

# Starting Science from God

Rational Scientific Theories from Theism

IAN J. THOMPSON



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# Contents

	<i>Preface</i>	<i>page ix</i>
	<i>Acknowledgements</i>	<i>xi</i>
	<b>Part I Preliminaries</b>	<b>1</b>
<b>1</b>	<b>Introduction</b>	<b>3</b>
	1.1 Theistic postulates	3
	1.2 Theism and science	4
	1.3 Laying the foundations	9
<b>2</b>	<b>A Short History of Theistic Ideas</b>	<b>13</b>
	2.1 Greek philosophical foundations	13
	2.2 Christian theism	15
	2.3 The scientific revolution	17
	2.4 Insights and critiques	19
	2.5 Creation and evolution	21
	2.6 Consciousness and process	22
	2.7 Quantum influences	23
<b>3</b>	<b>A Way Forward</b>	<b>25</b>
	3.1 Conflict or integration?	25
	3.2 Changes to science	26
	3.3 Changes to theology	27
	3.4 Religious scriptures	29
	3.5 New frameworks	30
	3.6 Authority and evidence	31
	<b>Part II Ontology</b>	<b>33</b>

<b>4</b>	<b>Power and Substance</b>	35
4.1	Substance	35
4.2	Dispositions	36
4.3	Scientific analyses of powers or dispositions	37
4.4	Dispositions in nature	39
4.5	The proposed ontology	41
4.6	Discussion	42
4.7	Quantum physics	45
4.8	Dispositions in psychology	49
4.9	Intentionality of the mental	51
<b>5</b>	<b>Multiple Generative Levels</b>	54
5.1	Beyond simple dispositions	54
5.2	Derivative dispositions	55
5.3	Physical derivative dispositions	57
5.4	Psychological derivative dispositions	61
5.5	Analysis of generative sequences	64
<b>6</b>	<b>A Dynamic Ontology</b>	69
6.1	Dispositions as units of understanding	69
6.2	History of substance	73
6.3	Natural laws?	76
6.4	Philosophy of levels	77
6.5	Identity, change and essence	79
	<b>Part III A Scientific Theism</b>	83
<b>7</b>	<b>Plan of Approach</b>	85
<b>8</b>	<b>The 'I am'</b>	89
8.1	Being itself	89
8.2	Assertions that 'God is X itself'	89
8.3	The Argument from Being	91
8.4	Consequences	92
<b>9</b>	<b>God is Not Us</b>	94
9.1	Unselfish love	94
9.2	Selflessness and personal unselfishness	96
9.3	God is good	97
9.4	The Argument from Love	98
9.5	Combining the Arguments from Being and Love	99

9.6	Analogical and literal language	101
<b>10</b>	<b>Images of God</b>	102
<b>11</b>	<b>God is Love</b>	106
11.1	Love Itself	106
11.2	Love and substance	107
11.3	Love and thought	108
11.4	Summary	110
<b>12</b>	<b>God is Life Itself</b>	111
12.1	Life	111
12.2	Life of created beings	113
12.3	But we <i>do</i> appear to live!	114
12.4	Appropriating life	115
<b>13</b>	<b>God is both Simple and Complex</b>	119
<b>14</b>	<b>God is Wisdom and Action</b>	123
14.1	Knowing causes and loves	123
14.2	Abstract knowledge	124
14.3	Divine Wisdom	125
14.4	Relating Love and Wisdom	126
14.5	God as the source of our own understanding	126
14.6	God is Action	127
14.7	A triad within God	128
<b>15</b>	<b>God is Transcendent and Immanent</b>	130
15.1	Transcendence	130
15.2	Immanence	131
15.3	Omnipotence	131
15.4	Eternity	133
<b>16</b>	<b>We Act Sequentially</b>	135
16.1	Time	135
16.2	Foreknowledge	136
16.3	The future	139
16.4	Freedom	140
<b>17</b>	<b>We are Composite, as Spiritual, Mental and Physical</b>	143
17.1	Retaining life	143
17.2	Spiritual, mental and physical	144
17.3	Realms	145

<b>18</b>	<b>We are Sustained by Influx From God, Directly and Indirectly</b>	148
	18.1 Spiritual, mental and physical operations	148
	18.2 Is this occasionalism?	149
	18.3 Multiple spaces and discrete degrees	151
	18.4 Consequences of discreteness	151
	18.5 Direct and indirect life from God	153
	18.6 Influx	153
	18.7 Consciousness	154
<b>19</b>	<b>God is Equally Present in All Subparts</b>	155
	19.1 Subparts as enneads	155
	19.2 Explorations	156
<b>20</b>	<b>The Theistic Universe</b>	160
	20.1 Support for the dynamic ontology	160
	20.2 Life from God	161
	20.3 Mirrored functions as correspondences	162
	20.4 Persons and their identity	162
	20.5 Intentionality	164
	20.6 Law and divine intervention	164
	<b>Part IV Theistic Science</b>	167
<b>21</b>	<b>Methods</b>	169
	21.1 Beginning theistic science	169
	21.2 Methodology of levels	171
<b>22</b>	<b>Discrete Degrees in the Mind</b>	173
	22.1 Minds	174
	22.2 Microscopic mentality	174
	22.3 Whole-person mentality	178
	22.4 Order of production vs order of growth	180
	22.5 Substructures	181
	22.6 Stages of emotional development	183
<b>23</b>	<b>Spiritual Discrete Degrees</b>	187
	23.1 What is the spiritual?	187
	23.2 Common misconceptions	188
	23.3 Sub-degrees of the spiritual	196
	23.4 Spirituality in life	197

23.5	Heavenly states	199
<b>24</b>	<b>Discrete Degrees in Nature</b>	<b>201</b>
24.1	Physical sub-degrees	202
24.2	Sub-sub-degrees of the physical	204
24.3	Existing physics	207
24.4	Selections: new physics?	211
24.5	Pre-geometry: new physics?	214
<b>25</b>	<b>Mind-body Connections</b>	<b>217</b>
25.1	Relations between degrees	217
25.2	Mind-body connections	219
25.3	Correspondences	222
25.4	Distinct minds and bodies	225
25.5	Spiritual-natural relations	225
25.6	The human (functional) form	227
	<b>Part V Applications</b>	<b>229</b>
<b>26</b>	<b>Evolution</b>	<b>231</b>
26.1	Causal explanations	231
26.2	God needs evolution	233
26.3	Descent by modification	236
26.4	Why evolution is true	238
26.5	Evidence	240
<b>27</b>	<b>Consciousness</b>	<b>243</b>
27.1	The hard problem	243
27.2	Awareness	244
27.3	What awareness is not	247
27.4	Awareness in animals and plants	248
27.5	Timing issues	250
27.6	Parapsychology	251
<b>28</b>	<b>Spiritual Growth</b>	<b>253</b>
28.1	The need for spiritual growth	253
28.2	Permanent development	254
28.3	What spiritual growth is not	255
28.4	Stages of spiritual growth	256
<b>29</b>	<b>Errors and Evils</b>	<b>258</b>
29.1	The problem of evil	258

29.2	Mackie's logical problem of evil	259
29.3	Divine versus Absolute omnipotence	260
29.4	Real questions	262
	<b>Part VI Discussion</b>	265
<b>30</b>	<b>Metaphysics</b>	267
30.1	Rational theology	267
30.2	Firsts and lasts	269
30.3	Rationality and love	270
30.4	Divine immanence	271
30.5	Mental dualism	272
<b>31</b>	<b>Formal Modeling</b>	274
31.1	Is modeling possible here?	274
31.2	Physical models	275
31.3	Causal sets	276
31.4	Associative spaces	277
31.5	Cognitive and connectionist nets	277
31.6	Self-aware artifacts?	278
31.7	The recursively nested hierarchy	279
<b>32</b>	<b>Possible Objections</b>	281
32.1	Logical formulation	281
32.2	Philosophy	282
32.3	Theology	284
32.4	Psychology	288
32.5	Biology	290
32.6	Physics	290
<b>33</b>	<b>Conclusions</b>	292
<i>Appendix A</i>	<b>Theistic Postulates</b>	294
<i>Appendix B</i>	<b>Further Resources</b>	296
	<i>Works Cited</i>	298
	<i>Index</i>	307

## Preface

I BELIEVE in God. I am a nuclear physicist. Those two things do not conflict in my mind, but instead they enhance each other.

