

KNOWING THE UNKNOWABLE

Science and Religions on God and the Universe

Edited by
John Bowker

I.B. TAURIS

LONDON · NEW YORK

CONTENTS

<i>Acknowledgements</i>	vii
<i>Notes on Contributors</i>	viii
<i>Preface</i>	xiii
Introduction: The Unknowable as Invitation in Science and Religion	1
<i>John Bowker</i>	
1. A Taxonomy of Absence	35
<i>John Rodwell</i>	
2. Understanding the Radiant Sun: The Unknown and the Unknowable in an Example of Scientific Approach	45
<i>Ramanath Cowsik</i>	
3. From the Unknowability of the Universe to the Teleology of Reason: A Phenomenological Insight into Apophatic Cosmology	63
<i>Alexei V. Nesteruk</i>	
4. On Knowing the Unknowable: Immanuel Kant and the Unknowable Real	87
<i>Keith Ward</i>	
5. Three Forms of Negativity in Christian Mysticism	99
<i>Bernard McGinn</i>	
6. On Clouds and Veils: Divine Presence and 'Feminine' Secrets in Revelation and Nature	123
<i>Sarah Coakley</i>	

7. Knowing the Unknowable about God and the Universe:
Humility, Hope and the End of Knowledge 161
Oliver Davies
8. The Unknowable Not Unknown: The Poetry
of R. S. Thomas 175
Margaret Bowker
9. Knowing the Unknowable in Indian Traditions:
Representation, Absence and Cosmology 189
Gavin Flood
10. Some Theological Reflections on Buddhism and the
Unknowability and Hiddenness of God 201
Paul Williams
11. Divine Absence and the Purification of Desire: A Hindu
Saint's Experience of a God Who Keeps his Distance 227
Francis X. Clooney, SJ
- Afterword: Knowing the Unknowable 257
Rowan Williams
- Index* 263

The Unknowable as Invitation in Science and Religion

John Bowker

The purpose of this book is to examine the part played in both science and religion by the quest to know the unknowable in the case of God and of the universe. At first sight it may seem to be a spectacularly pointless waste of time, since if something is truly unknowable, there is nothing to be gained by trying to know it. That reaction, however, is far too simplistic: there may be a great deal to be gained, as the chapters in this book show.

It is true, of course, that some things are logically and (as John Rodwell puts it in Chapter 1) necessarily unknowable because they are not available to be known. Four sided triangles and fairies at the bottom of the garden are unknowable because they are not available to be known:

As I was going up the stair
I met a man who wasn't there.
He wasn't there again today.
I wish, I wish he'd stay away.¹

There are those who believe that God is in this category, and who insist that the unknowability of God arises simply because 'God' was never there in the first place. Such people would seem to be straightforward atheists. Among Indian religions, both Jains and Buddhists reached the conclusion that the kind of God described and worshipped in the

mainstream Indian traditions (what we may call anachronistically, but for the sake of convenience, Hinduism) was never there in the first place.² The consequence of that in Buddhism is reviewed in this book by Paul Williams (Chapter 10).

Less drastically, classical Samkhya allowed a comparable conclusion, because, while it accepted the authority of the Veda and did not construct arguments to demonstrate the non-existence of God, it did claim that there is no reason to postulate the hypothesis of God as creator: *prakriti* and *purusha*³ are sufficient to explain the entire universe and all events within it.

This strong sense of unknowability may seem unlikely in the sciences, because it is hard to see how in those circumstances experimental science could even begin. But in detail scientists have spent much time involved in unknowability in this strong sense (i.e., in trying to know that which was never there in the first place). Spissitude, phlogiston, caloric, morbid miasma, N-rays and the aether are standard examples.

But even at this extreme end of a spectrum of reasons for unknowability, the struggle to know the unknowable has not proved pointless. In the case of science, for example, it has demonstrated either that the claimed phenomenon does not exist (as in the case of aether and N-rays), or that the claimed phenomenon is a corrigible, and now corrected, way to account for what presents itself evidentially. The attempt to know the unknowable has thus proved immensely creative in the advance of understanding and knowledge. For example, James Clerk Maxwell (1831–79) originally thought that the flow of electric current and the transmission of magnetic effects depended on the aether rotating to form vortices, and his classical theory of electromagnetism depended on mechanical models of the aether. Nevertheless, his paper of 1865, ‘A Dynamical Theory of the Electromagnetic Field’, makes no mention of the rotations and vortices, and simply presents the famous equations which synthesise basic laws in the separate fields of electricity and magnetism – Coulomb’s law and the Biot-Savart law respectively. The aether and the vortices were unknowable because they were not there to be known, but the struggle to know the unknowable nevertheless proved to be extremely fruitful (on this example, see further p. 9).

