: In such flawed reasoning, the conclusion rests upon certain assumptions not explicitly stated in the premises. Such assumptions are false, or at least uncertain, implausible or unjustified, so that the premises do not strictly support the conclusion. Explicating the lurking assumption usually suffices to demonstrate the argument's insufficiency, either due to a lack of relevant information or unacceptable premises.

Common Informal Fallacies

The following list is not exhaustive and presents only some of the more common fallacies, for the sake of illustration. They are intentionally not classified according to the classification above—this is a task for you to accomplish after reading this chapter, as an exercise (there is another one at the end of the chapter, and few questions you should answer here and there). Tradition dictates the names are presented in Latin, some of which are more famous than the vernacular.

Argument directed to the person (*Argumentum ad hominem*)

This fallacy consists in attacking the person instead of treating the argument that the person is proposing. Consequently, the character or the personal circumstances of the speaker is raised to invalidate his or her arguments, rather than any fault identified with the argument itself. This is a very common fallacy, of which there are various forms. It will be useful to highlight two of them:

- ***Abusive ad hominem***. This form of *ad hominem* consists in calling into question the moral character of the speaker, thus attempting to dismiss the trustworthiness of the person rather than showing the actual mistakes in their arguments. The offensive *ad hominem* dismisses a certain opinion on the grounds that those who sustain it are to be dismissed, whatever the independent qualities of the opinion.
- ***Circumstantial ad hominem***. The personal circumstances of one who makes or rejects a claim are irrelevant to the truth of what is claimed. This fallacy ignores this important fact by attempting to undermine someone's argument on the basis of their background, or current circumstances. For example, one might try to argue that we ought not listen to another's argument as they will benefit from the conclusion's truth. Such an appeal would obviously be unjustified.

A Question for You!

Can you think of a situation in which it would be acceptable to disregard someone's evidence due to their personal circumstances? (Clue: think of courts of law)

The Straw Man fallacy

This is a very common fallacy. According to the principle of charity in argumentation analysis, the strongest interpretation of an argument should always be preferred. The straw man fallacy is the direct refusal to adhere to this principle, and consists in reducing an argument to some weaker version of it simply in order to strike it down. The original strength of the argument is thereby missed and, reduced to a caricature, can be easily refuted. The fallacy's name comes from the fact that a straw man is easier to beat down than a real man. Some vegan activists claim their opponents often commit this fallacy by stating that if vegans have so much respect for animal life, they should accord the same respect to plant life as well. Vegans may justifiably claim this as a misrepresentation of their own position, and thus does not diminish its legitimacy. The straw man fallacy differs from the *ad hominem* fallacy in that it does not attempt to undermine the argument by directly attacking the person.

Appeal to power or threat of force (*Argumentum ad baculum*)

In Latin, "baculum" means a cudgel, bat or stick for hitting. An argument with a cudgel is then an appeal to brute force, or a threat of using force instead of reasoning in order to ensure one's conclusion is accepted. The *ad baculum* is a sort of intimidation, either literally by physical power or any other kind of threat, so someone feels constrained to accept the conclusion independently of its truth. When some-

one threatens to use force or power, or any other kind of intimidation instead of reasoning and arguing, one indeed abandons logic. This can then be taken as the utmost fallacy, the most radical way of trying to impose a conclusion without reasoning in favor of it.

Think, for instance, of when someone raises their voice as a form of intimidation to force the acceptance of a conclusion, without giving reasons. A historical example of this fallacy comes from the El Salvador guerrillas' use of a slogan in the 1980s, in order to prevent people from voting: "vote in the morning; die in the afternoon" (Manwarring and Prisk 1988, 186). The threat, of course, need not be overtly stated. In cinema, one of the most famous lines of Don Corleone, the Mafia character played by Marlon Brando in Francis F. Coppola's *The Godfather* (1972), is: "I'm gonna make him an offer he cannot refuse." One has to watch the movie to see why this is an *ad baculum*.

Begging the question (P*etitio principii*)

This fallacy arises when the argument's premises assume the truth of the very conclusion they are supposed to be providing evidence for, so that in order to accept the premises one has first to accept the conclusion. As in such cases the conclusion acts as a support for itself, the Latin name "petition of the principles" is thereby explained. Such arguments are fallacious because they are useless in establishing the truth of the conclusion, even if ultimately the argument's premises are true and the argument is definitely valid. Why then is this type of argument fallacious? Well, we desire *independent* evidence for our conclusions. After all, if we already knew the conclusion was true, we wouldn't require an argument to prove it. Arguments that beg the question, however, provide no such independent evidence. Would you justify your statements just by rephrasing them?

Arguments that beg the question, then, are troublesome because they pretend to be providing independent evidence for the conclusion when in reality they are simply restating the conclusion, or assuming its truth, within the premises. For instance, when someone argues men are better than women in logical reasoning because men are more rational than women, this is to beg the question. Now, if being logical just means being rational, then what has been said is just that men are more logical

because they are more logical. Thus the argument simply assumes the very point it is attempting to demonstrate.

A Question for You!

Can you spot some examples of this fallacy? And can you tell when a circularity in reasoning is not a fallacy? Explain.

Appeal to popular opinion (*Argumentum ad populum*)

The Latin means more precisely "appeal to the populace." This fallacy consists in the mistake of assuming an idea is true just because it's popular. Such arguments are fallacious because collective enthusiasm or popular sentiment are not good reasons to support a conclusion. This is a very common fallacy in demagogic discourses, propaganda, movies, and TV shows. Think, for instance, of marketing campaigns that say "products of brand *x* are better because they are good sellers." Or when someone says: "everyone agrees with this, why don't you?" But the "this" can be false even if everyone thinks it is true. The image below illustrates nicely this fallacy:

Relying solely on the popularity of a person, movement or idea can have significant repercussions for society, as this photo taken in Hamburg (Germany) in 1936 during Nazi rule demonstrates. One person in this photograph, unlike the others, is refusing to perform the Nazi salute. Can you spot them? To find out about the history of this photo and its significance, see the Wikipedia page on August Landmesser.

August Landmesser Almanya 1936, via Wikimedia Commons. This work is in the public domain.

Appeal to pity (*Argumentum ad misericordiam*)

This happens when someone appeals to the audience's sentiments to compel support for a conclusion without giving reasons for its truth. A clear example of this fallacy is provided by Patricia Velasco: "[I]t is not uncommon to find students who appeal to the teacher's sentiments in order to obtain, for instance, a grade review, by reciting an unending roll of personal problems: dogs are sacrificed, marital engagements are broken, grandmothers are hospitalized" (Velasco 2010, 123).

In courts, this kind of fallacy is common, as when the humanitarian sentiments of the jury are appealed to without discussing the facts of the case. There is a very famous and peculiar case of a youth who murdered his mother and father, and then had his attorney plead for a lighter penalty claiming the youth had become an orphan (Copi, Cohen & McMahon 2014, 115).

Sometimes the evocation of sentiments is not fallacious. It can be perfectly reasonable, for example, to combine reasons for a conclusion with an appeal to outrage or anger towards a certain action. This fallacy occurs when appealing to emotions *absolutely replaces* giving reasons—aiming at persuasion through eliciting emotions solely, without attempting to rationally support the conclusion—so that sentimentalism is used to produce the acceptance of the conclusion, no matter what is true.

Appeal to ignorance (A*rgumentum ad ignorantiam*)

This fallacy consists in assuming that the lack of evidence for a position is enough to demonstrate its falsity and, inversely, the lack of evidence for its falsity is enough to entail its truth. This is a very simple fallacy, for we cannot assert the truth of a proposition based on the lack of proof of its falsity, and vice versa. Lack of evidence is a flaw in our knowledge, and not a property of the claim itself. For instance, to say extraterrestrials exist because there is no proof of their non-existence would be to neglect the fact there may be no independent positive evidence for their existence either. The rational attitude to have when we have no evidence for either position is to suspend judgement on the matter.

A Question for You!

Can you imagine contexts in which *ad ignorantiam* is not a fallacy? Can you explain from your examples why it is not a fallacy?

Appeal to authority (*Argumentum ad verecundiam*)

These are arguments based upon the appeal to some authority, rather than independent reasons. We identify it when the speaker starts to cite famous "authorities," dropping names instead of giving his or her own reasons, thus recognizing his or her own incapacity to establish the conclusion of the matter at hand, as if saying: "I acknowledge my ignorance, there are others who know better than me on this subject." This explains its Latin name: "*argumentum ad verecundiam*," which is more properly translated as argument based on modesty, or coyness, referring to the speaker, who invokes an authority to support their case.

Notice that an appeal to authority can be legitimate if the authority invoked *really is an authority* on the subject. If you think of citing Hegel in discussing matters of philosophy, or Marie Curie in chemistry or physics, then the appeal could be reasonable. But invoking Marie Curie's ideas when talking about football, for instance, would in all likelihood be irrelevant. In other words, an appeal to authority becomes illegitimate when instead of giving reasons and constructing an independent inference for the conclusion, someone seeks to base a conclusion on the say-so of a putative authority, even though this someone is not a competent authority on the subject under discussion. The appeal then is fallacious. But even the highest authority's opinion on some subject is not enough by itself to establish a conclusion. No conclusion is true or false just because some specialist has said so. Rather, one's appeal to the word of the authority is merely a shorthand for, "they will be able to provide you with independent support for my conclusion." If they cannot, then the conclusion is not supported by your appeal to their authority, whatever you say.

This fallacy may seem awkward, but it is in fact very common. For instance, the ideas of Charles Darwin—a renowned biologist—are not rarely invoked in discussions about matters of morals, politics or religion, without biology being really relevant to the case.

A Question for You!

Can you find other examples of this fallacy? What warrants legitimacy to an authority—community consensus? Expertise? A combination of both? What else?

This advert for Camel cigarettes from the back cover of Life magazine (11th Nov., 1946) relies upon the health expertise of doctors to extol the virtues of a particular brand of cigarettes. The intended effect on the audience is to make them believe that, as knowledgeable advocates of good health, doctors would not implicitly recommend a cigarette that was bad for you. The appeal to a doctor's own actions, nonetheless, is unjustified in this case. Why? Firstly, simply because an individual does something (such as smoke a cigarette brand) does not mean they recommend it

for your health, even if they themselves are knowledgeable about its effect. People engage in many unhealthy and irrational activities in their private lives. Further, the advert relies on the presumption that the doctors themselves were informed on the health impacts of cigarettes. Remember, an appeal to authority figures is only justified if those authorities actually are much more informed on the relevant matter. For the history behind this, and similar adverts, see the "More Doctors Smoke Camels" advertising campaign information from the University of Alabama.

Camel Advertisement by R.J. Reynolds Tobacco Company. Published in *Life Magazine*, November 11, 1946. Via the University of Alabama. Used under fair use.

Hasty generalization

This fallacy is committed whenever one holds a conclusion without sufficient data to support it. In other words, the information used as a basis for the conclusion may well be true, but nonetheless unrepresentative of the majority. Some widely known generalizations are unjustified for just this reason, such as "all Brazilians are football lovers," "atheists are immoral people," and "the ends justify the means." Such generalizations are based on an insufficient set of cases, and cannot be justified with only a few confirming instances.

Our beliefs about the world are commonly based on such generalizations. In fact, it is a hard task not to do so! But that does not mean we should accept such generalizations without examination, and before seeking enough evidence to support them.

Equivocation

This is one of the most common fallacies. Whenever a term or expression appears with different meanings in the premises and in the conclusion, the fallacy of equiv-

ocation occurs. In these cases, the speaker relies upon the ambiguity of elements of language and shifts their meaning throughout the argument, forcing the audience to accept more than is entailed by the argument when any one fixed meaning is given to the relevant terms. A classical example is:

1. The end of a thing is its perfection.
2. Death is the end of life.
3. / ∴ Death is the perfection of life.

Here, "end" can mean "goal" or "termination," so the conclusion could be that the goal of life is perfection, or that life is perfected only when it is terminated. Apart from metaphysical considerations, the argument is only apparently valid, since the change in meaning and context make at least one of the premises or conclusion false (or, implausible).

A Question for You!

Can you rephrase the argument to make the fallacy clear?

EXERCISES

Exercise One

For each statement identify the informal fallacy.

Example:

Incest must be immoral, because people all over the world for many centuries have seen it as immoral.

Answer: This is an appeal to *popular opinion* (and, in particular, *tradition*) to suggest that a particular act is immoral when, unless one makes the additional argument that morality is nothing more than the accepted norms within a society, popular opinion is no evidence at all for the claim that an act is moral or immoral.

1. It's not wrong for newspapers to pass on rumours about sex scandals. Newspapers have a duty to print stories that are in the public interest, and the public clearly have a great interest in rumours about sex scandals since when newspapers print such stories, their circulation increases.
2. Free trade will be good for this country. The reason is patently clear. Isn't it obvious that unrestricted commercial relations will bestow on all sections of this nation the benefits which result when there is an unimpeded flow of goods between countries?
3. Of course the party in power is opposed to shorter terms, that's just because they want to stay in power longer.
4. A student of mine told me that I am her favorite professor, and I know that she's telling the truth, because no student would lie to her favorite professor.
5. Anyone who tries to violate a law, even if the attempt fails, should be punished. People who try to fly are trying to violate the law of gravity, so they should be punished.
6. There are more Buddhists than followers of any other religion, so there must be some truth to Buddhism.

Exercise Two

Now try to find your own fallacies, both those types discussed and new ones. Here are some other types of fallacies to get you started. First, ascertain the fallacy, and then identify cases of it:

- False cause (two kinds: *non causa pro causa* and *post hoc ergo propter hoc*)
- Converse accident
- The player fallacy

- Loaded question
- Irrelevant conclusion (*ignoratio elenchi*)
- False analogy
- Poisoning the well
- Complex question (two kinds: composition and division)
- Slippery slope

PART III

PHILOSOPHY OF RELIGION

6. Reasons to Believe – Theoretical Arguments

MARCUS WILLIAM HUNT

Thinking about God brings together our powers of speculation, our deepest values, and our greatest hopes and fears. It is therefore fertile philosophical territory. Some of the arguments for belief in God are theoretical in that they appeal to our reason. Other arguments are practical in that they invoke God to make sense of some of our practices, such as morality. In this chapter, we will review the most influential theoretical arguments for God's existence: the teleological, the cosmological, and the ontological arguments. The former two try to show God's existence using tools familiar from ordinary empirical reasoning; God is a hypothesis to be proven in much the same way as we prove more mundane hypotheses, marshalling the evidence as best we can. Just as a one might see a puddle and infer that it has been raining recently, one might observe certain other features of the world and infer God as the best (or only) explanation of them. The latter argument is more closely akin to mathematics and conceptual analysis; just as one might reflect on the concept of a triangle and ascertain that its internal angles must add up to 180°, one might reflect on the concept of God and ascertain that he must exist. Lastly, we will introduce the suggestion that it is legitimate to believe in God without providing arguments at all: that belief in God is more properly a cornerstone for our thinking, than a mere conclusion of some argument. Each of these arguments have been articulated in myriad ways, so we will focus our attention on some of the most influential versions.

The Teleological Argument

"Telos" being Greek for "purpose" or "goal," the **teleological** argument takes as its starting point the appearance of purpose or design in the world. If there is design, there must be a designer. This thought is an ancient and cross-cultural one, appearing in classical Hindu thought (Brown 2008) and in the Psalms: "The heavens

declare the glory of the Lord; and the firmament sheweth his handiwork" (Psalm 19:1). An influential formulation comes from William Paley (1743-1805). In *Natural Theology*, Paley offers numerous instances of apparent design, focusing primarily on biological organisms. Paley argues that organisms are analogous to human-created artifacts in that they involve a complex arrangement of parts that serve some useful function, where even slight alterations in the complex arrangement would mean that the useful function was no longer served. An eye, like a watch, evidently serves a useful function. The function is only achieved by a very complex arrangement of parts, which in turn serve various sub-functions, all ordered towards the higher function. Had this arrangement been different in any minute detail, the eye would not successfully serve its higher function. To explain this feature of the eye, we should, on an **analogy** with the watch, refer to a designing mind's activity, rather than the blind play of causal forces. As we are to the watch, so God is to the eye. To Paley, God is a powerful and simple hypothesis that must be invoked to explain the design resplendent in nature (Paley 1802).

Formulations of the teleological argument like Paley's have been subjected to searching criticisms, not least by David Hume (1711-1776). In his fabulously written *Dialogues Concerning Natural Religion*, Hume questions how close the analogy of design really is. For example, we produce artifacts by acting on pre-existing materials, but God is supposed to create from nothing. Most artifacts have a purpose that is evident to us, but God's purpose in having created this or that creature, or the world at all, is unclear. We have seen artifacts being manufactured on many occasions, but never an organism, or the world. Even granting unequivocally that there is design in the world, we would not be justified in inferring God to explain it. Hume notes that artifacts are usually the result of collaboration by many people. Nor is there any connection between the qualities of an artifact and the qualities of its designer; one need not be a giant to build a skyscraper or be beautiful to make a beautiful painting. So, the design in the world need not be the design of one being, or an especially exalted being. Rather, the evidence of design is equally consistent with the hypothesis of polytheism (Hume 1779). Perhaps as devastating for Paley's formulation, Charles Darwin's (1809-1882) theory of evolution by natural selection is widely taken to show that the complex arrangement of parts and the functions of the parts of organisms can be accounted for without reference to a designing mind. The appearance of design is merely appearance; the analogy between artifacts and organisms is a misleading one. God is an obsolete hypothesis so far as the expla-

nation of these phenomena are concerned. A distinct minority, the proponents of "Intelligent Design" contest this claim by offering examples of biological phenomena that supposedly cannot be explained by Darwinian evolution (Behe 1996). Barbara Forest argues that "Intelligent Design" theories lack a serious methodology, given that they invoke miraculous intervention in an unprincipled way to explain various phenomena (Forrest 2011).

However, teleological arguments continue to thrive in other forms. One line of thinking is the fine-tuning argument. Our universe seems to be governed by a batch of laws of nature—e.g. gravity, the strong nuclear force. It seems possible that these laws of nature could have been different in an unfathomable number of ways—e.g. we can conceive gravity as a billion times stronger than it is, or a billion times weaker. It seems that most of the ways that the laws of nature could have been would not allow for embodied moral agents (or, more broadly, life) by not allowing for the emergence of complex matter. Now, arguably God is a being who wishes there to be embodied moral agents. So, if there is a God, this predicts a universe with laws of nature that allow for the emergence of embodied moral agents, laws that are finely-tuned for such a purpose. By contrast, if there is no God there is no particular reason to predict that the laws of nature will be like this. Our universe seems to be one with laws that allow for embodied moral agents. Therefore, our universe is more consistent with the theistic hypothesis, so probably God exists. Finally, putting aside the fine-tuning of the physical laws we enjoy, Richard Swinburne contends that the fact that our universe is governed by laws at all, rather than being chaotic, is something that demands a design-based explanation (Swinburne 2004).

Whether such arguments really identify phenomena that stand in need of a special explanation, and whether the explanations they offer are vulnerable to being supplanted by non-theistic alternatives, is a matter of ongoing debate.

Questions to Consider

1. What is the value of arguments by analogy, such as Paley's? Do they give new

information, or just highlight information you already had, or can they even be misleading?
2. Suppose you were convinced that our universe is in fact fine-tuned. What, if anything, would you be entitled to infer about the nature of the fine-tuner(s)?
3. Many have thought that Darwinian evolution thoroughly undermines the view that biological phenomena are designed by God. Is there a consistent way of holding both views? Supposing there is, would the hypothesis of a designer-God still be a necessary part of the explanation of the biological phenomena, or a somewhat ornamental addition?

The Cosmological Argument

"Cosmos" being Greek for "world," the **cosmological** argument suggests God as the only adequate hypothesis in explaining why there is something rather than nothing. Cosmological arguments go back at least as far as Plato (428-348 BCE), with influential formulations being offered by Thomas Aquinas (1225-1274) and Gottfried Leibniz (1646-1716). One influential formulation comes from Samuel Clarke (1675-1729).

In A *Demonstration of the Being and Attributes of God*, Clarke argues for the conclusion that God is the reason for the universe's existence by showing the bankruptcy of the alternatives. Something must have existed from eternity, Clarke reasons, since to suppose otherwise would be to suppose that something arose from nothing, which is absurd. Further, this eternal something must be independent of the universe. Think of a sapling tree. Like every individual thing in the universe its existence is **contingent**—it could fail to exist—as demonstrated by the fact that it once did not exist and by the fact that it is susceptible to change and destruction. Therefore, its reason for existing must be sought outside it; if we seek the reason why the sapling exists we must refer to its parent tree, the soil, the sun, the air. But if everything in the universe is contingent, then so is the universe itself, and its reason for existing must be sought outside it. Even if the universe had no beginning in time, and we could trace the sapling's reason for existing backward indefinitely, we would still need to explain why there was this endless succession of contingent beings

rather than nothing. Think of "reason for existing" as being like the parcel in the children's game "pass the parcel."[1] Even supposing an infinite number of players, or a circle of players passing the parcel for an eternity, if every player must receive the parcel from another (like a contingent being receives its reason for existing from another), then we would still face the question where the players got the parcel in the first place. Lastly, the being outside the universe must have a necessary existence; that is, it must contain the reason for its existence within itself, such that it could not fail to exist. By the difficulties attending all the alternatives, we are driven to accept that not all beings are contingent; our search for reasons for existing must reach its terminus in a necessary being, God. Clarke admits that the notion of necessary existence is difficult to conceive, since all the beings we encounter are contingent, but holds that it is the only adequate hypothesis in explaining why there is something (Clarke 1705).

Clarke's cosmological argument was also criticized by Hume in his *Dialogues Concerning Natural Religion*. Hume questions why the universe itself may not be the necessary being. Clarke's reason for rejecting this idea was that everything in the universe is contingent. But, Hume notes, Clarke is committing the fallacy of composition. A flock may be composed of sheep destined for slaughter, but this does not prove that the flock itself is destined for slaughter. Likewise, perhaps the universe's existence is necessary despite the contingency of every individual thing in it, a thought which is lent some credibility by the physical principle that matter can neither be created nor destroyed. Raising further havoc, Hume questions whether there can even be such a thing as a necessary being. It seems to be a feature of claims which are necessary—like "2+2=4" or "a nephrologist is a physician of the kidneys"—that their contraries cannot be conceived without contradiction, as with "2+2=5." But we seem able to conceive any being's nonexistence without contradiction; just as I can coherently conceive of the sapling's nonexistence, I can coherently conceive of God's nonexistence (as shown by the fact that we feel the need to debate God's existence).

Another issue is that Clarke's cosmological argument, like many other formulations, invokes the "principle of sufficient reason," or the idea that every state of affairs has

1. Pass the parcel is a parlour game in which a parcel containing a prize is passed around and around in a circle.

a reason why it is so and not otherwise. This seems to be a principle that we make thorough use of from early childhood in endlessly asking "why?" and expecting that there must be answers. Because of this principle, we insist that the universe must have a reason for its existence, rather than allowing that the universe is an unaccountable "brute fact." But why should we accept the principle of sufficient reason? It does not seem to be a necessary truth or something we can infer from experience (Pruss 2006).

A quite different version of the cosmological argument is presented by William Lane Craig, drawing upon the Islamic philosophers of the 9th-12th centuries such as al-Ghazali (1058-1111), called the kalām cosmological argument. Craig argues that whatever begins to exist has a cause, that the universe began to exist, and that God must be invoked as its cause. Why believe that the universe began to exist? For one thing, it seems that the universe cannot have an infinite temporal duration since the successive addition of finites cannot add up to something infinite. Just as one cannot "count to infinity," the compounding of the moments that pass in time could not ever add up to an infinite temporal duration. For another, if we make the supposition that the universe has an infinite temporal duration various absurdities arise. Sundays are a subset (one-seventh) of all the days that have ever occurred. A very bored deity would count out six non-Sundays for every Sunday. But if the universe has an infinite temporal duration, then an infinite number of Sundays have occurred. And an infinite number of non-Sundays have occurred. Therefore, the subset is equal in magnitude to the set—an absurdity. So, the universe began to exist. Notice that Craig's argument avoids referring to necessary beings, or the principle of sufficient reason; Craig's argument requires only that if something begins to exist, then it has a cause. Supporters of the kalām cosmological argument may also cite scientific evidence to support the idea that the universe began to exist, for instance the Big Bang theory or the idea that if the universe had an infinite temporal duration, then **entropy** would guarantee that complex matter would not exist presently (Craig 1979).

One key question about Craig's kalām cosmological argument is whether the cause of the universe must be something like our conception of God, a kind of personal agent. Craig, following al-Ghazali, suggests that the cause of the universe must be timeless, outside of time entirely. Physical causes bring about their effects, as it were, immediately. For example, an effect like the process of water freezing will begin to happen as soon as its cause, a sub-zero temperature, is present. So, if the

cause of the universe is timeless and is a physical cause, we would expect the universe to have always existed. But as we have seen, that cannot be. So, the cause of the universe must be non-physical. Aside from physical causes, we sometimes explain effects as resulting from actions—we have the idea that personal agents bring about effects spontaneously as and when they will to do so, in a way that is different than and not entirely determined by physical causes. On this model, plausibly the cause of the universe is the action of a personal, but non-physical, agent. Others have objected, though, that it is difficult to make sense of the idea of a personal agent who acts but is also outside of time, and again that we are having to rely too heavily on our limited repertoire of concepts: for all we know, there might be causes that are neither like the physical nor like personal agency.

Questions to Consider

4. It seems that the opponent of the cosmological argument can try to defuse it by denying that the universe has a reason for its existence, or a cause, or by denying the principle of sufficient reason. Are these unreasonable moves? Is there any claim or principle that it would be unreasonable to deny, if the alternative was the conclusion that God exists?
5. In theory, could science one day prove that the universe did not begin to exist? What impact would such a finding have on Clarke's cosmological argument? On Craig's kalām cosmological argument?
6. Is it reasonable to rely on our limited repertoire of concepts, as exemplified in the discussion about whether the cause of the universe is a personal agent? Should we be worried by the thought that reality may be stranger than we can conceive?

THE ONTOLOGICAL ARGUMENT

"Ontos" being Greek for "being" or "existence," the **ontological** argument is unusual in that it has no empirical premises at all; God is not called upon as an explanation

for anything. Rather, God's existence is proven by reflection on the concept of God. This is an extremely unfamiliar way of proceeding, since ordinarily we think that by **analyzing** the concept of something, we may discover the **predicates** that will be true of it *if* it exists, but not *that* it exists. For instance, if I have a child then the predicate "has a grandfather named Patrick" will be true of it. The ontological argument proposes, in the case of God, to abolish this "if" and proceed directly from the concept of God to his existence. The argument's first proponent was Anselm of Canterbury (1033-1109). It's a familiar idea that God is great, the greatest in fact, so great one cannot think of anything greater. Anselm draws on this familiar idea in his *Proslogion*. There, Anselm characterizes God as "a being than which nothing greater can be conceived" (Anselm 1078). In more modern language, Anselm is saying that God is the greatest conceivable being, that it is part of the concept of God that it is impossible to conceive of any being greater than God. It seems that existence is greater than nonexistence. So, if we conceive of God as nonexistent, then we can conceive of something greater than God: e.g., a shoe, a flea. But God is the greatest conceivable being, so our assumption of God's nonexistence must have been false, and God must exist. Another way of putting this is that Anselm anticipates Hume's objection that no being's existence is necessary (since any being's nonexistence can be conceived without contradiction). Anselm insists that in this case the idea of God, properly understood, does give rise to contradiction if we suppose his non-existence. "The being which must exist does not exist" seems like a contradiction.

From the outset, the ontological argument has had difficulties heaped upon it. For one thing, although it may seem intuitively right that existence is greater than nonexistence, what does "greater" mean? Better than? Preferable to? More real than? A satisfying characterization is hard to find. Another early objection comes from Gaunilo of Marmoutier (994-1083), who makes the parodic suggestion of an island that is the greatest island that can be conceived. If such an island is to be greater than, say, Corsica, it must exist. Must we then say that such an island exists? Surely not. The difficulty raised by Gaunilo is that it seems that the predicate of existence can be bolted on to any concept illicitly. Anselm responds, however, that his argument applies uniquely to the greatest *being* that can be conceived (not a given, limited kind of being like an island), since although the imagined island would indeed be greater if it existed, it is not part of the concept of anything except the greatest being that can be conceived that it be greater than everything else, and

so for it alone can we infer its existence from its concept. A similar response is that contingency is part of the concept of an island (or dog, or horse, or any other specific, limited kind of being which we are acquainted with), so that a necessarily existing island would simply be a contradiction. Only with the non-specific concept of "a being" in general would contingency not just be included in the concept.

The most historically influential criticism of the ontological argument, however, comes from Immanuel Kant (1724-1804). In his *Critique of Pure Reason*, Kant argues that existence is not a predicate (Kant 1781). Think about the concept of a banana. We can attribute certain predicates to it, such as "yellowness" and "sweetness." As time goes by, we might add further predicates to the concept, e.g., "nutritional potassium source." Now think about what happens to the concept of a banana when you suppose that bananas exist. It seems that the concept is not changed at all. To say something exists is not to say anything about the concept of it, only that the concept is instantiated in reality. But if existence cannot be part of a concept, then it cannot be part of the concept of God, and cannot be found therein by any sort of analysis.

Kant's argument was widely taken to be calamitous to the ontological argument. However, in the 1960s, the argument was rejuvenated, in a form that (perhaps) avoids Kant's criticism, by Norman Malcom (1911-1990). Malcolm suggests that although existence may not be a predicate, necessary existence is a predicate. As contingent beings, we are the sort of things which can come into and go out of existence. But if God exists, then he is a necessary being rather than a contingent being. So, if he exists he cannot go out of existence. This is a predicate God enjoys, even if existence per se is not a predicate (Malcolm 1960). Intuitively, "indestructibility" and "immortality" are predicates that alter the concept of a thing. Another modern version of an Anselmian ontological argument is offered by Lynne Rudder Baker (1944-2017). Baker's version avoids the claim that existence is a predicate (as well as several other traditional difficulties). Instead, Baker notes that individuals who do not exist have mediated causal powers, that is, they cause effects but only because individuals who do exist have thoughts and beliefs about them: Santa Claus has the mediated causal power to get children to leave cookies out for him, children who themselves have unmediated causal powers. In short, to have unmediated causal powers is intuitively greater than having mediated causal powers, so given that God is the greatest being that can be conceived of, God must have unmediated causal powers, and so he must exist (Baker 2013).

A final difficulty that we may mention for these three theistic proofs is whether they prove the existence of the God of Abraham, or the God of classical theism (supposing that the two are the same) — which it is the concern of most theistic philosophers to do. The teleological argument may show a designer, which corresponds tolerably well to the creatorhood of God, but seems to fall short of showing God's other attributes, like omnibenevolence. Similarly, the world-cause or necessary being purportedly shown by the cosmological and ontological arguments may seem far distant from a personal God who is interested in our affairs. One theistic response is that these arguments may work in combination, or be supplemented by the evidence of revelations, religious experiences, and miracles (See Chapter 3 for a few such arguments), or we may be able to find ways in which one divine attribute implies the others. Bear in mind also that there are many less well-known theistic arguments beyond these three traditional ones (McIntosh 2019). (For some specific examples, see Chapter 3.)

Questions to Consider

7. Do we really have a conception of "a being than which nothing greater can be conceived"? Is that something we are able to frame in our minds, or have we just begun to misuse words?
8. If existence is not a predicate, why do we treat it as one in ordinary sentences, like "the pecan tree exists"? Further, how do we delineate the domain of fiction? Isn't our concept of "Homer Simpson" a concept of a character who does not exist? If not, what is it a concept of?
9. Even once you grasp it, does the ontological argument seem intuitive to you? Does it seem less intuitive than the cosmological argument? Should you put much weight on your intuitions about these arguments?

REFORMED EPISTEMOLOGY

It strikes some people as very odd to base belief in God on theoretical arguments

like those we have discussed. It seems that someone who did so would be obliged to regularly check the philosophical journals to ensure that their favorite argument had not been undermined, and as you may have noticed the fortunes of each argument wax and wane over time. Surely, belief in God should not depend on such vicissitudes. But without relying on such arguments, would belief not become theoretically unjustified, irrational, and dogmatic?

One suggestion, drawing on the Reformed theology of John Calvin (1509-1564), comes from Alvin Plantinga (1983). We can think of our beliefs as being arranged in a structure. Some beliefs are high-up in the structure. We can only justify these beliefs by making complicated arguments from other beliefs (e.g. "inflation reduces unemployment"). But other beliefs are at the foundation of the structure; they are not based on other beliefs, and so are themselves "basic." Basic beliefs need not be arbitrary. Rather, basic beliefs are justified ("properly basic") if they arise from the exercise of reliable faculties such as our senses or our reason. For instance, I don't infer the belief that I am cold from any more well-known beliefs. I justifiably believe it since it is evident to my senses. And, although a mathematician could prove "2+2=4" from axioms that are in some sense more fundamental, that isn't how ordinary people arrive at this belief. Rather, people justifiably believe that "2+2=4" since it is self-evident to their reason.

Could it be that belief in God is properly basic, rather than something high-up in our belief-structure, as the arguments that we have canvassed assume? The apparent objection to allowing this is that God's existence is neither evident to the senses, nor self-evident to reason. If a belief does not meet either of these criteria, then how can it be properly basic? Plantinga's response is that there are many beliefs which seem to be properly basic for us yet which do not meet these criteria. For instance, consider your belief that other people are not automatons, that they have an inner mental life like your own. This belief is usually basic for us; we believe it spontaneously when we see a human form, rather than believing it because of some complicated argument. Is this belief evident to the senses? No, we cannot "see" other people's minds, only their observable, outward behavior. Is it self-evident to reason? No, unlike a mathematical truth, it is the sort of thing which we can conceive to be false without contradiction (since we can conceive of other people being mindless robots). So, it seems this belief is basic for us, despite neither being self-evident nor evident to the senses, and is properly basic if whatever the faculty is that delivers this belief is reliable. Perhaps belief in God is just the same

way, something we spontaneously believe in certain circumstances, as when viewing a dramatic sunset or following the prevention of impending peril. Such a belief will be properly basic if it results from the exercise of a reliable faculty. Following Calvin, Plantinga postulates such a faculty under the term *sensus divinitatis* ("sense of divinity"). Plantinga notes that taking belief in God as basic need not be dogmatic, since basic beliefs can be overturned if they are shown to be false or shown to have resulted from unreliable faculties—but he conjectures the failure of the arguments against God's existence, which are addressed in Chapter 4.

Questions to Consider

10. If belief in God can be properly basic, why couldn't all sorts of strange beliefs be properly basic?
11. If there is a faculty that generates basic beliefs about religious claims, how do we explain the occurrence of unbelief or of indifference to religious claims? On the other hand, if there is not such a faculty, how do we explain the widespread belief in something so exotic and far-removed as God? Would anyone have thought-up the idea of God, if it were not the sort of idea that spontaneously occurs to us under certain common conditions?

Conclusion

We have looked at some arguments that purport to provide evidence for God's existence either by invoking God as an explanation for various aspects of the world (the teleological and cosmological arguments) or by analysis of the concept of God (the ontological argument). Each argument has formidable proponents and detractors, and both the arguments and the responses to them raise difficult philosophical problems about the nature of thought (concepts, beliefs, arguments) and the nature of nature itself (time, causality, purpose). One thing we can learn from this state of affairs is that anyone with an interest in proving God's existence, or in resisting those proofs, needs to take an interest in philosophy, and likewise that those with

an interest in philosophy can see philosophical problems in new and different lights by examining the arguments for God's existence.

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Further Reading

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Online Resources

The Stanford Encyclopedia of Philosophy and The Internet Encyclopedia of Philosophy contain many excellent articles on the main arguments for and against God's existence. There are many websites and blogs focusing on the philosophy of religion. Good ones include:

- Strange Notions: The Digital Areopagus–Reason, Faith, Dialogue
- Edward Feser's blog
- Alexander Pruss's blog
- Arguments for the Existence of God on The Secular Web
- Atheism: Proving the Negative
- Ex-apologist: A philosophy of religion blog
  Consider watching a video lecture series, such as Professor Matt McCormick's video lectures

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7. On the Ontological Proof of God's Existence

ANSELM

Prosologion

Chapter II

Truly there is a God, although the fool hath said in his heart, There is no God.

And so, Lord, do thou, who dost give understanding to faith, give me, so far as thou knowest it to be profitable, to understand that thou art as we believe; and that thou art that which we believe. And indeed, we believe that thou art a being than which nothing greater can be conceived. Or is there no such nature, since the fool hath said in his heart, there is no God? (Psalms xiv. 1). But, at any rate, this very fool, when he hears of this being of which I speak –a being than which nothing greater can be conceived –understands what he hears, and what he understands is in his understanding; although he does not understand it to exist

For, it is one thing for an object to be in the understanding, and another to understand that the object exists. When a painter first conceives of what he will afterwards perform, he has it in his understanding, but he does not yet understand it to be, because he has not yet performed it. But after he has made the painting, he both has it in his understanding, and he understands that it exists, because he has made it.

Hence, even the fool is convinced that something exists in the understanding, at least, than which nothing greater can be conceived. For, when he hears of this, he understands it. And whatever is understood, exists in the understanding. And assuredly that, than which nothing greater can be conceived, cannot exist in the understanding alone. For, suppose it exists in the understanding alone: then it can be conceived to exist in reality; which is greater.

Therefore, if that, than which nothing greater can be conceived, exists in the understanding alone, the very being, than which nothing greater can be conceived, is one, than which a greater can be conceived. But obviously this is impossible. Hence, there is no doubt that there exists a being, than which nothing greater can be conceived, and it exists both in the understanding and in reality.

Chapter III

God cannot be conceived not to exist. –God is that, than which nothing greater can be conceived. –That which can be conceived not to exist is not God.

And it assuredly exists so truly, that it cannot be conceived not to exist. For, it is possible to conceive of a being which cannot be conceived not to exist; and this is greater than one which can be conceived not to exist. Hence, if that, than which nothing greater can be conceived, can be conceived not to exist, it is not that, than which nothing greater can be conceived. But this is an irreconcilable contradiction. There is, then, so truly a being than which nothing greater can be conceived to exist, that it cannot even be conceived not to exist; and this being thou art, O Lord, our God.

So truly, therefore, dost thou exist, O Lord, my God, that thou canst not be conceived not to exist; and rightly. For, if a mind could conceive of a being better than thee, the creature would rise above the Creator; and this is most absurd. And, indeed, whatever else there is, except thee alone, can be conceived not to exist. To thee alone, therefore, it belongs to exist more truly than all other beings, and hence in a higher degree than all others. For, whatever else exists does not exist so truly, and hence in a less degree it belongs to it to exist. Why, then, has the fool said in his heart, there is no God (Psalms xiv. 1), since it is so evident, to a rational mind, that thou dost exist in the highest degree of all? Why, except that he is dull and a fool?

Chapter IV

How the fool has said in his heart what cannot be conceived. –A thing may be conceived in two ways: (1) when the word signifying it is conceived; (2) when the thing itself is understood As far as the word goes, God can be conceived not to exist; in reality he cannot.