Most of us have some idea about God and about how there might be such a being rather different from those we see every day. The concept of God has varied widely among religions over centuries, and it still varies among religions today. I subscribe to 'theism', in which God is seen as having created and as now sustaining the world. In the Judeo-Christian-Islamic tradition—the 'religions of the book'—this God is an eternal, omnipotent and benevolent being who transcends the temporality and limits of the world, but who still seeks a relation with the persons within it.

Theism has been continually supported by the religious traditions, and it was often used as a reference point in discussions between religions and the sciences. The early scientists such as Newton and Leibniz started from theistic frameworks, but science now presents purely naturalistic explanations that make no reference to God. Science now does not even assume any dualist distinctions between mind and nature.

The intellectual support for theism has thus been crumbling over the last two centuries. It is under a concerted attack today from many quarters. Newton and Leibniz thought that further scientific developments would support theism, but in fact many later scientists have turned actively against it. Sam Harris<sup>1</sup>, for example, claims that religious ideas are "mere motivated credulity" that should be subjected to "sustained criticism" for their lack of connection with evidence. Richard Dawkins<sup>2</sup> argues that the God of religion cannot be simple but must be of enormous complexity. Since God's existence can never be supported by finite scientific evidence, Dawkins claims that believing in his existence would be "a

<sup>1</sup> Harris, *The end of faith*.

<sup>2</sup> Dawkins, *The God delusion*.

total abdication of the responsibility to find an explanation". Robert Pennock<sup>3</sup> concludes that any explanation of nature that appeals to supernatural causes is invoking causes that are inherently mysterious, immune from disconfirmation, and that give no grounds for judgment in specific cases. Without the binding assumption of uninteruptible natural law, he claims, there would be absolute chaos in the scientific worldview. These are the challenges to be addressed in this book.

Outside of theology, theistic beliefs are typically professed, if at all, only in private or only on Sundays. Dualist or non-materialist understandings of the nature of mind are not valued. In most academic and intellectual activities, there is no public discussion of theism. Cosmology and evolution theories are formed without theistic considerations. Little public mention of dualism is allowed in biology or neuropsychology.

There is a place, therefore, for a robust statement of the foundations of theism in which logical and clear connections can be made with the sciences. That is my goal. I use the framework of a realist ontology where only things with causal effects are taken as really existing. Such an ontological approach follows the path started by Aristotle and further explored by Aquinas. Existing things constitute substances, and thus mere Platonic forms, idealistic consciousness, mathematics or information are not claimed to be that out of which things are made.

Scientists have various religious beliefs. Many scientists are happy with the great simplification of the world that can be achieved once non-physical things are excluded, whereas many others have feelings or intuitions that there is more to the world than the purely physical. One result of this tension has been the progressive simplification of religious beliefs, especially concerning their ontological claims, in order to shoehorn them into the restricted framework apparently allowed by science. I hope that this book will allow many of these simplifications to be reversed.

Starting science from God is a reasonable way to proceed.

<sup>3</sup> Pennock, "Supernaturalist explanations and the prospects for a theistic science."

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# **Part I**

## Preliminaries



# 1

## Introduction

### 1.1 Theistic postulates

**I**N THIS BOOK, I will formulate a *theistic manifesto* that makes explicit the foundational postulates of a scientific theism. On this basis, I will then show how deductions from these postulates give rise to the regularities of the physical world and how they generate psychological and physical structures and processes that can be confirmed from what science already has discovered. The essential theistic postulates are:

1. God is love which is unselfish and cannot love only itself.
2. God is wisdom as well as love and thereby also power and action.
3. God is life itself: the source of all dispositions to will, think and act.
4. Everything in the world is a kind of image of God: minds and also natural objects.
5. The dispositions of an object are those derivatives of divine power that accord with what is actual about that object.

On the basis of such postulates, I claim that we can understand how the world appears to function with considerable regularity in its underlying principles. It is from these principles that everything has its nature. There are laws which describe how these natures operate.

In a 2011 article at Salon.com, MIT physicist Alan Lightman<sup>1</sup> recognizes what he calls “the Central Doctrine of science”, that “All properties and events in the physical universe are governed by laws, and those laws are true at every time and place in the universe.” Theists do agree with that.

<sup>1</sup> Lightman (*Does God exist?*)

However, in theism, the laws themselves are not physical. Lightman later refers to “physical laws”, but he had not mentioned that qualification to start with. He only inserted it without argument. This question, of the physical nature of laws, illuminates the difference between the existing sciences and what I show is possible for science within theism.

Our discussion will focus on the features of God that are dynamic and therefore have an effect on the world. The relevant dynamic features may have higher priority in practical religious life than in traditional philosophy since they will often be outside the ‘essential divine attributes’ traditionally considered. That traditional list of divine attributes includes infinity, eternity, omnipotence, omniscience, immutability, impassivity, simplicity, necessity, etc., but not many of these have consequences for the way the world functions. In this book, therefore, I do not want to talk about merely the God of philosophy, but the ‘God of the living’. We will discuss for example how God is Love, how God is one into whose image we are growing, and how God is one who is delighted when we are happy for the longest period. These facts may appear to be less a part of philosophical than of vernacular religion, but they are no less important or true for that and they should be an essential part of any successful theism. I will lead up to a ‘living theism’, the view that God is that Person who is a necessary being, who is unselfish Love itself, Wisdom itself, and (in fact) Life itself.<sup>2</sup>

## 1.2 Theism and science

According to theism, God is responsible for both creating and sustaining the world. The theistic God is omnipotent, having at least powers far beyond those of humans. It is commonly believed by scientists that if God were allowed as an explanation in science, then an ‘anything goes’ attitude would prevail. They believe that the explanation of ‘God did it’ could be used for any event whatsoever, however regular or irregular and however comprehensible or incomprehensible. They reject the idea of God as some arbitrary and capricious old man who can do what he likes. A theist claims, in reply, that this reason for opposing theism in science arises from misunderstandings about the nature of God. We already know that there are considerable regularities in the manner of sustaining the world, so we

<sup>2</sup> Most often divine attributes will not be capitalized, except (as here) sometimes for emphasis, or for marking some important distinctions.

should instead explain the source and nature of those regularities. That source, for example, might be the constancy and eternity of the love and wisdom of God.

Allowing science to consider that God is the life of the mental and natural worlds would be a big mental jump from any naturalistic starting point. It would change the kinds of scientific theories that would be permitted. We will thus introduce a new kind of science called *theistic science*, as suggested by Plantinga<sup>3</sup>. You may argue that there is in fact only one kind of science, and that there is no sense in talking about e.g. ‘Australian science,’ or ‘theistic science’. However, there are ways in which plurality can and should be part of science. In particular, there can and should be multiple sources of ideas that lead to scientific theories. This means that we can consider theistic science a branch of each theoretical science that derives general theoretical principles from theism and which begins to give the results described later in this book. I argue that we should encourage ‘ontological pluralism’.<sup>4</sup> Some may respond that this pluralism only makes sense in the initial stages of a science but not in its mature stage. I reply that neither fundamental physics nor psychology—the subjects of this book—are mature sciences in the required sense. Some may argue that we should stick with the framework we have to see how far it will take us. There is always the possibility, they say, that materialist science will in the future give a complete and adequate account of mental processes, of the creation of the universe, and of the creation of life, so in the meantime we should not be impatient. I reply by asking that we consider the possibility that theism is true, and that God does make a difference to the world. Must we then wait 100 or 200 years until the naturalists have finally given up seeking natural explanations of those differences? Can we not start thinking now about these matters? To do so is to encourage ontological pluralism in science, especially concerning foundational questions. As Feyerabend<sup>5</sup> says in *Against Method*, in science there are in fact no fixed rules, and successful explanation is what counts. If some of us want to seek alternate explanations on the chance that we may be more successful in producing scientific predictions, then we should be able to do so. This is pluralism.