Even among those who claim that God is unknowable because God was never there in the first place, the outcome has not always been a straightforward atheism. For example, the much-proclaimed ‘death of God’ during the second half of the twentieth century was not understood as the death of a previously living entity who no longer exists, but as the revelation, according to Mark Taylor’s ‘Postmodern A-Theology’, that ‘God’ was a subjective projection, the creation of human beings: ‘This revolutionary reversal both called into question the actuality of the divine and rendered doubtful all forms of religious authority.’⁴ ‘God’ as traditionally understood had never been there in the first place. However, Taylor sees himself not as having left ‘the Christian story’ but as still belonging to those ‘marginal people’ through whom the next, and very different, stages of that story will be told.

From this it becomes clear that claims to unknowability in the strong sense may turn out to be simply a recognition that existing characterisations, whether of God or of some aspect of the universe, are false. The Jain and Buddhist rejections of God might be neutralised by accepting their critiques, but by saying that God *as characterised* in those critiques is indeed ‘not like that’. ‘God’ would certainly be unknowable in the sense that there is nothing that corresponds to those defective characterisations.

This will seem fairly trivial at the level of ‘God as an old man with a beard’ or of the universe as a finite space in which the earth is central. However, there is a far more serious implication to this, both in religion and in science. To say that God is not like an old man in a correspondence sense of reference has led all theistic religions inexorably into the realisation that God is not ‘like anything’, and is beyond description, because God is not an object in the universe like other objects, open to observation and description.

It was this that led, in Christianity, to apophatic theology (defined on p. xviii) and the *via negativa*, and this vital theme is explored by Bernard McGinn, in Chapter 5. The *via negativa* was no doubt ameliorated by the *via eminentiae*,⁵ but even so it led Eckhart to suggest that the Trinity itself is a preliminary language that does not *correspond* to ‘the barren Godhead’,⁶ ‘what God really is’. The interplay between what can and cannot be said is teased out by Oliver Davies in Chapter 7.

It is striking that although Davies is writing about these themes in the Christian tradition, everything that he says applies equally to Indian religions, with very little alteration needed beyond the change of proper names and the replacement of ‘incarnation’ by *avatara* (manifestation of God). As Gavin Flood points out in Chapter 9, the Indian traditions are less inhibited about the emotional experiencing of God, and about representations of the divine that will lead worshippers in the direction of God. Images abound in Hindu temples, and there is a real presence of God in and through the images – as indeed there can be in and through the universe and objects in the universe. Nevertheless, there is wide acceptance that the signpost is not the thing signified. Brahman (the ultimately Real) has significant attributes (*saguna* Brahman), especially for those for whom the universe is the body of Brahman, but even so *nirguna* Brahman (Brahman beyond attributes) is more fundamental, and can only be approached in words by saying ‘*neti, neti*’, ‘not this, not this’ (or, ‘No! No!’: see p. 189).

The negative way may seem remote from the sciences since it is surely their task to state what is the case, rather than what is not. And yet, as Ramanath Cowsik points out (p. 54), it was the achievement of Karl Popper to remind scientists of the importance of their own version of a *via negativa*: to attempt to falsify a theory or a hypothesis is to strengthen, not weaken, its power; and Ramanath Cowsik exemplifies in his chapter (Chapter 2) exactly how this works in practice. The scientific objection to theories like that of Freud (to take just one example) is not that they are incapable of telling important stories that may help people to understand and re-form their lives, since clearly for some people they do exactly that. It was rather that they are incapable of being falsified. A more recent example is that of the widely popular theory of units of cultural replication known as memes: it is an interesting story but incapable, in its present state, of being a serious scientific theory, because it cannot be falsified. Memes turn out to be a reification of ignorance.⁷

Falsification has become so basic to the process of science that some version of critical realism has come to seem not just attractive but inevitable. No scientist can tell us, in any final or complete way, ‘what the universe is’. The universe is always unknowable by way of defective or incomplete

characterisation, so that whatever is said about the universe, or some aspect of the universe, is likely to be approximate, provisional, corrigible and incomplete, not least from the point of view of later generations. On the other hand, there is sufficiently what there is in the case of the universe for corrections to take place. On this basis science may be incomplete and corrigible, but it achieves immense reliability. The universe is unknowable in any incorrigible sense, and yet is known.