But how has the fool said in his heart what he could not conceive; or how is it that

he could not conceive what he said in his heart? Since it is the same to say in the heart, and to conceive.

But, if really, nay, since really, he both conceived, because he said in his heart; and did not say in his heart, because he could not conceive; there is more than one way in which a thing is said in the heart or conceived. For, in one sense, an object is conceived, when the word signifying it is conceived; and in another, when the very entity, which the object is, is understood.

In the former sense, then, God can be conceived not to exist; but in the latter, not at all. For no one who understands what fire and water are can conceive fire to be water, in accordance with the nature of the facts themselves, although this is possible according to the words. So, then, no one who understands what God is can conceive that God does not exist; although he says these words in his heart, either without any or with some foreign, signification. For, God is that than which a greater cannot be conceived. And he who thoroughly understands this, assuredly understands that this being so truly exists, that not even in concept can it be non-existent. Therefore, he who understands that God so exists, cannot conceive that he does not exist.

I thank thee, gracious Lord, I thank thee; because what I formerly believed by thy bounty, I now so understand by thine illumination, that if I were unwilling to believe that thou dost exist, I should not be able not to understand this to be true.

Chapter V

God is whatever it is better to be than not to be; and he, as the only self-existent being, creates all things from nothing.

What art thou, then, Lord God, than whom nothing greater can be conceived? But what art thou, except that which, as the highest of all beings, alone exists through itself, and creates all other things from nothing? For, whatever is not this is less than a thing which can be conceived of. But this cannot be conceived of thee. What good, therefore, does the supreme Good lack, through which every good is? Therefore, thou art just, truthful, blessed, and whatever it is better to be than not to be. For it is better to be just than not just; better to be blessed than not blessed.

8. On The Teleological Argument

WILLIAM PALEY

Natural Theology

CHAPTER I.

STATE OF THE ARGUMENT

IN crossing a heath, suppose I pitched my foot against a *stone*, and were asked how the stone came to be there; I might possibly answer, that, for any thing I knew to the contrary, it had lain there for ever: nor would it perhaps be very easy to show the absurdity of this answer. But suppose I had found a *watch* upon the ground, and it should be inquired how the watch happened to be in that place; I should hardly think of the answer which I had before given, that, for any thing I knew, the watch might have always been there. Yet why should not this answer serve for the watch as well as for the stone? why is it not as admissible in the second case, as in the first? For this reason, and for no other, viz. that, when we come to inspect the watch, we perceive (what we could not discover in the stone) that its several parts are framed and put together for a purpose, *e. g.* that they are so formed and adjusted as to produce motion, and that motion so regulated as to point out the hour of the day; that, if the different parts had been differently shaped from what they are, of a different size from what they are, or placed after any other manner, or in any other order, than that in which they are placed, either no motion at all would have been carried on in the machine, or none which would have answered the use that is now served by it. To reckon up a few of the plainest of these parts, and of their offices, all tending to one result:— We see a cylindrical box containing a coiled elastic spring, which, by its endeavour to relax itself, turns round the box. We next observe a flexible chain (artificially wrought for the sake of flexure), communicating the action of the spring from the box to the fusee. We then find a series of wheels, the teeth of which catch in, and apply to, each other, conducting the motion from the fusee

to the balance, and from the balance to the pointer; and at the same time, by the size and shape of those wheels, so regulating that motion, as to terminate in causing an index, by an equable and measured progression, to pass over a given space in a given time. We take notice that the wheels are made of brass in order to keep them from rust; the springs of steel, no other metal being so elastic; that over the face of the watch there is placed a glass, a material employed in no other part of the work, but in the room of which, if there had been any other than a transparent substance, the hour could not be seen without opening the case. This mechanism being observed (it requires indeed an examination of the instrument, and perhaps some previous knowledge of the subject, to perceive and understand it; but being once, as we have said, observed and understood), the inference, we think, is inevitable, that the watch must have had a maker: that there must have existed, at some time, and at some place or other, an artificer or artificers who formed it for the purpose which we find it actually to answer; who comprehended its construction, and designed its use.

Nor would it, I apprehend, weaken the conclusion, that we had never seen a watch made; that we had never known an artist capable of making one; that we were altogether incapable of executing such a piece of workmanship ourselves, or of understanding in what manner it was performed; all this being no more than what is true of some exquisite remains of ancient art, of some lost arts, and, to the generality of mankind, of the more curious productions of modern manufacture. Does one man in a million know how oval frames are turned? Ignorance of this kind exalts our opinion of the unseen and unknown artist's skill, if he be unseen and unknown, but raises no doubt in our minds of the existence and agency of such an artist, at some former time, and in some place or other. Nor can I perceive that it varies at all the inference, whether the question arise concerning a human agent, or concerning an agent of a different species, or an agent possessing, in some respects, a different nature.

Neither, secondly, would it invalidate our conclusion, that the watch sometimes went wrong, or that it seldom went exactly right. The purpose of the machinery, the design, and the designer, might be evident, and in the case supposed would be evident, in whatever way we accounted for the irregularity of the movement, or whether we could account for it or not. It is not necessary that a machine be perfect, in order to show with what design it was made: still less necessary, where the only question is, whether it were made with any design at all.

Nor, thirdly, would it bring any uncertainty into the argument, if there were a few parts of the watch, concerning which we could not discover, or had not yet discovered, in what manner they conduced to the general effect; or even some parts, concerning which we could not ascertain, whether they conduced to that effect in any manner whatever. For, as to the first branch of the case; if by the loss, or disorder, or decay of the parts in question, the movement of the watch were found in fact to be stopped, or disturbed, or retarded, no doubt would remain in our minds as to the utility or intention of these parts, although we should be unable to investigate the manner according to which, or the connexion by which, the ultimate effect depended upon their action or assistance; and the more complex is the machine, the more likely is this obscurity to arise. Then, as to the second thing supposed, namely, that there were parts which might be spared, without prejudice to the movement of the watch, and that we had proved this by experiment,—these superfluous parts, even if we were completely assured that they were such, would not vacate the reasoning which we had instituted concerning other parts. The indication of contrivance remained, with respect to them, nearly as it was before.

Nor, fourthly, would any man in his senses think the existence of the watch, with its various machinery, accounted for, by being told that it was one out of possible combinations of material forms; that whatever he had found in the place where he found the watch, must have contained some internal configuration or other; and that this configuration might be the structure now exhibited, viz. of the works of a watch, as well as a different structure.

Nor, fifthly, would it yield his inquiry more satisfaction to be answered, that there existed in things a principle of order, which had disposed the parts of the watch into their present form and situation. He never knew a watch made by the principle of order; nor can he even form to himself an idea of what is meant by a principle of order, distinct from the intelligence of the watch-maker.

Sixthly, he would be surprised to hear that the mechanism of the watch was no proof of contrivance, only a motive to induce the mind to think so:

And not less surprised to be informed, that the watch in his hand was nothing more than the result of the laws of *metallic* nature. It is a perversion of language to assign any law, as the efficient, operative cause of any thing. A law presupposes an agent; for it is only the mode, according to which an agent proceeds: it implies a power;

for it is the order, according to which that power acts. Without this agent, without this power, which are both distinct from itself, the *law* does nothing; is nothing. The expression,

the law of metallic nature,

may sound strange and harsh to a philosophic ear; but it seems quite as justifiable as some others which are more familiar to him, such as

the law of vegetable nature,

the law of animal nature,

or indeed as

the law of nature

in general, when assigned as the cause of phænomena, in exclusion of agency and power; or when it is substituted into the place of these.

VIII. Neither, lastly, would our observer be driven out of his conclusion, or from his confidence in its truth, by being told that he knew nothing at all about the matter. He knows enough for his argument: he knows the utility of the end: he knows the subserviency and adaptation of the means to the end. These points being known, his ignorance of other points, his doubts concerning other points, affect not the certainty of his reasoning. The consciousness of knowing little, need not beget a distrust of that which he does know.

CHAPTER II.

STATE OF THE ARGUMENT CONTINUED

SUPPOSE, in the next place, that the person who found the watch, should, after some time, discover that, in addition to all the properties which he had hitherto observed in it, it possessed the unexpected property of producing, in the course of its movement, another watch like itself (the thing is conceivable); that it contained within it a mechanism, a system of parts, a mould for instance, or a complex adjust-

ment of lathes, files, and other tools, evidently and separately calculated for this purpose; let us inquire, what effect ought such a discovery to have upon his former conclusion.

I. The first effect would be to increase his admiration of the contrivance, and his conviction of the consummate skill of the contriver. Whether he regarded the object of the contrivance, the distinct apparatus, the intricate, yet in many parts intelligible mechanism, by which it was carried on, he would perceive, in this new observation, nothing but an additional reason for doing what he had already done,—for referring the construction of the watch to design, and to supreme art. If that construction *without* this property, or which is the same thing, before this property had been noticed, proved intention and art to have been employed about it; still more strong would the proof appear, when he came to the knowledge of this further property, the crown and perfection of all the rest.

He would reflect, that though the watch before him were, *in some sense*, the maker of the watch, which was fabricated in the course of its movements, yet it was in a very different sense from that, in which a carpenter, for instance, is the maker of a chair; the author of its contrivance, the cause of the relation of its parts to their use. With respect to these, the first watch was no cause at all to the second: in no such sense as this was it the author of the constitution and order, either of the parts which the new watch contained, or of the parts by the aid and instrumentality of which it was produced. We might possibly say, but with great latitude of expression, that a stream of water ground corn: but no latitude of expression would allow us to say, no stretch of conjecture could lead us to think, that the stream of water built the mill, though it were too ancient for us to know who the builder was. What the stream of water does in the affair, is neither more nor less than this; by the application of an unintelligent impulse to a mechanism previously arranged, arranged independently of it, and arranged by intelligence, an effect is produced, viz. the corn is ground. But the effect results from the arrangement. The force of the stream cannot be said to be the cause or author of the effect, still less of the arrangement. Understanding and plan in the formation of the mill were not the less necessary, for any share which the water has in grinding the corn: yet is this share the same, as that which the watch would have contributed to the production of the new watch, upon the supposition assumed in the last section. Therefore,

Though it be now no longer probable, that the individual watch, which our observer

had found, was made immediately by the hand of an artificer, yet doth not this alteration in anywise affect the inference, that an artificer had been originally employed and concerned in the production. The argument from design remains as it was. Marks of design and contrivance are no more accounted for now, than they were before. In the same thing, we may ask for the cause of different properties. We may ask for the cause of the colour of a body, of its hardness, of its head; and these causes may be all different. We are now asking for the cause of that subserviency to a use, that relation to an end, which we have remarked in the watch before us. No answer is given to this question, by telling us that a preceding watch produced it. There cannot be design without a designer; contrivance without a contriver; order without choice; arrangement, without any thing capable of arranging; subserviency and relation to a purpose, without that which could intend a purpose; means suitable to an end, and executing their office, in accomplishing that end, without the end ever having been contemplated, or the means accommodated to it. Arrangement, disposition of parts, subserviency of means to an end, relation of instruments to a use, imply the presence of intelligence and mind. No one, therefore, can rationally believe, that the insensible, inanimate watch, from which the watch before us issued, was the proper cause of the mechanism we so much admire in it;—could be truly said to have constructed the instrument, disposed its parts, assigned their office, determined their order, action, and mutual dependency, combined their several motions into one result, and that also a result connected with the utilities of other beings. All these properties, therefore, are as much unaccounted for, as they were before.

Nor is any thing gained by running the difficulty farther back, *i. e.* by supposing the watch before us to have been produced from another watch, that from a former, and so on indefinitely. Our going back ever so far, brings us no nearer to the least degree of satisfaction upon the subject. Contrivance is still unaccounted for. We still want a contriver. A designing mind is neither supplied by this supposition, nor dispensed with. If the difficulty were diminished the further we went back, by going back indefinitely we might exhaust it. And this is the only case to which this sort of reasoning applies. Where there is a tendency, or, as we increase the number of terms, a continual approach towards a limit, *there*, by supposing the number of terms to be what is called infinite, we may conceive the limit to be attained: but where there is no such tendency, or approach, nothing is effected by lengthening the series. There is no difference as to the point in question (whatever there may

be as to many points), between one series and another; between a series which is finite, and a series which is infinite. A chain, composed of an infinite number of links, can no more support itself, than a chain composed of a finite number of links. And of this we are assured (though we never *can* have tried the experiment), because, by increasing the number of links, from ten for instance to a hundred, from a hundred to a thousand, &c. we make not the smallest approach, we observe not the smallest tendency, towards self-support. There is no difference in this respect (yet there may be a great difference in several respects) between a chain of a greater or less length, between one chain and another, between one that is finite and one that is infinite. This very much resembles the case before us. The machine which we are inspecting, demonstrates, by its construction, contrivance and design. Contrivance must have had a contriver; design, a designer; whether the machine immediately proceeded from another machine or not. That circumstance alters not the case. That other machine may, in like manner, have proceeded from a former machine: nor does that alter the case; contrivance must have had a contriver. That former one from one preceding it: no alteration still; a contriver is still necessary. No tendency is perceived, no approach towards a diminution of this necessity. It is the same with any and every succession of these machines; a succession of ten, of a hundred, of a thousand; with one series, as with another; a series which is finite, as with a series which is infinite. In whatever other respects they may differ, in this they do not. In all equally, contrivance and design are unaccounted for.

The question is not simply, How came the first watch into existence? which question, it may be pretended, is done away by supposing the series of watches thus produced from one another to have been infinite, and consequently to have had no-such *first*, for which it was necessary to provide a cause. This, perhaps, would have been nearly the state of the question, if no thing had been before us but an unorganized, unmechanized substance, without mark or indication of contrivance. It might be difficult to show that such substance could not have existed from eternity, either in succession (if it were possible, which I think it is not, for unorganized bodies to spring from one another), or by individual perpetuity. But that is not the question now. To suppose it to be so, is to suppose that it made no difference whether we had found a watch or a stone. As it is, the metaphysics of that question have no place; for, in the watch which we are examining, are seen contrivance, design; an end, a purpose; means for the end, adaptation to the purpose.

And the question which irresistibly presses upon our thoughts, is, whence this contrivance and design? The thing required is the intending mind, the adapting hand, the intelligence by which that hand was directed. This question, this demand, is not shaken off, by increasing a number or succession of substances, destitute of these properties; nor the more, by increasing that number to infinity. If it be said, that, upon the supposition of one watch being produced from another in the course of that other's movements, and by means of the mechanism within it, we have a cause for the watch in my hand, viz. the watch from which it proceeded. I deny, that for the design, the contrivance, the suitableness of means to an end, the adaptation of instruments to a use (all which we discover in the watch), we have any cause whatever. It is in vain, therefore, to assign a series of such causes, or to allege that a series may be carried back to infinity; for I do not admit that we have yet any cause at all of the phænomena, still less any series of causes either finite or infinite. Here is contrivance, but no contriver; proofs of design, but no designer.

Our observer would further also reflect, that the maker of the watch before him, was, in truth and reality, the maker of every watch produced from it; there being no difference (except that the latter manifests a more exquisite skill) between the making of another watch with his own hands, by the mediation of files, lathes, chisels, &c. and the disposing, fixing, and inserting of these instruments, or of others equivalent to them, in the body of the watch already made in such a manner, as to form a new watch in the course of the movements which he had given to the old one. It is only working by one set of tools, instead of another.

The conclusion of which the *first* examination of the watch, of its works, construction, and movement, suggested, was, that it must have had, for the cause and author of that construction, an artificer, who understood its mechanism, and designed its use. This conclusion is invincible. A *second* examination presents us with a new discovery. The watch is found, in the course of its movement, to produce another watch, similar to itself; and not only so, but we perceive in it a system or organization, separately calculated for that purpose. What effect would this discovery have, or ought it to have, upon our former inference? What, as hath already been said, but to increase, beyond measure, our admiration of the skill, which had been employed in the formation of such a machine? Or shall it, instead of this, all at once turn us round to an opposite conclusion, viz. that no art or skill whatever has been concerned in the business, although all other evidences of art and skill remain as they

were, and this last and supreme piece of art be now added to the rest? Can this be maintained without absurdity? Yet this is atheism.

CHAPTER III.

APPLICATION OF THE ARGUMENT

THIS is atheism: for every indication of contrivance, every manifestation of design, which existed in the watch, exists in the works of nature; with the difference, on the side of nature, of being greater and more, and that in a degree which exceeds all computation. I mean that the contrivances of nature surpass the contrivances of art, in the complexity, subtility, and curiosity of the mechanism; and still more, if possible, do they go beyond them in number and variety; yet, in a multitude of cases, are not less evidently mechanical, not less evidently contrivances, not less evidently accommodated to their end, or suited to their office, than are the most perfect productions of human ingenuity.

I know no better method of introducing so large a subject, than that of comparing a single thing with a single thing; an eye, for example, with a telescope. As far as the examination of the instrument goes, there is precisely the same proof that the eye was made for vision, as there is that the telescope was made for assisting it. They are made upon the same principles; both being adjusted to the laws by which the transmission and refraction of rays of light are regulated. I speak not of the origin of the laws themselves; but such laws being fixed, the construction, in both cases, is adapted to them. For instance; these laws require, in order to produce the same effect, that the rays of light, in passing from water into the eye, should be refracted by a more convex surface, than when it passes out of air into the eye. Accordingly we find that the eye of a fish, in that part of it called the crystalline lens, is much rounder than the eye of terrestrial animals. What plainer manifestation of design can there be than this difference? What could a mathematical-instrument-maker have done more, to show his knowledge of his principle, his application of that knowledge, his suiting of his means to his end; I will not say to display the compass or excellence of his skill and art, for in these all comparison is indecorous, but to testify counsel, choice, consideration, purpose?

To some it may appear a difference sufficient to destroy all similitude between the eye and the telescope, that the one is a perceiving organ, the other an unperceiving instrument. The fact is, that they are both instruments. And, as to the mechanism, at least as to mechanism being employed, and even as to the kind of it, this circumstance varies not the analogy at all. For observe, what the constitution of the eye is. It is necessary, in order to produce distinct vision, that an image or picture of the object be formed at the bottom of the eye.

Whence this necessity arises, or how the picture is connected with the sensation, or contributes to it, it may be difficult, nay we will confess, if you please, impossible for us to search out. But the present question is not concerned in the inquiry. It may be true, that, in this, and in other instances, we trace mechanical contrivance a certain way; and that then we come to something which is not mechanical, or which is inscrutable. But this affects not the certainty of our investigation, as far as we have gone. The difference between an animal and an automatic statue, consists in this,—that, in the animal, we trace the mechanism to a certain point, and then we are stopped; either the mechanism becoming too subtile for our discerment, or something else beside the known laws of mechanism taking place; whereas, in the automaton, for the comparatively few motions of which it is capable, we trace the mechanism throughout. But, up to the limit, the reasoning is as clear and certain in the one case, as in the other. In the example before us, it is a matter of certainty, because it is a matter which experience and observation demonstrate, that the formation of an image at the bottom of the eye is necessary to perfect vision. The image itself can be shown. Whatever affects the distinctness of the image, affects the distinctness of the vision. The formation then of such an image being necessary (no matter how) to the sense of sight, and to the exercise of that sense, the apparatus by which it is formed is constructed and put together, not only with infinitely more art, but upon the self-same principles of art, as in the telescope or the camera obscura. The perception arising from the image may be laid out of the question; for the production of the image, these are instruments of the same kind. The end is the same; the means are the same. The purpose in both is alike; the contrivance for accomplishing that purpose is in both alike. The lenses of the telescope, and the humours of the eye, bear a complete resemblance to one another, in their figure, their position, and in their power over the rays of light, viz. in bringing each pencil to a point at the right distance from the lens; namely, in the eye, at the exact place where the membrane is spread to receive it. How is it possible, under circum-

stances of such close affinity, and under the operation of equal evidence, to exclude contrivance from the one; yet to acknowledge the proof of contrivance having been employed, as the plainest and clearest of all propositions, in the other?

9. On the Five Ways to Prove God's Existence

THOMAS AQUINAS

Summa Theologiae

I answer that, the existence of God can be proved in five ways.

The first and more manifest way is the argument from motion. It is certain, and evident to our senses, that in the world some things are in motion. Now whatever is in motion is put in motion by another, for nothing can be in motion except it is in potentiality to that towards which it is in motion; whereas a thing moves inasmuch as it is in act. For motion is nothing else than the reduction of something from potentiality to actuality. But nothing can be reduced from potentiality to actuality, except by something in a state of actuality. Thus that which is actually hot, as fire, makes wood, which is potentially hot, to be actually hot, and thereby moves and changes it. Now it is not possible that the same thing should be at once in actuality and potentiality in the same respect, but only in different respects. For what is actually hot cannot simultaneously be potentially hot; but it is simultaneously potentially cold. It is therefore impossible that in the same respect and in the same way a thing should be both mover and moved, i.e. that it should move itself. Therefore, whatever is in motion must be put in motion by another. If that by which it is put in motion be itself put in motion, then this also must needs be put in motion by another, and that by another again. But this cannot go on to infinity, because then there would be no first mover, and, consequently, no other mover; seeing that subsequent movers move only inasmuch as they are put in motion by the first mover; as the staff moves only because it is put in motion by the hand. Therefore it is necessary to arrive at a first mover, put in motion by no other; and this everyone understands to be God.

The second way is from the nature of the efficient cause. In the world of sense

we find there is an order of efficient causes. There is no case known (neither is it, indeed, possible) in which a thing is found to be the efficient cause of itself; for so it would be prior to itself, which is impossible. Now in efficient causes it is not possible to go on to infinity, because in all efficient causes following in order, the first is the cause of the intermediate cause, and the intermediate is the cause of the ultimate cause, whether the intermediate cause be several, or only one. Now to take away the cause is to take away the effect. Therefore, if there be no first cause among efficient causes, there will be no ultimate, nor any intermediate cause. But if in efficient causes it is possible to go on to infinity, there will be no first efficient cause, neither will there be an ultimate effect, nor any intermediate efficient causes; all of which is plainly false. Therefore it is necessary to admit a first efficient cause, to which everyone gives the name of God.

The third way is taken from possibility and necessity, and runs thus. We find in nature things that are possible to be and not to be, since they are found to be generated, and to corrupt, and consequently, they are possible to be and not to be. But it is impossible for these always to exist, for that which is possible not to be at some time is not. Therefore, if everything is possible not to be, then at one time there could have been nothing in existence. Now if this were true, even now there would be nothing in existence, because that which does not exist only begins to exist by something already existing. Therefore, if at one time nothing was in existence, it would have been impossible for anything to have begun to exist; and thus even now nothing would be in existence—which is absurd. Therefore, not all beings are merely possible, but there must exist something the existence of which is necessary. But every necessary thing either has its necessity caused by another, or not. Now it is impossible to go on to infinity in necessary things which have their necessity caused by another, as has been already proved in regard to efficient causes.

Therefore we cannot but postulate the existence of some being having of itself its own necessity, and not receiving it from another, but rather causing in others their necessity. This all men speak of as God.

The fourth way is taken from the gradation to be found in things. Among beings there are some more and some less good, true, noble and the like. But “more” and “less” are predicated of different things, according as they resemble in their different ways something which is the maximum, as a thing is said to be hotter according as it more nearly resembles that which is hottest; so that there is something which

is truest, something best, something noblest and, consequently, something which is uttermost being; for those things that are greatest in truth are greatest in being, as it is written in Metaph. ii. Now the maximum in any genus is the cause of all in that genus; as fire, which is the maximum heat, is the cause of all hot things. Therefore there must also be something which is to all beings the cause of their being, goodness, and every other perfection; and this we call God.

The fifth way is taken from the governance of the world. We see that things which lack intelligence, such as natural bodies, act for an end, and this is evident from their acting always, or nearly always, in the same way, so as to obtain the best result. Hence it is plain that not fortuitously, but designedly, do they achieve their end. Now whatever lacks intelligence cannot move towards an end, unless it be directed by some being endowed with knowledge and intelligence; as the arrow is shot to its mark by the archer. Therefore some intelligent being exists by whom all natural things are directed to their end; and this being we call God.

10. Dialogues Concerning Natural Religion

DAVID HUME

Part II

Not to lose any time in circumlocutions, said CLEANTHES, addressing himself to DEMEA, much less in replying to the pious declamations of PHILO; I shall briefly explain how I conceive this matter. Look round the world: contemplate the whole and every part of it: You will find it to be nothing but one great machine, subdivided into an infinite number of lesser machines, which again admit of subdivisions to a degree beyond what human senses and faculties can trace and explain. All these various machines, and even their most minute parts, are adjusted to each other with an accuracy which ravishes into admiration all men who have ever contemplated them. The curious adapting of means to ends, throughout all nature, resembles exactly, though it much exceeds, the productions of human contrivance; of human designs, thought, wisdom, and intelligence. Since, therefore, the effects resemble each other, we are led to infer, by all the rules of analogy, that the causes also resemble; and that the Author of Nature is somewhat similar to the mind of man, though possessed of much larger faculties, proportioned to the grandeur of the work which he has executed. By this argument a posteriori, and by this argument alone, do we prove at once the existence of a Deity, and his similarity to human mind and intelligence.

I shall be so free, CLEANTHES, said DEMEA, as to tell you, that from the beginning, I could not approve of your conclusion concerning the similarity of the Deity to men; still less can I approve of the mediums by which you endeavour to establish it. What! No demonstration of the Being of God! No abstract arguments! No proofs a priori! Are these, which have hitherto been so much insisted on by philosophers, all fallacy, all sophism? Can we reach no further in this subject than experience and probability? I will not say that this is betraying the cause of a Deity: But surely, by this affected candour, you give advantages to Atheists, which they never could obtain by the mere dint of argument and reasoning.

What I chiefly scruple in this subject, said PHILO, is not so much that all religious arguments are by CLEANTHES reduced to experience, as that they appear not to be even the most certain and irrefragable of that inferior kind. That a stone will fall, that fire will burn, that the earth has solidity, we have observed a thousand and a thousand times; and when any new instance of this nature is presented, we draw without hesitation the accustomed inference. The exact similarity of the cases gives us a perfect assurance of a similar event; and a stronger evidence is never desired nor sought after. But wherever you depart, in the least, from the similarity of the cases, you diminish proportionably the evidence; and may at last bring it to a very weak analogy, which is confessedly liable to error and uncertainty. After having experienced the circulation of the blood in human creatures, we make no doubt that it takes place in TITIUS and MAEVIUS. But from its circulation in frogs and fishes, it is only a presumption, though a strong one, from analogy, that it takes place in men and other animals. The analogical reasoning is much weaker, when we infer the circulation of the sap in vegetables from our experience that the blood circulates in animals; and those, who hastily followed that imperfect analogy, are found, by more accurate experiments, to have been mistaken.

If we see a house, CLEANTHES, we conclude, with the greatest certainty, that it had an architect or builder; because this is precisely that species of effect which we have experienced to proceed from that species of cause. But surely you will not affirm, that the universe bears such a resemblance to a house, that we can with the same certainty infer a similar cause, or that the analogy is here entire and perfect. The dissimilitude is so striking, that the utmost you can here pretend to is a guess, a conjecture, a presumption concerning a similar cause; and how that pretension will be received in the world, I leave you to consider.

It would surely be very ill received, replied CLEANTHES; and I should be deservedly blamed and detested, did I allow, that the proofs of a Deity amounted to no more than a guess or conjecture. But is the whole adjustment of means to ends in a house and in the universe so slight a resemblance? The economy of final causes? The order, proportion, and arrangement of every part? Steps of a stair are plainly contrived, that human legs may use them in mounting; and this inference is certain and infallible. Human legs are also contrived for walking and mounting; and this inference, I allow, is not altogether so certain, because of the dissimilarity which you remark; but does it, therefore, deserve the name only of presumption or conjecture?

Good God! cried DEMEA, interrupting him, where are we? Zealous defenders of religion allow, that the proofs of a Deity fall short of perfect evidence! And you, PHILO, on whose assistance I depended in proving the adorable mysteriousness of the Divine Nature, do you assent to all these extravagant opinions of CLEANTHES? For what other name can I give them? or, why spare my censure, when such principles are advanced, supported by such an authority, before so young a man as PAMPHILUS?

You seem not to apprehend, replied PHILO, that I argue with CLEANTHES in his own way; and, by showing him the dangerous consequences of his tenets, hope at last to reduce him to our opinion. But what sticks most with you, I observe, is the representation which CLEANTHES has made of the argument a posteriori; and finding that that argument is likely to escape your hold and vanish into air, you think it so disguised, that you can scarcely believe it to be set in its true light. Now, however much I may dissent, in other respects, from the dangerous principles of CLEANTHES, I must allow that he has fairly represented that argument; and I shall endeavour so to state the matter to you, that you will entertain no further scruples with regard to it.

Were a man to abstract from every thing which he knows or has seen, he would be altogether incapable, merely from his own ideas, to determine what kind of scene the universe must be, or to give the preference to one state or situation of things above another. For as nothing which he clearly conceives could be esteemed impossible or implying a contradiction, every chimera of his fancy would be upon an equal footing; nor could he assign any just reason why he adheres to one idea or system, and rejects the others which are equally possible.

Again; after he opens his eyes, and contemplates the world as it really is, it would be impossible for him at first to assign the cause of any one event, much less of the whole of things, or of the universe. He might set his fancy a rambling; and she might bring him in an infinite variety of reports and representations. These would all be possible; but being all equally possible, he would never of himself give a satisfactory account for his preferring one of them to the rest. Experience alone can point out to him the true cause of any phenomenon.

Now, according to this method of reasoning, DEMEA, it follows, (and is, indeed, tacitly allowed by CLEANTHES himself,) that order, arrangement, or the adjustment

of final causes, is not of itself any proof of design; but only so far as it has been experienced to proceed from that principle. For aught we can know a priori, matter may contain the source or spring of order originally within itself, as well as mind does; and there is no more difficulty in conceiving, that the several elements, from an internal unknown cause, may fall into the most exquisite arrangement, than to conceive that their ideas, in the great universal mind, from a like internal unknown cause, fall into that arrangement. The equal possibility of both these suppositions is allowed. But, by experience, we find, (according to CLEANTHES), that there is a difference between them. Throw several pieces of steel together, without shape or form; they will never arrange themselves so as to compose a watch. Stone, and mortar, and wood, without an architect, never erect a house. But the ideas in a human mind, we see, by an unknown, inexplicable economy, arrange themselves so as to form the plan of a watch or house. Experience, therefore, proves, that there is an original principle of order in mind, not in matter. From similar effects we infer similar causes. The adjustment of means to ends is alike in the universe, as in a machine of human contrivance. The causes, therefore, must be resembling.

I was from the beginning scandalised, I must own, with this resemblance, which is asserted, between the Deity and human creatures; and must conceive it to imply such a degradation of the Supreme Being as no sound Theist could endure. With your assistance, therefore, DEMEA, I shall endeavour to defend what you justly call the adorable mysteriousness of the Divine Nature, and shall refute this reasoning of CLEANTHES, provided he allows that I have made a fair representation of it.

When CLEANTHES had assented, PHILO, after a short pause, proceeded in the following manner.

That all inferences, CLEANTHES, concerning fact, are founded on experience; and that all experimental reasonings are founded on the supposition that similar causes prove similar effects, and similar effects similar causes; I shall not at present much dispute with you. But observe, I entreat you, with what extreme caution all just reasoners proceed in the transferring of experiments to similar cases. Unless the cases be exactly similar, they repose no perfect confidence in applying their past observation to any particular phenomenon. Every alteration of circumstances occasions a doubt concerning the event; and it requires new experiments to prove certainly, that the new circumstances are of no moment or importance. A change in bulk, situation, arrangement, age, disposition of the air, or surrounding bodies; any of these

particulars may be attended with the most unexpected consequences: And unless the objects be quite familiar to us, it is the highest temerity to expect with assurance, after any of these changes, an event similar to that which before fell under our observation. The slow and deliberate steps of philosophers here, if any where, are distinguished from the precipitate march of the vulgar, who, hurried on by the smallest similitude, are incapable of all discernment or consideration.

But can you think, CLEANTHES, that your usual phlegm and philosophy have been preserved in so wide a step as you have taken, when you compared to the universe houses, ships, furniture, machines, and, from their similarity in some circumstances, inferred a similarity in their causes? Thought, design, intelligence, such as we discover in men and other animals, is no more than one of the springs and principles of the universe, as well as heat or cold, attraction or repulsion, and a hundred others, which fall under daily observation. It is an active cause, by which some particular parts of nature, we find, produce alterations on other parts. But can a conclusion, with any propriety, be transferred from parts to the whole? Does not the great disproportion bar all comparison and inference? From observing the growth of a hair, can we learn any thing concerning the generation of a man? Would the manner of a leaf's blowing, even though perfectly known, afford us any instruction concerning the vegetation of a tree?

But, allowing that we were to take the operations of one part of nature upon another, for the foundation of our judgement concerning the origin of the whole, (which never can be admitted,) yet why select so minute, so weak, so bounded a principle, as the reason and design of animals is found to be upon this planet? What peculiar privilege has this little agitation of the brain which we call thought, that we must thus make it the model of the whole universe? Our partiality in our own favour does indeed present it on all occasions; but sound philosophy ought carefully to guard against so natural an illusion.

So far from admitting, continued PHILO, that the operations of a part can afford us any just conclusion concerning the origin of the whole, I will not allow any one part to form a rule for another part, if the latter be very remote from the former. Is there any reasonable ground to conclude, that the inhabitants of other planets possess thought, intelligence, reason, or any thing similar to these faculties in men? When nature has so extremely diversified her manner of operation in this small globe, can we imagine that she incessantly copies herself throughout so immense a universe?

And if thought, as we may well suppose, be confined merely to this narrow corner, and has even there so limited a sphere of action, with what propriety can we assign it for the original cause of all things? The narrow views of a peasant, who makes his domestic economy the rule for the government of kingdoms, is in comparison a pardonable sophism.

But were we ever so much assured, that a thought and reason, resembling the human, were to be found throughout the whole universe, and were its activity elsewhere vastly greater and more commanding than it appears in this globe; yet I cannot see, why the operations of a world constituted, arranged, adjusted, can with any propriety be extended to a world which is in its embryo state, and is advancing towards that constitution and arrangement. By observation, we know somewhat of the economy, action, and nourishment of a finished animal; but we must transfer with great caution that observation to the growth of a foetus in the womb, and still more to the formation of an animalcule in the loins of its male parent. Nature, we find, even from our limited experience, possesses an infinite number of springs and principles, which incessantly discover themselves on every change of her position and situation. And what new and unknown principles would actuate her in so new and unknown a situation as that of the formation of a universe, we cannot, without the utmost temerity, pretend to determine.

A very small part of this great system, during a very short time, is very imperfectly discovered to us; and do we thence pronounce decisively concerning the origin of the whole?

Admirable conclusion! Stone, wood, brick, iron, brass, have not, at this time, in this minute globe of earth, an order or arrangement without human art and contrivance; therefore the universe could not originally attain its order and arrangement, without something similar to human art. But is a part of nature a rule for another part very wide of the former? Is it a rule for the whole? Is a very small part a rule for the universe? Is nature in one situation, a certain rule for nature in another situation vastly different from the former?

And can you blame me, CLEANTHES, if I here imitate the prudent reserve of SIMONIDES, who, according to the noted story, being asked by HIERO, What God was? desired a day to think of it, and then two days more; and after that manner continually prolonged the term, without ever bringing in his definition or descrip-

tion? Could you even blame me, if I had answered at first, that I did not know, and was sensible that this subject lay vastly beyond the reach of my faculties? You might cry out sceptic and railler, as much as you pleased: but having found, in so many other subjects much more familiar, the imperfections and even contradictions of human reason, I never should expect any success from its feeble conjectures, in a subject so sublime, and so remote from the sphere of our observation. When two species of objects have always been observed to be conjoined together, I can infer, by custom, the existence of one wherever I see the existence of the other; and this I call an argument from experience. But how this argument can have place, where the objects, as in the present case, are single, individual, without parallel, or specific resemblance, may be difficult to explain. And will any man tell me with a serious countenance, that an orderly universe must arise from some thought and art like the human, because we have experience of it? To ascertain this reasoning, it were requisite that we had experience of the origin of worlds; and it is not sufficient, surely, that we have seen ships and cities arise from human art and contrivance…

Part V

But to show you still more inconveniences, continued PHILO, in your Anthropomorphism, please to take a new survey of your principles. Like effects prove like causes. This is the experimental argument; and this, you say too, is the sole theological argument. Now, it is certain, that the liker the effects are which are seen, and the liker the causes which are inferred, the stronger is the argument. Every departure on either side diminishes the probability, and renders the experiment less conclusive. You cannot doubt of the principle; neither ought you to reject its consequences.

All the new discoveries in astronomy, which prove the immense grandeur and magnificence of the works of Nature, are so many additional arguments for a Deity, according to the true system of Theism; but, according to your hypothesis of experimental Theism, they become so many objections, by removing the effect still further from all resemblance to the effects of human art and contrivance…

If this argument, I say, had any force in former ages, how much greater must it have at present, when the bounds of Nature are so infinitely enlarged, and such a magnificent scene is opened to us? It is still more unreasonable to form our idea of so

unlimited a cause from our experience of the narrow productions of human design and invention.

The discoveries by microscopes, as they open a new universe in miniature, are still objections, according to you, arguments, according to me. The further we push our researches of this kind, we are still led to infer the universal cause of all to be vastly different from mankind, or from any object of human experience and observation.

And what say you to the discoveries in anatomy, chemistry, botany?... These surely are no objections, replied CLEANTHES; they only discover new instances of art and contrivance. It is still the image of mind reflected on us from innumerable objects. Add, a mind like the human, said PHILO. I know of no other, replied CLEANTHES. And the liker the better, insisted PHILO. To be sure, said CLEANTHES.

Now, CLEANTHES, said PHILO, with an air of alacrity and triumph, mark the consequences. First, By this method of reasoning, you renounce all claim to infinity in any of the attributes of the Deity. For, as the cause ought only to be proportioned to the effect, and the effect, so far as it falls under our cognisance, is not infinite; what pretensions have we, upon your suppositions, to ascribe that attribute to the Divine Being? You will still insist, that, by removing him so much from all similarity to human creatures, we give in to the most arbitrary hypothesis, and at the same time weaken all proofs of his existence.

Secondly, You have no reason, on your theory, for ascribing perfection to the Deity, even in his finite capacity, or for supposing him free from every error, mistake, or incoherence, in his undertakings. There are many inexplicable difficulties in the works of Nature, which, if we allow a perfect author to be proved a priori, are easily solved, and become only seeming difficulties, from the narrow capacity of man, who cannot trace infinite relations. But according to your method of reasoning, these difficulties become all real; and perhaps will be insisted on, as new instances of likeness to human art and contrivance. At least, you must acknowledge, that it is impossible for us to tell, from our limited views, whether this system contains any great faults, or deserves any considerable praise, if compared to other possible, and even real systems. Could a peasant, if the Aeneid were read to him, pronounce that poem to be absolutely faultless, or even assign to it its proper rank among the productions of human wit, he, who had never seen any other production?