<sup>3</sup> Plantinga, “Evolution, neutrality, and antecedent probability.”

<sup>4</sup> This is already explicit in the foundation of physics and in psychological modeling. Basic physics, for example, considers strings or spin foams or deformed space as alternative possible ontologies. Psychology can consider symbols or functions or network connections in alternative possible ontologies. There is no principle of science that forever forbids such ontological pluralisms.

<sup>5</sup> Feyerabend, *Against method*.

We give the name theistic science to the kind of scientific activity within ontological pluralism that develops theoretical ideas for the relation between God and the created world and for how they function together. This enterprise starts by rigorously formulating and examining a 'scientific theism'. It then leads towards theistic science that gives rise to 'theistic psychology', 'theistic biology', etc., within an environment of ontological pluralism. If successful, we might one day begin to call these just 'science', but that, of course, remains to be seen.

Theistic science simply starts with the postulate that there is a God, according to the living theism defined above. Just as naturalistic physics starts from the a-theistic assumption of God *not* existing, I start from the assumption of God *existing*. We have to assume that something exists to start with, so both these ontological approaches should be allowed within science as long as they produce good explanations. Science by itself should not prejudge the kinds of ontologies to be assumed in the best theories, since that should depend only on the *results* of the investigations. The earth will not disappear from under our feet if we consider the possibility of God existing and see what conclusions might follow from that assumption.

You may be puzzled that I begin with theism rather than something simpler. Do we have to start by assuming an infinite God in order to do basic physics? I will discuss questions of simplicity and infinity in Chapter 13. For now, I only ask that I be awarded at the beginning the same deferred judgment as is awarded to superstring theory (for example). In the first step of an *ab initio* or fundamental theory, scientists write down the basic postulates from which they want to start and then proceed to derive from these as many conclusions as possible about the visible world. If they make predictions about something new or explain known facts in a new way without contradiction, this is regarded as a success. I ask that theistic science be allowed to follow the same pattern so we can judge at the end whether observations confirm or refute the theory. If they confirm theistic theory, then they may be regarded as evidence in favor of theism, otherwise not. This is different than the way that religious people regard theism<sup>6</sup>, but that does not stop us doing theistic science using the standard

<sup>6</sup> Some religious believers are reluctant to expose the foundations of theism to possible scientific investigations for fear that theism may be refuted. In reply, I would quote Socrates on the 'unexamined life' and furthermore note that many refutations are even now being attempted, for example by Stenger (*God, the failed hypothesis*) or Coyne (*Seeing and believing*). Ignorance hardly makes a good defense. Also, if I am wrong (whether in science or in religion), I want to know about it since I do not believe religious belief is only for other people.

scientific pattern. It is also possible that one day other non-theistic theories may be supported by the same evidence. I therefore challenge anyone to produce such other theories, similarly comprehensive, that are equally or more effective or better confirmed with respect to the predictions that this book will make on the basis of theism. Since in science the primary assumptions are not provable but are just that, assumptions, we should be allowed to consider alternatives.

When comparing theory with observation, we need to realize that every interpretation of observations depends on what prior theory we have in our minds, especially concerning how observations work and how it is determined that they are accurate. Observations are always 'theory laden' since their interpretation is not given by the observation itself but by previous theories. Without a method of interpretation, an experiment means nothing at all. It is therefore essential to consider alternative starting points so we are not saddled forever with what may be called a 'departure bias'.

Theistic science, as defined above, is different from traditional religion, theology or philosophy in that it attempts to describe the mechanisms by which God sustains or manages the universe and sustains or manages all the cause-effect relations within the universe. This is what makes the project scientific and thereby allows theism to enter science.

Throughout this book, there will be a number of recurring themes and ongoing conversations. These primarily relate to topics of continual debate among scientists, philosophers and theologians. The themes include:

- Is the world constructed as a monism, dualism, or theism?
- Can there be multiple levels or planes of existence?
- How can there be mind-body connections without denying the fully-fledged existence of minds or of brains?
- How can there be a Personal God, a Living God?
- How can we distinguish between divine and human actions in the world?
- How do physical, biological and mental structures come into existence? Are they created, gradually developed, or evolved?

These themes are listed here since I believe that the theism and science now being developed will, by the end of the book, suggest new answers to these queries.

Many scientists and philosophers resist this kind of theistic science. One reason is because those with a naturalist view have a negative bias con-

cerning all things related to God, spirituality, and even mind.<sup>7</sup> Another reason is because there is a logical impossibility of proving that something non-natural exists when the proof allowed is limited to natural measurements or abstractions based on them. This is related to another reason: that science does not have the *methods* to investigate spiritual or divine things. Many might ask, for example, how can we perform experiments or tests on God? How can we investigate things that cannot be seen empirically? Surely science and religion are the ‘non-overlapping magisteria’ (NOMA), as advocated by Gould<sup>8</sup>, where science is concerned with ‘what is’, and religion is concerned with ‘what should be’ (morality, ethics, and metaphysics beyond observations)? Many of these logical objections have been answered already by the skeptics, such as Stenger<sup>9</sup>, Coyne<sup>10</sup>, and summarized by Boudry, Blancke, and Braeckman<sup>11</sup>. They argue, and I agree with them on this point, that while science may adopt a *pragmatic methodological* naturalism, its naturalistic claims should not be stronger than this. We should not insist, for example, that science is forever barred from considering non-physical realities such as minds, spirits or God.<sup>12</sup> I agree with them because if these things are to make any practical difference, it must be possible for them to have effects in the natural world, and those effects must be able to be examined by scientists. If an angel appeared to heal the sick, then science should be able to investigate it rigorously. The above skeptics go on to argue that since such angels never appear, the theistic predictions fail and therefore theism should be rejected. I respond by arguing that theism was most often not correctly understood, and so the predictions were not correctly made. I will present new predictions for confirmation or falsification.

<sup>7</sup> This is to be contrasted with a ‘positive bias’, whereby anything proposed is provisionally accepted to see whether it is true. Those with a negative bias provisionally reject something new, even before considering whether it is true.

<sup>8</sup> Gould, “Nonoverlapping magisteria.”

<sup>9</sup> Stenger, *God, the failed hypothesis*.

<sup>10</sup> Coyne, *Seeing and believing*.

<sup>11</sup> Boudry, Blancke, and Braeckman, “How not to attack intelligent design creationism.”

<sup>12</sup> One consequence of adopting a pragmatic methodological naturalism, however, is what we already see: there are animated debates about what kind of evidence should be allowed in science, and what methods should be used to investigate the fringes of science such as parapsychology, near-death experiences, etc. Many scientists may, if pressed, admit that, if the same standard of evidence were to concern natural processes, then the already-existing evidence would be sufficient to prove the case. But still there is opposition.

### 1.3 Laying the foundations

This book sets out the structure of a theory that includes theism, then draws systematic conclusions from this theory, and only towards the end gives more details about our experience and observations. Part III contains a series of postulates that lay the foundation for the theory. The preliminary discussion surrounding each declared postulate is not meant to justify that assertion but only to make sure that it is understood correctly and that its declaration is plausible within a fundamental theory.

This will seem strange to many philosophers and theologians, especially those who have devoted their life's work to finding arguments, justifications and/or proofs for the existence and nature of God. I, by contrast, start in Part III by simply *assuming* that God exists and then follow that with claims about the nature of God—and all with no visible justification! How can I hope to get away with such audacity? The reason is that I am laying out the foundational postulates for a scientific theism as if it were just another scientific theory. Only after the postulates are complete and understood do we try to see what follows in detail, and only much later do I compare those predictions with observations. This is standard procedure in science, though perhaps not in philosophy and theology where more attention is paid to each claim in isolation. In today's scientific practice, whether we are theorists or experimentalists, we do not develop standalone arguments for the existence of (for example) quarks or superstrings. Rather, we only argue within the context of an overall theory that makes predictions on the basis of such existence claims. If the predictions prove correct, then this, we argue, allows us to legitimately claim support for the existence of what was postulated to exist at the fundamental level. This approach is particularly necessary if we are dealing with entities like superstrings, quarks (and now, even God) that will almost certainly never be observed with the naked eye.