The point of interest is why and how, in a comparable way, our accounts of God are always corrigible and yet also achieve reliability. Clearly, no one can tell us, in any complete or final way, 'what God is'. So our language about God (even when it appeals to revelation) is bound to be approximate, provisional, corrigible and incomplete. Yet there is sufficiently what there is in the case of God for corrections to take place and for great reliability to be established. How do we know this? The answer to that has to be practical. It can be found only in the forms through which the exploration of relationship with God is brought into being, in response to what seems to be initiative *from* God, in such things as prayer, worship, contemplation, meditation, and in their consequences in the ways in which people live in the world and with each other. What that means *in practice* for particular people is the focus of the chapters by Margaret Bowker (Chapter 8) and Francis Clooney (Chapter 11). In both cases, the people chosen for study are those who accept with rigorous honesty the serious sense in which God is unknowable and yet is known.

The claim that, in both science and religion, the unknowable nevertheless is known, does not lead to the conclusion that everything eventually *will* be known if we keep chipping away long enough at the mountain of unknowability. It is the point of Alexei Nesteruk's chapter (Chapter 3) that some parts of the mountain (so to speak) are inaccessible to human enquiry. He takes as an example the origins of the cosmos, protesting against the ways in which abductive inference (essential though that is in all science, as I have shown in *The Sacred Neuron*) slides into an illegitimate assumption that this is the same as empirical observation.

Keith Ward (in Chapter 4) picks up the point that there are 'limits to knowledge at the bounds of sense'. But that principle of the philosopher Kant does not mean that all things beyond the bounds of sense are

completely unknowable. It is simply that they will have to be known in ways different from a crude empiricism which supposes that all we need to do in order to know anything is (as Bernard Lonergan used to put it) ‘to go outside and take a look’.

From all this it follows that the unknowable, or what is claimed to be unknowable, does not have to be a dead-end. It can be an invitation. It is an invitation to come further and deeper, in the one case into God, and in the other into the universe.

In the case of Christianity and the Indian traditions, the invitation may come from One who deliberately withdraws the sense of his being present. It comes to those who have no doubt that they have genuinely and authentically known God. But now God seems to have withdrawn deliberately from that earlier sense of presence – to have withdrawn, in other words, into unknowability. The classic example of this in Christianity is the account by John of the Cross of ‘the dark night of the soul’. In India, in addition to the examples given by Gavin Flood in Chapter 9, an equally well-known example is the recognition that Krishna (an *avatara*, or manifestation in human form of God characterised as Vishnu) deliberately withdraws the well-known sense of his presence and becomes unknowable. The many stories told about Krishna include episodes of his deliberate withdrawal from those devoted to him.⁸ The response to the unknowability of God in this sense appears forcefully in what is known as *viraha-bhakti*, loving devotion even in the absence of God, and it is this which is expressed so yearningly in the South Indian poets known as the Alvars, whom Clooney considers in his chapter (Chapter 11). It is precisely because they do not (and indeed cannot) doubt the reality of God and of all they have previously known of God, that their poems of *viraha-bhakti* are so moving.⁹

In the sciences, this kind of unknowability cannot occur as though the universe takes a personal initiative to withdraw, but it certainly does occur in the sense of ‘unknowability as invitation’. As with God, so here: it is not as though people suddenly cease to believe in the universe altogether. On the contrary, the universe is still clearly there, but the truth about itself seems to be hiding at a much deeper level. There are differences and yet also similarities. This can be seen if we look in more detail at two examples of the ways in which, in science and religion, a response to

unknowability is made. The first example is the struggle of scientists to understand gravitation, the second is the work of human imagination in the architecture of the approach to God.

Gravity

Before the time of Newton, the nature and effects of gravitation could be observed, but the connection between these observations was unknown, and was believed by some to be unknowable. Lying hidden behind disparate and apparently disconnected phenomena (such as Kepler's three laws of planetary motion, and Galileo's laws of motion for bodies on the earth) Newton discerned 'the universality of gravitation'.