But were this world ever so perfect a production, it must still remain uncertain,

whether all the excellences of the work can justly be ascribed to the workman. If we survey a ship, what an exalted idea must we form of the ingenuity of the carpenter who framed so complicated, useful, and beautiful a machine? And what surprise must we feel, when we find him a stupid mechanic, who imitated others, and copied an art, which, through a long succession of ages, after multiplied trials, mistakes, corrections, deliberations, and controversies, had been gradually improving? Many worlds might have been botched and bungled, throughout an eternity, ere this system was struck out; much labour lost, many fruitless trials made; and a slow, but continued improvement carried on during infinite ages in the art of world-making. In such subjects, who can determine, where the truth; nay, who can conjecture where the probability lies, amidst a great number of hypotheses which may be proposed, and a still greater which may be imagined?

And what shadow of an argument, continued PHILO, can you produce, from your hypothesis, to prove the unity of the Deity? A great number of men join in building a house or ship, in rearing a city, in framing a commonwealth; why may not several deities combine in contriving and framing a world? This is only so much greater similarity to human affairs. By sharing the work among several, we may so much further limit the attributes of each, and get rid of that extensive power and knowledge, which must be supposed in one deity, and which, according to you, can only serve to weaken the proof of his existence. And if such foolish, such vicious creatures as man, can yet often unite in framing and executing one plan, how much more those deities or demons, whom we may suppose several degrees more perfect!

To multiply causes without necessity, is indeed contrary to true philosophy: but this principle applies not to the present case. Were one deity antecedently proved by your theory, who were possessed of every attribute requisite to the production of the universe; it would be needless, I own, (though not absurd,) to suppose any other deity existent. But while it is still a question, Whether all these attributes are united in one subject, or dispersed among several independent beings, by what phenomena in nature can we pretend to decide the controversy? Where we see a body raised in a scale, we are sure that there is in the opposite scale, however concealed from sight, some counterpoising weight equal to it; but it is still allowed to doubt, whether that weight be an aggregate of several distinct bodies, or one uniform united mass. And if the weight requisite very much exceeds any thing which we have ever seen conjoined in any single body, the former supposition becomes

still more probable and natural. An intelligent being of such vast power and capacity as is necessary to produce the universe, or, to speak in the language of ancient philosophy, so prodigious an animal exceeds all analogy, and even comprehension.

But further, CLEANTHES: men are mortal, and renew their species by generation; and this is common to all living creatures. The two great sexes of male and female, says MILTON, animate the world. Why must this circumstance, so universal, so essential, be excluded from those numerous and limited deities? Behold, then, the theogony of ancient times brought back upon us.

And why not become a perfect Anthropomorphite? Why not assert the deity or deities to be corporeal, and to have eyes, a nose, mouth, ears, &c.? EPICURUS maintained, that no man had ever seen reason but in a human figure; therefore the gods must have a human figure. And this argument, which is deservedly so much ridiculed by CICERO, becomes, according to you, solid and philosophical.

In a word, CLEANTHES, a man who follows your hypothesis is able perhaps to assert, or conjecture, that the universe, sometime, arose from something like design: but beyond that position he cannot ascertain one single circumstance; and is left afterwards to fix every point of his theology by the utmost license of fancy and hypothesis. This world, for aught he knows, is very faulty and imperfect, compared to a superior standard; and was only the first rude essay of some infant deity, who afterwards abandoned it, ashamed of his lame performance: it is the work only of some dependent, inferior deity; and is the object of derision to his superiors: it is the production of old age and dotage in some superannuated deity; and ever since his death, has run on at adventures, from the first impulse and active force which it received from him. You justly give signs of horror, DEMEA, at these strange suppositions; but these, and a thousand more of the same kind, are CLEANTHES's suppositions, not mine. From the moment the attributes of the Deity are supposed finite, all these have place. And I cannot, for my part, think that so wild and unsettled a system of theology is, in any respect, preferable to none at all.

These suppositions I absolutely disown, cried CLEANTHES: they strike me, however, with no horror, especially when proposed in that rambling way in which they drop from you. On the contrary, they give me pleasure, when I see, that, by the utmost indulgence of your imagination, you never get rid of the hypothesis of

design in the universe, but are obliged at every turn to have recourse to it. To this concession I adhere steadily; and this I regard as a sufficient foundation for religion.

Part VI

It must be a slight fabric, indeed, said DEMEA, which can be erected on so tottering a foundation. While we are uncertain whether there is one deity or many; whether the deity or deities, to whom we owe our existence, be perfect or imperfect, subordinate or supreme, dead or alive, what trust or confidence can we repose in them? What devotion or worship address to them? What veneration or obedience pay them? To all the purposes of life the theory of religion becomes altogether useless: and even with regard to speculative consequences, its uncertainty, according to you, must render it totally precarious and unsatisfactory.

To render it still more unsatisfactory, said PHILO, there occurs to me another hypothesis, which must acquire an air of probability from the method of reasoning so much insisted on by CLEANTHES. That like effects arise from like causes: this principle he supposes the foundation of all religion. But there is another principle of the same kind, no less certain, and derived from the same source of experience; that where several known circumstances are observed to be similar, the unknown will also be found similar. Thus, if we see the limbs of a human body, we conclude that it is also attended with a human head, though hid from us. Thus, if we see, through a chink in a wall, a small part of the sun, we conclude, that, were the wall removed, we should see the whole body. In short, this method of reasoning is so obvious and familiar, that no scruple can ever be made with regard to its solidity.

Now, if we survey the universe, so far as it falls under our knowledge, it bears a great resemblance to an animal or organised body, and seems actuated with a like principle of life and motion. A continual circulation of matter in it produces no disorder: a continual waste in every part is incessantly repaired: the closest sympathy is perceived throughout the entire system: and each part or member, in performing its proper offices, operates both to its own preservation and to that of the whole. The world, therefore, I infer, is an animal; and the Deity is the SOUL of the world, actuating it, and actuated by it…

This theory, I own, replied CLEANTHES, has never before occurred to me, though a pretty natural one; and I cannot readily, upon so short an examination and reflection, deliver any opinion with regard to it. You are very scrupulous, indeed, said

PHILO: were I to examine any system of yours, I should not have acted with half that caution and reserve, in starting objections and difficulties to it. However, if any thing occur to you, you will oblige us by proposing it.

Why then, replied CLEANTHES, it seems to me, that, though the world does, in many circumstances, resemble an animal body; yet is the analogy also defective in many circumstances the most material: no organs of sense; no seat of thought or reason; no one precise origin of motion and action. In short, it seems to bear a stronger resemblance to a vegetable than to an animal, and your inference would be so far inconclusive in favour of the soul of the world…

Part VII

But here, continued PHILO, in examining the ancient system of the soul of the world, there strikes me, all on a sudden, a new idea, which, if just, must go near to subvert all your reasoning, and destroy even your first inferences, on which you repose such confidence. If the universe bears a greater likeness to animal bodies and to vegetables, than to the works of human art, it is more probable that its cause resembles the cause of the former than that of the latter, and its origin ought rather to be ascribed to generation or vegetation, than to reason or design. Your conclusion, even according to your own principles, is therefore lame and defective.

Pray open up this argument a little further, said DEMEA, for I do not rightly apprehend it in that concise manner in which you have expressed it.

Our friend CLEANTHES, replied PHILO, as you have heard, asserts, that since no question of fact can be proved otherwise than by experience, the existence of a Deity admits not of proof from any other medium. The world, says he, resembles the works of human contrivance; therefore its cause must also resemble that of the other. Here we may remark, that the operation of one very small part of nature, to wit man, upon another very small part, to wit that inanimate matter lying within his reach, is the rule by which CLEANTHES judges of the origin of the whole; and he measures objects, so widely disproportioned, by the same individual standard. But to waive all objections drawn from this topic, I affirm, that there are other parts of the universe (besides the machines of human invention) which bear still a greater resemblance to the fabric of the world, and which, therefore, afford a better conjecture concerning the universal origin of this system. These parts are animals and vegetables. The world plainly resembles more an animal or a vegetable, than it does

a watch or a knitting-loom. Its cause, therefore, it is more probable, resembles the cause of the former. The cause of the former is generation or vegetation. The cause, therefore, of the world, we may infer to be something similar or analogous to generation or vegetation…

I must confess, PHILO, replied CLEANTHES, that of all men living, the task which you have undertaken, of raising doubts and objections, suits you best, and seems, in a manner, natural and unavoidable to you. So great is your fertility of invention, that I am not ashamed to acknowledge myself unable, on a sudden, to solve regularly such out-of-the-way difficulties as you incessantly start upon me: though I clearly see, in general, their fallacy and error. And I question not, but you are yourself, at present, in the same case, and have not the solution so ready as the objection: while you must be sensible, that common sense and reason are entirely against you; and that such whimsies as you have delivered, may puzzle, but never can convince us.

11. Non-Standard Arguments for God's Existence

ROBERT SLOAN LEE

The attempt to demonstrate the existence of God by way of reason and argument has been called "the most ambitious intellectual enterprise ever undertaken" (Schmitz 1992, 28). The standard arguments typically employed in this enterprise (namely, the ontological argument, the argument from design, and the cosmological argument—see Chapter 2) are the arguments that are usually discussed in introductory philosophy textbooks. Other arguments, ones not usually covered in introductory philosophy textbooks, can be called non-standard arguments for God's existence. Here, we will discuss a small sample of the non-standard arguments that attempt to show that belief in God's existence is either rational or well-evidenced. Specifically, we will focus on the following three arguments: Pascal's Wager, Arguments from Religious Experience, and C.S. Lewis's Argument from Desire. After examining these arguments, we will mention a few other non-standard arguments for the existence of God and recommend sources for further reading.

Pascal's Wager

Pascal's wager is not strictly an argument for God's existence. Rather, as Blaise Pascal (1623-1662), a brilliant polymath and the founder of probability theory, presents it, the argument attempts to show that one should believe in God even if there is no evidence for or against God's existence.[1] Specifically, Pascal thinks that it is in one's

1. An accessible account of Pascal's life and impressive accomplishments can be found in Thomas V. Morris, *Making Sense of It All: Pascal and the Meaning of Life* (Morris 1992).

own best interest to believe in God's existence in the absence of any evidence for or against God's existence.[2]

If there are no good reasons for believing or disbelieving in God's existence, Pascal holds that there are four possibilities:

- Option (a): God exists and one believes that God exists
- Option (b): God exists and one believes that God does not exist
- Option (c): God does not exist and one believes that God exists
- Option (d): God does not exist and one believes that God does not exist

Pascal argues that each possibility will have a particular outcome or payoff. Further, on the assumption that there is no evidence available to decide whether or not God exists, Pascal thinks we should choose the option which has the best payoff. Since we cannot choose whether or not God actually exists, our only choice is whether or not we *believe* that God exists. We are in the game, as it were, and we must place our bets.

Under possibilities (c) and (d) God does not exist, so any losses or benefits will be limited. In other words, if one believes that God exists when God does not exist (possibility c), then one might forgo some temporary pleasures or may gain temporary benefits from living one's life in a different way. Further, Pascal holds that benefits or losses associated with not believing in God's existence when God doesn't exist (possibility d) will also be limited.

However, Pascal thinks the outcomes for possibilities (a) and (b) are more striking. In fact, he thinks that if God exists and we choose to believe that God exists, then our gain will be unlimited. Further, if God exists and we choose to believe that God does not exist, Pascal says our loss will be unlimited. Since unlimited gains and losses will always outweigh limited gains and losses, we should choose to believe that God exists even if there is no evidence that would demonstrate God's existence

2. The wager was originally presented in Blaise Pascal's posthumously published and incomplete book, *Pensées* (Pascal 1966, 149-155). The title of this book can be translated as *Thoughts*.

or non-existence.[3] If Pascal's wager is a correct assessment of our options, then it turns out that not believing in God is irrational in terms of our self-interest.

There are different types of objections to Pascal's wager. Some of the argument's opponents think that making a decision to believe in God on the basis of self-interest is somehow morally problematic. However, whether or not that type of objection can be spelled out in a persuasive manner is another question, given that people blamelessly act in their own self-interest all the time (for example, eating and sleeping are acts of self-interest). Further, there is no reason to think that believing on the basis of Pascal's wager would harm anyone else's interests.[4] Further, one advocate of Pascal's argument writes that the "benefits invoked" by the argument "need not be self-centered prudential benefits only" (Jordan 1997, 353). He adds that these benefits "may involve the good of other persons, and even the common good of a large number of people" (Jordan 1997, 353). He concludes that prudential arguments, like Pascal's wager, "cannot be easily dismissed as morally suspect, selfish appeals to base considerations" (Jordan 1997, 353). In short, this objection to Pascal's wager is not very convincing.

A more important objection raises the question of whether the options and outcomes described by Pascal above are the only possibilities. Perhaps some other view of God is correct. For example, why should we think that God rewards belief without evidence? Perhaps there is a deviant God who perversely punishes belief and rewards unbelief. This objection is sometimes referred to as the many-Gods objection. Stephen Davis puts the objection this way: "Indeed, there are scores of other Gods or gods that are actually worshiped in the religions of the world, and there is no guarantee that they will dispense rewards and punishments in the way that Pascal says that the Christian God will do" (Davis 1997, 165). If this objection is correct, then the issue is not merely one of deciding between whether or not God exists, but of deciding which type of God exists.

Defenders of Pascal's wager are not without responses to this type of objection.

3. Of course, Pascal thought there was good evidence for God's existence (and for the truth of Christianity), but exploring that would take us too far out of our way.
4. A discussion on the difficulties of advancing this sort of objection can be found in Philip L. Quinn's essay, "Moral Objections to Pascalian Wagering" (Quinn 1994).

Regarding the notion of a perverse deity that punishes belief and rewards unbelief, Jeff Jordan says the following:

> Such a hypothesis being "cooked up" is not … a "genuine option." That is to say, these cooked up "religious" hypotheses are so bizarre that one is justified in assigning them, if not a zero probability, a probability assignment so small as to warrant only neglect. This procedure is illustrated by the simple case of coin tossing. When one tosses a coin considered fair, it is possible that it land on its edge, remain suspended midair, or disappear, or any number of bizarre but possible events might occur. Yet, because there is no reason to believe that these events are plausible, one quite properly neglects their possibility and considers the partition of "heads" and "tails" jointly to exhaust the possibilities. (Jordan 1994, 107-108)

Jordan thinks that the notion of the perverse deity considered above should be treated with similar neglect. Nevertheless, while we might dismiss gerrymandered ideas about perverse gods, the various deities of the world's religions (say, Vishnu, Yahweh, or Allah) constitute a more formidable objection to the wager argument. Some philosophers think that this objection defeats this basic statement of Pascal's wager (Flew 1984, 66-68; Harrison 1999, 598-599). (See Chapter 6 for more on how the diversity of the world's religions may cause difficulties for traditional arguments in favor of mono-theistic belief.)

While the basic version of Pascal's wager does not seem to survive this objection based on the actual religions of the world, the wager argument can be revised. On the revised version of the argument, all the religions that promise unlimited gain as a result of belief are grouped together under one option and all the other choices (namely, the view that all religions are false along with any religions that don't promise unlimited gains) are grouped together under another option. Given this partition, prudence says that one should pursue a religion from the first group (rather than disbelieving all religions or pursuing a religion from the second group). We can refer to this as the *ecumenical wager*. Jeff Jordan says the following about this revised argument:

> The ecumenical version of the wager shows that theistic belief (as well as, perhaps, other sorts of religious belief) carries a greater expected utility than does disbelief, and so one ought to try to believe….But it is important

> to note that even if the wager is no help in deciding which religious option to believe, it does nonetheless show that one ought to believe one of them. (Jordan 1994, 110-111)

In short, this version of Pascal's wager encourages one to explore certain sorts of religions—namely, those that offer some sort of unlimited gain.

Now that we've seen how some of the objections above may be answered, one should keep in mind that there are other objections to Pascal's argument (as well as replies to those objections). Further, it is also important to realize that there are other types of wager arguments. For example, James Beattie (1735-1803) argues that theism is so consoling or encouraging that we are justified in believing in God's existence even if God's existence is highly unlikely, and John Stuart Mill (1806-1873) offers a pragmatic argument that one is justified in hoping that something like theism is true. These and other versions of the argument can be explored in Jeff Jordan's book, *Pascal's Wager: Pragmatic Arguments and Belief in God* (Jordan 2006).[5] Another treatment of the wager argument worth mentioning is Michael Rota's book, *Taking Pascal's Wager: Faith, Evidence and the Abundant Life* (Rota 2016).

Questions to Consider

1. Suppose there is some good (but not conclusive) evidence for the type of God that Pascal believes in. Would that lend credibility to Pascal's basic wager argument?
2. Pascal's basic wager argument says nothing about Hell or punishment for not believing in God's existence (if God exists). Does noticing that fact make the argument more attractive or plausible? Why or why not? If it did include men-

5. Jeff Jordan explores prudential arguments presented by authors other than Pascal (for example, by J.S. Mill, James Beattie, H.H. Price, and others) in chapter 6 of his book (Jordan 2006, 166-198). One can also find a brief survey of Pascal-styled arguments in writers predating Pascal in John K. Ryan's essay, "The Wager in Pascal and Others" (Ryan 1994). Also of interest here is Nicholas Rescher's book, *Pascal's Wager: A Study of Practical Reasoning in Philosophical Theology* (Rescher 1985).

tion of punishment for disbelief, would that make the argument more compelling? Why or why not?

3. Suppose that you will die in one year if you don't believe (by the end of that year) that elephants live on Mars. So, you decide that you will try to make yourself believe this. Could you make yourself believe that elephants live on Mars? If not, then does that count against Pascal's wager or against Jeff Jordan's ecumenical wager? Explain why or why not.
4. Is it plausible to think that God could be displeased for someone coming to hold theistic belief as a result of the wager argument?

God's Existence and Religious Experience

Another argument for God's existence (or for the rationality of believing in God's existence) is the argument from religious experience. William James (1842-1910) and Rudolf Otto (1869-1937) are well-known authors who have discussed different kinds of religious experience and described the features of these experiences (James 1982; Otto 1950). However, contemporary philosophers have skillfully argued that religious experience provides justifying grounds for belief in God's existence (Alston 1991; Yandell 1993; Swinburne 2004, 293-327). Religious experience is a ubiquitous feature of human history and culture. Such experiences might range from a general sense of divine presence (rather than specifically *theistic* experience) to a mystical vision of the light of God. For a contemporary discussion of the features of religious experience and the different types of religious experience, see Chapter 2 of Caroline Franks Davis's book, *The Evidential Force of Religious Experience* (Davis 1989, 29-65).

While not everyone thinks that religious experience counts as evidence for God's existence, some hold that religious experience does justify belief in the existence of God. One way of formulating this sort of argument is the following:

1. Some people have experiences that seem to be experiences of God.
2. If some people have experiences that seem to be experiences of God, then

there is *prima facie* evidence for God's existence.

3. *Therefore*, there is *prima facie* evidence for God's existence. (from 1 and 2)

Here the notion of ***prima facie*** evidence is just the notion of initial evidence—where *prima facie* simply means what seems to be true before the situation is examined in greater detail. Given the frequency of religious experience (across both times and cultures), the first premise is virtually undeniable. However, why should one accept the second premise that claims experiences of God give one initial evidence for God's existence?

One reason to accept the second premise of this argument is offered by Richard Swinburne. He advances a principle of reasonable belief (namely, the Principle of Credulity). Swinburne's principle can be stated like this: if something appears to be present to a person, then (in the absence of special considerations) it probably is present to them (or it is at least rational to believe it to be present) (Swinburne 2004, 303-304). In other words, we are justified in thinking that things *are* a certain way based on things *appearing* to be that way—barring extenuating considerations. One philosopher provides an illustration of this principle in action: "For example, the experience of it seeming to me that my keys are locked inside my car is good evidence in support of my supposing that my keys are locked inside my car" (Geivett 2003, 181). Now, if we found out that this person has frequent hallucinations of his keys being locked in the car or that he has been hypnotized to believe this about his keys, then those extenuating circumstances would overturn the judgement that this man has good evidence (or justification) for believing that his keys are locked in his car. But in the absence of any such extenuating circumstances, his belief about his keys is justified. Likewise, advocates of the argument from religious experience often see religious experience in a similar way (namely, that an experience of God's presence is *prima facie* or initial evidence of God's presence).

Critics of the argument may think that it is easily defeated by some simple objections. However, it turns out that this type of argument possesses an unexpected resilience. For instance, one objection to the argument is that religious experiences (or something like them) can result from the use of drugs, extreme stress, extraordinary hardship, or other natural factors (involving, say, brain chemistry or the environment). Under these conditions purely natural factors can bring about religious experiences, and this throws doubt on the legitimacy of all religious experiences. In response to this objection, William J. Abraham writes, "We do not generally believe

that because some reports of ordinary natural objects sometimes involve illusion, hallucination, and the like, then all reports do so" (Abraham 1985, 45). He continues, "If we insist that they apply only to religious experience, then we face the embarrassing fact that we apply standards in the religious sphere which we do not apply elsewhere" (Abraham 1985, 45). This sort of double-standard suggests that "religious experience must always be seen as guilty until proven innocent," but that would fallaciously beg the question against Swinburne's principle of reasonable belief (Abraham 1985, 45). To illustrate this point, suppose it can be shown that some people frequently hallucinate their car keys being locked in their car. That fact would not give us a good reason to think that no one is ever justified in believing that their keys are locked in their cars, and similar considerations should apply to religious experience.

Another objection to the argument from religious experience highlights a dissimilarity between sensory experience and religious experience. Specifically, according to this objection, sensory experience is public, but religious experiences are private. Whereas the sensory experience of locking one's keys in the car can be verified by others, religious experience is subjective and there are no independent ways of confirming that one's religious experiences are reliable by comparing them to the religious experience of others. As a critic of the argument from religious experience, C.B. Martin writes, "What I apprehend," when I have a visual experience (of, say, car keys or a piece of blue paper), "is the sort of thing that can be photographed, touched, and seen by others"—but there seems to be no intersubjective way of verifying religious experience. (Martin 1959, 87-88). Given this consideration, Martin thinks that we should not consider religious experience as providing *prima facie* (or initial) evidence for God's existence. This response to the argument constitutes a rejection of the second premise of the argument which says that if some people have experiences that seem to be experiences of God, then there is *initial* evidence for God's existence.

However, one philosopher, Kai-Man Kwan, responds by denying Martin's claim. Specifically, the only way one can check the reliability of sense experience (of, say, seeing one's keys locked in the car) is by verbal reports from other people describing their sensory experience. In a similar way, people can give verbal reports to each other of their religious experiences. Kwan explains that "experiences of God are present in almost all ages, all places, and all cultures…" and Kwan adds that these reports, "to a considerable extent, match" (Kwan 2009, 506). He concludes that, in

this way, religious experience "is also public" (Kwan 2009, 506). In other words, the dissimilarity between sensory experience and religious experience is not nearly as great as the argument's critics suppose.[6]

Of course, there are other objections (and replies) to the argument from religious experience, and there are many other versions of this sort of argument.[7] William P. Alston deals with numerous objections to the argument from religious experience (Alston 2003). However, for a more fully developed treatment of the argument, consult his book, *Perceiving God* (Alston 1991). Also of interest here is Keith Yandell's essay, "Is Numinous Experience Evidence that God Exists?" (Yandell 2003), and his book-length development of the argument that takes into consideration religious experiences in both Eastern and Western religious traditions, *The Epistemology of Religious Experience* (Yandell 1993).

Questions to Consider

5. Suppose a machine is used to stimulate someone's brain in order to make them have a religious experience. Would that discredit the religious experiences of other people (or discredit the argument for God's existence from religious experience)? If so, then suppose that this same machine could stimulate someone's brain and cause them to see, feel, and taste an apple that isn't there. Would that discredit the claims of other people to have seen apples? If not, then what is the relevant difference between these cases?

6. There have been attempts to verify and falsify religious experience in the field of cognitive science or neurobiology. To pursue that line of thought, one may explore the collection of essays dealing with both sides of this issue, *The Believing Primate* (Schloss 2009) and the book, *The Neuroscience of Religious Experience* (McNamara 2009). (Also, see Chapter 5 for more on the relationship between cognitive science and religious belief.)
7. It is important to keep in mind that (for some philosophers) religious experience is not used in an argument for God's existence. Rather, religious experience constitutes direct (non-inferential) grounds for believing in God's existence (Plantinga 2000, 167-198). However, that very interesting distinction need not detract from our examination of religious experience as the basis of an argument for God's existence.

6. If one person, A, has a genuine religious experience of God (that was caused by God) and another person, B, does not have any religious experience at all, then could A's experience of God provide B with reason or evidence for believing in God? Explain why or why not.
7. If a person's religious experience of God counts as evidence for God, can that evidence outweigh other evidence against God's existence (say, from suffering or evil)?

C.S. LEWIS'S ARGUMENT FROM DESIRE

A British scholar who taught at both Oxford and Cambridge Universities, C.S. Lewis (1898-1963), changed his views from atheism to a general belief in God (and, eventually, to Christianity in particular) over the course of his career. There were three arguments motivating Lewis's change from atheism to theism: the argument from reason, the argument from morality, and the argument that we will examine, the argument from desire. Lewis's argument from desire is rarely discussed and often misunderstood, but we can avoid one misunderstanding of the argument by saying at the outset what the argument is not. Lewis's argument is not the claim that God exists because one wants God to exist. Further, the argument is not an argument from religious experience. The basic idea behind the argument is explained by Lewis:

> Creatures are not born with desires unless satisfaction for those desires exists. A baby feels hunger: well, there is such a thing as food. A duckling wants to swim: well, there is such a thing as water. Men feel sexual desire: well, there is such a thing as sex. If I find in myself a desire which no experience in this world can satisfy, the most probable explanation is that I was made for another world. (Lewis 1952, 120)

Before stating the argument more precisely and in greater detail, we need a better understanding of the experience that motivates the argument.

Lewis uses different names for the experience that propels his argument: *the inconsolable longing*, *Joy*, *enormous bliss*, *immortal longings*, and other names. The inconsolable longing is a feeling of nostalgic longing connected to a sense of absence or open-ended possibility. The experience that Lewis refers to here is not a religious experience or a mystical experience. Rather, it is an ordinary and natural desire, and Lewis's first experience of this desire occurred when he was eight years old:

> As I stood beside a flowering currant bush on a summer day there suddenly arose in me without warning, and as if from a depth not of years but of centuries, the memory of that earlier morning at the Old House when my brother had brought his toy garden into the nursery. It is difficult to find words strong enough for the sensation which came over me; Milton's "enormous bliss"...comes somewhere near it. It was a sensation, of course, of desire, but desire for what? (Lewis 1955, 16)

Lewis also experienced the inconsolable longing while reading Norse mythology, and he describes the longing as being "cold, spacious, severe, pale and remote" (Lewis 1955, 17). Lewis indicates that while his first experience of this desire "had taken only a moment" of time, other things that happened to him seemed to pale in comparison (Lewis 1955, 16).

Lewis provides a description of the inconsolable longing that can help one identify when one is having the experience. Specifically, the inconsolable longing is distinct from happiness and pleasure, it is desirable in itself, and it is brought about by a variety of objects and events that fail to satisfy that desire. Lewis explains, "I call it Joy, which is here a technical term and must be sharply distinguished both from Happiness and Pleasure" (Lewis 1955, 18). He adds that it is an "unsatisfied desire which is itself more desirable than any other satisfaction" (Lewis, 1955, 17-18). The fact that this inconsolable longing is desirable makes it distinct from other kinds of longing (like hunger) which can be unpleasant. Further, the experience of inconsolable longing may be described as a melancholic Joy or "dizzying exaltation" which provides an intense satisfaction that feels like "swallowing light itself" (Lewis 1986, 24-25). This experience will sometimes accompany one's appreciation of beauty in music, art, or nature. However, the object of this longing is not identical to any of these (because one can appreciate these things without having an experience of inconsolable longing). Lewis writes:

> There is a peculiar mystery about the object of this Desire. Inexperienced people (and inattention leaves some inexperienced all their lives) suppose, when they feel it, that they know what they are desiring. Thus if it comes to a child while he is looking at a far off hillside he at once thinks "if only I were there"; if it comes when he is remembering some event in the past, he thinks "if only I could go back to those days." If it comes (a little later) while he is reading a "romantic" tale or poem of "perilous seas and faerie lands forlorn," he thinks he is wishing that such places really existed and that he could reach them....When it darts out upon him from his studies in history or science, he may confuse it with the intellectual craving for knowledge. But every one of these impressions is wrong....Every one of these supposed objects for the Desire is inadequate to it. (Lewis 1958, 8-9)

The point here is that the object of this unique desire is not found in the realm of our sensory experiences.

Now that we have a somewhat better understanding of the natural experience that inspires the argument, we are in a position to state the argument concisely:

1. We have good reason to think that all of our natural desires have existing objects that satisfy those desires.
2. There exists, in most people, a natural desire (that is, the inconsolable longing) which is satisfied by neither anything within the range of sensory experience nor by anything in the natural world.
3. Therefore, we have good reason to think that something exists beyond the range of sensory experience and beyond the natural world that can satisfy the inconsolable longing. (from 1 and 2)

Now we add another premise that brings us to the final conclusion of the argument:

4. If we have good reason to think that something exists beyond the range of sensory experience and beyond the natural world that can satisfy the inconsolable longing, then we have some good reason to think that God exists.
5. Therefore, we have some good reason to think that God exists. (from 3 and 4)

Notice that Lewis is not arguing that there is something beyond nature based on the idea that life's experiences do not make us happy. It is often through happiness

(or along with happiness) that the inconsolable longing is experienced. Further, religious experience is not the means by which the inconsolable longing is satisfied. Instead, Lewis's argument is an argument based on a natural desire (for something beyond nature) that is commonplace and produced in people in a spontaneous fashion as a result of both ordinary experiences and unique experiences.

The most obvious objection to the argument is the claim that people often desire things that are not real. However, this objection (while true) does not apply to Lewis's argument, because Lewis' argument is that the inconsolable longing is a *natural* desire, which he distinguishes from *artificial* desires. Artificial desires are cultivated by our cultures and environments (for example, through advertisements or other cultural means), and must be built up out of natural desires, which are produced within us spontaneously. For example, the desires for food or sleep constitute natural desires, while the desires to become invisible, to become the president, or to fly like a bird are not natural desires. In the case of desiring to be president, one actually desires other things that are natural desires (for example, things like the desire for prestige or influence). Given this distinction, artificial desires do not always have corresponding objects of satisfaction, but are based on more fundamental desires that do.[8] Of course, there are other potential objections to this argument. For a detailed refutation of five other objections to the argument from desire, see the essay, "As if Swallowing Light Itself: C.S. Lewis's Argument from Desire, Part II" (Lee 2017).

Of course, if someone has a reason to think that there is something beyond the natural realm, then this raises the probability of the claim that God exists. However, it also raises the probability of any other view according to which there is something beyond nature. It does this in the same way that evidence may implicate multiple murder suspects in a murder case (where only one person committed a murder). For example, suppose the police find a certain shoe print at a crime scene and also find out that two suspects (say, Mr. Smith and Mr. Jones) both have that same style and size of shoe. That fact raises the probability that Mr. Smith committed the crime, but it also raises the probability that Mr. Jones committed the crime. It does this simply by *lowering* the probability that various *other* suspects committed

8. For more on the distinction between natural and artificial desires, see Peter Kreeft's essay, "C.S. Lewis' Argument from Desire" (Kreeft 1989, 250).

the crime because they wear different shoe sizes or different shoe styles. In a similar fashion, the plausibility of theism is raised given the conclusion of Lewis's argument, even if it raises the probability of any other view that also holds that there is something beyond the natural world. It does this simply by *lowering* the probability of any view according to which there is *nothing* beyond the natural world.

Questions to Consider

8. Make one list of natural desires and a second list of artificial desires. What is different between the desires on the first list versus the desires on the second list?
9. Have you ever experienced what C.S. Lewis calls *the inconsolable longing*? If so, then how would you describe that experience? If not, is it possible that you have had the experience but have not noticed it (or have confused it with other feelings)?
10. What sorts of distractions, amusements, or biases could prevent someone from noticing an experience of the inconsolable longing?

OTHER NON-STANDARD ARGUMENTS FOR GOD'S EXISTENCE

The arguments considered above are not the only non-standard arguments for rational belief in God's existence. Many other arguments for God's existence have been developed and defended by philosophers—even within the last fifty years. A good place to begin is the following text which covers a wide variety of arguments for God's existence: *Two Dozen (or so) Arguments for God* (Walls 2018). This work covers a great many non-standard arguments for God's existence, including arguments from mathematics, intuition, intentionality, sets, meaning, counterfactual statements, morality, consciousness, induction, and other arguments. In what follows, we will briefly highlight some of these non-standard arguments and their

advocates, specifically the moral argument, the argument from consciousness, and a few others.

One non-standard argument for God's existence that has grown in popularity over the last few years is the moral argument for God's existence. The moral argument comes in many varieties, but only a few of its more recent defenders will be mentioned here. First, David Baggett and Jerry L. Walls defend theistic ethics and advance an argument from morality for God's existence in *Good God: The Theistic Foundations of Morality* (Baggett 2011). In this work, Baggett and Walls argue that "moral freedom, ethical obligations, and genuine responsibility" are a better fit with theism than with a naturalistic outlook affirming the existence of only the "physical world" (Baggett 2011, 28).[9] Next, Linda Zagzebski—in her essay "Does Ethics Need God?"—advances the claim that theism prevents the moral enterprise from being seen as futile and provides grounds for thinking that we can have moral knowledge. She holds that these considerations make belief in God's existence rational (Zagzebski 1987). Another advocate of the moral argument, Mark D. Lindville, argues that theism can provide a framework that accounts for moral knowledge and personal dignity whereas naturalism cannot (Lindville 2009). John E. Hare (whose work builds upon and develops an argument initially suggested by Immanuel Kant) lays out the case that the demands of morality are too stringent for humans to satisfy without divine assistance—and, since we are nevertheless obligated to meet the demands of morality, we have reason to believe God exists and can assist us in satisfying those demands (Hare 1996). Katherin Rogers argues that only theism can provide the objectivity and normative power needed for a robust account of objective morality (Rogers 2005). Further, she argues that grounding morality in the nature of God provides a better account of morality than divine command theory, and that grounding morality in God's nature allows one to rebut the notion that God has no bearing on the solution to moral problems. Her final conclusion is that, given her account of God and morality, evil itself serves as evidence for God's existence. Finally, the debate between William Lane Craig and Paul Kurtz (along with the essays by various philosophers responding to their debate) does a nice job at setting out many of the core issues on both sides of the debate in *Is Goodness without God Good Enough?* (Garcia and King 2009). As one can see, there are many types

9. These authors go on to respond to a common objection to the moral argument for God's existence known as "the Euthyphro dilemma" (Baggett 2011, 31-48).

of moral argument for theism. However, in general, advocates of moral arguments for God's existence will highlight various features of morality (say, for example, the objectivity of moral obligation, our ability to possess moral knowledge, or the rationality of the moral enterprise) and then argue that such features are best explained by (or entail) the existence of God.

In recent years, another argument receiving greater attention is the argument from consciousness for God's existence. Richard Swinburne has argued that the correlation of brain events with mental intentions and mental events (such as pains, thrills, and beliefs) gives us reason to think that God exists (Swinburne 2004, 192-212). Robert Adams advances a similar argument in his essay, "Flavors, Colors, and God" (Adams 1987, 243-262). There, Adams suggests that the likelihood of God's existence is increased given the existence of qualia—that is, specific instances of conscious experience such as the subjective experience of seeing red or feeling cold—because there is no naturalistic explanation for how these sorts of qualitative states of mind exist. Theism, in contrast to naturalism, can provide such an explanation given that God is a mind. J.P. Moreland gives an extensive treatment of the argument from consciousness in his book, *Consciousness and the Existence of God: A Theistic Argument* (Moreland 2008). In that work, Moreland argues that the existence of consciousness and its correlation with physical states gives us evidence for God's existence. Like the moral argument mentioned above, the argument from consciousness comes in many varieties. Generally, defenders of arguments from consciousness appeal to the fact of conscious awareness or to certain features of consciousness (say, for example, the apprehension of qualia, the mind's intentionality, or to other features of conscious experience) and then argue that such facts or features are best explained by (or entail) God's existence.

A few other arguments deserve to be briefly mentioned. First, the argument for God's existence from beauty has received a careful presentation and defense in Mark Wynn's book, *God and Goodness: A Natural Theological Perspective* (Wynn 1999, 11-36). This argument is a development and refinement of F.R. Tennant's argument from beauty given in the 1930s (Tennant 1956, 89-93). An attractive feature of their argument, at least for some readers, is that it does not require that beauty be an objective property. Rather, the argument only requires that the subjective experience of beauty be produced by certain non-subjective features of the world (Wynn 1999, 16-17). Second, George Berkeley is infamous for his arguments for the non-existence of matter and how the non-existence of matter leads to the con-

clusion that God exists. For a better understanding of Berkeley's arguments, one place to begin is his short book first published in the 1700s, *Three Dialogues between Hylas and Philonous* (Berkeley 1979). A good supplemental work for understanding this type of argument is Robert Adams's essay, "Idealism Vindicated" (Adams 2007, 35-54). Third, one type of argument receiving little attention from contemporary philosophers is the argument from the intelligibility of reality. Hugo Meynell introduces this sort of argument, saying that he wants to suggest that the world "is intelligible; and to insinuate that this constitutes rather good reason for belief in the existence of God" (Meynell 1977, 23). Drawing on the work of Karl Popper and Bernard Lonergan, he goes on to explain that the practice of science (along with things required to practice science, namely physical objects, minds with mental contents, and irreducible propositions and concepts) implies the intelligibility of the universe (Meynell 1977, 23-28). Further, he argues that if there exists nothing analogous to the human mind involved in the constitution of the universe (something like God), then the universe would not be intelligible (Meynell 38-39). Therefore, the intelligibility of the universe gives us reason to believe in the existence of God. C.S. Peirce advanced, in broad outline, a similar sort of argument in the early 1900's (Peirce 1998, 434-450). Finally, we will mention an argument found in the same neighborhood as the previous argument. This version of the argument, however, is based primarily on the laws of nature. Specifically, John Foster's book, *The Divine Lawmaker* (Foster 2004), presents an argument for God's existence by appealing to both the laws of nature and induction, where induction is a type of inference in which one draws conclusions, say, about the future, by appealing to one's past experience (or in which one draws conclusions concerning unobserved cases based on observed cases) (Foster 2004).[10] While these last few arguments have received comparatively little attention, they are interesting and creative arguments for God's existence that some philosophers find compelling. Obviously, much more could be said in laying out the details of each of these arguments.

10. In a similar line of thought, Del Ratzch advances an argument for the existence of God. However, his argument focuses on the subjunctive feature of the types of natural law statements that one finds in science (Ratzsch 1990).