There will therefore be few attempts to justify theism except by the results of the whole book. There already exist various attempts in ontology, from Aristotle, Anselm, Aquinas and others, to prove various properties of God from the existence or change or contingency of bodies in the world. Many of these proofs depend on a particular analysis of causation in nature, and since the analysis presented in this book is slightly different from Aristotle's, the details of the proofs do not proceed in the same manner. Investigating the various proofs, therefore, is beyond the scope of this book.

Part I continues in Chapter 2 with a short historical review of how monotheism has developed in Western thought and how it is presently suffering in competition with a modern science that remains based on naturalism. Chapter 3 outlines some minimal changes necessary in our views of both science and religion in order to bring them closer together. We will see the important role of 'love' in the constitution of beings, and multiple 'levels of existence' will be considered.

Part II develops the relevant concepts of dispositions and multiple generative levels, using examples entirely from existing science. There is no mention of theism whatsoever. The notion of disposition is found to be an essential 'unit of understanding' in all kinds of science, from physics to biology to psychology. It has the benefit of being largely content-neutral in the division between physical and mental properties. Chapter 4 considers all these kinds of dispositions and how science relies on them to provide the causal explanations that it seeks in order to gain understanding of the nature of things. This chapter claims, moreover, that the concepts of dispositions and of forms are sufficient together to construct a concept of *substance*. Substance is a serious philosophical problem that should be solved in any comprehensive account of ontology. Part III begins by laying out the foundational postulates for a scientific theism. By 'scientific' here, I simply mean the systematic attempt to think clearly, logically, without contradiction and in such a way as to make predictions whose validity can be confirmed (or not) by observation. There are many steps in making such predictions which therefore only follow in Part IV.

We will see that there is a logical gap between Parts III and IV. Part III produces an abstract and formal structure for what the world would be like under theism. It leaves open the *identification* of parts of that structure with what we experience and observe and does not declare what is mental or physical. Part IV, therefore, has to make some contingent identifications, and this is where *empirical scientific activities* enter in. I present my own judgements for what parts of abstract theistic structure should be lined up with the many physical and mental processes we see around us, but I always allow that I may be mistaken. Assuming that I am not wrong, in successive chapters I propose derived scientific theories for the nature of spiritual, mental and physical processes. I look forward to seeing whether they are (or are not) confirmed by experiments.

Part V follows the consequences of these theistic theories for topics of

current public interest and scientific investigations. These topics include the question of how life has developed on earth: have living creatures been created specifically or have they evolved according to mutations and natural selection? A second topic, much debated in recent years, concerns the nature of our conscious awareness and how it is related to the neurochemical processes in our brains. The connected topic of spirituality and spiritual growth is also discussed, in particular as to whether that growth depends on only mental influences or whether it also depends on actions in the world. Finally, Part V touches on the problem of evil in the world and how it could exist when God is both omnipotent and wholly good. No final resolution of this problem is given, only considerations about the nature of the world and of God's interaction with the world, things which need to be known before the problem can be addressed properly.

Part VI examines how these ideas fit into existing accounts of metaphysics, in particular with the relations of this theory with those of past philosophers as they dealt with similar problems about spirituality, minds and nature. Since many scientists prefer their theories to be formally expressed by mathematics, Chapter 31 discusses what the prospects are for such formalizations. While no completely formal version of theism can be given—it describes both God and persons who have their own free wills—there are various aspects of theism which could be expressed mathematically, and I make suggestions for further research. Part VI ends with a collection of possible objections to theism. Each point is stated and answered rather briefly. Again, most of these questions deserve a more full and comprehensive response.

The reader may in the end wonder what claims or predictions I can make to justify the 'extraordinary claims' to be made about God. Will I have produced 'extraordinary evidence' to prove these demanding claims? One answer is that the determination of what is 'extraordinary' relative to 'normal' is itself theory-laden: it depends on our previous theoretical suppositions. Many of the claims of modern science, for instance that material objects may possess consciousness and intentionality, are themselves equally extraordinary and so should require extraordinary evidence and not merely promissory notes that 'one day in the future' science will explain how this is possible.

I am not ever going to logically prove the basic features of theism that are needed for theistic science. There are in fact many attempts in other

places to prove the existence and attributes of God from what we know and maybe from what we already know outside of religion, but that is not my approach. I do not argue in a natural theology from nature and science to God. Instead, I start from God. Indeed, I propose to start science *from* God and theism. You will see what theistic science looks like. Perhaps you will consider that this theistic science has provided retroactive evidence for God: just as a successful string theory will provide evidence for the existence of strings. Like all inductive arguments from observations to ontologies this is not an absolute proof. You are free to declare (or delay) your own decision.

## 2

# A Short History of Theistic Ideas

**P**HILOSOPHICAL theism was built on the the first articulated monotheism that dates from the late Second Temple Jewish period of the prophetic tradition. We will see how the ideas of Greek philosophy came to be used to understand this Semitic theism and also the theism of Christianity. We will trace its development within Western philosophy and explain how it produced, and was then influenced by, scientific ideas and investigations. The exposition here is brief and takes the place of a more complete account which would include more of the Islamic and Indian contributions to theistic thought. Each era had its own underground currents, many of which were influential and even popular. Those currents were often hardly recognized by philosophy and were regarded as heterodox by the churches.

Every ontology, whether explicitly theistic or not, addresses similar issues. We want to see how the various recurring themes of Chapter 1 have been dealt with in the past. We also want to clarify the opposing tendencies in seeking explanations or resolutions of those problems. We will examine the tension between those philosophies that start from God and those that start from nature.

### 2.1 Greek philosophical foundations

The Greek philosophers wanted to know how the changeable world they saw around them was related to the world of knowledge which contained immutable and eternal truths. Plato (c. 427-347 BC) thought that what we knew truly were the *forms* of things, since these eternally existed whether

or not physical objects existed to embody the forms. The contemplation of forms as such, Plato thought, was the proper intellectual activity. In particular, the contemplation of the 'form of the good', which he took as the 'good itself', was an experience akin to uplifting mystical insights. This kind of quasi-religious experience led Plato to place greater emphasis on forms rather than on the physical world.

The result of Plato's emphasis on the pure forms as being what were absolutely real was an implication that the physical world was a 'poor shadow' of what was real. This shadow is what we would see on a cave wall when we are not facing the light. The physical universe is perhaps created by a subsidiary god or demiurge, not by the Absolute itself. Our task in life, according to Plato, is to love wisdom in order to raise ourselves out of immersion with everyday concerns. Philosophy enables us to live properly in our souls, which are 'self-moving' and hence have life in themselves and are capable of perceiving rational and transcendent forms. Our souls are certainly not the 'harmony of our body', Plato insists, since sometimes they act contrary to bodily inclinations.

Aristotle (384-322 BC) was a student of Plato but took the opposite down-to-earth approach to philosophy and knowledge. He directly examined physical objects, biological creatures, and human beings, which are all beings with potentialities for change and function. He said that each of these has a 'soul' which enables it to function in its proper manner. Plants, for example, have vegetative souls, animals have animal souls, and humans have rational souls. All these souls, according to Aristotle, should be conceived as the form or essential function of their respective organisms. That form is the form of the matter of those creatures, and the matter is that material out of which they are made. He was insisting on the reality of the natural world as that which has its sources of change within itself. Forms themselves do not exist externally to the beings that embody them. They may be intellectually distinguished—in the mind of the knower—but this does not mean that we can ever (as Plato thought) see forms as existing in a world of their own. Aristotle did develop the idea of a Divine Intellect which we share when we perceive rational truths, but in general his emphasis was on particular existing beings, not on absolute forms in some kind of intellectual or 'Platonic' heaven.