However, 'the unknowable' in this case was not something simple, hiding behind a chair (as in a child's game of hide-and-seek), waiting to be found. It was a deeper and far more profound way of understanding the relationship between those phenomena. As Cushing has put it, 'Newton was able to take this melange of fragmented facts and partial truths and ferret out a unified set of laws that correctly explained the motion of both heavenly and terrestrial bodies.'¹⁰

But this by no means made the nature of gravity obvious. Even when he had 'explained the phenomena of the heavens and of our sea by the power of gravity', the nature of gravity still remained unknown and perhaps unknowable; and if it remained as continuing invitation to others, it did not do so to Newton. In the often-quoted passage from his *Mathematical Principles of Natural Philosophy*, he makes it clear that for him it is enough that the phenomena are explained:

Hitherto we have explained the phenomena of the heavens and of our sea by the power of gravity, but have not yet assigned the cause of this power. This is certain, that it must proceed from a cause that penetrates to the very centres of the sun and planets, without suffering the least diminution of its force; that operates not according to the quantity of the surfaces of the particles upon which it acts (as mechanical causes used to do), but according to the quantity of the solid matter which they contain, and propagates its

virtue on all sides to immense distances, decreasing always as the inverse square of the distances. Gravitation towards the sun is made up out of the gravitations towards the several particles of which the body of the sun is composed; and in receding from the sun decreases accurately as the inverse square of the distances as far as the orbit of Saturn, as evidently appears from the quiescence of the aphelion of the planets; nay, and even to the remotest aphelion of the comets, if those aphelions are also quiescent. But hitherto I have not been able to discover the cause of those properties from phenomena, and I frame no hypotheses; for whatever is not deduced from the phenomena is to be called an hypothesis; and hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy. In this philosophy particular propositions are inferred from the phenomena, and afterwards rendered general by induction. Thus it was that the impenetrability, the mobility, and the impulsive force of bodies, and the laws of motion and of gravitation, were discovered. And to us it is enough that gravity does really exist, and act according to the laws which we have explained, and abundantly serves to account for all the motions of celestial bodies, and of our sea.

(Isaac Newton, *Mathematical Principles of Natural Philosophy III*, General Scholium, trans. A. Motte and F. Cajori, Encyclopaedia Britannica Great Books (Chicago: 1990), pp. 371f.)

The reason why that passage is so often quoted is because it gives the authority of Newton to the primacy of induction over deduction from unfounded hypotheses. But d'Alembert, one of the leading French advocates of Newton, saw very clearly that an inductive approach alone will always leave much 'behind the veil', and completely unknowable – far beyond the scope of existing human knowledge: must it, and will it, always be so? Will that which is 'behind the veil' (or behind what Lord Kelvin called 'clouds': see further p. 11) always remain so, or is it a continuing invitation?

Newton, in d'Alembert's view, could not play the part of God, and therefore he could see nature 'only through a veil which hides the workings of its more delicate parts from our view . . . Doomed . . . to be ignorant of the essence and inner contexture of bodies, the only resource remaining for our sagacity is to try at least to grasp the analogy of

phenomena, and to reduce them to a small number of primitive and fundamental facts. Thus Newton, without assigning the cause of universal gravitation, nevertheless demonstrated that the system of the world is uniquely grounded on the laws of this gravitation.¹¹

D'Alembert believed that 'the most abstract notions, those that ordinary men regard as most inaccessible, are often those that shed the brightest light.' This is the unknowable inviting us on in a much deeper sense than that of 'solving the next problem'. The successors of Newton realised that neither he nor they understood how one physical body could affect another at such distances with no apparent contact between them – how, in other words, there could be *actio in distans*, 'action at a distance'. Following the famous maxim of Hobbes (*causa motus nulla esse potest in corpore nisi contiguo et moto*), they came to the conclusion that there must be some intervening medium through which the direct physical influence is communicated from the one to the other, and for that reason they postulated the existence of the aether.