Questions to Consider

11. Can morality and self-interest conflict with each other?
12. Is the moral intuition that *innocent people should not be harmed for no good reason* anything more than a social agreement or personal preference? If it nothing more than a social agreement or preference, then is there any reason to follow that intuition if one does not wish to do so and can avoid any negative consequences for not doing so?
13. Suppose that an evolutionary account can be provided for what we call moral behavior. Would that account succeed in making sense of objective moral obligations or would that account need to be supplemented in some way? If so, then how?
14. If everything is ultimately physical or material, then how can we make sense of the idea that physical things (which are not about anything) give rise to mental things (which are about other things)?
15. Some take human conscious awareness as a requirement of any possible scientific inquiry (and, therefore, more fundamental than any scientific theory of space-time, mass, charge, and so on), and they hold that this prerequisite of science should make it difficult for us to think of consciousness as being nothing more than brain activity (Taliaferro 2009, 9-10). If this is correct, does that make the hypothesis of God's existence more plausible? Why or why not?
16. Why should we expect reality to be rationally comprehensible (at least in part) by means of empirical investigation or by the methods of scientific investigation? Would God's existence make it more or less surprising that reality can be rationally comprehended?
17. People often have personal goals, projects, and purposes. However, if naturalism is true, then all of a person's goals, projects, and purposes will be destroyed, forgotten, and lost in the depths of time (no matter how successful one is in reaching one's goals or achieving one's purposes). What relevance (if any) could God's existence have in relation to whether or not a person's life has objective purpose, meaning, or value?
18. Suppose that three or four of the non-standard arguments provide some good evidence for God's existence. Do these arguments make a better case for God's existence when they are taken together (rather than individually)? If not, then why not? If so, then how do these arguments stack up against arguments

for God's non-existence?

CONCLUSION

This survey of arguments could not possibly explore (or even list) all of the non-standard arguments for God's existence. Nevertheless, it hopefully provides the reader with a better idea of the variety and range of arguments that have been developed and deployed in making a case for the rationality of theistic belief.[11]

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Further Reading

To learn more about the arguments we have discussed, one may consult the works

previously mentioned in the text and notes above and the works listed below. However, if one can only read a few works connected with the non-standard arguments for God's existence, one could begin by consulting the following significant journal articles, essays, and books for any particular argument that one finds interesting.

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Wynn, Mark. 1999. "Providence and Beauty." In *God and Goodness: A Natural Theological Perspective*, 11-36. New York: Routledge.

Arguments inspired by Berkeley's immaterialist arguments for God's existence

Adams, Robert. 2007. "Idealism Vindicated." In *Persons: Human and Divine*, eds. Peter van Inwagen and Dean Zimmerman, 35-54. Oxford: Oxford University Press.

Spiegel, James S. 2016. "Idealism and the Reasonableness of Theistic Belief" In *Idealism and Christian Philosophy: Idealism and Christian Truth, Volume 2*, eds. Steven B. Cowan and James S. Spiegel, 11-28. New York: Bloomsbury.

Arguments for God's existence that appeal to the laws of nature or the intelligibility of reality

Clarke, W. Norris. 2007. *The Philosophical Approach to God: A New Thomistic Perspective*. 2nd ed. New York: Fordham University Press.

Foster, John. 2004. *The Divine Lawmaker: Lectures on Induction, Laws of Nature, and the Existence of God*. Oxford: Clarendon Press.

General works pertaining to the philosophy of religion and natural theology

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12. Reasons Not to Believe

STEVEN STEYL

Introduction

Arguments against God, religious belief, and the supernatural have long attracted the attention of philosophers. Atheism, as a socially viable, seriously considered alternative to theism, has taken root only in the last few centuries, but many arguments now associated with atheism have been debated in philosophical circles for much longer—not in the form of proofs of God's non-existence, but more often in the form of concerns that any adequate belief set must resolve. In this chapter, we shall examine some of the most prominent arguments against theistic belief.

Theism, of course, encompasses a multitude of belief sets, ranging from monotheistic religions such as Judaism, Christianity, and Islam, to polytheistic religions such Hinduism and (arguably) Buddhism, and even pantheism, so it will be necessary to limit our scope somewhat. Philosophical arguments against theism normally target a specific subcategory of monotheism typified by the Abrahamic traditions (Judaism, Christianity, and Islam). This brand of monotheism worships what some philosophers of religion call the "omniGod," a god possessing the following omni-properties:

- omniscience, or knowledge of everything;
- omnipotence, or the power to do anything; and
- omnibenevolence, or perfect (moral) goodness.

Other gods may, of course, possess some combination of these, but critiques of theism tend to aim explicitly at the versions of the omniGod in these three traditions, so this form of monotheism shall be our focus.

The omniGod is usually viewed through the lens of personalism, the claim that God is a person of some sort. Personalists are not committed to the claim that God is an embodied person, as though God had a genetic makeup, a spleen, and so

forth. Rather, theistic personalists conceive of God as responsive or reflective in ways akin to our own. God has, for instance, emotional responses to worldly events much like we do. Personalism, however, is not the only option for omniGod theists. Classical theists like St. Augustine (354-430) and St. Thomas Aquinas (1224-1274) had a very different, non-personal concept of God. According to **classical theism**, God is simple, so that all of their properties are identical to one another and also to God (God's benevolence *is* their timelessness, and God *is* God's benevolence); immutable, so that their properties cannot change; impassible, unable to be acted upon by us or anything in the causal world; and timeless, existing outside of time.[1] But here we shall be dealing primarily with the personalist omniGod, since it (a) is a more popular conception of God among philosophers, and is therefore the subject of most attempts to discredit theism, and (b) is more familiar to theists today.

The Incoherence of Divine Attributes

Philosophers have been thinking about God's properties for millennia. One popular argument against this concept of God also arises from such reflection. It maintains that the omni-properties are either internally or externally incoherent, and therefore a god which possesses these traits cannot possibly exist.

Omnipotence, as defined above, is a common target for such arguments, because it seems to lead to paradoxes. These paradoxes usually have to do with God's ability to restrict their own power. Can God create a stone that is too heavy for them to lift? Can God create something indestructible, so that it cannot be later destroyed by its maker? If the answer to either question is "yes," then there are some things that God cannot do. If God can create an object that cannot be destroyed by its maker, then they cannot destroy that object, and the same is true, mutatis mutandis (that is, with the necessary changes), for a rock that they cannot lift. On the other hand,

1. For those wishing to learn more, see Aquinas' *Summa Contra Gentiles* (1934), Book 1, and Augustine's *The City of God, Part II* (2013), Book 11. There are many different editions and translations of ancient and medieval philosophers' works, and it is common practice in the philosophical community to use a standard referencing system that is the same across all of these rather than using page numbers (which differ across the various editions). Here I shall follow the standard referencing, so that students can find the passages cited regardless of the editions they are using.

if the answer to either question is “no,” and God is incapable of limiting themself in this way, then again there are some things God cannot do. So omnipotence, defined as an ability to do anything at all, cannot be one of God’s (or any being’s) traits, since the very concept of omnipotence is internally inconsistent.

There are a number of responses available to the defender of divine omnipotence. One is to suggest, as René Descartes (1596-1650) does, that God can in fact create a stone that is too heavy for them to lift, but that this is not problematic because God is not bound by the laws of logic or similar metaphysical truths. We suppose that it is contradictory for a human being, who cannot perform logically impossible feats, to create a rock that is too heavy for her to lift. But why think that God, the Almighty, would be bound by similar laws? If we believe that God is all-powerful, then they could well be capable of suspending the laws of logic!

Such solutions raise other problems, however. One might reasonably ask, in response to this answer, whether such a god can be reasoned about at all.[2] There are, after all, certain claims about God that theists will typically want to make. And it seems that many of those claims are only tenable because they are logical. Consider, for example, omnibenevolence. If God is omnibenevolent, we know that they always do what is good. But if God is not constrained by the laws of logic, then we have no reason to accept this statement. God’s omnibenevolence only entails morally good actions because it follows logically. So theists who defend omnipotence by claiming that God is in some sense beyond logic may be throwing the baby out with the bathwater.

Another option is to concede that the definition of omnipotence above ought to be revised. One could, for example, qualify the above definition by appending “except that which is logically impossible,” without deviating too radically from our original conception of God as all-powerful. Though we have shelved his concept of God, we might still like to borrow an idea from Thomas Aquinas, a prominent Medieval philosopher and theologian, who defended such a view:

2. As J. L. Mackie once put it, if God was capable of doing what is logically impossible, "he could certainly exist, and have any desired attributes, in defiance of every sort of contrary consideration. The view that there is an absolutely omnipotent being in this sense stands, therefore, right outside the realm of rational enquiry and discussion" (Mackie 1962, 16).

> since power is said in reference to possible things, this phrase, "God can do all things," is rightly understood to mean that God can do all things that are possible; and for this reason He is said to be omnipotent. (*Summa Theologiae*, Ia, 25, 3)[3]

Such a manoeuvre is not without its hazards, of course. One might think that such a God fails to satisfy conditions of adequacy for an object of worship, appealing perhaps to an Anselmian view that God is that "than which no greater can be thought."[4] It is, nevertheless, open to the omniGod theist to either challenge the supposed inconsistency, or to revise their account of omnipotence.

Another problem arises when we question whether the omni-properties are consistent or coherent with one another. One could claim that any of the traits mentioned above is internally consistent and non-paradoxical, but that the set of traits attributed to God generates contradictions and cannot therefore be possessed by a single entity. Consider the following premise:

1. Omniscience interferes with free will.

If we take omniscience to include infallible knowledge of every future event, then God knows with absolute certainty that they will do x at a given time t.[5] If this is true, then it looks as though omniscience interferes with free will. But if omniscience interferes with free will, then it looks as though omniscience also interferes with omnipotence. If God cannot be mistaken about how they will act at t, then God is incapable of doing anything other than x. Thus, we arrive at:

2. If God lacks free will, then God lacks omnipotence.

And omniscience may also conflict with omnibenevolence. The freedom to do otherwise is often thought of as a precondition for morally good action (I am not performing a praiseworthy action if a mind control device forces me to rescue a drowning child). Yet if God infallibly knows how they will act and thus cannot act

3. See also the *Summa Theologiae* (1912-36), Ia, 25, 3.
4. See Chapter 2 for more about St. Anselm and his ontological argument for the existence of God.
5. Note that this problem does not necessarily threaten classical theists, since on their view God is timeless.

otherwise, then one could plausibly argue that there seems to be a similar lack of moral freedom with respect to their actions. So it appears as though omnibenevolence is inconsistent with omniscience, and we can add the following premise to the argument:

3. If God lacks free will, then God lacks omnibenevolence.

If these premises are all true, omniscience interferes with free will, and as a result it interferes with *both* omnipotence *and* omnibenevolence. The argument would thus reach the following conclusion:

4. If God is omniscient, God cannot be omnipotent (2) or omnibenevolent (3).

And notice that one could present a different argument that begins with either omnibenevolence or omnipotence, and goes on to claim that either of these properties is inconsistent with the others. Consider:

1*. Omnibenevolence seems to interfere with free will
2. If God lacks free will, then God lacks omnipotence.

If omnibenevolence amounts to moral perfection, then we can infer that God necessarily does what is morally best in any given scenario. But this is just to say that God cannot do anything that is morally suboptimal. God cannot, therefore, be omnipotent if we take omnipotence to mean an ability to perform morally imperfect actions.

So it appears as though all of the omni-properties can be brought into ***prima facie*** conflict (that is, into conflict at first glance) with any of the others. If any of these inconsistencies hold water, then once again, the omniGod cannot exist, because in order to exist, they must possess a set of traits that are logically inconsistent with one another.

Questions to Consider

1. Do you think that God can suspend the laws of logic and bring about contradictions? Why or why not?
2. Select one of the apparent inconsistencies between two omni-properties and respond to that apparent inconsistency on the omniGod theist's behalf.
3. Is it open to the theist to abandon one or more omni-properties altogether? Can you think of reasons for them not to do so?

Problems of Evil

The omni-properties may be inconsistent not only with each other, but with observable or indispensable facts about the world. In this subsection we shall look at the apparent inconsistency between the omni-properties and the existence of evil. Take the following example:

> Suppose in some distant forest lightning strikes a dead tree, resulting in a forest fire. In the fire a fawn is trapped, horribly burned, and lies in terrible agony for several days before death relieves its suffering. (Rowe 1979, 337)

For many philosophers, and many reflective non-philosophers, it is difficult to reconcile the existence of such evils in the world with belief in an omniGod. How could an almighty creator, who brims with loving-kindness, allow any evil to exist in the world, let alone evils of the scale and severity we see in the world today? This apparent tension between the existence of evil and the existence of the omniGod has birthed a number of arguments from evil, designed to show that belief in God is at best unreasonable and at worst outright irrational. Here, we shall focus on **moral evils**, evils for which some agent is morally responsible or blameworthy. As we shall see at the end of this section, other evils must also be dealt with.

Of those arguments, J. L. Mackie's argument from evil has been by far the most influential. Mackie argued that belief in the omniGod is irrational because evil could not coexist with a God who possesses two of the omni-properties above.

On Mackie's view, the inconsistency emerges once we begin to flesh out each of omnipotence and omnibenevolence:

1. If God is omnipotent, there are "no limits to what [they] can do" (Mackie 1955, 201).
2. If God is omnibenevolent, they are "opposed to evil, in such a way that [they] always eliminate[ ] evil as far as [they] can" (Mackie 1955, 201).

Together, premises (1) and (2) suggest that if the omniGod existed, evil would not.[6] The omniGod of Abrahamic theology is perfectly able and entirely willing to eliminate all of the world's troubles. But it is quite clear, Mackie insists, that evil does exist. The upshot of Mackie's argument, then, is that if evil exists (and it certainly seems to) then God is either not omnipotent or not perfectly good. In other words, the omniGod does not exist. David Hume articulates this position more forcefully in an oft-quoted passage from his *Dialogues Concerning Natural Religion* (Hume 1948): "is [God] willing to prevent evil, but not able? Then he is impotent. Is he able, but not willing? Then he is malevolent. Is he both able and willing? Whence then is evil?"[7]

One of the most renowned responses to such problems of evil, defended by philosophers like Plantinga (1974), is known as the free will defence. The free will defence begins with an intuitively plausible premise: free will is very valuable and ought to be preserved. More specifically, the free will defence begins by noting the import of libertarian free will, a capacity to choose your own actions without being caused to act by anything external (e.g. a mind control device or being held at gunpoint). A person exercises libertarian free will whenever their actions are not brought about by outside interference. But this sort of free will therefore requires God's non-interference. God cannot force us to act in certain ways without thereby

6. Many philosophers go on to add a third premise, taking it to be a hidden or necessary premise in Mackie's argument:

   3. If God is omniscient, he knows about all of the world's evils and how to eradicate them;

   This makes the conclusion a *tri*lemma instead of a *di*lemma, but the conclusion remains the same – the omniGod still does not exist.
7. Classical theists like Aquinas do acknowledge the challenge evil poses, but the argument plays out rather differently if God is immutable and impassible.

sacrificing libertarian free will. So they cannot coerce us into morally upstanding actions without eliminating something of great value. The crux of the free will defence is thus a dilemma. God must choose either to allow us our libertarian free will and in doing so run the risk that we will sometimes act reprehensibly, or to intercede in human life, preventing us from causing evil, but at the cost of our libertarian free will.[8] Despite possessing the omni-properties, God is faced with forced choices in much the same way we are, and it is better (or more modestly, it could be better for all we know) that God leaves our free will intact.

Many theists find this response satisfying, and it is certainly an elegant solution. But it is a solution which resolves only part of the problem. The free will defence makes sense of evils like murder and theft, which are freely chosen. But some evils seem to have nothing to do with free will at all. More specifically, some philosophers have argued that the free will defence cannot explain **natural evils**, evils for which no agent is morally responsible or blameworthy—like volcanic eruptions, forest fires, and tsunamis. How, after all, can Rowe's example above be explained by reference to free will? There is no discernible libertarian free will on which to lay blame there, since such evils are caused by natural processes. So we might think that the free will defence yields only a partial solution to the problem of evil, and that there are other cases of evil which require other solutions.

The Problem of Hell

8. The argument thus assumes that God could not have created a world in which people both possess libertarian free will and never bring about evil—a questionable assumption, to be sure, but one we shall not challenge here.

Figure 1: The Last Judgement by Fra Angelico (1425-1430) via Wikimedia Commons. This work is in the public domain.

Hell comes in many forms, but whether one conceives of hell as an eternal state of "weeping and gnashing of teeth" (Matthew 13:42), or a state of unrepentant debauchery and wickedness, hell is universally seen as an evil of the worst order, and it thus raises an acute problem of evil. The problem is also exacerbated by hell's finality, since it is often thought to be eternal or infinite, and by its direct adminis-

tration (or at least explicit permission) by God. For some omniGod theists, another aggravating factor also holds true: some non-believers are consigned to hell for committing no special sin other than non-belief. Philosophers of religion are rightly concerned about the philosophical defensibility of such accounts of hell, and many have for that reason embraced a *universalist eschatology*—that is, a view on which every person, regardless of their beliefs, character, or actions in this life, eventually reaches heaven.

Questions to Consider

4. Are you convinced by Mackie's problem of evil? Why or why not?
5. In order for the free will defence to succeed, it will need to provide good reasons for thinking that libertarian free will is of greater value than the prevention of evil. Does this seem plausible? Why or why not?
6. Do you think the free will defence can explain natural evils like earthquakes and volcanoes? Why or why not?
7. How can God's omnibenevolence be reconciled with the existence of hell? Are theists forced to be universalists about heaven?

Divine Hiddenness

> My God, my God, why have you forsaken me? Why are you so far from saving me, so far from my cries of anguish? My God, I cry out by day, but you do not answer, by night, but I find no rest (Psalm 22:1-2 [NIV]).

It is also peculiar that the omniGod, who loves us infinitely and who so strongly desires for that love to be reciprocated, is entirely hidden from many of us. This apparent absence from the world gives rise to a cluster of objections to omniGod theism. Which subspecies pertains depends in part on what exactly we mean by

"hidden." In the passage from the Book of Psalms quoted above, God is hidden from a believer in such a way that they sink into a sort of existential crisis. God's existence is not hidden, since the Psalmist is not questioning whether God exists or not. Rather, the Psalmist is puzzled and upset by God's failure to interact. So Psalm 22 raises a problem of what one might call divine withdrawal. An objection from divine hiddenness could also adopt a different tack and say that God's existence is discoverable, but that their nature or their plans are hidden from us in some problematic way, in which case we might prefer to call our problem one of divine mysteriousness. Here, however, we shall focus on moral and epistemological problems raised by divine hiddenness in a different sense. We shall examine divine hiddenness in the context of non-resistant non-belief, where God has not made their existence sufficiently perceptible to non-believers.

John Schellenberg is perhaps the most well-known proponent of this argument from divine hiddenness, and his argument in *Divine Hiddenness and Human Reason* (1993) is widely recognized as the first modern statement of the problem. In this subsection we shall reconstruct that argument, taking on board some of the revisions he has made since it was published. Schellenberg's argument, in essence, is that the existence of an omnibenevolent God is inconsistent with the existence of non-resistant non-believers. A perfectly loving God would not allow for non-resistant non-belief, because belief constitutes a precondition for personal relationship.

What do we mean by "non-resistance" here? Schellenberg himself has not always used that term. Indeed, he initially preferred the language of culpability, and this does perhaps shed some light on what he means. Schellenberg also offers several illustrative examples of resistance:

> We might imagine a resister wanting to do her own thing without considering God's view of the matter, or wanting to do something she regards as in fact contrary to the values cultivated in a relationship with God … imagine careless investigation of one sort or another in relation to the existence of God, or someone deliberately consorting with people who carelessly fail to believe in God and avoiding those who believe, or just over time mentally drifting, with her own acquiescence, away from any place where she could convincingly be met by evidence of God. (Schellenberg 2015b, 55-56)

Resistance thus involves "actions or omissions (at least mental ones)" which "shut

the door" to a relationship with God. One cannot be ignorant of the fact that one is resisting, so there is some element of intention in resistant non-belief, specifically an intent to end or diminish or preclude belief in God. Non-resistant non-belief, on the other hand, means non-belief in God where the non-believer has not "shut the door"—where, for example, some trauma or major life-event has preempted belief, or where someone has never come across the concept of God.

Schellenberg begins his argument for the incompatibility of God's existence and non-resistant non-belief with the following thought:

1. If a perfectly loving God exists, then they are always open to a personal relationship with any person capable of entering into one.

Openness, here, means nothing more than being willing to enter into a relationship. It does not mean that God is or ought to be actively pursuing a relationship with every one of us, or that we cannot choose to spurn them. It means simply that God is not actively ruling out a relationship with any person. Unless you yourself have rejected God, there is nothing to stop you from participating in a relationship with them. Schellenberg goes on to add another premise to his argument:

2. If there is a God who is always open to a personal relationship with any person, then no person is ever non-resistantly in a state of non-belief about God's existence.

This premise says just that God's openness to a relationship with us rules out non-resistant non-belief. In order to be in any sort of loving relationship with another person, you must first believe that they exist. So in order for you to be open to a relationship with God, you must accept that he or she exists. Thus, an omniGod would guarantee that you are always capable of relation by ensuring that you always believe in their existence. Schellenberg explains:

> by not revealing his existence [God] is doing something that makes it impossible for [the non-resistant non-believer] to participate in personal relationship with [God] at the relevant time even should she try to do so, and this … is precisely what is involved in [God's] not being open to having such a relationship with [non-resistant non-believers]. (Schellenberg 2015a, 23)

Schellenberg's argument, then, is that a perfectly loving (i.e. omnibenevolent) God would always be open to a personal relationship with those whom they love, and would always take steps to maintain the possibility of such a relationship even if it never comes to fruition. A necessary precondition for any personal relationship is that each participant believes the other exists. So in order for a personal relationship to be possible, God would make their existence known. Yet, Schellenberg continues, God has not made their existence known.[9] Non-resistant non-believers do exist, and therefore the omniGod does not.

Responses to this problem have often consisted in pointing out reasons why God might choose to remain hidden. Daniel Howard-Snyder, a prominent commentator, has argued that a non-believer's justifications for non-resistance could supply God with a good reason for remaining hidden. It seems reasonable, Howard-Snyder argues, to suggest that some motives for non-resistance are improper, and the omniGod could choose to remain hidden from such a believer until they adopt better reasons for being non-resistant. Consider someone who is non-resistant, but only because he or she wants to avoid damnation and spend eternity in bliss.[10] The motive for non-resistance, in such a case, is pure self-interest. Yet we can envision an omniGod deciding to remain hidden from such a person until they have better reasons for being non-resistant, and this does not seem, at first glance, as though it is morally wrong. So perhaps God's hiddenness is not proof of their non-existence.

Questions to Consider

8. Is the problem of divine hiddenness a version of the problem of evil? Why or why not?
9. Does Schellenberg's exposition of divine love seem reasonable to you? Can you think of everyday examples of, or counterexamples to, his account of perfect love?

9. Note that this is a contestable premise. See Chapter 2, Section 1 on teleological arguments, for instance.
10. See the discussion of Pascal's Wager in Chapter 3, Section 1.

10. Can you think of other reasons why God might choose to remain hidden from non-resistant non-believers? Do you think, for instance, that there is something valuable about freely choosing to believe in God without their revealing themself? Is this the kind of free choice an omnibenevolent God would pursue? Consider our discussion of free will in Section 3.
11. Do you think the problem of hiddenness exacerbates the problem of hell? Does it conflict even more with omnibenevolence to both (a) put people into hell for non-belief and (b) remain hidden?

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Further Reading

Textbooks

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Online Resources

The Stanford Encyclopedia of Philosophy, a reputable and free online resource

covering a variety of philosophical topics. The Internet Encyclopedia of Philosophy, a free online resource which also covers select topics in philosophy. Consider also Crash Course Philosophy, a Youtube series dealing with a number of philosophical topics.

- Crash Course Philosophy
- Internet Encyclopedia of Philosophy
- Stanford Encyclopedia of Philosophy: Miracles

Readings Specific to Each Topic

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- Schellenberg's summary: The Hiddenness Argument and the Contribution of Philosophy (1/5). Youtube.

13. The Ethics of Belief

WILLIAM CLIFFORD

I.—The Duty of Inquiry

A shipowner was about to send to sea an emigrant-ship. He knew that she was old, and not over-well built at the first; that she had seen many seas and climes, and often had needed repairs. Doubts had been suggested to him that possibly she was not seaworthy. These doubts preyed upon his mind, and made him unhappy; he thought that perhaps he ought to have her thoroughly overhauled and refitted, even though this should put him to great expense. Before the ship sailed, however, he succeeded in overcoming these melancholy reflections. He said to himself that she had gone safely through so many voyages and weathered so many storms that it was idle to suppose she would not come safely home from this trip also. He would put his trust in Providence, which could hardly fail to protect all these unhappy families that were leaving their fatherland to seek for better times elsewhere. He would dismiss from his mind all ungenerous suspicions about the honesty of builders and contractors. In such ways he acquired a sincere and comfortable conviction that his vessel was thoroughly safe and seaworthy; he watched her departure with a light heart, and benevolent wishes for the success of the exiles in their strange new home that was to be; and he got his insurance-money when she went down in mid-ocean and told no tales.

What shall we say of him? Surely this, that he was verily guilty of the death of those men. It is admitted that he did sincerely believe in the soundness of his ship; but the sincerity of his conviction can in no wise help him, because *he had no right to believe on such evidence as was before him.* He had acquired his belief not by honestly earning it in patient investigation, but by stifling his doubts. And although in the end he may have felt so sure about it that he could not think otherwise, yet inasmuch as he had knowingly and willingly worked himself into that frame of mind, he must be held responsible for it.

Let us alter the case a little, and suppose that the ship was not unsound after all;

that she made her voyage safely, and many others after it. Will that diminish the guilt of her owner? Not one jot. When an action is once done, it is right or wrong for ever; no accidental failure of its good or evil fruits can possibly alter that. The man would not have been innocent, he would only have been not found out. The question of right or wrong has to do with the origin of his belief, not the matter of it; not what it was, but how he got it; not whether it turned out to be true or false, but whether he had a right to believe on such evidence as was before him.

There was once an island in which some of the inhabitants professed a religion teaching neither the doctrine of original sin nor that of eternal punishment. A suspicion got abroad that the professors of this religion had made use of unfair means to get their doctrines taught to children. They were accused of wresting the laws of their country in such a way as to remove children from the care of their natural and legal guardians; and even of stealing them away and keeping them concealed from their friends and relations. A certain number of men formed themselves into a society for the purpose of agitating the public about this matter. They published grave accusations against individual citizens of the highest position and character, and did all in their power to injure these citizens in the exercise of their professions. So great was the noise they made, that a Commission was appointed to investigate the facts; but after the Commission had carefully inquired into all the evidence that could be got, it appeared that the accused were innocent. Not only had they been accused on insufficient evidence, but the evidence of their innocence was such as the agitators might easily have obtained, if they had attempted a fair inquiry. After these disclosures the inhabitants of that country looked upon the members of the agitating society, not only as persons whose judgment was to be distrusted, but also as no longer to be counted honourable men. For although they had sincerely and conscientiously believed in the charges they had made, yet *they had no right to believe on such evidence as was before them*. Their sincere convictions, instead of being honestly earned by patient inquiring, were stolen by listening to the voice of prejudice and passion.

Let us vary this case also, and suppose, other things remaining as before, that a still more accurate investigation proved the accused to have been really guilty. Would this make any difference in the guilt of the accusers? Clearly not; the question is not whether their belief was true or false, but whether they entertained it on wrong grounds. They would no doubt say, 'Now you see that we were right after all; next time perhaps you will believe us.' And they might be believed, but they would not

thereby become honourable men. They would not be innocent, they would only be not found out. Every one of them, if he chose to examine himself *in foro conscientiæ*, would know that he had acquired and nourished a belief, when he had no right to believe on such evidence as was before him; and therein he would know that he had done a wrong thing.

It may be said, however, that in both of these supposed cases it is not the belief which is judged to be wrong, but the action following upon it. The shipowner might say, 'I am perfectly certain that my ship is sound, but still I feel it my duty to have her examined, before trusting the lives of so many people to her.' And it might be said to the agitator, 'However convinced you were of the justice of your cause and the truth of your convictions, you ought not to have made a public attack upon any man's character until you had examined the evidence on both sides with the utmost patience and care.'

In the first place, let us admit that, so far as it goes, this view of the case is right and necessary; right, because even when a man's belief is so fixed that he cannot think otherwise, he still has a choice in regard to the action suggested by it, and so cannot escape the duty of investigating on the ground of the strength of his convictions; and necessary, because those who are not yet capable of controlling their feelings and thoughts must have a plain rule dealing with overt acts.

But this being premised as necessary, it becomes clear that it is not sufficient, and that our previous judgment is required to supplement it. For it is not possible so to sever the belief from the action it suggests as to condemn the one without condemning the other. No man holding a strong belief on one side of a question, or even wishing to hold a belief on one side, can investigate it with such fairness and completeness as if he were really in doubt and unbiassed; so that the existence of a belief not founded on fair inquiry unfits a man for the performance of this necessary duty.

Nor is that truly a belief at all which has not some influence upon the actions of him who holds it. He who truly believes that which prompts him to an action has looked upon the action to lust after it, he has committed it already in his heart. If a belief is not realized immediately in open deeds, it is stored up for the guidance of the future. It goes to make a part of that aggregate of beliefs which is the link between sensation and action at every moment of all our lives, and which is so organized

and compacted together that no part of it can be isolated from the rest, but every new addition modifies the structure of the whole. No real belief, however trifling and fragmentary it may seem, is ever truly insignificant; it prepares us to receive more of its like, confirms those which resembled it before, and weakens others; and so gradually it lays a stealthy train in our inmost thoughts, which may some day explode into overt action, and leave its stamp upon our character for ever.

And no one man's belief is in any case a private matter which concerns himself alone. Our lives are guided by that general conception of the course of things which has been created by society for social purposes. Our words, our phrases, our forms and processes and modes of thought, are common property, fashioned and perfected from age to age; an heirloom which every succeeding generation inherits as a precious deposit and a sacred trust to be handed on to the next one, not unchanged but enlarged and purified, with some clear marks of its proper handiwork. Into this, for good or ill, is woven every belief of every man who has speech of his fellows. An awful privilege, and an awful responsibility, that we should help to create the world in which posterity will live.

In the two supposed cases which have been considered, it has been judged wrong to believe on insufficient evidence, or to nourish belief by suppressing doubts and avoiding investigation. The reason of this judgment is not far to seek: it is that in both these cases the belief held by one man was of great importance to other men. But forasmuch as no belief held by one man, however seemingly trivial the belief, and however obscure the believer, is ever actually insignificant or without its effect on the fate of mankind, we have no choice but to extend our judgment to all cases of belief whatever. Belief, that sacred faculty which prompts the decisions of our will, and knits into harmonious working all the compacted energies of our being, is ours not for ourselves, but for humanity. It is rightly used on truths which have been established by long experience and waiting toil, and which have stood in the fierce light of free and fearless questioning. Then it helps to bind men together, and to strengthen and direct their common action. It is desecrated when given to unproved and unquestioned statements, for the solace and private pleasure of the believer; to add a tinsel splendour to the plain straight road of our life and display a bright mirage beyond it; or even to drown the common sorrows of our kind by a self-deception which allows them not only to cast down, but also to degrade us. Whoso would deserve well of his fellows in this matter will guard the purity of his

belief with a very fanaticism of jealous care, lest at any time it should rest on an unworthy object, and catch a stain which can never be wiped away.

It is not only the leader of men, statesman, philosopher, or poet, that owes this bounden duty to mankind. Every rustic who delivers in the village alehouse his slow, infrequent sentences, may help to kill or keep alive the fatal superstitions which clog his race. Every hard-worked wife of an artisan may transmit to her children beliefs which shall knit society together, or rend it in pieces. No simplicity of mind, no obscurity of station, can escape the universal duty of questioning all that we believe.

It is true that this duty is a hard one, and the doubt which comes out of it is often a very bitter thing. It leaves us bare and powerless where we thought that we were safe and strong. To know all about anything is to know how to deal with it under all circumstances. We feel much happier and more secure when we think we know precisely what to do, no matter what happens, than when we have lost our way and do not know where to turn. And if we have supposed ourselves to know all about anything, and to be capable of doing what is fit in regard to it, we naturally do not like to find that we are really ignorant and powerless, that we have to begin again at the beginning, and try to learn what the thing is and how it is to be dealt with—if indeed anything can be learnt about it. It is the sense of power attached to a sense of knowledge that makes men desirous of believing, and afraid of doubting.

This sense of power is the highest and best of pleasures when the belief on which it is founded is a true belief, and has been fairly earned by investigation. For then we may justly feel that it is common property, and holds good for others as well as for ourselves. Then we may be glad, not that *I* have learned secrets by which I am safer and stronger, but that *we men* have got mastery over more of the world; and we shall be strong, not for ourselves, but in the name of Man and in his strength. But if the belief has been accepted on insufficient evidence, the pleasure is a stolen one. Not only does it deceive ourselves by giving us a sense of power which we do not really possess, but it is sinful, because it is stolen in defiance of our duty to mankind. That duty is to guard ourselves from such beliefs as from a pestilence, which may shortly master our own body and then spread to the rest of the town. What would be thought of one who, for the sake of a sweet fruit, should deliberately run the risk of bringing a plague upon his family and his neighbours?

And, as in other such cases, it is not the risk only which has to be considered; for a bad action is always bad at the time when it is done, no matter what happens afterwards. Every time we let ourselves believe for unworthy reasons, we weaken our powers of self-control, of doubting, of judicially and fairly weighing evidence. We all suffer severely enough from the maintenance and support of false beliefs and the fatally wrong actions which they lead to, and the evil born when one such belief is entertained is great and wide. But a greater and wider evil arises when the credulous character is maintained and supported, when a habit of believing for unworthy reasons is fostered and made permanent. If I steal money from any person, there may be no harm done by the mere transfer of possession; he may not feel the loss, or it may prevent him from using the money badly. But I cannot help doing this great wrong towards Man, that I make myself dishonest. What hurts society is not that it should lose its property, but that it should become a den of thieves; for then it must cease to be society. This is why we ought not to do evil that good may come; for at any rate this great evil has come, that we have done evil and are made wicked thereby. In like manner, if I let myself believe anything on insufficient evidence, there may be no great harm done by the mere belief; it may be true after all, or I may never have occasion to exhibit it in outward acts. But I cannot help doing this great wrong towards Man, that I make myself credulous. The danger to society is not merely that it should believe wrong things, though that is great enough; but that it should become credulous, and lose the habit of testing things and inquiring into them; for then it must sink back into savagery.

The harm which is done by credulity in a man is not confined to the fostering of a credulous character in others, and consequent support of false beliefs. Habitual want of care about what I believe leads to habitual want of care in others about the truth of what is told to me. Men speak the truth to one another when each reveres the truth in his own mind and in the other's mind; but how shall my friend revere the truth in my mind when I myself am careless about it, when I believe things because I want to believe them, and because they are comforting and pleasant? Will he not learn to cry, 'Peace,' to me, when there is no peace? By such a course I shall surround myself with a thick atmosphere of falsehood and fraud, and in that I must live. It may matter little to me, in my cloud-castle of sweet illusions and darling lies; but it matters much to Man that I have made my neighbours ready to deceive. The credulous man is father to the liar and the cheat; he lives in the bosom of this his family, and it is no marvel if he should become even as they are. So closely are our

duties knit together, that whoso shall keep the whole law, and yet offend in one point, he is guilty of all.

To sum up: it is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence.

If a man, holding a belief which he was taught in childhood or persuaded of afterwards, keeps down and pushes away any doubts which arise about it in his mind, purposely avoids the reading of books and the company of men that call in question or discuss it, and regards as impious those questions which cannot easily be asked without disturbing it—the life of that man is one long sin against mankind.

If this judgment seems harsh when applied to those simple souls who have never known better, who have been brought up from the cradle with a horror of doubt, and taught that their eternal welfare depends on *what* they believe, then it leads to the very serious question, *Who hath made Israel to sin?*

It may be permitted me to fortify this judgment with the sentence of Milton[2]—

'A man may be a heretic in the truth; and if he believe things only because his pastor says so, or the assembly so determine, without knowing other reason, though his belief be true, yet the very truth he holds becomes his heresy.'

And with this famous aphorism of Coleridge[3]—

'He who begins by loving Christianity better than Truth, will proceed by loving his own sect or Church better than Christianity, and end in loving himself better than all.'

Inquiry into the evidence of a doctrine is not to be made once for all, and then taken as finally settled. It is never lawful to stifle a doubt; for either it can be honestly answered by means of the inquiry already made, or else it proves that the inquiry was not complete.

'But,' says one, 'I am a busy man; I have no time for the long course of study which would be necessary to make me in any degree a competent judge of certain questions, or even able to understand the nature of the arguments.' Then he should have no time to believe.

To sum up:—

We may believe what goes beyond our experience, only when it is inferred from that experience by the assumption that what we do not know is like what we know.

We may believe the statement of another person, when there is reasonable ground for supposing that he knows the matter of which he speaks, and that he is speaking the truth so far as he knows it.

It is wrong in all cases to believe on insufficient evidence; and where it is presumption to doubt and to investigate, there it is worse than presumption to believe.

References

1. ↑ *Contemporary Review*, January, 1877.
2. ↑ *Areopagitica*.
3. ↑ *Aids to Reflection*.

PART IV

EPISTEMOLOGY

14. On Doubt and Certainty

RENÉ DESCARTES

Meditations on First Philosophy

Meditation I

OF THE THINGS OF WHICH WE MAY DOUBT.

1. SEVERAL years have now elapsed since I first became aware that I had accepted, even from my youth, many false opinions for true, and that consequently what I afterward based on such principles was highly doubtful; and from that time I was convinced of the necessity of undertaking once in my life to rid myself of all the opinions I had adopted, and of commencing anew the work of building from the foundation, if I desired to establish a firm and abiding superstructure in the sciences. But as this enterprise appeared to me to be one of great magnitude, I waited until I had attained an age so mature as to leave me no hope that at any stage of life more advanced I should be better able to execute my design. On this account, I have delayed so long that I should henceforth consider I was doing wrong were I still to consume in deliberation any of the time that now remains for action. To-day, then, since I have opportunely freed my mind from all cares [and am happily disturbed by no passions], and since I am in the secure possession of leisure in a peaceable retirement, I will at length apply myself earnestly and freely to the general overthrow of all my former opinions.
2. But, to this end, it will not be necessary for me to show that the whole of these are false—a point, perhaps, which I shall never reach; but as even now my reason convinces me that I ought not the less carefully to withhold belief from what is not entirely certain and indubitable, than from what is manifestly false, it will be sufficient to justify the rejection of the whole if I shall find in each

some ground for doubt. Nor for this purpose will it be necessary even to deal with each belief individually, which would be truly an endless labor; but, as the removal from below of the foundation necessarily involves the downfall of the whole edifice, I will at once approach the criticism of the principles on which all my former beliefs rested.