Although neither Plato nor Aristotle was a theist as we now understand the term, their agreements and disagreements set the stage for many long-

running debates. One tension has continued for millennia: the tension between emphasizing some eternal source (or 'firsts') as what is most real and active (as Plato did), in contrast to emphasizing everyday objects in our physical universe (or 'lasts') as what are most real and active (as Aristotle did). A full account of theism has to integrate these two approaches, I believe, so that both God and the world have significant roles.

## 2.2 Christian theism

The first centuries of Christianity were profoundly influenced by the Second Temple Jewish monotheism. Much philosophical effort was put forth to comprehend, not theism itself, but rather the natures and relations of Jesus and God. The influential thinkers here were Justin Martyr, Tertullian, Origen, Athanasius (culminating in the Nicene Creed), and Augustine. Their formulations included many individual terms of Greek philosophy, but these terms were not included within a systematic framework.

The first comprehensive attempt to understand something like theism in terms of Greek philosophy was that of Plotinus (204-270), who used ideas from Plato to view the creation of the world as an emanation from God the Absolute One. In this 'Neoplatonism', the Absolute One contains no division, distinction or multiplicity, not even the distinction between being and non-being. Yet by emanation or 'overflowing', it produces a created universe that descends by degrees eventually to the material level. The world is not created from love, and it does not even act freely, but follows necessarily from the One. This Neoplatonism proved attractive to many Christian and Islamic thinkers such as the Alexandrians, Augustine, and pseudo-Dionysius, even though it was initially opposed to Christianity and not generally accepted as orthodox because of its non-dualist and gnostic tendencies. It was not thought to allow sufficiently for the distinction between God and humans. Also the route it described for religious salvation was through esoteric knowledge and mystical union rather than by means of a religious or social life accessible to everyone.

Thomas Aquinas (1225-1274) was the first to take seriously within Christianity the works of Aristotle. Islamic philosophers and the Jewish monotheism of Maimonides had already been influenced Aristotle's books. Aquinas showed how Aristotelean concepts may be used to formulate a metaphysics in which Christianity may be understood. At the

time, the general opinion was that a Platonic formulation would be easier, but Aquinas showed that, with only a few extensions, Aristotle's approach was very useful. Aquinas used Aristotle's analysis of organisms in terms of function and form. He again described these functions as caused by vegetative, animal and rational souls. However, he decided that since forms must always be forms *of* some substratum, that substratum cannot be matter in general (as Aristotle thought) but instead must be whatever exists that has *no* form or property. The underlying substratum or substance must therefore be *pure potency*: just and only that capacity to receive and embody forms. Aquinas viewed the causal powers of objects and organisms as arising from the forms (that is, souls) of those beings, since pure potency is too indeterminate to generate specific powers. This view requires attributing causal powers to forms which must therefore be somehow more than 'shape' and 'structure'.

In order to adapt Aristotle's philosophy to Christian theology and the survival of bodily death, Aquinas took the *rational* soul of humans to be *not* a form of the physical body but rather a form which is immaterial in some way. He was not clear concerning the nature of this immateriality, only saying for example, that an angel can be formed as an immaterial substance by conjoining an intellectual soul with an 'act of existence'. A whole person needs also a physical and biological body to function, but the intellectual soul can persist somehow as some immaterial aspect and be influential as a 'formal cause' in some way.

God was conceived by Aquinas in the full theistic manner as Perfect and Immutable Being Itself, Truth Itself, along with the attributes of Impassibility, Transcendence, Immanence, Omnipotence, Omniscience and (Omni)benevolence.<sup>1</sup> What is new with Aquinas is that God is conceived as Pure Act and is completely devoid of potentiality.<sup>2</sup> 'Love' gets added in as one more perfection. We may reasonably ask, however, whether Aquinas had the correct way of conceiving God to be a creative power, considering that the formulation of 'Pure Act' excludes all concepts of potentiality and hence of power and therefore partly contradicts the view of God as powerful.

Aquinas' philosophy (Thomism) subsequently became orthodox within

<sup>1</sup> All capitalized here to emphasize their leading roles in Thomist metaphysics and theology.

<sup>2</sup> If God had potentiality, Aquinas argued, then he could change and therefore would not be immutable. Or he could improve, in which case he would not previously have been perfect. And God certainly cannot change for the worse.

the Catholic church. Because it was based on Aristotle's approach rather than that of Plato, we can argue that this scholasticism laid the first foundations for a scientific revolution that starts not with God but by examining nature itself.

### 2.3 The scientific revolution

The first work of René Descartes (1596-1650) was in mathematics and science. He is well known for the 'Cartesian coordinates' used in drawing graphs in all kinds of mathematical physics. He formulated theories for how the internal organs of animal bodies operate from natural causes. He took these causes as operating according to a mechanical philosophy, where the sizes and shapes of components of systems are what determine their operation.

Later in his life Descartes wanted to make a new foundation for philosophy, in particular one that kept natural science separate from the human souls responsible for rational thought and hence also separate from religion. His philosophy took the (by now well-known) skeptical approach in order to see what can be known when conventional knowledge is not taken for granted. By means of his 'Cogito, ergo sum', he concluded that we have a separate 'rational soul' by means of which we can have intellectual logic, thought, and comprehension. He contrasted this soul with the extended objects he had used in his mechanical philosophy. He concluded that there exist two types of substances: rational souls which are constituted by thought and physical objects which are constituted by extension. Rational souls are not extended, and physical objects cannot think rationally. All *non*-rational processes in humans and animals (reflexes, sensations and feelings) are to be entirely explained by the mechanical operation of extended bodies and their parts. As many have pointed out, however, Descartes did not explain the connection between souls and the natural world.<sup>3</sup>

Descartes was merely formalizing what had already been believed since even before Aquinas: that there was a natural world of causes and effects and, in addition, a set of human souls of some immaterial nature and ca-

<sup>3</sup> It is probable, in retrospect, that in a metaphysics where 'thought' and 'extension' are the only two essential principles no bridge between them can be found apart from a simple declaration (unexplained) that such a connection exists.

pable of rational thought. The fact that Descartes brought this distinction clearly into the open has effectively made him a scapegoat for everyone who has complaints about our understanding of mind and its relation to the body. The name 'Cartesian dualism' has become a term of derision.<sup>4</sup> However, Bolton<sup>5</sup> points out that when we "attribute the influence of Dualism to Descartes, we are implicitly attributing to him the power of imposing his own peculiar way of thinking on a whole civilization for three centuries together. In reality, this kind of power is so rare that it is usually considered an attribute of the founders of religions, not of philosophers."

In an attempt to unify what Descartes left separate, Baruch Spinoza (1632-1677) concluded that whatever exists must have the properties of *both* extension and rationality. Furthermore, it is the single God which exists with this combination of attributes, a God which exists impersonally. All of us apparently separate beings are in reality modes of existence of that One God. This again is explicitly a non-dualist and pantheist view of reality and is hence distinct from theism. However, it is a demonstration of what kind of theory might have to be conceived of in order to be logically and philosophically consistent. Spinoza's work demonstrates again the importance of considering the nature of God if we are to have any satisfactory account also of the physical world.