3. All that I have, up to this moment, accepted as possessed of the highest truth and certainty, I received either from or through the senses. I observed, however, that these sometimes misled us; and it is the part of prudence not to place absolute confidence in that by which we have even once been deceived.
4. But it may be said, perhaps, that, although the senses occasionally mislead us respecting minute objects, and such as are so far removed from us as to be beyond the reach of close observation, there are yet many other of their informations (presentations), of the truth of which it is manifestly impossible to doubt; as for example, that I am in this place, seated by the fire, clothed in a winter dressing gown, that I hold in my hands this piece of paper, with other intimations of the same nature. But how could I deny that I possess these hands and this body, and withal escape being classed with persons in a state of insanity, whose brains are so disordered and clouded by dark bilious vapors as to cause them pertinaciously to assert that they are monarchs when they are in the greatest poverty; or clothed [in gold] and purple when destitute of any covering; or that their head is made of clay, their body of glass, or that they are gourds? I should certainly be not less insane than they, were I to regulate my procedure according to examples so extravagant.
5. Though this be true, I must nevertheless here consider that I am a man, and that, consequently, I am in the habit of sleeping, and representing to myself in dreams those same things, or even sometimes others less probable, which the insane think are presented to them in their waking moments. How often have I dreamt that I was in these familiar circumstances, that I was dressed, and occupied this place by the fire, when I was lying undressed in bed? At the present moment, however, I certainly look upon this paper with eyes wide awake; the head which I now move is not asleep; I extend this hand consciously and with express purpose, and I perceive it; the occurrences in sleep are not so distinct as all this. But I cannot forget that, at other times I have been deceived in sleep by similar illusions; and, attentively considering those cases, I perceive so clearly that there exist no certain marks by which the state of waking can ever be distinguished from sleep, that I feel greatly astonished; and in amazement I

almost persuade myself that I am now dreaming.

6. Let us suppose, then, that we are dreaming, and that all these particulars—namely, the opening of the eyes, the motion of the head, the forth-putting of the hands—are merely illusions; and even that we really possess neither an entire body nor hands such as we see. Nevertheless it must be admitted at least that the objects which appear to us in sleep are, as it were, painted representations which could not have been formed unless in the likeness of realities; and, therefore, that those general objects, at all events, namely, eyes, a head, hands, and an entire body, are not simply imaginary, but really existent. For, in truth, painters themselves, even when they study to represent sirens and satyrs by forms the most fantastic and extraordinary, cannot bestow upon them natures absolutely new, but can only make a certain medley of the members of different animals; or if they chance to imagine something so novel that nothing at all similar has ever been seen before, and such as is, therefore, purely fictitious and absolutely false, it is at least certain that the colors of which this is composed are real. And on the same principle, although these general objects, viz. [a body], eyes, a head, hands, and the like, be imaginary, we are nevertheless absolutely necessitated to admit the reality at least of some other objects still more simple and universal than these, of which, just as of certain real colors, all those images of things, whether true and real, or false and fantastic, that are found in our consciousness (cogitatio), are formed.
7. To this class of objects seem to belong corporeal nature in general and its extension; the figure of extended things, their quantity or magnitude, and their number, as also the place in, and the time during, which they exist, and other things of the same sort.
8. We will not, therefore, perhaps reason illegitimately if we conclude from this that Physics, Astronomy, Medicine, and all the other sciences that have for their end the consideration of composite objects, are indeed of a doubtful character; but that Arithmetic, Geometry, and the other sciences of the same class, which regard merely the simplest and most general objects, and scarcely inquire whether or not these are really existent, contain somewhat that is certain and indubitable: for whether I am awake or dreaming, it remains true that two and three make five, and that a square has but four sides; nor does it seem possible that truths so apparent can ever fall under a suspicion of falsity [or incertitude].
9. Nevertheless, the belief that there is a God who is all powerful, and who created

me, such as I am, has, for a long time, obtained steady possession of my mind. How, then, do I know that he has not arranged that there should be neither earth, nor sky, nor any extended thing, nor figure, nor magnitude, nor place, providing at the same time, however, for [the rise in me of the perceptions of all these objects, and] the persuasion that these do not exist otherwise than as I perceive them ? And further, as I sometimes think that others are in error respecting matters of which they believe themselves to possess a perfect knowledge, how do I know that I am not also deceived each time I add together two and three, or number the sides of a square, or form some judgment still more simple, if more simple indeed can be imagined? But perhaps Deity has not been willing that I should be thus deceived, for he is said to be supremely good. If, however, it were repugnant to the goodness of Deity to have created me subject to constant deception, it would seem likewise to be contrary to his goodness to allow me to be occasionally deceived; and yet it is clear that this is permitted.

10. Some, indeed, might perhaps be found who would be disposed rather to deny the existence of a Being so powerful than to believe that there is nothing certain. But let us for the present refrain from opposing this opinion, and grant that all which is here said of a Deity is fabulous: nevertheless, in whatever way it be supposed that I reach the state in which I exist, whether by fate, or chance, or by an endless series of antecedents and consequents, or by any other means, it is clear (since to be deceived and to err is a certain defect) that the probability of my being so imperfect as to be the constant victim of deception, will be increased exactly in proportion as the power possessed by the cause, to which they assign my origin, is lessened. To these reasonings I have assuredly nothing to reply, but am constrained at last to avow that there is nothing of all that I formerly believed to be true of which it is impossible to doubt, and that not through thoughtlessness or levity, but from cogent and maturely considered reasons; so that henceforward, if I desire to discover anything certain, I ought not the less carefully to refrain from assenting to those same opinions than to what might be shown to be manifestly false.
11. But it is not sufficient to have made these observations; care must be taken likewise to keep them in remembrance. For those old and customary opinions perpetually recur—long and familiar usage giving them the right of occupying my mind, even almost against my will, and subduing my belief; nor will I lose the habit of deferring to them and confiding in them so long as I shall consider

them to be what in truth they are, viz, opinions to some extent doubtful, as I have already shown, but still highly probable, and such as it is much more reasonable to believe than deny. It is for this reason I am persuaded that I shall not be doing wrong, if, taking an opposite judgment of deliberate design, I become my own deceiver, by supposing, for a time, that all those opinions are entirely false and imaginary, until at length, having thus balanced my old by my new prejudices, my judgment shall no longer be turned aside by perverted usage from the path that may conduct to the perception of truth. For I am assured that, meanwhile, there will arise neither peril nor error from this course, and that I cannot for the present yield too much to distrust, since the end I now seek is not action but knowledge.

12. I will suppose, then, not that Deity, who is sovereignly good and the fountain of truth, but that some malignant demon, who is at once exceedingly potent and deceitful, has employed all his artifice to deceive me; I will suppose that the sky, the air, the earth, colors, figures, sounds, and all external things, are nothing better than the illusions of dreams, by means of which this being has laid snares for my credulity; I will consider myself as without hands, eyes, flesh, blood, or any of the senses, and as falsely believing that I am possessed of these; I will continue resolutely fixed in this belief, and if indeed by this means it be not in my power to arrive at the knowledge of truth, I shall at least do what is in my power, viz., [suspend my judgment], and guard with settled purpose against giving my assent to what is false, and being imposed upon by this deceiver, whatever be his power and artifice. But this undertaking is arduous, and a certain indolence insensibly leads me back to my ordinary course of life; and just as the captive, who, perchance, was enjoying in his dreams an imaginary liberty, when he begins to suspect that it is but a vision, dreads awakening, and conspires with the agreeable illusions that the deception may be prolonged; so I, of my own accord, fall back into the train of my former beliefs, and fear to arouse myself from my slumber, lest the time of laborious wakefulness that would succeed this quiet rest, in place of bringing any light of day, should prove inadequate to dispel the darkness that will arise from the difficulties that have now been raised.

Meditation II

OF THE NATURE OF THE HUMAN MIND; AND THAT IT IS MORE EASILY KNOWN THAN THE BODY.

1. The Meditation of yesterday has filled my mind with so many doubts, that it is no longer in my power to forget them. Nor do I see, meanwhile, any principle on which they can be resolved; and, just as if I had fallen all of a sudden into very deep water, I am so greatly disconcerted as to be unable either to plant my feet firmly on the bottom or sustain myself by swimming on the surface. I will, nevertheless, make an effort, and try anew the same path on which I had entered yesterday, that is, proceed by casting aside all that admits of the slightest doubt, not less than if I had discovered it to be absolutely false; and I will continue always in this track until I shall find something that is certain, or at least, if I can do nothing more, until I shall know with certainty that there is nothing certain. Archimedes, that he might transport the entire globe from the place it occupied to another, demanded only a point that was firm and immovable; so, also, I shall be entitled to entertain the highest expectations, if I am fortunate enough to discover only one thing that is certain and indubitable.
2. I suppose, accordingly, that all the things which I see are false (fictitious); I believe that none of those objects which my fallacious memory represents ever existed; I suppose that I possess no senses; I believe that body, figure, extension, motion, and place are merely fictions of my mind. What is there, then, that can be esteemed true ? Perhaps this only, that there is absolutely nothing certain.
3. But how do I know that there is not something different altogether from the objects I have now enumerated, of which it is impossible to entertain the slightest doubt? Is there not a God, or some being, by whatever name I may designate him, who causes these thoughts to arise in my mind ? But why suppose such a being, for it may be I myself am capable of producing them? Am I, then, at least not something? But I before denied that I possessed senses or a body; I hesitate, however, for what follows from that? Am I so dependent on the body and the senses that without these I cannot exist? But I had the persuasion that there was absolutely nothing in the world, that there was no sky and no earth, neither minds nor bodies; was I not, therefore, at the same time, persuaded

that I did not exist? Far from it; I assuredly existed, since I was persuaded. But there is I know not what being, who is possessed at once of the highest power and the deepest cunning, who is constantly employing all his ingenuity in deceiving me. Doubtless, then, I exist, since I am deceived; and, let him deceive me as he may, he can never bring it about that I am nothing, so long as I shall be conscious that I am something. So that it must, in fine, be maintained, all things being maturely and carefully considered, that this proposition (pronunciatum) I am, I exist, is necessarily true each time it is expressed by me, or conceived in my mind.

4. But I do not yet know with sufficient clearness what I am, though assured that I am; and hence, in the next place, I must take care, lest perchance I inconsiderately substitute some other object in room of what is properly myself, and thus wander from truth, even in that knowledge (cognition) which I hold to be of all others the most certain and evident. For this reason, I will now consider anew what I formerly believed myself to be, before I entered on the present train of thought; and of my previous opinion I will retrench all that can in the least be invalidated by the grounds of doubt I have adduced, in order that there may at length remain nothing but what is certain and indubitable.
5. What then did I formerly think I was ? Undoubtedly I judged that I was a man. But what is a man ? Shall I say a rational animal ? Assuredly not; for it would be necessary forthwith to inquire into what is meant by animal, and what by rational, and thus, from a single question, I should insensibly glide into others, and these more difficult than the first; nor do I now possess enough of leisure to warrant me in wasting my time amid subtleties of this sort. I prefer here to attend to the thoughts that sprung up of themselves in my mind, and were inspired by my own nature alone, when I applied myself to the consideration of what I was. In the first place, then, I thought that I possessed a countenance, hands, arms, and all the fabric of members that appears in a corpse, and which I called by the name of body. It further occurred to me that I was nourished, that I walked, perceived, and thought, and all those actions I referred to the soul; but what the soul itself was I either did not stay to consider, or, if I did, I imagined that it was something extremely rare and subtile, like wind, or flame, or ether, spread through my grosser parts. As regarded the body, I did not even doubt of its nature, but thought I distinctly knew it, and if I had wished to describe it according to the notions I then entertained, I should have explained myself in this manner: By body I understand all that can be termi-

nated by a certain figure; that can be comprised in a certain place, and so fill a certain space as therefrom to exclude every other body; that can be perceived either by touch, sight, hearing, taste, or smell; that can be moved in different ways, not indeed of itself, but by something foreign to it by which it is touched [and from which it receives the impression]; for the power of self-motion, as likewise that of perceiving and thinking, I held as by no means pertaining to the nature of body; on the contrary, I was somewhat astonished to find such faculties existing in some bodies.

6. But [as to myself, what can I now say that I am], since I suppose there exists an extremely powerful, and, if I may so speak, malignant being, whose whole endeavors are directed toward deceiving me ? Can I affirm that I possess any one of all those attributes of which I have lately spoken as belonging to the nature of body ? After attentively considering them in my own mind, I find none of them that can properly be said to belong to myself. To recount them were idle and tedious. Let us pass, then, to the attributes of the soul. The first mentioned were the powers of nutrition and walking; but, if it be true that I have no body, it is true likewise that I am capable neither of walking nor of being nourished. Perception is another attribute of the soul; but perception too is impossible without the body; besides, I have frequently, during sleep, believed that I perceived objects which I afterward observed I did not in reality perceive. Thinking is another attribute of the soul; and here I discover what properly belongs to myself. This alone is inseparable from me. I am—I exist: this is certain; but how often? As often as I think; for perhaps it would even happen, if I should wholly cease to think, that I should at the same time altogether cease to be. I now admit nothing that is not necessarily true. I am therefore, precisely speaking, only a thinking thing, that is, a mind (mens sive animus), understanding, or reason, terms whose signification was before unknown to me. I am, however, a real thing, and really existent; but what thing? The answer was, a thinking thing.
7. The question now arises, am I aught besides ? I will stimulate my imagination with a view to discover whether I am not still something more than a thinking being. Now it is plain I am not the assemblage of members called the human body; I am not a thin and penetrating air diffused through all these members, or wind, or flame, or vapor, or breath, or any of all the things I can imagine; for I supposed that all these were not, and, without changing the supposition, I find that I still feel assured of my existence. But it is true, perhaps, that those

very things which I suppose to be non-existent, because they are unknown to me, are not in truth different from myself whom I know. This is a point I cannot determine, and do not now enter into any dispute regarding it. I can only judge of things that are known to me: I am conscious that I exist, and I who know that I exist inquire into what I am. It is, however, perfectly certain that the knowledge of my existence, thus precisely taken, is not dependent on things, the existence of which is as yet unknown to me: and consequently it is not dependent on any of the things I can feign in imagination. Moreover, the phrase itself, I frame an image (effingo), reminds me of my error; for I should in truth frame one if I were to imagine myself to be anything, since to imagine is nothing more than to contemplate the figure or image of a corporeal thing; but I already know that I exist, and that it is possible at the same time that all those images, and in general all that relates to the nature of body, are merely dreams [or chimeras]. From this I discover that it is not more reasonable to say, I will excite my imagination that I may know more distinctly what I am, than to express myself as follows: I am now awake, and perceive something real; but because my perception is not sufficiently clear, I will of express purpose go to sleep that my dreams may represent to me the object of my perception with more truth and clearness. And, therefore, I know that nothing of all that I can embrace in imagination belongs to the knowledge which I have of myself, and that there is need to recall with the utmost care the mind from this mode of thinking, that it may be able to know its own nature with perfect distinctness.

8. But what, then, am I ? A thinking thing, it has been said. But what is a thinking thing? It is a thing that doubts, understands, [conceives], affirms, denies, wills, refuses; that imagines also, and perceives.
9. Assuredly it is not little, if all these properties belong to my nature. But why should they not belong to it ? Am I not that very being who now doubts of almost everything; who, for all that, understands and conceives certain things; who affirms one alone as true, and denies the others; who desires to know more of them, and does not wish to be deceived; who imagines many things, sometimes even despite his will; and is likewise percipient of many, as if through the medium of the senses. Is there nothing of all this as true as that I am, even although I should be always dreaming, and although he who gave me being employed all his ingenuity to deceive me ? Is there also any one of these attributes that can be properly distinguished from my thought, or that can be said to be separate from myself ? For it is of itself so evident that it is I

who doubt, I who understand, and I who desire, that it is here unnecessary to add anything by way of rendering it more clear. And I am as certainly the same being who imagines; for although it may be (as I before supposed) that nothing I imagine is true, still the power of imagination does not cease really to exist in me and to form part of my thought. In fine, I am the same being who perceives, that is, who apprehends certain objects as by the organs of sense, since, in truth, I see light, hear a noise, and feel heat. But it will be said that these presentations are false, and that I am dreaming. Let it be so. At all events it is certain that I seem to see light, hear a noise, and feel heat; this cannot be false, and this is what in me is properly called perceiving (sentire), which is nothing else than thinking.

10. From this I begin to know what I am with somewhat greater clearness and distinctness than heretofore. But, nevertheless, it still seems to me, and I cannot help believing, that corporeal things, whose images are formed by thought [which fall under the senses], and are examined by the same, are known with much greater distinctness than that I know not what part of myself which is not imaginable; although, in truth, it may seem strange to say that I know and comprehend with greater distinctness things whose existence appears to me doubtful, that are unknown, and do not belong to me, than others of whose reality I am persuaded, that are known to me, and appertain to my proper nature; in a word, than myself. But I see clearly what is the state of the case. My mind is apt to wander, and will not yet submit to be restrained within the limits of truth. Let us therefore leave the mind to itself once more, and, according to it every kind of liberty [permit it to consider the objects that appear to it from without], in order that, having afterward withdrawn it from these gently and opportunely [and fixed it on the consideration of its being and the properties it finds in itself], it may then be the more easily controlled.

11. Let us now accordingly consider the objects that are commonly thought to be [the most easily, and likewise] the most distinctly known, viz, the bodies we touch and see; not, indeed, bodies in general, for these general notions are usually somewhat more confused, but one body in particular. Take, for example, this piece of wax; it is quite fresh, having been but recently taken from the beehive; it has not yet lost the sweetness of the honey it contained; it still retains somewhat of the odor of the flowers from which it was gathered; its color, figure, size, are apparent (to the sight); it is hard, cold, easily handled; and sounds when struck upon with the finger. In fine, all that contributes to

make a body as distinctly known as possible, is found in the one before us. But, while I am speaking, let it be placed near the fire—what remained of the taste exhales, the smell evaporates, the color changes, its figure is destroyed, its size increases, it becomes liquid, it grows hot, it can hardly be handled, and, although struck upon, it emits no sound. Does the same wax still remain after this change ? It must be admitted that it does remain; no one doubts it, or judges otherwise. What, then, was it I knew with so much distinctness in the piece of wax? Assuredly, it could be nothing of all that I observed by means of the senses, since all the things that fell under taste, smell, sight, touch, and hearing are changed, and yet the same wax remains.

12. It was perhaps what I now think, viz, that this wax was neither the sweetness of honey, the pleasant odor of flowers, the whiteness, the figure, nor the sound, but only a body that a little before appeared to me conspicuous under these forms, and which is now perceived under others. But, to speak precisely, what is it that I imagine when I think of it in this way? Let it be attentively considered, and, retrenching all that does not belong to the wax, let us see what remains. There certainly remains nothing, except something extended, flexible, and movable. But what is meant by flexible and movable ? Is it not that I imagine that the piece of wax, being round, is capable of becoming square, or of passing from a square into a triangular figure ? Assuredly such is not the case, because I conceive that it admits of an infinity of similar changes; and I am, moreover, unable to compass this infinity by imagination, and consequently this conception which I have of the wax is not the product of the faculty of imagination. But what now is this extension ? Is it not also unknown ? for it becomes greater when the wax is melted, greater when it is boiled, and greater still when the heat increases; and I should not conceive [clearly and] according to truth, the wax as it is, if I did not suppose that the piece we are considering admitted even of a wider variety of extension than I ever imagined, I must, therefore, admit that I cannot even comprehend by imagination what the piece of wax is, and that it is the mind alone (mens, Lat., entendement, F.) which perceives it. I speak of one piece in particular; for as to wax in general, this is still more evident. But what is the piece of wax that can be perceived only by the [understanding or] mind? It is certainly the same which I see, touch, imagine; and, in fine, it is the same which, from the beginning, I believed it to be. But (and this it is of moment to observe) the perception of it is neither an act of sight, of touch, nor of imagination, and never was either of these, though it might for-

merly seem so, but is simply an intuition (inspectio) of the mind, which may be imperfect and confused, as it formerly was, or very clear and distinct, as it is at present, according as the attention is more or less directed to the elements which it contains, and of which it is composed.

13. But, meanwhile, I feel greatly astonished when I observe [the weakness of my mind, and] its proneness to error. For although, without at all giving expression to what I think, I consider all this in my own mind, words yet occasionally impede my progress, and I am almost led into error by the terms of ordinary language. We say, for example, that we see the same wax when it is before us, and not that we judge it to be the same from its retaining the same color and figure: whence I should forthwith be disposed to conclude that the wax is known by the act of sight, and not by the intuition of the mind alone, were it not for the analogous instance of human beings passing on in the street below, as observed from a window. In this case I do not fail to say that I see the men themselves, just as I say that I see the wax; and yet what do I see from the window beyond hats and cloaks that might cover artificial machines, whose motions might be determined by springs ? But I judge that there are human beings from these appearances, and thus I comprehend, by the faculty of judgment alone which is in the mind, what I believed I saw with my eyes.
14. The man who makes it his aim to rise to knowledge superior to the common, ought to be ashamed to seek occasions of doubting from the vulgar forms of speech: instead, therefore, of doing this, I shall proceed with the matter in hand, and inquire whether I had a clearer and more perfect perception of the piece of wax when I first saw it, and when I thought I knew it by means of the external sense itself, or, at all events, by the common sense (sensus communis), as it is called, that is, by the imaginative faculty; or whether I rather apprehend it more clearly at present, after having examined with greater care, both what it is, and in what way it can be known. It would certainly be ridiculous to entertain any doubt on this point. For what, in that first perception, was there distinct ? What did I perceive which any animal might not have perceived ? But when I distinguish the wax from its exterior forms, and when, as if I had stripped it of its vestments, I consider it quite naked, it is certain, although some error may still be found in my judgment, that I cannot, nevertheless, thus apprehend it without possessing a human mind.
15. But finally, what shall I say of the mind itself, that is, of myself ? for as yet I do not admit that I am anything but mind. What, then! I who seem to possess so

distinct an apprehension of the piece of wax, do I not know myself, both with greater truth and certitude, and also much more distinctly and clearly? For if I judge that the wax exists because I see it, it assuredly follows, much more evidently, that I myself am or exist, for the same reason: for it is possible that what I see may not in truth be wax, and that I do not even possess eyes with which to see anything; but it cannot be that when I see, or, which comes to the same thing, when I think I see, I myself who think am nothing. So likewise, if I judge that the wax exists because I touch it, it will still also follow that I am; and if I determine that my imagination, or any other cause, whatever it be, persuades me of the existence of the wax, I will still draw the same conclusion. And what is here remarked of the piece of wax, is applicable to all the other things that are external to me. And further, if the [notion or] perception of wax appeared to me more precise and distinct, after that not only sight and touch, but many other causes besides, rendered it manifest to my apprehension, with how much greater distinctness must I now know myself, since all the reasons that contribute to the knowledge of the nature of wax, or of any body whatever, manifest still better the nature of my mind ? And there are besides so many other things in the mind itself that contribute to the illustration of its nature, that those dependent on the body, to which I have here referred, scarcely merit to be taken into account.

16. But, in conclusion, I find I have insensibly reverted to the point I desired; for, since it is now manifest to me that bodies themselves are not properly perceived by the senses nor by the faculty of imagination, but by the intellect alone; and since they are not perceived because they are seen and touched, but only because they are understood [or rightly comprehended by thought], I readily discover that there is nothing more easily or clearly apprehended than my own mind. But because it is difficult to rid one's self so promptly of an opinion to which one has been long accustomed, it will be desirable to tarry for some time at this stage, that, by long continued meditation, I may more deeply impress upon my memory this new knowledge.

15. On the Foundation of Knowledge

JOHN LOCKE

An Essay Concerning Human Understanding

BOOK I —Neither Principles nor Ideas are Innate

CHAPTER I —No Innate Speculative Principles

1. The way shown how we come by any Knowledge, sufficient to prove it not innate.

It is an established opinion amongst some men, that there are in the understanding certain INNATE PRINCIPLES; some primary notions, KOIVAI EVVOIAI, characters, as it were stamped upon the mind of man; which the soul receives in its very first being, and brings into the world with it. It would be sufficient to convince unprejudiced readers of the falseness of this supposition, if I should only show (as I hope I shall in the following parts of this Discourse) how men, barely by the use of their natural faculties may attain to all the knowledge they have, without the help of any innate impressions; and may arrive at certainty, without any such original notions or principles. For I imagine any one will easily grant that it would be impertinent to suppose the ideas of colours innate in a creature to whom God hath given sight, and a power to receive them by the eyes from external objects: and no less unreasonable would it be to attribute several truths to the impressions of nature, and innate characters, when we may observe in ourselves faculties fit to attain as easy and certain knowledge of them as if they were originally imprinted on the mind.

But because a man is not permitted without censure to follow his own thoughts in the search of truth, when they lead him ever so little out of the common road, I shall set down the reasons that made me doubt of the truth of that opinion, as an excuse

for my mistake, if I be in one; which I leave to be considered by those who, with me, dispose themselves to embrace truth wherever they find it.

2. General Assent the great Argument.

There is nothing more commonly taken for granted than that there are certain PRINCIPLES, both SPECULATIVE and PRACTICAL, (for they speak of both), universally agreed upon by all mankind: which therefore, they argue, must needs be the constant impressions which the souls of men receive in their first beings, and which they bring into the world with them, as necessarily and really as they do any of their inherent faculties.

3. Universal Consent proves nothing innate.

This argument, drawn from universal consent, has this misfortune in it, that if it were true in matter of fact, that there were certain truths wherein all mankind agreed, it would not prove them innate, if there can be any other way shown how men may come to that universal agreement, in the things they do consent in, which I presume may be done.

4. "What is is," and "It is possible for the same Thing to be and not to be," not universally assented to.

But, which is worse, this argument of universal consent, which is made use of to prove innate principles, seems to me a demonstration that there are none such: because there are none to which all mankind give an universal assent. I shall begin with the speculative, and instance in those magnified principles of demonstration, "Whatsoever is, is," and "It is impossible for the same thing to be and not to be"; which, of all others, I think have the most allowed title to innate. These have so settled a reputation of maxims universally received, that it will no doubt be thought strange if any one should seem to question it. But yet I take liberty to say, that these propositions are so far from having an universal assent, that there are a great part of mankind to whom they are not so much as known . . .

BOOK II—OF IDEAS

CHAPTER I.—OF IDEAS IN GENERAL, AND THEIR ORIGINAL.

1. Idea is the Object of Thinking.

Every man being conscious to himself that he thinks; and that which his mind is applied about whilst thinking being the IDEAS that are there, it is past doubt that men have in their minds several ideas,—such as are those expressed by the words whiteness, hardness, sweetness, thinking, motion, man, elephant, army, drunkenness, and others: it is in the first place then to be inquired, HOW HE COMES BY THEM?

I know it is a received doctrine, that men have native ideas, and original characters, stamped upon their minds in their very first being. This opinion I have at large examined already; and, I suppose what I have said in the foregoing Book will be much more easily admitted, when I have shown whence the understanding may get all the ideas it has; and by what ways and degrees they may come into the mind;—for which I shall appeal to every one's own observation and experience.

2. All Ideas come from Sensation or Reflection.

Let us then suppose the mind to be, as we say, white paper, void of all characters, without any ideas:—How comes it to be furnished? Whence comes it by that vast store which the busy and boundless fancy of man has painted on it with an almost endless variety? Whence has it all the MATERIALS of reason and knowledge? To this I answer, in one word, from EXPERIENCE. In that all our knowledge is founded; and from that it ultimately derives itself. Our observation employed either, about external sensible objects, or about the internal operations of our minds perceived and reflected on by ourselves, is that which supplies our understandings with all the MATERIALS of thinking. These two are the fountains of knowledge, from whence all the ideas we have, or can naturally have, do spring.

3. The Objects of Sensation one Source of Ideas

First, our Senses, conversant about particular sensible objects, do convey into the mind several distinct perceptions of things, according to those various ways wherein those objects do affect them. And thus we come by those IDEAS we have of yellow, white, heat, cold, soft, hard, bitter, sweet, and all those which we call sensible qualities; which when I say the senses convey into the mind, I mean, they from external objects convey into the mind what produces there those perceptions. This great source of most of the ideas we have, depending wholly upon our senses, and derived by them to the understanding, I call SENSATION.

4. The Operations of our Minds, the other Source of them.

Secondly, the other fountain from which experience furnisheth the understanding with ideas is,—the perception of the operations of our own mind within us, as it is employed about the ideas it has got;—which operations, when the soul comes to reflect on and consider, do furnish the understanding with another set of ideas, which could not be had from things without. And such are perception, thinking, doubting, believing, reasoning, knowing, willing, and all the different actings of our own minds;—which we being conscious of, and observing in ourselves, do from these receive into our understandings as distinct ideas as we do from bodies affecting our senses. This source of ideas every man has wholly in himself; and though it be not sense, as having nothing to do with external objects, yet it is very like it, and might properly enough be called INTERNAL SENSE. But as I call the other Sensation, so I call this REFLECTION, the ideas it affords being such only as the mind gets by reflecting on its own operations within itself. By reflection then, in the following part of this discourse, I would be understood to mean, that notice which the mind takes of its own operations, and the manner of them, by reason whereof there come to be ideas of these operations in the understanding. These two, I say, viz. external material things, as the objects of SENSATION, and the operations of our own minds within, as the objects of REFLECTION, are to me the only originals from whence all our ideas take their beginnings. The term OPERATIONS here I use in a large sense, as comprehending not barely the actions of the mind about its ideas, but some sort of passions arising sometimes from them, such as is the satisfaction or uneasiness arising from any thought.

5. All our Ideas are of the one or of the other of these.

The understanding seems to me not to have the least glimmering of any ideas which

it doth not receive from one of these two. EXTERNAL OBJECTS furnish the mind with the ideas of sensible qualities, which are all those different perceptions they produce in us; and THE MIND furnishes the understanding with ideas of its own operations.

These, when we have taken a full survey of them, and their several modes, and the compositions made out of them we shall find to contain all our whole stock of ideas; and that we have nothing in our minds which did not come in one of these two ways. Let any one examine his own thoughts, and thoroughly search into his understanding; and then let him tell me, whether all the original ideas he has there, are any other than of the objects of his senses, or of the operations of his mind, considered as objects of his reflection. And how great a mass of knowledge soever he imagines to be lodged there, he will, upon taking a strict view, see that he has not any idea in his mind but what one of these two have imprinted;—though perhaps, with infinite variety compounded and enlarged by the understanding, as we shall see hereafter.

6. Observable in Children.

He that attentively considers the state of a child, at his first coming into the world, will have little reason to think him stored with plenty of ideas, that are to be the matter of his future knowledge. It is BY DEGREES he comes to be furnished with them. And though the ideas of obvious and familiar qualities imprint themselves before the memory begins to keep a register of time or order, yet it is often so late before some unusual qualities come in the way, that there are few men that cannot recollect the beginning of their acquaintance with them. And if it were worth while, no doubt a child might be so ordered as to have but a very few, even of the ordinary ideas, till he were grown up to a man. But all that are born into the world, being surrounded with bodies that perpetually and diversely affect them, variety of ideas, whether care be taken of it or not, are imprinted on the minds of children. Light and colours are busy at hand everywhere, when the eye is but open; sounds and some tangible qualities fail not to solicit their proper senses, and force an entrance to the mind;—but yet, I think, it will be granted easily, that if a child were kept in a place where he never saw any other but black and white till he were a man, he would have no more ideas of scarlet or green, than he that from his childhood never tasted an oyster, or a pine-apple, has of those particular relishes.

7. Men are differently furnished with these, according to the different Objects they converse with.

Men then come to be furnished with fewer or more simple ideas from without, according as the objects they converse with afford greater or less variety; and from the operations of their minds within, according as they more or less reflect on them. For, though he that contemplates the operations of his mind, cannot but have plain and clear ideas of them; yet, unless he turn his thoughts that way, and considers them ATTENTIVELY, he will no more have clear and distinct ideas of all the operations of his mind, and all that may be observed therein, than he will have all the particular ideas of any landscape, or of the parts and motions of a clock, who will not turn his eyes to it, and with attention heed all the parts of it. The picture, or clock may be so placed, that they may come in his way every day; but yet he will have but a confused idea of all the parts they are made up of, till he applies himself with attention, to consider them each in particular.

8. Ideas of Reflection later, because they need Attention.

And hence we see the reason why it is pretty late before most children get ideas of the operations of their own minds; and some have not any very clear or perfect ideas of the greatest part of them all their lives. Because, though they pass there continually, yet, like floating visions, they make not deep impressions enough to leave in their mind clear, distinct, lasting ideas, till the understanding turns inward upon itself, reflects on its own operations, and makes them the objects of its own contemplation. Children when they come first into it, are surrounded with a world of new things which, by a constant solicitation of their senses, draw the mind constantly to them; forward to take notice of new, and apt to be delighted with the variety of changing objects. Thus the first years are usually employed and diverted in looking abroad. Men's business in them is to acquaint themselves with what is to be found without; and so growing up in a constant attention to outward sensations, seldom make any considerable reflection on what passes within them, till they come to be of riper years; and some scarce ever at all.

9. The Soul begins to have Ideas when it begins to perceive.

To ask, at what TIME a man has first any ideas, is to ask, when he begins to perceive;—HAVING IDEAS, and PERCEPTION, being the same thing. I know it is an opinion, that the soul always thinks, and that it has the actual perception of ideas

in itself constantly, as long as it exists; and that actual thinking is as inseparable from the soul as actual extension is from the body; which if true, to inquire after the beginning of a man's ideas is the same as to inquire after the beginning of his soul. For, by this account, soul and its ideas, as body and its extension, will begin to exist both at the same time.

10. The Soul thinks not always; for this wants Proofs.

But whether the soul be supposed to exist antecedent to, or coeval with, or some time after the first rudiments of organization, or the beginnings of life in the body, I leave to be disputed by those who have better thought of that matter. I confess myself to have one of those dull souls, that doth not perceive itself always to contemplate ideas; nor can conceive it any more necessary for the soul always to think, than for the body always to move: the perception of ideas being (as I conceive) to the soul, what motion is to the body; not its essence, but one of its operations. And therefore, though thinking be supposed never so much the proper action of the soul, yet it is not necessary to suppose that it should be always thinking, always in action. That, perhaps, is the privilege of the infinite Author and Preserver of all things, who "never slumbers nor sleeps"; but is not competent to any finite being, at least not to the soul of man. We know certainly, by experience, that we SOMETIMES think; and thence draw this infallible consequence,—that there is something in us that has a power to think. But whether that substance PERPETUALLY thinks or no, we can be no further assured than experience informs us. For, to say that actual thinking is essential to the soul, and inseparable from it, is to beg what is in question, and not to prove it by reason;—which is necessary to be done, if it be not a self-evident proposition. But whether this, "That the soul always thinks," be a self-evident proposition, that everybody assents to at first hearing, I appeal to mankind. It is doubted whether I thought at all last night or no. The question being about a matter of fact, it is begging it to bring, as a proof for it, an hypothesis, which is the very thing in dispute: by which way one may prove anything, and it is but supposing that all watches, whilst the balance beats, think, and it is sufficiently proved, and past doubt, that my watch thought all last night. But he that would not deceive himself, ought to build his hypothesis on matter of fact, and make it out by sensible experience, and not presume on matter of fact, because of his hypothesis, that is, because he supposes it to be so; which way of proving amounts to this, that I must necessarily think all last night, because another supposes I always think, though I myself cannot perceive that I always do so.

But men in love with their opinions may not only suppose what is in question, but allege wrong matter of fact. How else could any one make it an inference of mine, that a thing is not, because we are not sensible of it in our sleep? I do not say there is no SOUL in a man, because he is not sensible of it in his sleep; but I do say, he cannot THINK at any time, waking or sleeping, without being sensible of it. Our being sensible of it is not necessary to anything but to our thoughts; and to them it is; and to them it always will be necessary, till we can think without being conscious of it.

11. It is not always conscious of it.

I grant that the soul, in a waking man, is never without thought, because it is the condition of being awake. But whether sleeping without dreaming be not an affection of the whole man, mind as well as body, may be worth a waking man's consideration; it being hard to conceive that anything should think and not be conscious of it. If the soul doth think in a sleeping man without being conscious of it, I ask whether, during such thinking, it has any pleasure or pain, or be capable of happiness or misery? I am sure the man is not; no more than the bed or earth he lies on. For to be happy or miserable without being conscious of it, seems to me utterly inconsistent and impossible. Or if it be possible that the SOUL can, whilst the body is sleeping, have its thinking, enjoyments, and concerns, its pleasures or pain, apart, which the MAN is not conscious of nor partakes in,—it is certain that Socrates asleep and Socrates awake is not the same person; but his soul when he sleeps, and Socrates the man, consisting of body and soul, when he is waking, are two persons: since waking Socrates has no knowledge of, or concernment for that happiness or misery of his soul, which it enjoys alone by itself whilst he sleeps, without perceiving anything of it; no more than he has for the happiness or misery of a man in the Indies, whom he knows not. For, if we take wholly away all consciousness of our actions and sensations, especially of pleasure and pain, and the concernment that accompanies it, it will be hard to know wherein to place personal identity.

12. If a sleeping Man thinks without knowing it, the sleeping and waking Man are two Persons.

The soul, during sound sleep, thinks, say these men. Whilst it thinks and perceives, it is capable certainly of those of delight or trouble, as well as any other perceptions; and IT must necessarily be CONSCIOUS of its own perceptions. But it has all this apart: the sleeping MAN, it is plain, is conscious of nothing of all this. Let

us suppose, then, the soul of Castor, while he is sleeping, retired from his body; which is no impossible supposition for the men I have here to do with, who so liberally allow life, without a thinking soul, to all other animals. These men cannot then judge it impossible, or a contradiction, that the body should live without the soul; nor that the soul should subsist and think, or have perception, even perception of happiness or misery, without the body. Let us then, I say, suppose the soul of Castor separated during his sleep from his body, to think apart. Let us suppose, too, that it chooses for its scene of thinking the body of another man, v. g. Pollux, who is sleeping without a soul. For, if Castor's soul can think, whilst Castor is asleep, what Castor is never conscious of, it is no matter what PLACE it chooses to think in. We have here, then, the bodies of two men with only one soul between them, which we will suppose to sleep and wake by turns; and the soul still thinking in the waking man, whereof the sleeping man is never conscious, has never the least perception. I ask, then, whether Castor and Pollux, thus with only one soul between them, which thinks and perceives in one what the other is never conscious of, nor is concerned for, are not two as distinct PERSONS as Castor and Hercules, or as Socrates and Plato were? And whether one of them might not be very happy, and the other very miserable? Just by the same reason, they make the soul and the man two persons, who make the soul think apart what the man is not conscious of. For, I suppose nobody will make identity of persons to consist in the soul's being united to the very same numerical particles of matter. For if that be necessary to identity, it will be impossible, in that constant flux of the particles of our bodies, that any man should be the same person two days, or two moments, together.

13. Impossible to convince those that sleep without dreaming, that they think.

Thus, methinks, every drowsy nod shakes their doctrine, who teach that the soul is always thinking. Those, at least, who do at any time SLEEP WITHOUT DREAMING, can never be convinced that their thoughts are sometimes for four hours busy without their knowing of it; and if they are taken in the very act, waked in the middle of that sleeping contemplation, can give no manner of account of it.