Isaac Newton (1643-1727) is famous for having developed mathematical treatments for many natural phenomena, especially concerning mechanics, gravity and optics, and he is seen by many today as the prototypical modern scientist. However, he adhered to a very strict monotheism wherein God had absolute Omnipotence. Since this was not orthodox from the Christian point of view—he did not allow that Jesus could be divine—it was hidden from the public even in his own lifetime. Like Nicodemus, he came to God in secret.<sup>6</sup> Though many today think of Newton as a deist, he in fact followed theism rather diligently. He took God as sometimes

<sup>4</sup> As, for example, Paley ("Cartesian melodrama") discusses: "There is, of course, a small paradox in all of this. If the hostility to Descartes has been so widespread for so long, in what sense has he been influential? How can it be said that Cartesianism permeates the modern world if virtually no one has had a good word to say about it? To take one obvious example, mind/body dualism never caught on, and for three centuries it has been dismissed by the vast majority of philosophers who have considered it. So why is it routinely assumed to be the 'traditional' view? Is it possible that Descartes could somehow have influenced 'the common man' (a familiar figure, once upon a time, in analytic philosophy), even though 'intellectuals' were queuing up to refute him? Did the idea that there were two forms of substance, one material and the other immaterial, somehow seep into western culture, like a disease poisoning the water supply, while philosophers, physicists and biologists were all looking the other way? How exactly is that supposed to have happened?"

<sup>5</sup> Bolton, "Dualism and the philosophy of the soul."

<sup>6</sup> See Snobelen ("Isaac Newton, heretic").

directly active in the world in order, for example, to reward moral behavior. Because Newton hid this theism, this aspect of his thinking had little public influence. This split within Newton between theism and naturalism was sustained by the public perception of him as a natural philosopher (physicist). His reluctance to publicly bridge this gap was a precursor to many later divergences within philosophy and science between theories of theism and of nature.

Gottfried Leibniz (1646-1716), a contemporary of and a competitor to Newton, developed metaphysical ideas that had great influence on early scientific Enlightenment but which were less than a full theism. Leibniz viewed God and nature as operating in parallel, with a perfect God creating the best possible universe that functioned perfectly on its own. He had all of nature consisting of atoms or 'monads', each of which had some kind of basic mentality and each of which lasted forever. This is a kind of pan-psychism, but the scientific public preserved only the idea that atoms last forever and do so independently of God. There is no room in Leibniz's system for God to influence the world, and this was one reason for his arguments against the theism of Clarke and Newton, as will be further discussed in Chapter 30. Leibniz may have wanted to preserve some kind of non-denominational theism in the interests of civil liberty and tolerance, but, because he wrote both God and minds out of causal influence on the world, the long-term effect of this writings was to maintain a 'two kingdoms' approach to scientific and religious knowledge. In the end this favored naturalism.

## 2.4 **Insights and critiques**

Instead of following or inventing a rational system of metaphysics, David Hume (1711-1776) was more skeptical and wanted to ground his beliefs only on what could be empirically observed. He attempted to form an entirely naturalistic 'science of man' that described the psychology of human nature. He saw this nature as based on desires rather than on reasons, in contrast to the rationalists of the previous generation. He was skeptical of religion, especially its more metaphysical assertions and its acceptance of miracles. He wanted, with John Locke, to keep religion separate from civic activities.

Emanuel Swedenborg (1688-1772) started out similarly following the

new scientific philosophies and wanted to understand how all of nature, organisms and even the soul functioned in the world. To this end he began to develop theories based on the observations of his contemporaries. However, in midlife he experienced a kind of spiritual awakening that led, he said, to his constant presence in a spiritual world as well as in the physical world. He then published many works detailing a religious and theistic philosophy, from which I have learned a great deal. In fact, I find in Swedenborg<sup>7</sup> the clearest presentation of the arguments within theism that I use in Part III, in particular the arguments from love and from life, and also the universal three-fold subdivision of parts. It continues to surprise me that his theories are not more widely known. One reason for this may be that his philosophy was bound up with specifically religious content which made historical and particular claims. His views were also expressed in the terms of the science of his day that we know is no longer adequate. Furthermore, his supporting evidence consisted of his spiritual explorations which are difficult or impossible to replicate, though some reports of near-death experiences show a commonality. Perhaps there will need to be further independent support for Swedenborg's claims before they can be generally accepted today.

Immanuel Kant (1724-1804) was a philosopher who was of two minds about Swedenborg. Kant had also started out thinking about physics and nature, being an enthusiastic supporter of the new sciences from Newton. Kant (1929) tried to develop science along these lines, with several attempts to form realistic ideas of space, forces and motion in nature. He wanted to include religion (or at least the good effects that it has on practical reason for society), but, in the new scientific age, he was unable to find a realistic basis for this in ontology or metaphysics. He saw that Swedenborg claimed to have precisely what he needed here—an empirical basis for a spiritual reality—but was unable to go along with him for fear of disapproval by his academic peers. The product of this conflict in 1766 was the anonymous<sup>8</sup> book of Kant (2002), where he more-or-less accurately describes Swedenborg's theory but in the end ridicules Swedenborg and his claims. In private he was more accepting. Palmquist<sup>9</sup> and Thorpe<sup>10</sup> both explain how Kant's later philosophy of an 'intelligible world' can

<sup>7</sup> Swedenborg, *The divine love and wisdom*.

<sup>8</sup> Kant cannot have expected complete anonymity, since, for example, he lists the names of his friends whose queries prompted him to write the book.

<sup>9</sup> Palmquist, *Parapsychology, philosophy and the mind*.

<sup>10</sup> Thorpe, "The realm of ends as a community of spirits."

be usefully regarded as an attempt to construct a view that has the same *practical* effect as would follow from Swedenborg's religious philosophy but with neither the ontological commitment nor the allowance of any evidence not based on sensory inputs. In, for example, his metaphysics lectures of 1782-3, given between the publication of the first and second editions of the *Critique of Pure Reason*, Kant argues for ideas rather similar to those of Swedenborg. Kant argues in favor of the concept of a moral community not governed by physical separations but by qualitative moral relations. Thorpe points out a significant difference, however, in that Kant later arrives at a position where that community in the intelligible world is determined by the free choices of autonomous agents and hence not influenced by God. Such autonomous existences, we note, are not really possible within theism.

## 2.5 Creation and evolution

With the progress of the scientific revolution, the need for any influence of God on daily events became less and less obvious, culminating in Laplace's claim that "I had no need for that hypothesis" to describe the evolution of the physical universe. Others, however, still saw evidence for God in the detailed nature of that universe, especially in the existence of living creatures that appear to be wonderfully made, as if designed. William Paley (1743-1805) published *Natural Theology; or, Evidences of the Existence and Attributes of the Deity* in 1802. He argued from the perfection of living creatures to the existence of a good Deity who made them. Arguments in this manner of 'natural theology' were then very popular. Hume had in fact already presented counter-arguments to many of Paley's claims, demonstrating the weakness of arguing from nature to God. Paley's argument presupposes a general belief in the 'goodness of nature', or else, as Hume says, God becomes responsible for the unpleasant natural phenomena as well.

Charles Darwin (1809-1882) was predisposed at an early age towards naturalistic explanations but still took seriously Paley's arguments from design. Then Darwin conceived that gradualist processes of natural selection were responsible for producing the great variety of biological species and also the appearance of design within them. In this way, he was able to counter Paley's argument. Even the possibility of natural processes was

presumably sufficient to rebut his inference about God. Darwin was effectively advocating a deism, because, he said, he did not want any God to exist that would be responsible for the suffering, predation and parasitism, etc., which he saw everywhere in nature. Others point out that if God was not involved, there could be no reason given for retaining a divinity at all. Darwin was claiming that God does not influence the world after creating it, and such claims reduced public support for theism.

## 2.6 Consciousness and process

Even if biological evolution could be explained, there were still many questions remaining about the nature of mind and consciousness, questions which theism once might have been called upon to answer. There began to be much public interest in spiritualism and psychic phenomena, and the Society for Psychical Research was founded in 1882. These activities were not now based on theism but rather on phenomena that were not explained by either the religious or scientific establishments. William James (1842-1910) was not religious, for example, though from his father he had been exposed to Swedenborg's ideas. He wanted to know about minds, took the question of human immortality very seriously, and published the first comprehensive description of religious experiences. James<sup>11</sup> proposed a 'transmission theory' of human consciousness, contrasting it with the theory that it is generated by the brain. He lacked, however, a theory of what might *exist* to account for human consciousness or immortality, and in the end, James<sup>12</sup> even asked "Does 'consciousness' exist?", seeming to reply in the negative. Unless there is *some* ontology, I will counter, the possibility of a proper science fades away.

Alfred North Whitehead (1861-1947) was a mathematician who became interested in the foundations of physics. He first followed interpretations of special relativity, in which only events existed. Then in 1929 Whitehead published a fully-fledged 'process philosophy'. According to this mature viewpoint, the world consists of a succession of 'actual occasions' that develop and become actual by 'perceiving' their predecessors in a way reminiscent of conscious perception. Within his philosophy there is also the beginning of a 'process theology' whereby God is involved in creation,

<sup>11</sup> James, *Human immortality*.

<sup>12</sup> James, "Does 'consciousness' exist?"

having both a primordial and a consequent nature, and whereby God develops along with the world. God's influence on the world is first by the 'ingress' of forms for actuality (as with Plato) and second as a 'lure' to humans for what is good. In both cases, there are no directly causal influences. In fact, there are no active causes anywhere in his ontology, not even in the physical world. Rather, everything, even physical processes, is modeled on perception by organisms, resulting overall in a panpsychist view of the entire universe.

Whitehead's philosophy can be called theistic, but only in a weak sense because the positive influences of God on the world are limited to those creatures with desire and with a conscience. His ideas were developed by Charles Hartshorne<sup>13</sup> and by John Cobb<sup>14</sup> into a 'process theology' that has become popular. It seems to offer consistency with modern physics. It has an emphasis on 'becoming' rather than 'being', along with explanations of how consciousness might arise in organisms. It also has an explanation of why Darwinian natural selection may have been necessary.

## 2.7 Quantum influences

Questions of how mind or God may influence physical reality have remained alive since Whitehead's era and seem to be a focus of thoughts for those who might be inclined to theism but who do not find any suitable general framework. In modern times, physical reality tends to be described by quantum mechanics. One topical question is whether quantum mechanics allows the physical world to be influenced by consciousness or by God. Since quantum theory is indeterministic by itself—it only predicts probabilities—and since the existence of a conscious observer is often invoked to solve the measurement problem in quantum mechanics, it does seem that these influences on physics are possible.

Amit Goswami<sup>15</sup> recently appears to be explaining theism, for example, when he says that "God is the agent of downward causation". One reading of this is true in theism, but Goswami turns it around. According to him, every instance of downward causation is God, so any experiment which demonstrates non-local correlations is therefore a proof of God. That is

<sup>13</sup> Hartshorne, *A natural theology for our time*.

<sup>14</sup> Cobb, *A Christian natural theology*.

<sup>15</sup> Goswami, *God is not dead*.

not the God of theism, and I find it farfetched to claim to have thereby 'rediscovered God within science'.

Quantum physics may be indeterministic about the detailed choices between different outcomes for some classes of microscopic events, namely decoherent measurements, but it is not completely arbitrary. It makes very precise predictions for the probabilities of those outcomes, and, furthermore, the evolution of these probability distributions is completely deterministic.

Either mind influences the choice when decohering measurements occur (as Stapp<sup>16</sup> suggests), or it changes the probabilities of different outcomes (as Saunders<sup>17</sup> and Bielfeldt<sup>18</sup> also consider). In the first case, the range of influence is extremely limited and hardly plausible in a dualist theory. In the second case, the non-physical input changes the probability rules of quantum physics in just the same way as dualist input would change Newton's laws of motion if it were to influence classical systems. I conclude therefore, with Saunders and Bielfeldt, that it is very doubtful that any dualist or divine input into the operation of the natural world proceeds by exploiting the small residual indeterminism of quantum physics. Dualist control in quantum physics is no easier than in classical physics. That is, any influence of a dual degree must affect those properties of objects that are also measured by physics.

The challenge is to find a coherent theory which explains what, when, how and why those physical properties are changed. In order to meet this challenge, we first need a coherent and realistic account of existence and causation, preferably one that can be used for both physical existence and for minds. That is the task of Part II.

Before such an account of causation can be used within a scientific theism, there are several fundamental issues that need to be addressed, especially where science and theism presently disagree. Several of these issues are addressed in the next chapter in order to find a new way forward to a theism that will give an account of God and nature and of their connection.

<sup>16</sup> Stapp, *Mindful universe*.

<sup>17</sup> Saunders, "Does God cheat at dice?"

<sup>18</sup> Bielfeldt, "Can western monotheism avoid substance dualism?"

# 3

## A Way Forward

### 3.1 Conflict or integration?

The previous chapter described a decline in theism within intellectual and scientific circles. It became more and more discredited to use theism in a realistic manner to describe how God exists in relation to the world, especially to the details of the world as found by the sciences. This decline is a consequence of the many objections put forward by scientists and philosophers since the time of Kant and of the related dissatisfactions with the kind of explanations put forward within theism. In light of this diminished acceptance and these dissatisfactions, it may seem doubtful that a way could be taken to an integrated understanding of the world together with God. Is it possible to find a view which includes both science and theology in a fully-fledged manner without doing violence to either? The theology to be advocated should describe a living God, rather than a merely metaphysical Absolute.

In this chapter I will describe a way forward to such an integration. It will be better explained in later chapters, as then the various suggested changes and methods to be advocated will be justified in terms of the theoretical structure. The purpose now is confined to outlining a series of small changes, both to science and to theology, which need to be made to understand the arguments to be presented. The small changes are modifications which, I claim, will not in the end affect the essences of science and theology but will, in fact, improve them.

### 3.2 Changes to science

Scientists should consider the possibility of as-yet-undiscovered dependencies of physical processes on such things as our individual minds or even on the transcendent mind of God. Such dependencies should be intellectually evaluated and evidence considered which might confirm such theories. We should *not* refuse to consider evidence because of a denial in advance of the very possibility of openness. In the end, any actual changes in science will be made only in the light of new theories and new evidence which properly describe and confirm how such influences operate, but at least evidence will not be denied a hearing according to normal standards. Scientists, in this new context, will still retain the ability to examine the regular and law-like behavior of material processes. It is only that, sometimes, the *causes* of those processes will not be previous material powers but something new to be investigated. A change needed is for science to *give up assuming the causal closure of the universe*. The likelihood of some causal openness for the universe should be admitted.

Some (perhaps many) scientists will respond with "Over my dead body! Did not we get rid of occult influences five centuries ago, and look how much better we are for that!" The theistic reply to this is "Fear not!" We are *not* asking for a return to the Middle Ages, to witchcraft or magic or anything similar, and moreover not to a 'new age' in which 'anything goes' and in which 'we make whatever reality we want'. Rather, the civil contract between secular citizens of good will should remain untouched. Any new science should be entirely robust and transparent and subject to public confirmations or disconfirmations. Admittedly we will be advocating immanent theism, rather than the deism in which God does not interact with the world, so the world will not be so simple, but it will not be the end of civilization as we know it.

In fact, it is likely that whole new sciences will be formed after we begin to understand the interactions between mental and physical processes. Many present-day scientists suspect that such interactions exist but are reluctant to admit this in public, at least on weekdays, for fear of ridicule. This reluctance is not actually based on evidence against such interactions. Every physical scientist feels pressure to assume causal closure in order to belong to the profession.

It seems to me that scientists are afraid of something: of the possible in-

ursion into the world (into the world of thought, if not the real world) of new powers which they have traditionally ignored and over which they have no control. They fear that even *thinking* that minds or God have influence would be to encourage an acceptance of what they think of as 'black forces'. I once thought like that, but I could not make sense of the world if neither minds nor God could influence it. Some scientists may be relaxed about the prospect, but they are not a majority in research circles. The theistic response, to assuage these fears, is to emphasize that these new influences of the mind and of God are *not* arbitrary, violent, or disruptive. Rather, the opposite. These influences, in theism, will be regular, will be conditioned in many ways, and will be supportive rather than upsetting. There is nothing to be afraid of within science: these are white rather than black forces, and in fact are largely responsible for generating the enormously complicated biological, psychological, sociological and civil structures we see in the world and certainly not for breaking them down.