14. That men dream without remembering it, in vain urged.

It will perhaps be said,—That the soul thinks even in the soundest sleep, but the MEMORY retains it not. That the soul in a sleeping man should be this moment busy a thinking, and the next moment in a waking man not remember nor be able to rec-

ollect one jot of all those thoughts, is very hard to be conceived, and would need some better proof than bare assertion to make it be believed. For who can without any more ado, but being barely told so, imagine that the greatest part of men do, during all their lives, for several hours every day, think of something, which if they were asked, even in the middle of these thoughts, they could remember nothing at all of? Most men, I think, pass a great part of their sleep without dreaming. I once knew a man that was bred a scholar, and had no bad memory, who told me he had never dreamed in his life, till he had that fever he was then newly recovered of, which was about the five or six and twentieth year of his age. I suppose the world affords more such instances: at least every one's acquaintance will furnish him with examples enough of such as pass most of their nights without dreaming.

15. Upon this Hypothesis, the Thoughts of a sleeping Man ought to be most rational.

To think often, and never to retain it so much as one moment, is a very useless sort of thinking; and the soul, in such a state of thinking, does very little, if at all, excel that of a looking-glass, which constantly receives variety of images, or ideas, but retains none; they disappear and vanish, and there remain no footsteps of them; the looking-glass is never the better for such ideas, nor the soul for, such thoughts. Perhaps it will be said, that in a waking MAN the materials of the body are employed, and made use of, in thinking; and that the memory of thoughts is retained by the impressions that are made on the brain, and the traces there left after such thinking; but that in the thinking of the SOUL, which is not perceived in a sleeping man, there the soul thinks apart, and making no use of the organs of the body, leaves no impressions on it, and consequently no memory of such thoughts. Not to mention again the absurdity of two distinct persons, which follows from this supposition, I answer, further,—That whatever ideas the mind can receive and contemplate without the help of the body, it is reasonable to conclude it can retain without the help of the body too; or else the soul, or any separate spirit, will have but little advantage by thinking. If it has no memory of its own thoughts; if it cannot lay them up for its own use, and be able to recall them upon occasion; if it cannot reflect upon what is past, and make use of its former experiences, reasonings, and contemplations, to what, purpose does it think? They who make the soul a thinking thing, at this rate, will not make it a much more noble being than those do whom they condemn, for allowing it to be nothing but the subtilist parts of matter. Characters drawn on dust, that the first breath of wind effaces; or impressions made on a heap of atoms, or animal spirits, are altogether as useful, and render the subject as noble,

as the thoughts of a soul that perish in thinking; that, once out of sight, are gone for ever, and leave no memory of themselves behind them. Nature never makes excellent things for mean or no uses: and it is hardly to be conceived that our infinitely wise Creator should make so admirable a faculty as the power of thinking, that faculty which comes nearest the excellency of his own incomprehensible being, to be so idly and uselessly employed, at least a fourth part of its time here, as to think constantly, without remembering any of those thoughts, without doing any good to itself or others, or being any way useful to any other part of the creation. If we will examine it, we shall not find, I suppose, the motion of dull and senseless matter, any where in the universe, made so little use of and so wholly thrown away.

16. On this Hypothesis, the Soul must have Ideas not derived from Sensation or Reflection, of which there is no Appearance.

It is true, we have sometimes instances of perception whilst we are asleep, and retain the memory of those thoughts: but how extravagant and incoherent for the most part they are; how little conformable to the perfection and order of a rational being, those who are acquainted with dreams need not be told. This I would willingly be satisfied in,—whether the soul, when it thinks thus apart, and as it were separate from the body, acts less rationally than when conjointly with it, or no. If its separate thoughts be less rational, then these men must say, that the soul owes the perfection of rational thinking to the body: if it does not, it is a wonder that our dreams should be, for the most part, so frivolous and irrational; and that the soul should retain none of its more rational soliloquies and meditations.

17. If I think when I know it not, nobody else can know it.

Those who so confidently tell us that the soul always actually thinks, I would they would also tell us, what those ideas are that are in the soul of a child, before or just at the union with the body, before it hath received any by sensation. The dreams of sleeping men are, as I take it, all made up of the waking man's ideas; though for the most part oddly put together. It is strange, if the soul has ideas of its own that it derived not from sensation or reflection, (as it must have, if it thought before it received any impressions from the body,) that it should never, in its private thinking, (so private, that the man himself perceives it not,) retain any of them the very moment it wakes out of them, and then make the man glad with new discoveries. Who can find it reason that the soul should, in its retirement during sleep, have so

many hours' thoughts, and yet never light on any of those ideas it borrowed not from sensation or reflection; or at least preserve the memory of none but such, which, being occasioned from the body, must needs be less natural to a spirit? It is strange the soul should never once in a man's whole life recall over any of its pure native thoughts, and those ideas it had before it borrowed anything from the body; never bring into the waking man's view any other ideas but what have a tang of the cask, and manifestly derive their original from that union. If it always thinks, and so had ideas before it was united, or before it received any from the body, it is not to be supposed but that during sleep it recollects its native ideas; and during that retirement from communicating with the body, whilst it thinks by itself, the ideas it is busied about should be, sometimes at least, those more natural and congenial ones which it had in itself, underived from the body, or its own operations about them: which, since the waking man never remembers, we must from this hypothesis conclude either that the soul remembers something that the man does not; or else that memory belongs only to such ideas as are derived from the body, or the mind's operations about them.

18. How knows any one that the Soul always thinks? For if it be not a self-evident Proposition, it needs Proof.

I would be glad also to learn from these men who so confidently pronounce that the human soul, or, which is all one, that a man always thinks, how they come to know it; nay, how they come to know that they themselves think, when they themselves do not perceive it. This, I am afraid, is to be sure without proofs, and to know without perceiving. It is, I suspect, a confused notion, taken up to serve an hypothesis; and none of those clear truths, that either their own evidence forces us to admit, or common experience makes it impudence to deny. For the most that can be said of it is, that it is possible the soul may always think, but not always retain it in memory. And I say, it is as possible that the soul may not always think; and much more probable that it should sometimes not think, than that it should often think, and that a long while together, and not be conscious to itself, the next moment after, that it had thought.

19. That a Man should be busy in Thinking, and yet not retain it the next moment, very improbable.

To suppose the soul to think, and the man not to perceive it, is, as has been said, to

make two persons in one man. And if one considers well these men's way of speaking, one should be led into a suspicion that they do so. For those who tell us that the SOUL always thinks, do never, that I remember, say that a MAN always thinks. Can the soul think, and not the man? Or a man think, and not be conscious of it? This, perhaps, would be suspected of jargon in others. If they say the man thinks always, but is not always conscious of it, they may as well say his body is extended without having parts. For it is altogether as intelligible to say that a body is extended without parts, as that anything thinks without being conscious of it, or perceiving that it does so. They who talk thus may, with as much reason, if it be necessary to their hypothesis, say that a man is always hungry, but that he does not always feel it; whereas hunger consists in that very sensation, as thinking consists in being conscious that one thinks. If they say that a man is always conscious to himself of thinking, I ask, How they know it? Consciousness is the perception of what passes in a man's own mind. Can another man perceive that I am conscious of anything, when I perceive it not myself? No man's knowledge here can go beyond his experience. Wake a man out of a sound sleep, and ask him what he was that moment thinking of. If he himself be conscious of nothing he then thought on, he must be a notable diviner of thoughts that can assure him that he was thinking. May he not, with more reason, assure him he was not asleep? This is something beyond philosophy; and it cannot be less than revelation, that discovers to another thoughts in my mind, when I can find none there myself. And they must needs have a penetrating sight who can certainly see that I think, when I cannot perceive it myself, and when I declare that I do not; and yet can see that dogs or elephants do not think, when they give all the demonstration of it imaginable, except only telling us that they do so. This some may suspect to be a step beyond the Rosicrucians; it seeming easier to make one's self invisible to others, than to make another's thoughts visible to me, which are not visible to himself. But it is but defining the soul to be "a substance that always thinks," and the business is done. If such definition be of any authority, I know not what it can serve for but to make many men suspect that they have no souls at all; since they find a good part of their lives pass away without thinking. For no definitions that I know, no suppositions of any sect, are of force enough to destroy constant experience; and perhaps it is the affectation of knowing beyond what we perceive, that makes so much useless dispute and noise in the world.

20. No ideas but from Sensation and Reflection, evident, if we observe Children.

I see no reason, therefore, to believe that the soul thinks before the senses have

furnished it with ideas to think on; and as those are increased and retained, so it comes, by exercise, to improve its faculty of thinking in the several parts of it; as well as, afterwards, by compounding those ideas, and reflecting on its own operations, it increases its stock, as well as facility in remembering, imagining, reasoning, and other modes of thinking.

21. State of a child on the mother's womb.

He that will suffer himself to be informed by observation and experience, and not make his own hypothesis the rule of nature, will find few signs of a soul accustomed to much thinking in a new-born child, and much fewer of any reasoning at all. And yet it is hard to imagine that the rational soul should think so much, and not reason at all, And he that will consider that infants newly come into the world spend the greatest part of their time in sleep, and are seldom awake but when either hunger calls for the teat, or some pain (the most importunate of all sensations), or some other violent impression on the body, forces the mind to perceive and attend to it;—he, I say, who considers this, will perhaps find reason to imagine that a FOETUS in the mother's womb differs not much from the state of a vegetable, but passes the greatest part of its time without perception or thought; doing very little but sleep in a place where it needs not seek for food, and is surrounded with liquor, always equally soft, and near of the same temper; where the eyes have no light, and the ears so shut up are not very susceptible of sounds; and where there is little or no variety, or change of objects, to move the senses.

22. The mind thinks in proportion to the matter it gets from experience to think about.

Follow a child from its birth, and observe the alterations that time makes, and you shall find, as the mind by the senses comes more and more to be furnished with ideas, it comes to be more and more awake; thinks more, the more it has matter to think on. After some time it begins to know the objects which, being most familiar with it, have made lasting impressions. Thus it comes by degrees to know the persons it daily converses with, and distinguishes them from strangers; which are instances and effects of its coming to retain and distinguish the ideas the senses convey to it. And so we may observe how the mind, BY DEGREES, improves in these; and ADVANCES to the exercise of those other faculties of enlarging, compound-

ing, and abstracting its ideas, and of reasoning about them, and reflecting upon all these; of which I shall have occasion to speak more hereafter.

23. A man begins to have ideas when he first has sensation. What sensation is.

If it shall be demanded then, WHEN a man BEGINS to have any ideas, I think the true answer is,—WHEN HE FIRST HAS ANY SENSATION. For, since there appear not to be any ideas in the mind before the senses have conveyed any in, I conceive that ideas in the understanding are coeval with SENSATION; WHICH IS SUCH AN IMPRESSION OR MOTION MADE IN SOME PART OF THE BODY, AS MAKES IT BE TAKEN NOTICE OF IN THE UNDERSTANDING.

24. The Original of all our Knowledge.

The impressions then that are made on our sense by outward objects that are extrinsical to the mind; and its own operations about these impressions, reflected on by itself, as proper objects to be contemplated by it, are, I conceive, the original of all knowledge. Thus the first capacity of human intellect is,—that the mind is fitted to receive the impressions made on it; either through the senses by outward objects, or by its own operations when it reflects on them. This is the first step a man makes towards the discovery of anything, and the groundwork whereon to build all those notions which ever he shall have naturally in this world. All those sublime thoughts which tower above the clouds, and reach as high as heaven itself, take their rise and footing here: in all that great extent wherein the mind wanders, in those remote speculations it may seem to be elevated with, it stirs not one jot beyond those ideas which SENSE or REFLECTION have offered for its contemplation.

25. In the Reception of simple Ideas, the Understanding is for the most part passive.

In this part the understanding is merely passive; and whether or no it will have these beginnings, and as it were materials of knowledge, is not in its own power. For the objects of our senses do, many of them, obtrude their particular ideas upon our minds whether we will or not; and the operations of our minds will not let us be without, at least, some obscure notions of them. No man can be wholly ignorant of what he does when he thinks. These simple ideas, when offered to the mind, the understanding can no more refuse to have, nor alter when they are imprinted, nor blot them out and make new ones itself, than a mirror can refuse, alter, or obliter-

ate the images or ideas which the objects set before it do therein produce. As the bodies that surround us do diversely affect our organs, the mind is forced to receive the impressions; and cannot avoid the perception of those ideas that are annexed to them.

16. On Truth and Falsehood

BERTRAND RUSSELL

TRUTH AND FALSEHOOD

OUR knowledge of truths, unlike our knowledge of things, has an opposite, namely *error*. So far as things are concerned, we may know them or not know them, but there is no positive state of mind which can be described as erroneous knowledge of things, so long, at any rate, as we confine ourselves to knowledge by acquaintance. Whatever we are acquainted with must be something: we may draw wrong inferences from our acquaintance, but the acquaintance itself cannot be deceptive. Thus there is no dualism as regards acquaintance. But as regards knowledge of truths, there is a dualism. We may believe what is false as well as what is true. We know that on very many subjects different people hold different and incompatible opinions: hence some beliefs must be erroneous. Since erroneous beliefs are often held just as strongly as true beliefs, it becomes a difficult question how they are to be distinguished from true beliefs. How are we to know, in a given case, that our belief is not erroneous? This is a question of the very greatest difficulty, to which no completely satisfactory answer is possible. There is, however, a preliminary question which is rather less difficult, and that is: What do we *mean* by truth and falsehood? It is this preliminary question which is to be considered in this chapter.

In this chapter we are not asking how we can know whether a belief is true or false: we are asking what is meant by the question whether a belief is true or false. It is to be hoped that a clear answer to this question may help us to obtain an answer to the question what beliefs are true, but for the present we ask only "What is truth?" and "What is falsehood?" not "What beliefs are true?" and "What beliefs are false?" It is very important to keep these different questions entirely separate, since any confusion between them is sure to produce an answer which is not really applicable to either.

There are three points to observe in the attempt to discover the nature of truth, three requisites which any theory must fulfil.

(1) Our theory of truth must be such as to admit of its opposite, falsehood. A good many philosophers have failed adequately to satisfy this condition: they have constructed theories according to which all our thinking ought to have been true, and have then had the greatest difficulty in finding a place for falsehood. In this respect our theory of belief must differ from our theory of acquaintance, since in the case of acquaintance it was not necessary to take account of any opposite.

(2) It seems fairly evident that if there were no beliefs there could be no falsehood, and no truth either, in the sense in which truth is correlative to falsehood. If we imagine a world of mere matter, there would be no room for falsehood in such a world, and although it would contain what may be called "facts," it would not contain any truths, in the sense in which truths are things of the same kind as falsehoods. In fact, truth and falsehood are properties of beliefs and statements: hence a world of mere matter, since it would contain no beliefs or statements, would also contain no truth or falsehood.

(3) But, as against what we have just said, it is to be observed that the truth or falsehood of a belief always depends upon something which lies outside the belief itself. If I believe that Charles I. died on the scaffold, I believe truly, not because of any intrinsic quality of my belief, which could be discovered by merely examining the belief, but because of an historical event which happened two and a half centuries ago. If I believe that Charles I. died in his bed, I believe falsely: no degree of vividness in my belief, or of care in arriving at it, prevents it from being false, again because of what happened long ago, and not because of any intrinsic property of my belief. Hence, although truth and falsehood are properties of beliefs, they are properties dependent upon the relations of the beliefs to other things, not upon any internal quality of the beliefs.

The third of the above requisites leads us to adopt the view—which has on the whole been commonest among philosophers— that truth consists in some form of correspondence between belief and fact. It is, however, by no means an easy matter to discover a form of correspondence to which there are no irrefutable objections. By this partly—and partly by the feeling that, if truth consists in a correspondence of thought with something outside thought, thought can never know when truth has been attained—many philosophers have been led to try to find some definition of truth which shall not consist in relation to something wholly outside belief. The most important attempt at a definition of this sort is the theory that truth consists

in *coherence*. It is said that the mark of falsehood is failure to cohere in the body of our beliefs, and that it is the essence of a truth to form part of the completely rounded system which is The Truth.

There is, however, a great difficulty in this view, or rather two great difficulties. The first is that there is no reason to suppose that only *one* coherent body of beliefs is possible. It may be that, with sufficient imagination, a novelist might invent a past for the world that would perfectly fit on to what we know, and yet be quite different from the real past. In more scientific matters, it is certain that there are often two or more hypotheses which account for all the known facts on some subject, and although, in such cases, men of science endeavour to find facts which will rule out all the hypotheses except one, there is no reason why they should always succeed.

In philosophy, again, it seems not uncommon for two rival hypotheses to be both able to account for all the facts. Thus, for example, it is possible that life is one long dream, and that the outer world has only that degree of reality that the objects of dreams have; but although such a view does not seem inconsistent with known facts, there is no reason to prefer it to the common-sense view, according to which other people and things do really exist. Thus coherence as the definition of truth fails because there is no proof that there can be only one coherent system.

The other objection to this definition of truth is that it assumes the meaning of "coherence" known, whereas, in fact, "coherence" presupposes the truth of the laws of logic. Two propositions are coherent when both may be true, and are incoherent when one at least must be false. Now in order to know whether two propositions can both be true, we must know such truths as the law of contradiction. For example, the two propositions "this tree is a beech" and "this tree is not a beech," are not coherent, because of the law of contradiction. But if the law of contradiction itself were subjected to the test of coherence, we should find that, if we choose to suppose it false, nothing will any longer be incoherent with anything else. Thus the laws of logic supply the skeleton or framework within which the test of coherence applies, and they themselves cannot be established by this test.

For the above two reasons, coherence cannot be accepted as giving the *meaning* of truth, though it is often a most important *test* of truth after a certain amount of truth has become known.

Hence we are driven back to *correspondence with fact* as constituting the nature of

truth. It remains to define precisely what we mean by "fact," and what is the nature of the correspondence which must subsist between belief and fact, in order that belief may be true.

In accordance with our three requisites, we have to seek a theory of truth which (1) allows truth to have an opposite, namely falsehood, (2) makes truth a property of beliefs, but (3) makes it a property wholly dependent upon the relation of the beliefs to outside things.

The necessity of allowing for falsehood makes it impossible to regard belief as a relation of the mind to a single object, which could be said to be what is believed. If belief were so regarded, we should find that, like acquaintance, it would not admit of the opposition of truth and falsehood, but would have to be always true. This may be made clear by examples. Othello believes falsely that Desdemona loves Cassio. We cannot say that this belief consists in a relation to a single object, "Desdemona's love for Cassio," for if there were such an object, the belief would be true. There is in fact no such object, and therefore Othello cannot have any relation to such an object. Hence his belief cannot possibly consist in a relation to this object.

It might be said that his belief is a relation to a different object, namely "that Desdemona loves Cassio"; but it is almost as difficult to suppose that there is such an object as this, when Desdemona does not love Cassio, as it was to suppose that there is "Desdemona's love for Cassio." Hence it will be better to seek for a theory of belief which does not make it consist in a relation of the mind to a single object.

It is common to think of relations as though they always held between *two* terms, but in fact this is not always the case. Some relations demand three terms, some four, and so on. Take, for instance, the relation "between." So long as only two terms come in, the relation "between" is impossible: three terms are the smallest number that render it possible. York is between London and Edinburgh; but if London and Edinburgh were the only places in the world, there could be nothing which was between one place and another. Similarly *jealousy* requires three people: there can be no such relation that does not involve three at least. Such a proposition as "A wishes B to promote C's marriage with D" involves a relation of four terms; that is to say, A and B and C and D all come in, and the relation involved cannot be expressed otherwise than in a form involving all four. Instances might be multiplied indef-

initely, but enough has been said to show that there are relations which require more than two terms before they can occur.

The relation involved in *judging* or *believing* must, if falsehood is to be duly allowed for, be taken to be a relation between several terms, not between two. When Othello believes that Desdemona loves Cassio, he must not have before his mind a single object, "Desdemona's love for Cassio," or "that Desdemona loves Cassio," for that would require that there should be objective falsehoods, which subsist independently of any minds; and this, though not logically refutable, is a theory to be avoided if possible. Thus it is easier to account for falsehood if we take judgment to be a relation in which the mind and the various objects concerned all occur severally; that is to say, Desdemona and loving and Cassio must all be terms in the relation which subsists when Othello believes that Desdemona loves Cassio. This relation, therefore, is a relation of four terms, since Othello also is one of the terms of the relation. When we say that it is a relation of four terms, we do not mean that Othello has a certain relation to Desdemona, and has the same relation to loving and also to Cassio. This may be true of some other relation than believing; but believing, plainly, is not a relation which Othello has to *each* of the three terms concerned, but to *all* of them together: there is only one example of the relation of believing involved, but this one example knits together four terms. Thus the actual occurrence, at the moment when Othello is entertaining his belief, is that the relation called "believing" is knitting together into one complex whole the four terms Othello, Desdemona, loving, and Cassio. What is called belief or judgment is nothing but this relation of believing or judging, which relates a mind to several things other than itself. An *act* of belief or of judgment is the occurrence between certain terms at some particular time, of the relation of believing or judging.

We are now in a position to understand what it is that distinguishes a true judgment from a false one. For this purpose we will adopt certain definitions. In every act of judgment there is a mind which judges, and there are terms concerning which it judges. We will call the mind the *subject* in the judgment, and the remaining terms the *objects*. Thus, when Othello judges that Desdemona loves Cassio, Othello is the subject, while the objects are Desdemona and loving and Cassio. The subject and the objects together are called the *constituents* of the judgment. It will be observed that the relation of judging has what is called a "sense" or "direction." We may say, metaphorically, that it puts its objects in a certain *order*, which we may indicate

by means of the order of the words in the sentence. (In an inflected language, the same thing will be indicated by inflections, *e.g.* by the difference between nominative and accusative.) Othello's judgment that Cassio loves Desdemona differs from his judgment that Desdemona loves Cassio, in spite of the fact that it consists of the same constituents, because the relation of judging places the constituents in a different order in the two cases. Similarly, if Cassio judges that Desdemona loves Othello, the constituents of the judgment are still the same, but their order is different. This property of having a "sense" or "direction" is one which the relation of judging shares with all other relations. The "sense" of relations is the ultimate source of order and series and a host of mathematical concepts; but we need not concern ourselves further with this aspect.

We spoke of the relation called "judging" or "believing" as knitting together into one complex whole the subject and the objects. In this respect, judging is exactly like every other relation. Whenever a relation holds between two or more terms, it unites the terms into a complex whole. If Othello loves Desdemona, there is such a complex whole as "Othello's love for Desdemona." The terms united by the relation may be themselves complex, or may be simple, but the whole which results from their being united must be complex. Wherever there is a relation which relates certain terms, there is a complex object formed of the union of those terms; and conversely, wherever there is a complex object, there is a relation which relates its constituents. When an act of believing occurs, there is a complex, in which "believing" is the uniting relation, and subject and objects are arranged in a certain order by the "sense" of the relation of believing. Among the objects, as we saw in considering "Othello believes that Desdemona loves Cassio," one must be a relation—in this instance, the relation "loving." But this relation, as it occurs in the act of believing, is not the relation which creates the unity of the complex whole consisting of the subject and the objects. The relation "loving," as it occurs in the act of believing, is one of the objects—it is a brick in the structure, not the cement. The cement is the relation "believing." When the belief is *true*, there is another complex unity, in which the relation which was one of the objects of the belief relates the other objects. Thus, *e.g.*, if Othello believes *truly* that Desdemona loves Cassio, then there is a complex unity, "Desdemona's love for Cassio," which is composed exclusively of the *objects* of the belief, in the same order as they had in the belief, with the relation which was one of the objects occurring now as the cement that binds together the other objects of the belief. On the other hand, when a belief is *false*, there is no such

complex unity composed only of the objects of the belief. If Othello believes *falsely* that Desdemona loves Cassio, then there is no such complex unity as "Desdemona's love for Cassio."

Thus a belief is *true* when it *corresponds* to a certain associated complex, and *false* when it does not. Assuming, for the sake of definiteness, that the objects of the belief are two terms and a relation, the terms being put in a certain order by the "sense" of the believing, then if the two terms in that order are united by the relation into a complex, the belief is true; if not, it is false. This constitutes the definition of truth and falsehood that we were in search of. Judging or believing is a certain complex unity of which a mind is a constituent; if the remaining constituents, taken in the order which they have in the belief, form a complex unity, then the belief is true; if not, it is false.

Thus although truth and falsehood are properties of beliefs, yet they are in a sense extrinsic properties, for the condition of the truth of a belief is something not involving beliefs, or (in general) any mind at all, but only the *objects* of the belief. A mind, which believes, believes truly when there is a *corresponding* complex not involving the mind, but only its objects. This correspondence ensures truth, and its absence entails falsehood. Hence we account simultaneously for the two facts that beliefs (*a*) depend on minds for their *existence*, (*b*) do not depend on minds for their *truth*.

We may restate our theory as follows: If we take such a belief as "Othello believes that Desdemona loves Cassio," we will call Desdemona and Cassio the *object-terms*, and loving the *object-relation*. If there is a complex unity "Desdemona's love for Cassio," consisting of the object-terms related by the object-relation in the same order as they have in the belief, then this complex unity is called the *fact corresponding to the belief*. Thus a belief is true when there is a corresponding fact, and is false when there is no corresponding fact.

It will be seen that minds do not *create* truth or falsehood. They create beliefs, but when once the beliefs are created, the mind cannot make them true or false, except in the special case where they concern future things which are within the power of the person believing, such as catching trains. What makes a belief true is a *fact*, and this fact does not (except in exceptional cases) in any way involve the mind of the person who has the belief.

Having now decided what we *mean* by truth and falsehood, we have next to consider what ways there are of knowing whether this or that belief is true or false. This consideration will occupy the next chapter.

PART V

PHILOSOPHY OF MIND

17. Substance Dualism in Descartes

PAUL RICHARD BLUM

Introduction

René Descartes (1596-1650) was a French philosopher who is often studied as the first great philosopher in the era of "modern philosophy." He is the most famous proponent of a view called "substance dualism," which states that the mind and the body are two different substances. While the body is material (corporeal), the mind is immaterial (incorporeal). This view leaves room for human souls, which are usually understood as immaterial. Descartes argued on the basis of the Christian views that souls are immaterial and can exist separate from the body, but he emphasized that the mind alone is immaterial, whereas the other traditional functions of the souls can be explained as corporeal operations. His view and arguments were so influential that after him many philosophers referred to substance dualism under Descartes' name as "Cartesian dualism." In his explanation of the mind, the soul, and the ability of humans to understand the world around them through the powers of their minds, Descartes remains one of the most influential figures not just in modern philosophy, but throughout the history of philosophy. Even in the contemporary era, philosophers such as Gilbert Ryle (1900-1976) found worth in writing about and arguing against Descartes' views to set up their own theories. Ryle questioned whether the mind and body are in fact distinct and argued that they would not communicate with each other if they were. Ryle states:

> Body and mind are ordinarily harnessed together.…[T]he things and events which belong to the physical world…are external, while the workings of [a person's] own mind are internal.…[This results in the] partly metaphorical representation of the bifurcation of a person's two lives. (1945, 11-16)

Ryle stated that, if Descartes' theory were correct, the mind would be a mere "ghost in a machine," inactive and unable to cause actions in the body (the machine). Ryle did not term Decartes' theory "substance dualism" but "Descartes' myth." Descartes' arguments for substance dualism and the immaterial nature of the mind and soul

are therefore paramount to any investigation of the philosophy of mind, and are still being debated in present-day theories. On the other hand, with his interpretation of what he calls passions (most operations of a living body), he also provides incentives for a non-dualistic physicalism of the mind.

The Traditional Concept of Substance

Descartes' philosophy of mind was a response to the erosion of the traditional Aristotelian concept of substance after the Middle Ages. According to the Aristotelian view, any substance is composed of matter that is determined by the form that is its essence. So every living thing is a body conjoined with its soul (namely, what makes it alive as such or such thing). In other words, an animal is an animate body. The soul of a dog makes that bundle of flesh and bones a dog. The peculiar case of human beings is that this soul is also an intellect: the rational mind. In that case then, the soul (and certainly the mind) is something other than body; it is non-material (or incorporeal) because it forms and enlivens the material body. So the question arises: is the soul (or at least the human mind) something that exists on its own?

In the traditional Aristotelian approach, the form of a ship (what makes it look like a ship and makes the ship body float on water) is nothing separate from the ship, except that we can have a concept of it even if there is no ship around. But what about the form of a plant or an animal? The form of plants and animals is their soul. When they are destroyed, their form that makes them alive (with growth, movement, and senses) is gone. With human beings, that might be different: the mind may survive the death of the body. Some ancient thinkers argued that the mind or the soul survives death and enters another body, be that a person or a beast: the transmigration of souls or reincarnation. The Christian theory of humans teaches that the soul of an individual is created at the same time as the person; however, it lives on after the death of the person: the human intellect is immaterial and immortal. This is why some Christians venerate saints, and why some occultists invoke deceased persons for conversation.

The essence of things (whether an artifact like a ship or the souls of plants, animals, and humans) was termed the thing's "substantial form." Forms make and express

the substance of things. The thing's substantial form makes a thing what it is, and makes it possible to conceive of it and to know it.

This is where Descartes starts his theory of substances. In a letter to Henricus Regius (1598-1679), Descartes states that he does not reject substantial forms but finds them "unnecessary in setting out my explanations" (AT III492, CSM III 205).[1] He clearly sees them as a mere explanatory tool that may be replaced by a better one. Instead, Descartes suggests any material thing is only an aggregate of qualities and properties. He argues, in the same letter, against the habit to apply "substantial form" when defining the human being. He warns that to speak of substantial form both for humans and material things carries the risk to misunderstand the soul as something corporeal and material. Instead, he suggests limiting the term "substantial form" to the immaterial human soul alone in order to emphasize that the soul's nature is "quite different" from the essence of things that "emerge from the potentiality of matter." He says that "[T]his difference in nature opens the easiest route to demonstrating [the soul's] non-materiality and immortality" (AT III 503, 505; CSM III 208). In order to elevate the soul to a level above bodily things, he downplays non-human things to mere upshots of matter. This letter shows that Descartes' primary concerns are with method more than with facts and that he aims at separating material fields of knowledge from the soul.

The Immaterial Nature of the Soul

Descartes attempts to reconcile having an immaterial soul within a largely scientific (and physicalist) framework. This leads to some surprising turns within his theory that are quite different from previous theories on substances. Ultimately, Descartes' view is dualist because, although he renders all earthly substances material (and understandable to science), one thing remains that is a true immaterial substance with an essence: the human soul. Animals and human bodies, because they are

1. Descartes' works are cited by the standard French edition C. Adam and P. Tannery (eds.), *Oeuvres de Descartes*. Paris: Vrin, 1964-1976, "AT" with volume and page number; the standard English translation J. G. Cottingham, R. Stoothoff, D. Murdoch, and A. Kenny (trs.), *The Philosophical Writings of Descartes*, 3 vols. Cambridge: Cambridge University Press, 1985-1991, "CSM" with volume and page number.

parts of the physical world, are not strictly substances with essences; they are more properly aggregates. He argues from what we can know (epistemology) instead of what there is (metaphysics), and this method directs his views on substances.

From the very beginning of his research, Descartes aimed at exploring the competence of thought in ascertaining knowledge, and in doing so he wrote *Rules for the Direction of the Mind* in search for assurance in science. This view would later be called "rationalism" because he prioritized the functions of intellect, imagination, sense perception, and memory. Rationalism influenced a long line of philosophers from the modern era throughout the contemporary era in philosophy. He later recommended a reduction of human knowledge from simple concepts and propositions. This method, as expounded in Rule XII, relies on the human mind as a "power." He states:

> As for the objects of knowledge, it is enough if we examine the following three questions: What presents itself to us spontaneously? How can one thing be known on the basis of something else? What conclusions can be drawn from each of these?

Notice his emphasis on the understanding of objective knowledge. The question is not "What *is* it?" but "How does it *appear* to me?" and "How does it connect with what I know?" Investigating the nature of the mind is of primary importance. Knowledge of objects themselves takes a back seat to the inner workings of the mind.

Descartes describes the intellect as "the power through which we know things in the strict sense [that] is purely spiritual, and is … distinct from the whole body." To explain this power is difficult; Descartes explains that "nothing quite like this power is to be found in corporeal things." It is the intellect that applies itself to seeing, touching, and so on; and only it can "act on its own," that is, to understand. Although it may appear to be a trifle, Descartes does not make positive claims here, but buffers everything with "it is said" (*dicitur*): the mind "is said" to see, touch, imagine, or understand. What counts is that this mental power can both receive sense data and refer to themes that have nothing corporeal at all (AT X 410-417, CSM I 39-43).

In his last work, *The Passions of the Soul*, Descartes focuses on those activities that

are not thoughts in the abstract sense but "passions": "those perceptions, sensations or emotions of the soul which we refer particularly to it" (AT XI 349, CSM I 338f., art. 27). The body has a number of functions (movement, for instance); and the soul has two basic functions that are kinds of thought, namely, volition and perceptions. Volitions are activities, whereas perceptions are passive motions that do not originate from the soul itself (AT XI 349, CSM I 338f., art. 17). If a person desires something or resolves to do something, that is an activity of the soul; if a person sees or hears something, that impression does not come from inside but from outside—the soul is affected rather than active. This soul is not a member of the body; therefore, it has the surprising property not to have any location in the body, but to be "really joined to the whole body" precisely for being non-local, not extended, and immaterial. On the one hand, Descartes is reiterating the traditional Aristotelian understanding of ensoulment (the soul as shorthand for the life of animated things); on the other hand, he is enforcing the concept of body as a whole organism: since the soul is conjoined with the body as a whole, body and soul together appear to be an organism. The organism is an ensemble ("assemblage") of material function (AT XI 351, CSM I 339, art. 30). A strictly physicalist and non-dualist explanation of sensations and passions is lurking in the background. Under a physicalist (i.e. materialist) view, everything (including the mind) can be explained physically; there is no need to refer to anything outside physics. The stakes are high for a philosophy of mind because conceiving of the body as an organism might lead to explaining all psychical movements as mere functioning of body parts. Descartes moves boldly in this direction.

The questions he answers in this treatise, *The Passions of the Soul*, before classifying and explaining the six basic passions, are: How are these corporeal passions conveyed to the mind and how does the mind impact bodily functions due to emotions? To answer these questions, Descartes employs the Stoic concept of animal spirits. According to the Stoic theory, a tenuous body, located in the brain, links the mind with corporeal operations. This view was *en vogue* in the early seventeenth century, for instance in Tommaso Campanella (1568-1639) (1999). Descartes' animal spirits are "a certain very fine air or wind" that shuttle between the brain and the body parts (AT XI 332, CSM I 330, art. 7; Sepper 2016, 26-28). They must be like little messengers that travel between body parts and mind and seem to understand both languages of the body and mind. They are called "spirits" but are expressly described as

very fine bodies coming from the blood. In order to make that plausible, an example Descartes gives will help.

> Wonder is a sudden surprise of the soul….It has two causes: first, an impression in the brain, which represents the object as something unusual and consequently worthy of special consideration; and secondly, a movement of the spirits, which the impression disposes both to flow with great force to the place in the brain where it is located so as to strengthen and preserve it there, and also to pass into the muscles which serve to keep the sense organs fixed in the same orientation so that they will continue to maintain the impression in the way in which they formed it. (AT XI 380f., CSM I 353, art. 70)

But how do those minute spirits work to communicate with the mind? Descartes points to the pineal gland, which was the only part in the brain that he knew of that did not come in pairs. This gland, however, is not where Descartes claims the soul resides; the soul itself has no location at all and is tied to the body as a whole. Rather, the fine spirits that fill the cavities of the brain use the gland to unite images and other sense impressions; and it is here where the mind "exercises its functions more particularly than in the other parts of the body" (AT XI 353f., CSM I 339f., art. 30f). The animal spirits mediate between body and mind.

We are left with an apparently strictly physicalist explanation of a great deal of mental activity in a strongly dualist conception of mind.[2] For the soul is a substance and it is of a totally different nature than body. Moreover, the traditionally so termed "lower faculties" of the soul (growth, movement, and sensations), which are equally present in animals, are removed from the definition of the human soul and ascribed to the body as an organism. Thinking (beyond the corporeal) is now the only the activity of the soul. Traditionally, thinking had been the privilege of the intellectual part of the soul. In Descartes, soul now means "rational mind." In his work on the *Passions*, Descartes explicitly refers back to his anatomy and physiology of blood circulation in his earlier *Discourse on Method*, where he also relies on animal spirits when presenting his research project of natural science (AT VI 54,

2. Cf. the "Fifth Responses" in the *Meditations*, AT VII 230, CSM II 161.

CSM I 138, part 5). Hence *The Passions of the Soul* does not in principle deviate from the program of the *Discourse*.

In Part 5 of the *Discourse*, Descartes explicitly separates functions that are commonly attributed to the mind from the soul proper. Even speech can be found in animals as long as it is nothing but an indicator of some passions and, hence, can be imitated by machines.[3] While these functions can be compared with a clockwork, the soul cannot be reduced to matter (AT VI 58f., CSM I 140f). The human and the animal bodies are like robots that perform activities, including sense perception and communication. The mind comes in addition to that machine. Hence Gilbert Ryle's criticism that the mind is a mere "ghost in the machine."

What we find in the *Discourse* is the encounter of Descartes the scientist with Descartes the philosopher of knowledge. The early *Rules* had investigated the order of thinking for the sake of reliable interpretations of reality; the late *Passions* executed that in a paradigmatic way and showed to what extent methodical thinking can achieve scientific knowledge of one of the most insecure areas of research, human emotions. The *Discourse* links both efforts. It stresses method.

On the Way to Substance Dualism

Descartes entertained a notion of body, and of matter in general, that escapes the traditional terminology of substances. Descartes' famous *cogito ergo sum*, often translated as "I think therefore I am," identifies thinking as the essence of every *thing* that thinks. What is important for the notion of substance is that the content of what that thing is deliberately remains open. In a letter, Descartes claims that nothing material can be assuredly known to exist, whereas "the soul is a being or substance which is not at all corporeal, whose nature is solely to think" (AT I 353, CSM III 55). Descartes wavers between using terms such as "being," "substance," and "nature" (*estre*, *substance*, *nature*), which indicates that he is not committed to the professional philosophical terminology and concepts of his time. There is an incor-

3. It sounds like an anticipation of John Searle's "Chinese Room": exchanging signs does not entail thinking (See Chapter 3).

poreal substance that exists by way of performing the thinking, and that is all that the mind can know.

Descartes' method approaches something like substance dualism in his further development of his theories. In the *Meditations on First Philosophy* he elaborates on the mental experiment of reducing the soul to mere thought. The major purpose of this text is to prove that the soul is immaterial (if not immortal). The reduction of soul to mind yields the certainty of "I am, I exist," which is necessarily true, whenever it is mentally conceived (AT VII 25, CSM II 17; 2nd med.). Once again we see the mind guaranteeing its own existence. After contrasting this existence with that of corporeal particulars and objects, Descartes pronounces that "I am, then, in the strict sense only a thing that thinks" (AT VII 27, CSM II 18). In the sixth meditation, Descartes distinguishes material objects from mind and stresses:

> I have a clear and distinct idea of myself, in so far as I am simply a thinking, non-extended thing (*res cogitans*, *non extensa*); and on the other hand I have a distinct idea of body, in so far as this is simply an extended, non-thinking thing (*res extensa*, *non cogitans*). (AT VII 78, CSM II 54)

This talk of thinking thing vs. extended thing (*res cogitans* vs. *res extensa*) suggests a clear dualism of mind and body. They are mutually exclusive substances that appear to make up the world. At this point, the fourth objection in the *Meditations*, raised by Antoine Arnauld (1612-1694), should be taken into account. Arnauld surmises that Descartes is either siding with Platonists who hold that the soul is the only constituent of a human being and that uses the body as a tool, or he is offering a traditional abstraction as geometers do who abstract figures from complex reality (AT VII 203f., CSM II 143). Platonists tend to deny dignity of material things and see all reality as results of spirit; geometers deal with mere abstractions (as anyone knows who tries to draw a perfect circle). In both cases the dualism would be dissolved. In reply, Descartes admits that this interpretation is possible but insists that the real distinction of mind from body is the result of attentive meditation (AT VII 228f., CSM II 160f).

Reshaping the Concept of Substance

As pointed out repeatedly, Descartes is working with and around a traditional philosophical terminology while trying to escape it. Therefore, it is worth seeing how he defines "substance" in his *Principles of Philosophy*. One interpretation is that substance means "independent existence" and hence applies only to God who is defined as perfect and not dependent on anything. However, in the material world we learn about substances through the properties that appear to us. We don't see a lake as a substance; what we see is the shiny surface of water, surrounded by a shore, which leads us to perceiving the lake. The "principal attributes" of body and mind are notably extension and thinking, respectively (AT VIII 24f., CSM I 210f., sections 51–53). Descartes was careful not to jump to conclusions about the actual existence of material substances separate from their attributes. Hence he uses the imprecise word "thing" when referring to himself as essentially a thinking thing. The Latin term is *res*. Like "thing" in modern English, *res* has no ontological claim whatsoever, that is, when we say "thing" we avoid explaining what we mean and whether it is real. It is the "something" that language can point out without saying what it is.[4]

We may conclude that Descartes was aware of the temptation to present mind and body as competing and cooperating substances and he tried to escape the dualism, not only because any dualism is in need of some mediation, as the involvement of animal spirits proves, but also and foremost because of its explanatory deficits. On the one hand, his view appears to embrace the dualism that comes with inherited language (for instance from Platonism and Aristotelianism). On the other hand, if the philosophical problem of mind is that of understanding human knowledge, then understanding must be accessible to material beings and not within the realm of the immaterial. Therefore, Ryle was right to believe that Descartes fundamentally missed the task of understanding the mind.

To summarize the main points of the role of Descartes at the origin of modern philosophy of mind and specifically of substance dualism: Descartes aimed initially

4. It is worth noting, perhaps, that the Latin version of the famous statement in the *Discourse* "From this I knew I was a substance …" modified "substance" by adding "any some thing or substance." Thus the author signaled that he was departing from traditional understanding of substance to a generic "something" (AT VI 558: "rem quondam sive substantiam").

at proving that the human soul is immaterial (as Christian doctrine teaches); for that purpose he emphasized the certainty of rational thinking and its independence from body and material objects. This led him to the (still debated) question of how the mind can work with the body in the process of sense perceptions, feelings, etc. His response engaged the theory of "animal spirits," tenuous bodies that shuttle between the mind and the organs. As a consequence, he explained great deal of intellectual functions (perceptions, emotions, etc.) in purely physical terms. At the same time he underlined the immateriality of thinking. In traditional philosophical terminology, this amounted to the theory of two totally distinct substances: mind and body. However, it should be noted that Descartes undermined the concept of substance and reduced it to something deliberately vague. Therefore, philosophers who cling to the notion of substance as a reality will find substance dualism in Descartes; others, who focus on his attempts at explaining mental operations like perceptions and feelings in corporeal terms, will find him to be a proponent of physicalism.

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18. Materialism and Behaviorism

HEATHER SALAZAR

Introduction

In stark contrast to Cartesian substance dualism is materialism. Materialism denies the existence of a "mind" as an entity separate from the body. According to materialism, the concept of "mind" is a relic of the past from before a time of scientific understanding and when used today is only properly shorthand for "brain" or "behavior." Materialism therefore implies that: 1. There are no pure minds or souls in Heaven, Hell, or any such kind of afterlife after bodily death; 2. There are no spirits or immaterial essences, and therefore spiritual and self-transformative practices that purport to move people beyond their bodies, brains, and behaviors are absurd; and 3. Reincarnation and switching bodies (made famous in movies such as *Switching Places*, *Freaky Friday*, and *Big*) are nonsense. A mind just is a body or a body's behaviors; without a body a mind cannot exist.

Consider the movie *Big*. In it, a kid named Josh makes a wish to be "big" during an eerie encounter with a fortune-telling machine at a state fair. When he wakes, he is a 35-year-old adult and is unrecognizable to his mom. He convinces his best friend that he really is Josh and his best friend helps him to get a job and an apartment. Nevertheless, he cannot manage to grow emotionally enough to inhabit his new world. He frustrates his close female friend who cannot understand why he does not want to be romantic with her. According to the standard interpretation of stories like *Big*, a person's mind contains memories, love, fears, and so on. This is what constitutes the core of who a person really is. The mind is immaterial and cannot be seen; it can only be experienced by the person whose mind it is. But a person's mind is also connected to a body, which enables the person to communicate and interact with others in the world. Some bodies have minds (like other people) and some do not (like rocks). A body is incidental to a person's selfhood; it is just a house for the mind. So it is possible that a body can age and have the same mind. And this is what happens to Josh. Eventually, Josh finds the strange fortune-telling machine

and wishes to be a boy again, and he re-enters his kid-body, now with the knowledge and wisdom he gained in his transformative journey.

Big is a fantasy, but it trades on common beliefs about what a person is (an immaterial mind) and what a body is (a material house for a mind which is incidental to a person's true identity). Note that if dualism is false and the body and mind are not two, but one, as materialism claims, then a person could not have the same mind in a vastly different body (or even in a slightly altered body). This is because every change in the memories, emotions, and experiences of a person would not take place in an immaterial mind, but rather would be translatable to talk of the body, the interactions of the body with the world, or as many materialists claim, talk of the brain.

Take what it would mean in *Big* for Josh to change according to such a materialist understanding. Imagine that it is possible to induce rapid aging in a person through an entirely physical process (say, the taking of a pill that speeds up a person's metabolism and turnover of bodily cells), such that overnight Josh ages by ten years. Even then, the turnover of those cells would have changed his mind just as much as it changed his body. But if his mind is identical and reducible to his brain, then his mind would (of logical necessity) be changed just as much as his body. This is evident through Leibniz's Law (also called the "indiscernibility of identicals"), which is a metaphysical truth that simply states that if something is identical to something else it must be identical in every way (or else it would not be the *same* object, but merely a *similar* object). That means Josh's mind would no longer be that of a boy; rather, he would have the mind of a man. Romantic desires would no longer be foreign to him (as they are in the movie) because the biological chemicals, such as testosterone, that are responsible for aging him into a man with a beard are the same chemicals that are responsible for creating sex drives. His biochemistry would be changed and so would his energy levels and emotions. Furthermore, his brain mass would be larger, since a person's brain grows in the process of aging from childhood to adulthood. That additional brain mass would entail not only different biochemicals, but also more and differently connected neurons. Those are the same neurons and connections, materialists claim, that are responsible for the development of concepts, language, understanding, and so on. So if Josh woke up with his body transformed into a man, then his mind would be changed just as much. He could not possibly wake up with the same mind he had as a boy, according to a materialist.

The story of *Big* is not just impossible; it is nonsense. The fact that people easily make sense of the story and readily suspend their disbelief shows just how deeply ingrained dualist assumptions of the body and mind are. Our ignorance and ability to be misled by fantasies, however, does not show that materialism is false. Instead, the materialist will state, it shows we are gullible and that intuition is not a reliable guide to the truth. If we were more sophisticated in our ability to grasp reality, *Big* would seem unbelievable and incomprehensible.

There are many different versions of materialism and behaviorism. This chapter will introduce some of the most common motivations for embracing it and some of the most important historical developments of it.

Empiricism and Science as Replacement for God

The scientific revolution began in the mid-sixteenth century and the progress of science throughout the nineteenth century made science a proven method of quick advancement for knowledge. Some philosophers, such as David Hume (1711-1796), argued that people should "reject every system … however subtle or ingenious, which is not founded on fact and observation" (Hume [1751] 1998). He and those who agree are called empiricists. Rene Descartes (1596-1650) (who argued for substance dualism) and John Locke (1632-1704) had philosophical theories that tried to forward philosophical views within science, then called mechanical philosophy, which sought to find explanations that were subject to physical laws. Whereas Descartes was a rationalist, relying on principle, Locke was an empiricist and relied on experience (constituting evidence). Both Descartes and Locke had to prove that their theories were consistent with God and the religion of the time (which in Europe was Christianity); however, later theorists either left God completely out of the picture or tried to show from a theoretical basis that there still was a place for God in science.

Some of the important foundations of science, such as the closure principle and the primacy of the empirical over the theoretical, were prominent in philosophy, as well. In the sciences, experiments and theories rely centrally on the closure principle, which states that material objects have causes and effects that are locatable in the physical world. Without this principle, there would be no reason to do scientific

research. Instead of claiming that the cause of a disease is a virus, we could just as easily claim that it is caused by God's wrath or a demonic force. This slowly caused people to rethink their ideas of the existence of God. If God was no longer needed to explain the things that we experience in the world—if science could do it completely without the use of God—then why do we need to believe in the existence of God?

An empiricist will readily point out that you cannot see God, nor can see your mind. You may be able to see someone else's brain if you witness a surgeon operating on someone, but you cannot see anyone's mind, including your own. And according to the principle of closure, something that is immaterial cannot affect something that is material, so the brain or other physical things are more properly the cause of our actions, not some mystical immaterial substance of the mind.

The principle of Ockham's Razor—named after William of Ockham (1285-1347), a philosopher from the middle ages—states that when something of a different kind (in this case, immaterial things) is not needed to explain something else (material things), then it can be eliminated. Favored in the sciences, Ockham's Razor is an explanatory principle of parsimony, and it gave philosophers a justification to remove God and other items that could not be seen (like minds) from their ontological status as real (separate) objects. Instead, talk of minds and mental events, such as thoughts and feelings, are simply shorthand expressions for processes in the body and world that science helps people to understand. It is therefore reasonable, they thought, that either minds really are just bodies or else minds do not exist. Ockham's Razor became the battle-cry of the new materialist brand of philosophers, scientists, and psychologists in the modern era and even today.

Materialism

Some philosophers who worked in the same time period as Descartes and Locke, such as Thomas Hobbes (1588-1679), began to follow a theory generally called materialism or physicalism, which states that all there is in the world and in us is material, and there is nothing immaterial. The mind had historically been conceived as immaterial with immaterial properties, such as thinking, believing, and desiring. Hobbes, however, insisted that the mind—and even God—must be material. When

I think of a cat and you think of a cat, we think of the same concept (we assume), but how can we *know* that, and communicate with confidence, when there is nothing physical in the thought? How is it the case that we can ever verify that we are thinking of the same thing? Under materialism, if there is no such thing as an immaterial mind then what was previously called "thinking" must instead be explained by the body, the interactions of the body in the world, or more simply in modern materialism, the neurological firings of the brain. What we think of as thinking is an action of the body, and what we think of when we think of concepts such as "cat" is anchored in the material world of sense perception.

Type identity is a materialist theory that asserts that all mental states are identical to certain types of physical states. Contemporary proponents J. J. C. Smart (1920-2012) and U. T. Place (1924-2000) explained that science will reveal to us through experiments which kinds of mental states are equivalent to which kinds of physical processes in the brain. Note that a correlation between two kinds of states does not show that they are identical: a mental one of love and a physical one of more available serotonin in the brain, for example. Also, a physical event under type identity cannot be said to cause a mental one. Being hugged by someone does not cause a feeling happiness; rather it is an example of a physical action that causes certain nerves in the skin to send signals to the brain and create a sequence of firing that is identical to a feeling of happiness. Both correlation and causation assume that there are two events of different kinds that are related. Under materialism, there is just one kind of thing, so while it may appear that a mental and a physical event are related, the mental event is identical to the physical event. It is important to refrain from these errors when speaking about materialism.

Brain scans reveal the physical processes that happen in the brain when people commonly experience seemingly mental events, giving credence to the type identity theorist's assertion that mental and brain events are just the same thing. A well-known example is that of the experience of pain, a kind of mental event that appears to be an immaterial feeling. The type identity theorist states that pain just is the completely physical event of C-fibers firing in the brain. When C-fibers fire, a person is in pain. Sometimes a person may not be fully aware of the pain they have, say, for example, if their attention is elsewhere or if another neurological process is covering up a subjective experience of pain. Imagine a person who gets struck in the head by a large rock. He is in fact injured and C-fibers fire in the brain, but then the person becomes unconscious. That is not to say he is not in pain; he is just

unaware of it. Or say that a person gets attacked by a shark in the ocean and succeeds in fending it off. She is bleeding and is injured, but the ocean is so cold that her extremities are numb. In this case, there is a different physical process that is either postponing or covering up C-fibers firing, and therefore her experience of pain will be delayed until she is out of the cold ocean.

There have been numerous attacks against type identity theory that are so successful that many identity theorists have changed their account. One of the most devastating objections is based on the observation that different kinds of brains can realize pain. Animals surely experience pain like we do, but most animals have dramatically different brains, connections, and biochemicals than we do, so mental events like pain cannot be categorically reduced to a particular human brain kind of event. Hilary Putnam (1926-2016) astutely argued that this observation, called the multiple realizability of the mental, should lead us to abandon any supposed identity of kinds between the mental and the physical (Putnam 1967). Any account of mental events must explain how similar mental events appear to take place across a wide range of physical beings. We might even imagine beings from a distant planet who are silicone-based instead of carbon-based that also experience pain even though their systems have no physical similarities whatsoever to human brains and neurological events. This argument has led many to embrace a different account of the identity or reduction of the mental to the physical. In order to avoid this criticism, for example, token identity theories purport that all mental events reduce to a physical brain state, yet claim the identity is not necessarily instantiated by the same or similar brain states between people, or even within a single person at various times. Expositions of this theory vary and can often cross into other theories of mind, such as functionalism (see Chapter 3) and property dualism (see Chapter 4), so they will not be discussed here.

Despite most theorists' discouragement of the arguments against type identity theory, there is a more radical materialist theory that embraces even more counterintuitive conclusions. Instead of taking on the explanatory burden of connecting the identity of mental and brain events, these theorists claim that everything is purely physical. There are no thoughts, no emotions, no minds. Everything is just an effect of brain and other physical processes. This kind of materialism is called eliminative materialism or reductive materialism because it states not only that the mind and the world should be explained consistently and within science as Descartes and Locke agreed, or that the mind should be seen as part of the physical realm as the

type identity theorists do, but that there simply is no mind. Contemporary proponents of eliminative materialism Paul Churchland and Patricia Churchland explain our perceptions of the world according to neurology. An eliminative materialist would say that the feeling of pain is an illusion. We have become habituated to call certain things pain when at bottom there are only physical events happening. In discussions with the Dalai Lama, Patricia Churchland claims that she cannot say she even has the emotion of love toward her own child (because love is an illusion) and the beliefs of ordinary people who say there are such things as love and other emotions are false (Houshmand, Livingston, and Wallace 1999). Folk psychology, the theory of mind that embraces intuitions by the "common folk" who are uneducated about science, is merely a convenient myth.

Eliminative materialism is the most extreme view opposing substance dualism. The eliminative materialist truly eliminates the existence of minds, and with them, all of the features of mentality. They reject experiences, thoughts, and even actions. Therefore, although eliminative materialism explains everything within a scientific framework, it does so at the great cost of our intuitions, thoughts, feelings, and selves. Indeed, it eliminates most of what a theory of mind intends to understand. Many philosophers claim that Ockham's Razor has gone too far if most of what we intended to explain gets dismissed entirely. An account of the mind that brings back more of the features of normal life and explains those within a scientific framework is preferable to preserve the life and meaning of what people think, do, and say.

Behaviorism and The Logical Positivists

In the empiricist tradition, a different movement attempted to situate the mind within the realm of the material world, not through the identity of the two but through the explanation of the mind completely in terms of physical behaviors and events. Logical behaviorism claims that mental events (like pain) are to be understood as a set of behaviors (saying "ouch," screaming, or cringing after being hit). In this way, pain is entirely explainable within a concrete scientific framework that can be observed and communicated clearly between all beings.

The logical positivists (spanning from the Vienna Circle in 1922 through the 1950s in the United States) thought that if they could mimic the methods of the sciences

that philosophical advances would also be imminent. Those such as Otto Neurath (1882-1945) and Rudolph Carnap (1891-1970) performed rigorous analyses to show that the mind and other non-observable and non-scientifically verifiable objects did not exist, and that those things we thought were immaterial could be constructed from completely material objects and processes. Some argued that all talk of immaterial objects or processes should be eliminated from our language. Their impact was tremendous and the terrain of Western philosophy shifted toward philosophy of language throughout the twentieth century. The period of logical positivism is also known as "the linguistic turn" (of the century). Some of the most important philosophers of the twentieth century, Ludwig Wittgenstein (1889-1951) and W. V. O. Quine (1908-2000), were closely aligned with the Vienna Circle and logical positivism.

The logical positivists appeared to have a solution for the dilemma concerning the meaning of what people say and the integration of the mental within the physical. Instead of rendering everything involving the mental illusory or false, mental talk can be translated and should be translated into talk of behavior. The mind therefore becomes encapsulated within the realm of action. The argument goes like this: we do not need to eliminate all talk of our minds or our thoughts, and we do not need to say that all things involving such subjects are false. It is just that the meanings of all of those words and thoughts are not what they seem at first. What these words really are is a kind of shorthand for things that are all empirically observable, and most importantly, our behaviors. After all, we cannot see our thoughts and it seems like what we have always really meant by our talk of the mental we have created from observations of behavior. When I say, "Mom is angry," what I mean is that she is acting in such and such a way, not smiling, furrowing her eyebrows, not talking much, and so on. In this way, many of the things that we say come out true, and they all rely on empirical evidence—the evidence that we have always been gathering from the behavior of people. According to the logical behaviorist, if mental talk cannot be translated into behavior talk, then that particular mental talk is meaningless, just like Lewis Carroll's nonsense poem "Jabberwocky." The poem sounds grammatical and it resembles real words: "Twas bryllyg, and the slythy toves," it begins (Carroll and Tenniel 1872). People often have interpretations and emotional reactions to it, but it does not mean anything. Logical behaviorists believed poetry, art, and much of literature fell into this camp. It was entertaining but meaningless.

The logical behaviorists soon became overrun by possibly the most decisive objec-

tions in the history of philosophy. Whereas most philosophical positions refine themselves and carry more or fewer adherents, logical positivism and logical behaviorism had such devastating objections of inconsistency leveled against them that adhering to them became nearly impossible. There are two theoretical objections that were particularly damaging for logical behaviorism. The first depends on the principle of verificationism. Many of the logical positivists, including Carl Hempel (1905-1997), held a theory whereby all truths relied on their verification, either analytically (in virtue of their meanings, or by definition) or synthetically (not in virtue of their meanings, which, for Hempel indicated that they were true by experience) (Hempel 1980). Rudolph Carnap, though a member of the Vienna Circle, realized that verification was too stringent a demand to be met by any proposition, and he spent a good portion of his philosophical career trying out different criteria to rescue the theory from the criticism. As argued by Hilary Putnam, the principle of verification itself could not be verified and it was therefore "self-refuting" (Putnam 1983). Second, behaviorists were unable to provide the necessary and sufficient behavioral conditions required for translating talk about minds into talk about behaviors. In fact, Peter Geach (1916-2013) gave an objection to logical behaviorism that eliminated any kind of definition of beliefs or other mental states purely in terms of behaviors. Everything that a person does, or is disposed to do, depends on the person's beliefs and desires, so defining one belief in terms of certain actions just prolongs the problem of defining it, since the actions used to define it will make reference to yet other beliefs and desires. The account is therefore circular (Geach 1957, 8).

Another objection argues that behavior is both unnecessary and insufficient to account for what people mean by their use of mental concepts. The success of this objection affects the strong version of logical behaviorism (and usually the view to which people refer) which states that there are necessary and sufficient conditions within behavior to define mentality. To refute this view, focusing on the sufficiency of the behavior, a critic must find cases where there is behavior that mimics the existence of minds but where there is no mind. Ned Block, for example, said that puppets controlled via radio links by other minds outside the puppet's hollow body would mimic a mind working but is not a mind working (Block 1981). To refute the other side, that behavior is necessary for mentality, which could be seen as a weaker form of behaviorism if accepted without the sufficiency condition, the critic needs to find examples where there is thinking going on, but without the behavior.

This is more difficult. Disembodied minds or thinking objects, if they exist, could constitute counterexamples. Hilary Putnam argued that we can imagine a world in which people experience pain but are conditioned to disguise their pain behaviors (Putnam 1963). Our ability to coherently think of such a world shows that pain is not conceptually and necessarily tied to behaviors, even if in our world we most often experience them contingently connected (see Chapter 5). Ludwig Wittgenstein, regarded as a champion for the logical positivists and the behaviorists, himself eventually turned away from a behaviorist-like theory to a theory that relied on thoughts as separate and independent from our descriptions of them.

Conclusion

Today, materialist and behaviorist views enjoy prominence in the sciences, but not in philosophy. Biologists and neuroscientists are working hard to uncover the mysteries of behavior and the brain. Each time they learn more information, they help build a better basis for a purely empirical philosophy of mind. But empirical research alone will never be sufficient to ground a materialist or behaviorist theory of mind. Both the radical theory of eliminativism (which intends to show that the mind does not exist) and non-reductive identity theories (which propose that mental events are always the same as physical events) still require persuasive philosophical arguments to show that minds are redundant or unnecessary in our ontology. Scientists themselves rely on self-reports of feelings and thoughts even while they conduct studies attempting to show that the mind can be reduced to the brain. An evolution in our ways of studying the body and the brain that do not rely on self-reports of feelings and thoughts seems a long way off.

The problem is that evidence of the workings of the body and brain, no matter how advanced, can never in itself establish a definite reduction of the mind to the body and the brain. Science alone cannot demonstrate the equivalence of the mind to the body or brain. Thus far, Ockham's Razor has not yet successfully shaved off the necessity of talk about minds for most philosophers. One day, an evolution in human ways of relating to ourselves and each other may rely less on feelings and thoughts and more on reactions and behaviors. Perhaps, it may be observed, the human condition was once like that, more instinctual in origin. Even if this is true,

observations of the origin of human life do not indicate that our current human condition is entirely material. Some may argue that an evolution towards reliance on an immaterial mind marks progress in our species. Others may argue that the evolution of a seemingly immaterial mind shows the sophistication of brain. The debate will likely continue until talk of immaterial minds appears to be unnecessary.

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19. Functionalism

JASON NEWMAN

Introduction: Two Monsters We Must Avoid

While passing through the Strait of Messina, between mainland Italy and the isle of Sicily, Homer has Odysseus come upon two monsters, Scylla and Charybdis, one on either side of the strait. If Odysseus is to pass through the strait, he must choose between two very unhappy options; for if he averts one along the way, he will move in the other's monstrous reach. On the one side is roaring Charybdis, who would surely blot out—as if by colossal whirlpool—Odysseus's entire ship. (Have you ever been faced with an option so bad that you cannot believe you have to seriously consider it? Well, this is Odysseus's bleak situation.) On the other side of the strait, things fare little better for Odysseus and his war-weary crew: we have vicious Scylla, who only by comparison to Charybdis, looks like the right choice. The ship makes it through, Homer tells us, minus those who were snatched from the ship's deck and eaten alive. Six are taken, we are told, one for each of Scylla's heads. By comparison only, indeed.

In this chapter we consider the theory of mind known as functionalism, the view that minds are really functional systems like the computing systems we rely on every day, only much more complex. The functionalist claims to sail a middle path between materialism (discussed in Chapter 2), or the joint thesis that minds are brains and mental states are brain states, and behaviorism (also discussed in Chapter 2), or the thesis that mental states are behavioural states or dispositions to behave in certain ways.

Avoiding Materialism

One the one side we have materialism, which we must avoid because there appears to be no strict identity between mental states and brain states. Even though human

Freya is different than a wild rabbit in many interesting ways, we think they can both be in physical pain. Suppose that while restringing her guitar, Freya lodges a rogue metal splinter off the D string in the top of her ring finger. She winces in pain. Physiologically and neurologically, a lot happened—from the tissue damage caused by the metal splinter, to Freya's finally wincing from the sensation. But it only took milliseconds.

Now suppose that while out foraging and hopping about, the wild rabbit mishops on the prickly side of a pinecone. The rabbit cries out a bit, winks hard, and hops off fast. A very similar physiological and neurological chain of events no doubt transpired from the mishop on the pinecone to hopping off fast in pain. But as interestingly similar as the wild rabbit's brain is to human Freya's, it is not plausible to think that both Freya and the wild rabbit entered into the same brain state. We do want to say they entered into the same *mental* state, however. That is, they were both in pain. Since the same pain state can be realized in multiple kinds of brains, we can say that mental states like pain are multiply realizable. This is bad news for the materialist; it looks like brain states and mental states come apart.

Avoiding Behaviorism

Now we look bleary-eyed in the direction of behaviorism. But here, too, we find a suspicious identity claim—this time between mental states, like Freya's belief that her house is gray, and behavioral states or dispositions to behave in certain circumstances. For example, if Freya were asked what color her house is, she would be disposed to answer, "Gray." But just as with mental states and brain states, Freya's believing that her Colonial-period house is painted the original gray from when the house was first built and painted in 1810, and her dispositions to behave accordingly, come apart, showing that they could not be identical.

Suppose Freya wants to throw a housewarming party for herself and includes a colorful direction in the invitation that hers is the "only big gray Colonial on Jones St. Can't miss it." We say that Freya would not sincerely include such a thing if she did not believe it to be true. And we have no reason to suspect she is lying. We can go further. We want to say that it is her belief that her Colonial is big, is gray, and the only one like it on Jones Street that causes her, at least in part, to include that

direction in the invitation. But if it is her mental state (her belief) that caused her behavior, then the mental state and the behavioral state (her including the colorful direction in the invitation) cannot be strictly identical.

Freya might very well have been disposed to give just such a colorful direction to her home, given her beliefs, as the behaviorist would predict; and this disposition might even come with believing the things Freya does. But if we want to refer to Freya's beliefs in our explanation of her behavior—and this is the sort of thing we do when we say our beliefs and other mental states cause our behavior—then we must hold that they are distinct, since otherwise our causal explanation would be viciously circular.

It would be circular because the thing to be explained, her Colonial-describing behavior, is the same thing as the thing that is supposed to causally explain it, her Colonial-descriptive beliefs; and the circle would be vicious because nothing would ever really get explained. So the behaviorist, like the materialist, seems to see an identity where there is none.

No Turning Back: The Mind is Natural

The goal is to formulate an alternative to the above two theories of mind that nevertheless both make a promise worth making: to treat the mind as something wholly a part of the natural world. From the failures of materialism and behaviorism, we must not turn back to a problematic Cartesian dualist view of mind and matter (discussed in Chapter 1), where it again would become utterly mysterious how Freya's beliefs about how her Colonial looks could possibly influence her physical behavior, since her beliefs and physical behavior exist on different planes of existence, as it were. But there is a third way to view beliefs like Freya's.

Functionalism as the Middle Path

Our way between the two monsters is to take seriously the perhaps dangerous idea that minds really are computing machines. In England, Alan Turing (1912-1954) laid

the groundwork for such an idea with his monumental work on the nature of computing machines and intelligence (1936, 230-265; 1950, 433-460). Turing was able to conceive of a computing machine so powerful that it could successfully perform any computable function a human being could be said to carry out, whether consciously, as in the math classroom, or at the subconscious level, as in the many computations involved in navigating from one side to the other of one's room.

A Turing machine, as it came to be called, is an abstract computer model designed with the purpose of illustrating the limits of computability. Thinking creatures like human beings, of course, are not abstract things. Turing machines are not themselves thinking machines, but insofar as thinking states can be coherently understood as computational states, a Turing machine or Turing machine-inspired model should provide an illuminating account of the mind.

Turing's ideas were developed in the United States by philosopher Hilary Putnam (1926-2016). Functionalism treats minds as natural phenomena contra Cartesian dualism; mental states, like pain, as multiply realizable, contra materialism; and mental states as causes of behavior, contra behaviorism. In its simple form, it is the joint thesis that the mind is a functional system, kind of like an operating system of a computer, and mental states like beliefs, desires, and perceptual experiences are really just functional states, kind of like inputs and outputs in that operating system. Indeed, often this simple version of functionalism is known as "machine" or "input-output functionalism" to highlight just those mechanical features of the theory.

Nothing's Shocking: The Functionalist Mind is a Natural Mind

The functionalist says if we conceive of mental stuff in this way—namely, as fundamentally inputs and outputs in a complex, but wholly natural system—then we get to observe the reality of the mind, and the reality of our mental lives. We get to avoid any genuine worries about mental stuff being too spooky, or about how it could possibly interact with material stuff, as one might genuinely worry on a Cartesian dualist theory of mind, where we are asked to construe mental stuff and material stuff as fundamentally two kinds of substances. With functionalism, the

how-possible question about interaction between the mental and material simply does not arise, no more than it would for the software and hardware interaction in computers, respectively. So, on the functionalist picture of the mind, the mysterious fog is lifted, and the way is clear.

Multiple Realizability

Let us use a thought experiment of our own to illustrate the functionalist's theory of mind. Imagine Freya cooks a warm Sunday breakfast for herself and sits on a patio table in the spring sun to enjoy it. Freya's belief that "my tofu scramble is on the table before me" is to be understood roughly like this: as the OUTPUT of one mental state, her seeing her breakfast on the table before her, and as the INPUT for others, including other beliefs Freya might have or come to have by deductive inference ("something is on the table before me," and so on and so forth) and behaviors (e.g., sticking a fork into that tofu scramble and scarfing it down). Note well: we have not mentioned anything here about the work Freya's sensory cortex or thalamus or the role the rods and cones in her retina are playing in getting her to believe what she does; her belief is identified only by its functional or causal role. This seems to imply that Freya's breakfast belief is multiply realizable, like pain is.

Recall our earlier discussion of the important difference between rabbit-brain stuff and human-brain stuff. Nevertheless, we wanted to say that both Freya and the wild rabbit could be in pain. We said pain, then, is multiply realizable. This is another way of saying that being in pain does not require any specific realization means, just some or other adequate means of realization. The point also strongly implies that the means of realization for Freya's breakfast belief, no less than her pain, need not be a brain state at all. This signals a major worry for the materialist. Since our beliefs, desires, and perceptual experiences are identified by their functional or causal role, the functionalist has no problem accounting for the multiple realizability of mental states.

Real Cause: The Functionalist Mind Causes Behavior

Finally, we saw that our mental states cannot be counted as the causes of our behavior on a behaviorist view, since on that view of mind, mental states are nothing over and above our behavior (or, dispositions to behave in certain ways in certain circumstances). In an effort to disenchant the mind in general and individual minds in particular, and move mental states like beliefs and pain into scientific view, the behaviorist recoiled too far from spooky Cartesian dualism, leaving nothing in us to be the causes of our own behavior. The functionalist understands, like the behaviorist, that there is a close connection between our beliefs, desires, and pains, on the one hand, and our behavior, on the other. It is just that the connection is a functional, or causal, one, not one of identity. Since mental states (like Freya's belief that "my tofu scramble is on the table before me") are identified with their functional or causal role in the larger functional system of inputs and outputs, other mental states and behavioral states, the functionalist has no problem accounting for mental states playing a causal role in the explanations we give of our own behavior. On the functionalist theory of mind, mental states are real causes of behavior.

Objections to Functionalism

Now that we have seen some of the major points in favor of the theory, let us have a look at some of the worries that have been raised against functionalism.

The Chinese Room

John Searle argues against a version of functionalism he calls "strong" artificial intelligence, or "strong AI" In "Minds, Brains and Programs," Searle develops a thought experiment designed to show that having the right inputs and outputs is not sufficient for having mental states, as the functionalist claims (1980). The specific issue concerns what is required to understand Chinese.

Imagine someone who does not understand Chinese is put in a room and tasked

with sorting Chinese symbols in response to other Chinese symbols, according to purely formal rules given in an English-language manual. So, for example, one person can write some Chinese symbols on a card, place it in a basket on a conveyor belt which leads into and out from the little room you are in. Once you receive it, you look at the shape of the symbol, find it in the manual, and read which Chinese symbols to find in the other basket to send back out. Imagine further that you get very good at this manipulation of symbols, so good in fact that you can fool fluent Chinese speakers with the responses you give. To them, you function every bit like you understand Chinese. It appears, however, you have no true understanding at all. Therefore, Searle concludes, functioning in the right way is not sufficient for having mental states.

The functionalist has replied that, of course, as the thought experiment is described, the person in the room does not understand Chinese. But also as the case is described, the person in the room is just a piece of the whole functional system. Indeed, it is the system that functions to understand Chinese, not just one part. So it is the whole system, in this case, the whole room, including the person manipulating the symbols and the instruction manual (the "program"), that understands Chinese.

The Problem of Qualia

The splinter Freya picked up from her D string caused her a bit of pain, and perhaps more so for the behaviorist, as we saw earlier. One major worry for the functionalist is that there seems to be more to Freya's pain than its just being the putative cause of some pain-related behavior, where this cause is understood to be another mental state, presumably, not identified with pain at all. (Remember, the functionalist wishes to avoid the vicious circularity that plagued the behaviorist's explanations of behavior.)

There is an undeniable sensation to pain: it is something you feel. In fact, some might argue that at the conscious level, that is all there is to pain. Sure, there is the detection of tissue damage and the host physiological and neurological events transpiring, and yes, there is the pain-related behavior, too. However, we must not leave out of our explanation of pain the feel of pain. Philosophers call the feeling aspect

of some mental states like pain fundamentally qualitative states. Other qualitative mental states might include experiences of colored objects, such as those a person with normal color vision has every day.

In seeing a Granny Smith apple in the basket on a dining room table, she has a visual experience as of a green object. But the functionalist can only talk about the experience in terms of the function or causal role it plays. So, for example, the functionalist can speak to Freya's green experience as being the cause of her belief that she sees a green apple in the basket. But the functionalist cannot speak to the feeling Freya (or any of us) has in seeing a ripe green Granny Smith. We think there is a corresponding feeling to color experiences like Freya's over and above whatever beliefs they might go on to cause us to have. Since mental states like pain and color experiences are identified solely by their functional role, the functionalist seems without the resources to account for these qualitative mental states.

The functionalist might reply by offering a treatment of qualia in terms of what such aspects of experience function to do for us. The vivid, ripe greenness of the Granny Smith functions to inform Freya about a source of food in a way that pulls her visual attention to it. Freya's color experiences allow her to form accurate beliefs about the objects in her immediate environment. It is certainly true that ordinary visual experience provide us with beautiful moments in our lives. However, they likely function to do much more besides. Likewise, it is more likely that there is a function for the qualitative or feeling aspects of some mental states, and that these aspects can be understood in terms of their functions, than it is that these aspects are free-floating above the causal order of things. So, the functionalist who wishes to try to account for qualia need not remain silent on the issue.

Conclusion

We have not considered all the possible objections to functionalism, nor have we considered more sophisticated versions of functionalism that aim to get around the more pernicious objections we have considered. The idea that minds really are kinds of computing machines is still very much alive and as controversial as ever. Taking that idea seriously means having to wrestle with a host of questions at the intersection of philosophy of mind, philosophy of action, and personal identity.

In what sense is Freya truly an *agent* of her own actions, if we merely cite a cold input to explain some behavior of hers? That is to say, how does Freya *avow* her own beliefs on a merely functionalist view? If minds are kinds of computers, then what does that make thinking creatures like Freya? Kinds of robots, albeit sophisticated ones? These and other difficult questions will need to be answered satisfactorily before many philosophers will be content with a functionalist theory of mind. For other philosophers, a start down the right path, away from Cartesian dualism and between the two terrors of materialism and behaviorism, has already been made.

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20. Property Dualism

ELLY VINTIADIS

Introduction

The first thing that usually comes to mind when one thinks of dualism is René Descartes' (1596-1650) substance dualism. However, there is another form of dualism, quite popular nowadays, which is called property dualism, a position which is sometimes associated with non-reductive physicalism.

Cartesian dualism posits two substances, or fundamental kinds of thing: material substance and immaterial thinking substance. These are two entirely different kinds of entities, although they interact with each other. According to property dualism, on the other hand, there is one fundamental kind of thing in the world—material substance—but it has two essentially different kinds of property: physical properties and mental properties. So for instance, a property dualist might claim that a material thing like a brain can have both physical properties (like weight and mass) and mental properties (such as having a particular belief or feeling a shooting pain), and that these two kinds of properties are entirely different in kind. Some philosophers subscribe to property dualism for all mental properties while others defend it only for conscious or "phenomenal" properties such as the feeling of pain or the taste of wine.[1] These latter properties give rise to what is known as the hard problem of consciousness: How do we explain the existence of consciousness in a material world?

Though these are both dualist views, they differ in fundamental ways. Property dualism was proposed as a position that has a number of advantages over substance dualism. One advantage is that, because it does not posit an immaterial mental substance, it is believed to be more scientific than Cartesian dualism and less reli-

1. Examples of non-conscious mental properties include beliefs that most of the time are not conscious, or our attitudes, drives, and motivations

giously motivated. A second advantage is that it seems to avoid the problem of mental causation because it posits only one kind of substance; there is no communication between two different kinds of thing. And a third advantage is that, by maintaining the existence of distinctly mental properties, it does justice to our intuitions about the reality of the mind and its difference from the physical world. But to understand all this we need to take a step back.

Substances and Properties

The notion of a substance has a long history going back to Ancient Greek metaphysics, most prominently to Aristotle, and it has been understood in various ways since then. For present purposes we can say that a substance can be understood as a unified fundamental kind of entity—e.g. a person, or an animal—that can be the bearer of properties. In fact, the etymology of the Latin word *substantia* is that which lies below, that which exists underneath something else. So, for instance, a zebra can be a substance, which has properties, like a certain color, or a certain number of stripes. But the zebra is independent of its properties; it will continue to exist even if the properties were to change (and, according to some views, even if they ceased to exist altogether).

According to Cartesian dualism there are two kinds of substance: the material substance, which is extended in space and is divisible, and mental substances whose characteristic is thought. So each person is made up of these two substances—matter and mind—that are entirely different in kind and can exist independently of each other. Talking of the mind in terms of substances gives rise to a number of problems (see Chapter 1). To avoid these problems, property dualism argues that mentality should be understood in terms of properties, rather than substances: instead of saying that there are certain kinds of things that are minds, we say that to have a mind is to have certain properties. Properties are characteristics of things; properties are attributed to, and possessed by, substances. So according to property dualism there are different kinds of properties that pertain to the only kind of substance, the material substance: there are physical properties like having a certain color or shape, and there are mental properties like having certain beliefs, desires and perceptions.