One related change needed in science is to consider multiple levels of reality, where such levels are related by specific causes and specific laws that scientists will investigate. Such levels are not to be taken as merely distinct levels of explanation or of different microscopic vs. macroscopic levels of description but as multiple derivative levels that exist concurrently with and interact with each other. This change in science will be relatively easy. Chapter 5 shows that many of these levels are already known to science in some detail, though not recognized as such.

### 3.3 Changes to theology

Religious people might also benefit from making some changes in their theology. This is a delicate process, but, I believe, the changes to be suggested here can be justified with no loss of glory to God. Rather, it will turn out, there will be much gain. It is not a coincidence that the changes to be recommended here are a mirror of those required above for scientists.

The theological conflict arises because the God described in this book is a being composed entirely of Love, and, moreover, a completely unselfish love. To such a God, we assert that anger, jealousy, exclusiveness and selfishness are completely foreign, and that God is, rather, patient, merciful, compassionate, and accommodating. Many people will question whether this is the same as the God of the Bible (Old and New Testaments) and

of the Qu'ran. Those books claim to describe the same good God, but the God they portray does *appear* to be angry, jealous, possessive, selfish and vindictive. Which view is true, which view is appearance, and why? Let me give one possible resolution.

The theology in Part III will claim God is life itself: the very source of love and wisdom for all beings in the world. It will go on to explain how God is the source for all derived willing, thinking and acting in the universe. All power and glory should be attributed to God, as there is only one God and thus no other source of life. The divine Love of God in Himself can be viewed as similar to a brilliant source of light and glory before which nothing selfish or impure can stand if not shielded or otherwise aided. If unregenerate or selfish persons are in the presence of God, they will be extremely uncomfortable and pained. To such persons it truly *appears* that God is angry with them.<sup>1</sup> But, in reality, it is their *own* anger and selfishness which generates these discomforts and pains: real and powerful feelings. To them it does feel that God is angry and, in fact, angry with them personally. However that anger is certainly not from God but is a consequence of their own partial state of religious maturity and the manner in which God's glory is hence received imperfectly by them.

This reasoning explains why it only appears that God is possessive of his religious flock and jealous of other gods and that he selfishly believes that only his way is the truth and the life. Since there *are no other gods*, it is for *our* benefit that he deflects us from seeking them. It is a simple theistic fact that God is the one life and that this is not an arbitrary megalomania on God's part. It is actually a direct consequence of God's unselfish, compassionate, and perpetual care for everyone's individual wellbeing.

Therefore it is *our* variations which lead to God having varying appearances to us, while he is actually always constant and unselfish. Just as our sun is fixed, but we experience (real) days and seasons as our earth varies, so is it with God.<sup>2</sup> Since God is of Love and hence relates to us by means of our loves, it is our *deepest religious loves* which are varying, and thus drive the differing appearances. These deepest loves are what we will call spiritual loves.

If we can allow this explanation of the cause of the difference between

<sup>1</sup> By 'true appearance', I mean not a 'mere appearance' which has no effect, but something which has real effects, at least in our minds and bodies.

<sup>2</sup> "He causes his sun to rise on the evil and the good", Matt. 5:45

reality and appearances, we should feel free to affirm the purity and unselfishness of the God of Love as fundamental in theology. This affirmation will be made in Part III, and it will be the basis for many subsequent deductions within theism and science. It implies that God is continually trying to provide us with as much life as we are able to receive, retain and use. It is primarily we who vary.<sup>3</sup> Equivalently, we can take God as always doing everything that he can to help us but as still respecting our free choices. Once we can rely on God to act constantly and unselfishly for what is best in the long term, we have a good possibility of finding laws that relate theism and science and also a good prospect of discovering a science based on regular structures, dispositions and predictions.

Accepting the fact that God's love is good has important consequences for the concerns of scientists in the previous section. Many scientists worry about possible incursions of arbitrary powers by an omnipotent God. If God's omnipotence is ruled (as it should be) by his constant and unselfish Love acting by means of divine Wisdom, then the influences of God on the world will be good and constructive rather than destructive. The fact that some less-mature persons see those influences as fearful merely reflects their own spiritual states, in accordance with the principles outlined above.

### 3.4 Religious scriptures

Let us briefly discuss the consequences of the above account for how religious scriptures may be produced and read. The influence of God must have been received and filtered according to the spiritual and religious capabilities of the persons involved in the reception. When prophets produce religious scriptures inspired by God, they present a moral vision which reflects their own internal spiritual loves at the time. Historically religions did not *begin* by understanding the above facts about love and how our spiritual loves govern the way God appears to us. Rather, the written historical scriptures have an external moral character whenever the religious temper is external, with correspondingly more emphasis on ritual purity than on spiritual honesty.

The purpose of such divinely-inspired scriptures is to lead us toward life and love that are closer to God. This leading is typically from external

<sup>3</sup> As argued in Thompson ("The consistency of physical law with divine immanence").

toward more internal understandings and loves. The earliest scriptures present an external moral character that is less developed than that produced by later spiritual repentance and regeneration. Such early scriptures should still be understood as embodying the Word of God, but in a more hidden or obscure manner that is necessarily limited by the loves of the original recipients and writers. This implies that successive scriptures will be different in character. Later productions will embody God's love and wisdom more accurately than the previous writings.

### 3.5 New frameworks

My purpose is to follow through with the above theistic account of God and to use it to describe in simple (and perhaps somewhat bare) terms a new framework of theistic science that enables an integration of theology and the sciences. By the sciences, I primarily refer to physics and psychology.

The first step toward this integrated framework is to formulate a clear idea of causation, especially an idea that may be generalized to include physics, psychology, and perhaps theology. The preferred concept of causation, to be developed in Part II, treats 'dispositions' as the primary feature of objects (both physical objects and minds). Although Part II contains no theology, this focus on dispositions arises because of the underlying theism in the whole project. The theism suggests love as the underlying reality for persons, and hence, in a derivative manner, suggests that dispositions and powers are the reality underlying both minds and nature. A concept of *substance* can usefully be developed and defined in terms of dispositions. Ideas of *multi-level* and *derivative* causation may also be defined and recognized in physics and psychology. Part II is required because changes in the philosophy of science need to be integrated within the new framework. Some likely predictions in science will be presented in Part IV.

This book describes, by deduction from postulates, a *framework* for theology and science and *not* theologies and sciences themselves. I do not predict quantum mechanics, quantum gravity, or detailed theories of thinking and memory in particular. I only provide a general framework in which such theories are to be expected and show how much I believe a theistic framework might ideally constrain the details of scientific theories. Those

future theories are thereby expected to happily link up with theism in general, as well as, I hope, with all verified empirical observations from scientific research.

### 3.6 Authority and evidence

If theistic science is to be in fact a science, it will be *only a theory*, and it will need to be justified by evidence and by rational logic and consistency. It cannot assume anything just on the basis of authority, neither the authority of a person nor of a book. It cannot, in advance, take anything as a proven fact. This applies to all scriptures, all revelations, and indeed to all experience. They cannot be authorities for theistic science. They are only evidence that may or may not support theories. Individual investigators will have their own beliefs, even their own firm convictions, but these can only be motivations and not proofs. This book will make and clarify some of the basic postulates of theism, but these postulations will not be automatically taken as proven. They are only the initial skeleton of an overall theory. Evidence and confirmation refer only to a theory as a whole or to the comparative evaluation of two competing theories.

Even if God speaks to someone in (say) a revelation, we still (as in any science) have to evaluate the likelihood that it *was* actually from God, that the person remembers it correctly, and that he did not distort the content of the message. Evidence and rationality enter into each such evaluation of the true nature of the revelation. Evaluation requirements still apply even if that person should be ourself. It applies even when the message is internally consistent and even when it has good effects. Such considerations will improve its evidential quality but can never automatically override the other considerations that should be part of the discernment. Personally we may be certain of something—and even build our lives on it—but such certainty is not part of any public science.