Property dualism is contrasted with substance dualism since it posits only one kind of substance, but it is also contrasted with ontological monist views, such as materialism or idealism, according to which everything that exists (including properties) is of one kind. Usually, property dualism is put forward as an alternative to reductive physicalism (the type identity theory) – the view that all properties in the world can, in principle at least, be reduced to, or identified with, physical properties (Chapter 2).

Hilary Putnam's (1926-2016) multiple realization argument is a main reason why reductive physicalism is rejected by some philosophers, and it provides an argument for property dualism. Although this argument was originally used as an argument for functionalism, since it challenges the identity of mental states with physical states, it was taken up by non-reductive physicalists and property dualists alike. According to the multiple realization argument then, it is implausible to identify a certain kind of mental state, like pain, with a certain type of physical state since mental states might be implemented ("realized") in creatures (or even non-biological systems) that have a very different physical make up than our own. For instance, an octopus or an alien may very well feel pain but pain might be realized differently in their brains than it is in ours. So it seems that mental states can be "multiply realizable." This is incompatible with the idea that pain is strictly identical with one physical property, as the identity theory seems to claim. If this is correct, and there is no possibility of reduction of types of mental states to types of physical states, then mental properties and physical properties are distinct, which means that there are two different kinds of properties in the world and, therefore, property dualism is true.

In addition to the multiple realization argument, probably the most famous argument for property dualism is the knowledge argument put forward by Frank Jackson (1982). This argument involves the imaginary example of Mary, a brilliant neuroscientist who was raised in a black and white room. She knows everything there is to know about the physical facts about vision but she has never seen red (or any color for that matter). One day Mary leaves the black and white room sees a red tomato. Jackson claims that Mary learns something new upon seeing the red tomato—she learns what red looks like. Therefore, there must be more to learn about the world than just physical facts, and there are more properties in the world than just physical properties.

Kinds of Property Dualism

Property dualism can be divided into two kinds. The first kind of property dualism says that there are two kinds of properties, mental and physical, but mental properties are dependent on physical properties. This dependence is usually described in terms of the relation of supervenience. The basic idea of supervenience is that a property, A, supervenes on another property, B, if there cannot be a difference in A without a difference in B (though there can be differences in B with no change in A, which allows for the multiple realizability of mental properties). So, for example, if the aesthetic properties of a work of art supervene on its physical properties, there cannot be a change in its aesthetic properties unless there is a change in its physical properties. Or, if I feel fine now but have a headache five minutes from now, there must be a physical difference in my brain in these two moments. Another way of putting the idea that mental properties depend on physical properties is to say that if you duplicate all the physical properties of the world, you will automatically duplicate the mental properties as well—they would come "for free."

This kind of view is sometimes called non-reductive physicalism, and is often considered to be a form of property dualism, since it holds that there are two kinds of properties. Jaegwon Kim is a prominent supporter of the irreducibility of phenomenal properties (though he resists the term "property dualism" and prefers to call his position "something near enough" physicalism [2005]). Kim holds that intentional properties, like having a belief or hoping for something to happen, can be functionally reduced to physical properties.[2] However, this is not so for phenomenal properties (like tasting a particular taste or experiencing a certain kind of afterimage), which supervene on physical properties but cannot be reduced, functionally or otherwise, to physical properties.

2. In functional reduction we identify the functional/causal role that the phenomenon we are interested plays and then reduce that role to a physical (token) state that realizes it. To use an example given by Kim in *Physicalism, Or Something Near Enough*, a gene is defined functionally as the mechanism that encodes and transmits genetic information. That is what a gene does. What "realizes" the role of the gene, however, are DNA molecules; genes are functionally reduced to DNA molecules. So a functional reduction identifies a functional/causal role with a physical state that realizes it (makes it happen, so to speak) and offers an explanation of how the physical state realizes the functional state.

According to Kim, there is a difference between intentional and phenomenal properties: Phenomenal (qualitative) mental states cannot be defined functionally, as intentional states can (or can in principle), and therefore cannot be reduced either. Briefly, the reason is that although phenomenal states can be associated with causal tasks these descriptions do not define or constitute pain. That is, though, pain can be associated with the state that is caused by tissue damage, that induces the belief that something is wrong with one's body and that results in pain-avoidance behavior, this is not what pain is. Pain is what it feels like to be in pain, it is a subjective feeling. In contrast, intentional states like beliefs and intentions are anchored to observable behaviour, and this feature makes them amenable to functional analysis. For instance, if a population of creatures interacts with its environment in a similar fashion to us (if those creatures interact with one another as we do, produce similar utterances and so forth), then we would naturally ascribe to these creatures beliefs, desires, and other intentional states, precisely because intentional properties are functional properties.

The second kind of property dualism, which is dualism in a more demanding sense, claims that there are two kinds of properties, physical and mental, and that mental properties are something over and above physical properties. This in turn can be understood in at least two ways. First, being "over and above" can mean that mental properties have independent causal powers, and are responsible for effects in the physical world. This is known as "downward causation." In this sense, a property dualist of this kind must believe that, say, the mental property of having the desire to get a drink is what actually causes you to get up and walk to the fridge, in contrast to some material property of your brain being the cause, like the firing of certain groups of neurons. Second, being something "over and above" must imply the denial of supervenience. In other words, for mental properties to be genuinely independent of physical properties, they must be able to vary independently of their physical bases. So a property dualist who denies supervenience would be committed to the possibility that two people can be in different mental states, e.g., one might be in pain and the other not, while having the same brain states.

Emergentism is a property dualist view in this more demanding sense. Emergentism first appeared as a systematic theory in the second half of the nineteenth century and the beginning of the twentieth century in the work of the so-called "British Emergentists," J.S.Mill (1806 –1873), Samuel Alexander (1859 –1938), C. Lloyd Morgan (1852 –1936) and C.D. Broad (1887 –1971). Since then it has been defended

(and opposed) by many philosophers and scientists, some of whom understand it in different ways. Still, we can summarize the position by saying that according to emergentism, when a system reaches a certain level of complexity, entirely new properties emerge that are novel, irreducible to, and something "over and above" the lower level from which they emerged (Vintiadis 2013). For example, when a brain, or a nervous system, becomes complex enough new mental properties, like sensations, thoughts and desires, emerge from it in addition to its physical properties. So according to emergentism everything that exists is made up of matter but matter can have different kinds of properties, mental and physical, that are genuinely distinct in one or both of the senses described above: that is, either in the sense that mental properties have novel causal powers that are not to be found in physical properties underlying them or in the sense that mental properties do not supervene on physical properties.

Some philosophers have argued for the kind of demanding property dualism that denies supervenience by appealing to the conceivability of philosophical zombies—an argument most famously developed by David Chalmers. Philosophical zombies are beings that are behaviorally and physically just like us but that have no "inner" experience. If such beings are not only conceivable but also possible (as Chalmers argues), then it seems that there can be mental differences without physical differences (1996). If this argument is correct, then phenomenal properties cannot be explained in terms of physical properties and they are really distinct from physical properties.

Objections to Property Dualism

A main problem for substance dualism was the question of mental causation. Given the view that the mental and the material substance are two discrete kinds of substances the problem that arises is that of their interaction, a problem posed by Princess Elizabeth of Bohemia (1618-1680) in her correspondence with Descartes. How can two different kinds of things have an effect on one another? It seems from what we know from science that physical effects have physical causes. If this is indeed the case, how is it that I can think of my grandmother and cry, or desire a glass of wine and go over to the fridge to pour myself one? How *do* the mental and

the physical interact? The common consensus that substance dualism cannot satisfactorily answer this problem ultimately led many philosophers to the rejection of Cartesian dualism.

In the attempt to preserve the mental while also preserving a foothold in the physical, dualism of properties was introduced. However, the double requirement of the distinctness of physical properties from mental properties and of the dependence of mental properties on physical properties turns out to be a source of problems for property dualism as well.

This can be seen in the problem of causal exclusion that is analyzed below. This problem arises for property dualism and has been put forward by a number of philosophers over the years, most notably by Kim himself who, due to this problem, concludes that phenomenal properties that are irreducibly mental are also merely epiphenomenal, that is, they have no causal effects on physical events (2005).

According to mind-body supervenience, every time a mental property M is instantiated it supervenes on a physical property P.

$$\begin{array}{c} M \\ \Uparrow \\ P \end{array}$$

Now suppose M appears to cause another mental property M^1,

$$\begin{array}{ccc} M & \rightarrow & M^1 \\ \Uparrow & & \\ P & & \end{array}$$

the question arises whether the cause of M^1 is indeed M or whether it is M^1's subjacent base P^1 (since according to supervenience M^1 is instantiated by a physical property P^1).

$$\begin{array}{ccc} M & \rightarrow & M^1 \\ \Uparrow & & \Uparrow \\ P & & P^1 \end{array}$$

At this point we need to introduce two principles held by physicalists: First, the principle of causal closure according to which the physical world is causally closed. This means that every physical effect has a sufficient physical cause that brings

it about. Note that this in itself does not exclude non-physical causes since such causes could also be part of the causal history of an effect. What does exclude such non-physical causes is a second principle which denies the overdetermination of events. According to this principle an effect cannot have more than one wholly sufficient cause (it cannot be overdetermined) and so this, along with causal closure, leads to the conclusion that when you trace the causes of an effect, all there are are physical causes.

To return to our example, given the denial of causal overdetermination, either M or P^1 is the cause of M^1—it can't be both—and so, given the supervenience relation, it seems that M^1 occurs because P^1 occurred. Therefore, it seems that M actually causes M^1 by causing the subjacent P^1 (and also that mental to mental, or same level, causation presupposes mental to physical, or downward, causation).

$$\begin{array}{ccc} M & \rightarrow & M^1 \\ \Uparrow & & \\ P & & \end{array} \qquad \begin{array}{ccc} M & \rightarrow & M^1 \\ \Uparrow & \searrow & \Uparrow \\ P & & P^1 \end{array}$$

However, given the principle of causal closure P^1 must have a sufficient physical cause P.

$$\begin{array}{ccc} M & & M^1 \\ \Uparrow & & \Uparrow \\ P & \rightarrow & P^1 \end{array}$$

But given exclusion again, P^1 cannot have two sufficient causes, M and P, and so P is the real cause of P^1 because if M were the real cause, causal closure would be violated again.

So the problem of causal exclusion is that, given supervenience, causal closure and the denial of overdetermination, it is not clear how mental properties can be causally efficacious; mental properties seem to be epiphenomenal, at best. And while epiphenomenalism is compatible with property dualism (since property dualism states that there are two kinds of properties in the world, and epiphenomenalism states that some mental properties are causally inert by-products of physical properties, thus accepting the existence of two properties), its coherence comes at the expense of our common sense intuitions that our mental states affect our phys-

ical states and our behavior. It seems then, that, for its critics, as far as mental causation goes, property dualism does not fare much better than substance dualism.

More generally, the question of the causal efficacy of mental properties gives rise to the same kinds of objections that were raised regarding mental causation in substance dualism. For instance, in both cases mental to physical interaction seems to violate the principle of conservation of energy, a principle that is considered to be fundamental to our physical science. That is, the conservation law would be violated if mental to physical causation were possible, since such an interaction would have to introduce energy to the physical world (assuming, that is, that the physical world is causally closed).

It is not in the scope of this discussion to wade into this matter, but it should be noted that this objection is not accepted by everyone; it has been argued that the principle of conservation of energy does not apply universally, for instance by citing examples from general relativity or quantum gravity. Similarly, both the causal closure of the physical and the denial of causal overdetermination have been questioned. Nonetheless, despite these responses, it is fair to say that the question of mental causation still remains one of the major objections to property dualism.

Another objection, this time to some views that are considered property dualist views, can be posed by asking, "In what way is property dualism really dualism?" In our distinction between two kinds of property dualism above, there is a clear sense in which positions of the second kind, like emergentism or views that deny supervenience, are property dualist positions. Since, for such views, mental properties are "something over and above" physical properties; they are distinct from them, irreducible to them and not wholly determined by them. So here we have cases of two genuinely different kinds of properties, and genuine cases of property dualism.

However, it is not equally clear that non-reductive physicalism can properly be called a kind of property dualism. The problem is that if mental properties are not something over and above physical properties then it is hard to see this as a genuine version of property dualism. We can see this if we look more closely into the meaning of physicalism.

Physicalism is the view that what there fundamentally is is what is described by physics. In this sense, mental properties are non-physical properties, since they are not properties to be found in physics. But if non-reductive physicalism claims

that there are non-physical properties that are irreducible to physical properties, why should this be considered a case of physicalism? The answer given by the non-reductive physicalist is that this is because such properties are grounded in the physical realm through the relation of supervenience and that, although mental properties might not be identical to physical properties, they need to be at least in principle *explainable* in terms of physical properties (Horgan 1993). Indeed, non-reductive physicalism is sometimes called token identity theory because it claims that tokens (instances) of mental states can be identified with tokens of physical states, even if types of mental states are not identical with types of physical states. (An analogy: all instances of the property of being beautiful are physical—all beautiful objects are physical objects—but the property of being beautiful is not a physical property). But now the problem is that, as Tim Crane has argued, if physicalism requires that non-physical properties are explicable (even in principle) in physical terms it is not obvious why this position is a property dualist one, since for there to be genuine property dualism, the ontology of physics should not be enough to explain mental properties (2001). So, according to this objection, it seems that the mere denial of the identity of mental and physical properties is not enough for real property dualism, and also that real property dualists must either believe in downward causation or deny supervenience or both.

To sum up the above discussion, we can say that property dualism is a position that attempts to preserve the reality of mental properties while also giving them a foothold in the physical world. The need for this is evident, given the intractable difficulties presented by substance dualism on the one hand, and the problems faced by the identity theory on the other. However, despite the fact that property dualism enjoys renewed popularity these days, it is open to important objections that, for its critics, have not been adequately addressed and which render the position problematic.

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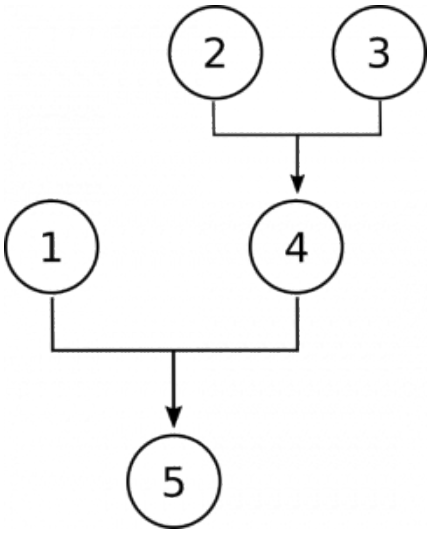
Exercise Solutions

Chapter Four

First, explicate the following arguments, paraphrasing as necessary and only including tacit premises when explicitly instructed to do so. Next, diagram the arguments.

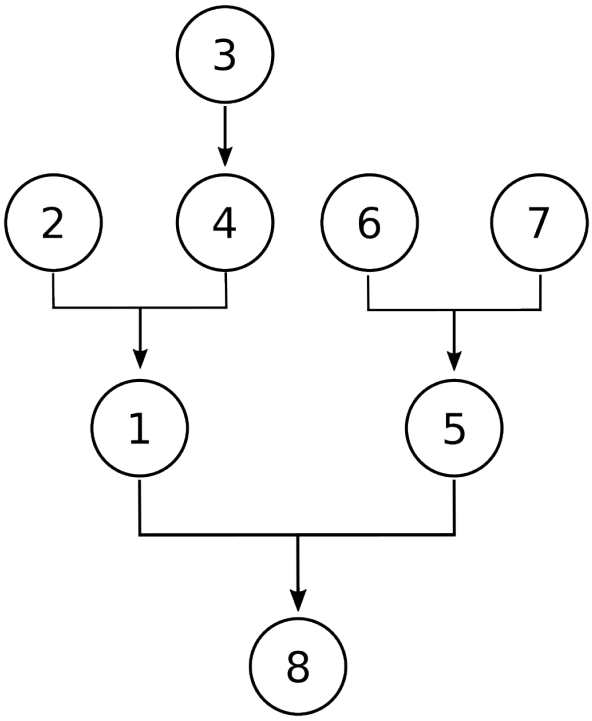
1. Numbers, if they exist at all, must be either concrete or abstract objects. Concrete objects—like planets and people—are able to interact with other things in cause-and-effect relations. Numbers lack this ability. Therefore, numbers are abstract objects. *[You will need to add an implicit intermediate premise here!]*

1. Numbers must be either concrete or abstract objects.
2. Concrete objects are able to interact with other objects in cause-and-effect relations.
3. Numbers do not interact with other objects in cause-and-effect relations.
4. Numbers are not concrete objects. [*Implicit intermediate premise]*
5. / ∴ Numbers are abstract objects.



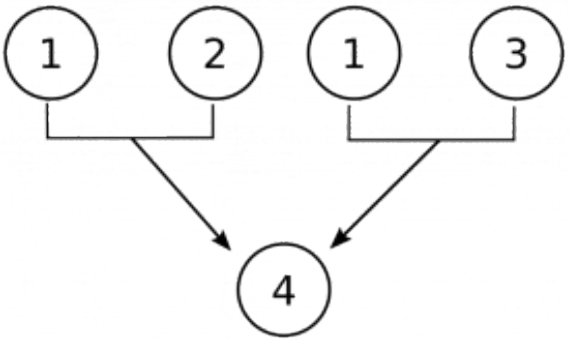
2. Abolish the death penalty! Why? It is immoral. Numerous studies have shown that there is racial bias in its application. The rise of DNA testing has exonerated scores of inmates on death row; who knows how many innocent people have been killed in the past? The death penalty is also impractical. Revenge is counterproductive: "An eye for an eye leaves the whole world blind," as Gandhi said. Moreover, the costs of litigating death penalty cases, with their endless appeals, are enormous.

1. The death penalty is immoral.
2. Studies show that there is a racial bias in the application of the death penalty.
3. DNA testing how exonerated scores of inmates on death row.
4. Innocent inmates have been subject to the death penalty
5. The death penalty is impractical.
6. Revenge is counterproductive.
7. The costs of litigating death penalty cases are enormous.
8. ∕ ∴ The death penalty ought to be abolished.



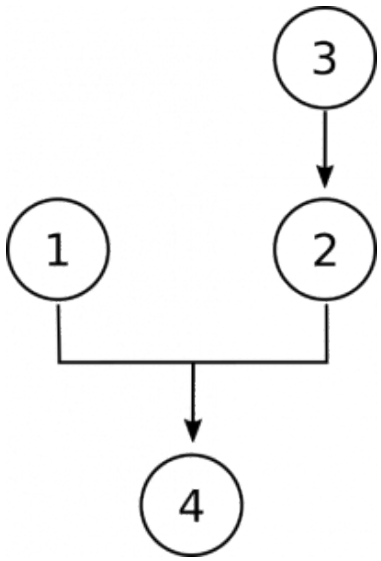
3. A just economic system would feature an equitable distribution of resources and an absence of exploitation. Capitalism is an unjust economic system. Under capitalism, the typical distribution of wealth is highly skewed in favor of the rich. And workers are exploited: despite their essential role in producing goods for the market, most of the profits from the sales of those goods go to the owners of firms, not their workers.

1. Just economic systems feature an equitable distribution of resources and an absence of exploitation.
2. Within capitalist systems, the typical distribution of wealth is highly skewed in favor of the rich.
3. Within capitalist systems, workers are exploited.
4. ∴ Capitalism is an unjust economic system.



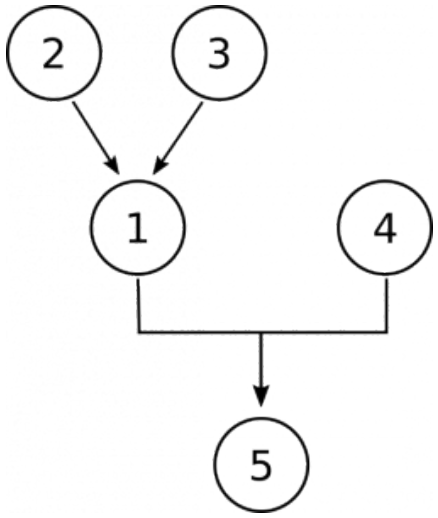
4. The mind and the brain are not identical. How can things be identical if they have different properties? There is a property that the mind and brain do not share: the brain is divisible, but the mind is not. Like all material things, the brain can be divided into parts—different halves, regions, neurons, etc. But the mind is a unity. It is my thinking essence, in which I can discern no separate parts.

1. Identical objects must have the same properties.
2. The mind and the brain do not have the same properties.
3. The brain is divisible, whereas the mind is not.
4. ∕ ∴ The mind and the brain are not identical.



5. Every able-bodied adult ought to participate in the workforce. The more people working, the greater the nation's wealth, which benefits everyone economically. In addition, there is no replacement for the dignity workers find on the job. The government should therefore issue tax credits to encourage people to enter the workforce. [*Include in your explication a tacit premise, not explicitly stated in the passage, but necessary to support the conclusion.*]

1. Every able-bodied adult ought to participate in the workforce.
2. The more people working, the greater the nation's wealth.
3. Working provides irreplaceable dignity to individuals.
4. Some individuals will not be able to work without tax credits. [*Implicit intermediate premise]*
5. / ∴ The government should issue tax credits to encourage people to work.



Chapter Five

Exercise One

For each argument decide whether it is **deductive**, **inductive**, **abductive**. If it contains more than one type of inference, indicate which.

1.

1. Chickens from my farm have gone missing.
2. My farm is in the British countryside.
3. / ∴ There are foxes killing my chickens.

This is an **abductive** argument because it is attempting to explain some known phenomena, namely the chickens' going missing, by inferring a hypothesis from all the information the individual has available to them: that the foxes killed the chickens.

2.

1. All flamingos are pink birds.
2. All flamingos are fire breathing creatures.
3. / ∴ Some pink birds are fire breathing creatures.

This is a **deductive** argument because it is attempting to demonstrate that it's impossible for the conclusion "Some pink birds are fire breathing creatures" from the premises "All flamingos are pink birds" and "All flamingos are fire breathing creatures."

3.

1. Every Friday so far this year the cafeteria has served fish and chips.
2. If the cafeteria is serving fish and chips and I want fish and chips then I should

bring in £4.
3. If the cafeteria isn't serving fish and chips then I shouldn't bring in £4.
4. I always want fish and chips.
5. / ∴ I should bring in £4 next Friday.

This argument has both **inductive** and **deductive** components. To **deductively** infer that I should bring in £4 next Friday, in conjunction with the second and fourth premises, we need to know that *every Friday* the cafeteria serves fish and chips. However, at present we don't know this. We only know that every Friday *so far this year* the cafeteria has served fish and chips. So, we need to make an **inductive inference** (i.e. an inference from observed instances to as of yet unobserved instances) from the first premise before we can deduce the conclusion using the other premises. So, made fully explicit the argument would look like this:

1. Every Friday so far this year the cafeteria has served fish and chips.
2. The cafeteria serves fish and chips every Friday (from first premise by *induction*).
3. If the cafeteria is serving fish and chips and I want fish and chips then I should bring in £4.
4. If the cafeteria isn't serving fish and chips then I shouldn't bring in £4.
5. I always want fish and chips.
6. / ∴ I should bring in £4 next Friday.

Note that premise three isn't actually needed in the argument, but this isn't a problem. Lots of arguments have superfluous content.

4.

1. If Bob Dylan or Italo Calvino were awarded the Nobel Prize in Literature, then the choices made by the Swedish Academy would be respectable.
2. The choices made by the Swedish Academy are not respectable.
3. Therefore, Neither Bob Dylan nor Italo Calvino have been awarded the Nobel Prize in Literature.

This is also a **deductive** argument, as it's attempting to demonstrate that it's impos-

sible for the conclusion to be false if the premises are both true. It's also a **valid argument**, and is of the form:

1. If A then B
2. Not B
3. / ∴ Not A

which is known as *Modus Tollens*.

5.

1. In all the games that the Boston Red Sox have played so far this season they have been better than their opposition.
2. If a team plays better than their opposition in all their games then they will win the World Series.
3. / ∴ The Boston Red Sox will win the league.

This argument has both **inductive** and **deductive** components. To use premise 2 to **deductively** infer the conclusion requires us to know that the Boston Red Sox have played better than all of their opponents, yet this isn't what premise one tells us. So to derive the claim that "The Boston Red Sox will play better than all of their opponents this year" we need to make an **inductive inference** from premise one (i.e. an inference from observed instances to as of yet unobserved instances). So, made fully explicit the argument would look like this:

1. In all the games that the Boston Red Sox have played so far this season they have been better than their opposition.
2. The Boston Red Sox *will* be better than all their opposition this year (from first premise by *induction*)
3. If a team plays better than their opposition in all their games then they will win the World Series.
4. / ∴ The Boston Red Sox will win the league.

6.

1. There are lights on in the front room and there are noises coming from upstairs.
2. If there are noises coming from upstairs then Emma is in the house.
3. / ∴ Emma is in the house

This is a **deductive** argument, as it's attempting to demonstrate that it's impossible for the conclusion to be false if the premises are both true. It's also a **valid** argument, and is of the form:

1. A and B
2. If B then C
3. / ∴ C

This form of argument is known as *Modus Ponens*.

Exercise Two

Give examples of arguments that have each of the following properties:

1. Sound

Here you want to provide an argument which is **valid** and which has **actually true** premises. Here is an example:

1. All mammals are animals
2. Bears are mammals
3. / ∴ Bears are animals

2. Valid, and has at least one false premise and a false conclusion

Here you need to provide an argument whose **conclusion must be true if all the premises are true**, but that **actually** at least one of the premises is false and the conclusion is false. Here's an example:

1. All fish are mammals
2. Piranhas are fish
3. ∕ ∴ Piranhas are mammals

3. Valid, and has at least one false premise and a true conclusion

Here you need to provide an argument whose **conclusion must be true if all the premises are true**, but that **actually** at least one of the premises is false and the conclusion is true. Here's an example:

1. All birds can fly
2. Seagulls are birds
3. ∕ ∴ Seagulls can fly

4. Invalid, and has at least one false premise and a false conclusion

Here you need to provide an argument whose conclusion can be false **even if all the premises are true**, and also that **actually** at least one of the premises and the conclusion is false. Here's an example:

1. All birds can fly
2. Seagulls are birds
3. ∕ ∴ Piranhas can fly

5. Invalid, and has at least one false premise and a true conclusion

Here you need to provide an argument whose conclusion can be false **even if all the**

premises are true, and also that **actually** at least one of the premises is false but the conclusion is true. Here's an example:

1. All birds can fly
2. Seagulls are birds
3. ∕ ∴ Piranhas can swim

6. Invalid, and has true premises and a true conclusion

Here you need to provide an argument whose conclusion can be false **even if all the premises are true**, and also that **actually** the premises and the conclusion are true. Here's an example:

1. All mammals are animals
2. Bears are mammals
3. ∕ ∴ Piranhas can swim

7. Invalid, and has true premises and a false conclusion

Here you need to provide an argument whose conclusion can be false **even if all the premises are true**, and also that **actually** the premises are true but the conclusion is false. Here's an example:

1. All mammals are animals
2. Bears are mammals
3. ∕ ∴ Piranhas can fly

8. Strong, but invalid [Hint: Think about inductive arguments.]

Here you need to provide a **strong** argument, that is an argument whose premises support its conclusion, which isn't deductively valid. The easiest way to do this is to provide an **inductively strong argument**:

1. The Sun has risen every day for the past two-thousand years
2. ∴ The Sun will rise tomorrow

Chapter Five

Exercise One

For each statement identify the informal fallacy.

1. It's not wrong for newspapers to pass on rumours about sex scandals. Newspapers have a duty to print stories that are in the public interest, and the public clearly have a great interest in rumours about sex scandals since when newspapers print such stories, their circulation increases.

This argument deals on an **equivocation** of the meaning of "public interest."

The argument might seem plausible because in the first instance of "public interest," this means "in the public good," but in the second instance, "great interest" just means, "the public find it interesting." Given that *in the public good* and *the public find it interesting* don't mean the same thing, the argument rests on an equivocation.

2. Free trade will be good for this country. The reason is patently clear. Isn't it obvious that unrestricted commercial relations will bestow on all sections of this nation the benefits which result when there is an unimpeded flow of goods between countries?

This argument **begs the question**, for it simply presupposes that free trade will be good for the country by restating the conclusion in more complicated terms.

3. Of course the party in power is opposed to shorter terms, that's just because they want to stay in power longer.

This is an **ad hominem argument**, in that it attempts to undermine the argument (or opinion) of the political party purely in virtue of their motivations, and not by actively engaging with the argument.

4. A student of mine told me that I am her favorite professor, and I know that she's telling the truth, because no student would lie to her favorite professor.

This argument **begs the question**. The argument concludes that a student believes that the professor is her favorite, but relies upon this very fact in appealing to "no student would lie to her favorite professor" to establish the conclusion.

5. Anyone who tries to violate a law, even if the attempt fails, should be punished. People who try to fly are trying to violate the law of gravity, so they should be punished.

This argument deals on an **equivocation** of the meaning of "law." In the first instance, in "violate a law," we are meant to interpret this as "legal law," whereas in the second instance, "people who try to fly are trying to violate the law of gravity," what is obviously meant is a law of nature, and *not* a legal law.

6. There are more Buddhists than followers of any other religion, so there must be some truth to Buddhism.

This is a simple **inappropriate appeal to popularity**.

About the Contributors

Contemporary Authors

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Diane Gall completed her PhD in philosophy at York University in Toronto and is Instructor in Philosophy at Medicine Hat College, Alberta. Her main research interests are in Wittgenstein, the philosophy of mind and psychology, and how philosophy asserts itself in the pop culture (particularly, the science fiction) of the day.

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Cassiano Terra Rodrigues gained his PhD from the Pontifical University of São Paulo, and currently teaches at the Aeronautics Institute of Technology, São José dos Campos, Brazil. His main research concerns Charles S. Peirce's philosophy,

in dialogue with other thinkers, such as Kant and Wittgenstein. More details of Rodrigues' work.

Heather Salazar is an Associate Professor of Philosophy at Western New England University. She received her PhD at University of California, Santa Barbara. Her research focuses on the intersections of metaethics and philosophy of mind in Eastern and Western philosophy and in particular on conceptions of the self and their impact on moral obligations. Her publications include The Philosophy of Spirituality (Brill 2018), "Descartes' and Patanjali's Conceptions of the Self" (Jour- nal of Indian Philosophy and Religion 2011) and "Kantian Business Ethics" in Business in Ethical Focus (Broadview 2007). She is currently under contract for a monograph which assesses and contributes to neo-Kantian ethical constructivism.

Steven Steyl is a PhD candidate at the University of Notre Dame Australia. He specialises in ethics, political philosophy, and philosophy of religion. He has taught philosophy of religion at the University of Auckland, the University of Sydney, and the University of Notre Dame Australia. Most of his current research is in moral philosophy, specifically the concept of care and its application to contemporary moral issues like migration and conversion therapy.

Nathan Smith is an Instructor of Philosophy at Houston Community College (HCC). He received his PhD in philosophy from Boston College and the Université de Paris IV – Sorbonne. He is currently serving as the OER Coordinator and manager of HCC's Z-Degree. His dissertation was on the origins of Descartes's concept of mind in the Rules for the Direction of the Mind. He is an OER research fellow and currently does work in renaissance and early modern philosophy and open education.

Elly Vintiadis teaches philosophy at the American College of Greece. She received her PhD in 2003 from the City University of New York Graduate Center and has also taught at the Hellenic Naval Staff and Command College and at the City College of New York. Her latest publication is a co-edited volume, Brute Facts (Oxford University Press 2018).

These biographies are taken from the volumes in which the works were originally found, except for Gall.

Historical Authors

Plato (429?–347 BCE) is, by any reckoning, one of the most dazzling writers in the Western literary tradition and one of the most penetrating, wide-ranging, and influential authors in the history of philosophy. An Athenian citizen of high status, he displays in his works his absorption in the political events and intellectual movements of his time, but the questions he raises are so profound and the strategies he uses for tackling them so richly suggestive and provocative that educated readers of nearly every period have in some way been influenced by him, and in practically every age there have been philosophers who count themselves Platonists in some important respects. He was not the first thinker or writer to whom the word "philosopher" should be applied. But he was so self-conscious about how philosophy should be conceived, and what its scope and ambitions properly are, and he so transformed the intellectual currents with which he grappled, that the subject of philosophy, as it is often conceived—a rigorous and systematic examination of ethical, political, metaphysical, and epistemological issues, armed with a distinctive method—can be called his invention. Few other authors in the history of Western philosophy approximate him in depth and range: perhaps only Aristotle (who studied with him), Aquinas, and Kant would be generally agreed to be of the same rank.

Bertrand Arthur William Russell (1872–1970) was a British philosopher, logician, essayist and social critic best known for his work in mathematical logic and analytic philosophy. His most influential contributions include his championing of logicism (the view that mathematics is in some important sense reducible to logic), his refining of Gottlob Frege's predicate calculus (which still forms the basis of most contemporary systems of logic), his defense of neutral monism (the view that the world consists of just one type of substance which is neither exclusively mental nor exclusively physical), and his theories of definite descriptions, logical atomism and logical types.

Anselm of Canterbury (1033–1109) was the outstanding Christian philosopher and theologian of the eleventh century. He is best known for the celebrated "ontological argument" for the existence of God in the *Proslogion*, but his contributions to philosophical theology (and indeed to philosophy more generally) go well beyond the ontological argument. In what follows I examine Anselm's theistic proofs, his con-

ception of the divine nature, and his account of human freedom, sin, and redemption.

Thomas Aquinas (1225–1274) lived at a critical juncture of western culture when the arrival of the Aristotelian *corpus* in Latin translation reopened the question of the relation between faith and reason, calling into question the *modus vivendi* that had obtained for centuries. This crisis flared up just as universities were being founded. Thomas, after early studies at Montecassino, moved on to the University of Naples, where he met members of the new Dominican Order. It was at Naples too that Thomas had his first extended contact with the new learning. When he joined the Dominican Order he went north to study with Albertus Magnus, author of a paraphrase of the Aristotelian *corpus*. Thomas completed his studies at the University of Paris, which had been formed out of the monastic schools on the Left Bank and the cathedral school at Notre Dame. In two stints as a regent master Thomas defended the mendicant orders and, of greater historical importance, countered both the Averroistic interpretations of Aristotle and the Franciscan tendency to reject Greek philosophy. The result was a new *modus vivendi* between faith and philosophy which survived until the rise of the new physics. The Catholic Church has over the centuries regularly and consistently reaffirmed the central importance of Thomas's work, both theological and philosophical, for understanding its teachings concerning the Christian revelation, and his close textual commentaries on Aristotle represent a cultural resource which is now receiving increased recognition.

William Paley (1743—1805) English theologian; born at Peterborough (37 miles northeast of Northampton) July, 1743; died at Lincoln May 25, 1805. His mother was a keen, thrifty woman of much intelligence, and his father was a minor canon at Peterborough and a pedagogue. In 1758 Paley entered, as sizar, Christ College, Cambridge. He had been a fair scholar at his father's school, especially interested in mathematics. After taking his degree in 1763, he became usher at an academy in Greenwich and, in 1766, was elected fellow of Christ College, where he became an intimate friend of John Law and lectured successfully on metaphysics, morals, and the Greek Testament. He offered lectures on Locke, Clark's *Attributes*, and Butler's *Analogy*; and in his lectures on divinity took the ground maintained in his *Moral Philosophy* that the Thirty- nine Articles were merely articles of peace, inasmuch as they contained about 240 distinct propositions, many of them inconsistent with each other. He had been ordained a priest in 1767, and was appointed to the rec-

tory of Musgrave in Cumberland, which be resigned in 1776, to take the vicarage of the two parishes, Appleby and Dalston. In 1780, he was installed prebendary at Carlisle, and resigned Appleby on becoming archdeacon in 1782. At the close of 1785, he became chancellor of the diocese and (1789-92) figured as an active opponent of the slave-trade. Presented to the vicarage of Aldingham in 1792, he vacated Dalston for Stanwix in 1793. In recognition of his apologetic writings, he was given the prebend of St. Pancras in St. Paul's Cathedral; the subdeanery of Lincoln, in 1795; and the rectory of Bishop Warmouth in 1795; and transferred his residence to Lincoln shortly before his death.

Generally regarded as one of the most important philosophers to write in English, **David Hume** (1711–1776) was also well known in his own time as an historian and essayist. A master stylist in any genre, his major philosophical works—A *Treatise of Human Nature* (1739–1740), the *Enquiries concerning Human Understanding* (1748) and *concerning the Principles of Morals*(1751), as well as his posthumously published *Dialogues concerning Natural Religion* (1779)—remain widely and deeply influential. Although Hume's more conservative contemporaries denounced his writings as works of scepticism and atheism, his influence is evident in the moral philosophy and economic writings of his close friend Adam Smith. Kant reported that Hume's work woke him from his "dogmatic slumbers" and Jeremy Bentham remarked that reading Hume "caused the scales to fall" from his eyes. Charles Darwin regarded his work as a central influence on the theory of evolution. The diverse directions in which these writers took what they gleaned from reading him reflect both the richness of their sources and the wide range of his empiricism. Today, philosophers recognize Hume as a thoroughgoing exponent of philosophical naturalism, as a precursor of contemporary cognitive science, and as the inspiration for several of the most significant types of ethical theory developed in contemporary moral philosophy.

William Kingdon Clifford (1845—1879) was an English mathematician and philosopher.

Building on the work of Hermann Grassmann, he introduced what is now termed geometric algebra, a special case of the Clifford algebra named in his honour. The operations of geometric algebra have the effect of mirroring, rotating, translating, and mapping the geometric objects that are being modelled to new positions. Clifford algebras in general and geometric algebra in particular have been of ever

increasing importance to mathematical physics,[1] geometry,[2] and computing.[3] Clifford was the first to suggest that gravitation might be a manifestation of an underlying geometry. In his philosophical writings he coined the expression *mind-stuff*.

René Descartes (1596–1650) was a creative mathematician of the first order, an important scientific thinker, and an original metaphysician. During the course of his life, he was a mathematician first, a natural scientist or "natural philosopher" second, and a metaphysician third. In mathematics, he developed the techniques that made possible algebraic (or "analytic") geometry. In natural philosophy, he can be credited with several specific achievements: co-framer of the sine law of refraction, developer of an important empirical account of the rainbow, and proposer of a naturalistic account of the formation of the earth and planets (a precursor to the nebular hypothesis). More importantly, he offered a new vision of the natural world that continues to shape our thought today: a world of matter possessing a few fundamental properties and interacting according to a few universal laws. This natural world included an immaterial mind that, in human beings, was directly related to the brain; in this way, Descartes formulated the modern version of the mind–body problem. In metaphysics, he provided arguments for the existence of God, to show that the essence of matter is extension, and that the essence of mind is thought. Descartes claimed early on to possess a special method, which was variously exhibited in mathematics, natural philosophy, and metaphysics, and which, in the latter part of his life, included, or was supplemented by, a method of doubt.

The biographical accounts of the historical authors are all taken from the Stanford Encyclopaedia of Philosophy, except for Paley and Clifford. The Paley entry is from the Internet Encyclopaedia of Philosophy. Gall wrote the Clifford entry.

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Version	Date	Change	Affected Page(s)
0.9	6 September 2021	Original	

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