Thus Maxwell (see p. 2), who unified the phenomena of electricity and magnetism, and identified the electromagnetic nature of light, recognised the importance of Faraday's fields and lines of force, but because he was still seeking what he called '*vis a tergo* – a shove from behind', he argued originally for the physical reality of the aether as the medium through which that 'shove' could be given.¹² He could then explain the effect of an electric current on a magnetic needle by understanding the magnetic field as being occupied by innumerable vortices created by rotations in the aether, their axes coinciding with the direction of the magnetic force at every point of the field. Tied as he was to a mechanistic understanding of the universe, he had no option but to find some medium through which the principles of classical mechanics could work the observable effects.

'Had no option but . . .?': however, is that really so? That is the question of this book. Facing the apparently unknowable (how to account for electromagnetic effects? how to account for the nature of gravity?), a divide opened up. On the one hand, some (the majority) in effect gave up: given the domain assumption of a mechanistic universe, and given also the unacceptability of action at a distance, it seemed to them that there must be

some direct physical link between distant interacting bodies. If that link appeared to be hidden, it could only be because the intermediate medium through which agency could be effected is made up of particles too subtle to be detected. Hence they ‘invented’ the aether. After all, Newton himself had observed, ‘That one body may act upon another at a distance through a vacuum, without the mediation of anything else . . . is to me so great an absurdity that I believe that no man, who has in philosophical matters a competent faculty for thinking, can ever fall into it.’

On the other hand, there were those who persisted with the hidden and what to the majority was unknowable. Among them, Michelson is particularly well known because of his experiment in 1881, repeated later with Morley (hence ‘the Michelson–Morley experiment’). If the aether existed, then the velocity of a disturbance measured by an observer at rest in the aether would have a privileged value, because it would relate to the motionless aether, as opposed to two observers moving at different velocities with respect to the aether. It would thus be the same as the true velocity of light. The light-bearing (luminiferous) aether exemplified Newtonian absolute space, so that if its existence could be verified, it would offer a way of distinguishing absolute motions from relative motions. Michelson’s experiment showed that the hypothetical aether did not have any of the effects that it should have had (if the aether existed) on the velocity of electromagnetic waves.

Although this was the end of the hypothesis of an interplanetary medium, possessing dynamic and kinetic properties like those of ordinary bodies, it did not stop at least some from trying to rescue the aether – the FitzGerald contraction, for example, or the claim that the aether must be dragged along by the bodies moving through it.

Others persisted with the apparently unknowable, not least Einstein, who recognised the impossibility of putting together Newton’s laws of motion, Maxwell’s equations and the classical concepts of spacetime. When, as he put it later, ‘the Special Theory of Relativity began to germinate in me, I was thrown into all sorts of nervous conflicts. When young, I used to go away for weeks in a state of confusion.’¹³

This is persistence, which can be costly, in responding to the unknowable as invitation. And yet, when the solution came, it arrived in a sudden

moment when, as he recalled, he was sitting in his chair at the Patent Office in Bern, and the thought occurred to him, 'If a person falls freely he will not feel his own weight.' It was this single thought which impelled him towards the theory of gravitation. Combining the geometry of curved spaces and his own discovery of the unity of spacetime, he identified gravity, not with the curvature of space, as Helmholtz and others had speculated, but with the curvature of spacetime.

Although it is now known much more clearly 'what gravity is', post-Einstein, the 'invitation' has continued. In 1977, for example, Bertotti (in the – for this book – aptly named *Encyclopaedia of Ignorance*¹⁴) listed three new 'riddles of gravitation': the riddle of geometrical simplicity (is the spacetime continuum simply an *arena* for particles or fields, or are matter, charge, electromagnetism and other fields simply manifestations of the bending of space, so that physics is geometry?); the riddle of proper time (whereas Newton assumed that gravity is transmitted instantaneously in absolute time, for Einstein nothing can be transmitted faster than light, so that absolute time becomes what Mach called 'an idle metaphysical conception'; so how can proper time, used to define the invariant separation between two events, be treated as an absolute?); and the riddle of inertia.

By 2001, John Taylor (in the equally aptly named *Hidden Unity in Nature's Laws*¹⁵) was able to show how the hidden in the case of gravity still continues to act as invitation. For example, in what he calls 'the crack in gravity's armour', he points out important moments in the history of physics when progress has been made by 'probing the interface between two subjects that sit uneasily together'. Thus Einstein himself was led towards the special theory of relativity by seeking to reconcile Newtonian dynamics with electromagnetism; and Planck initiated quantum theory by combining statistical physics with electromagnetism (these were the 'two clouds' specified by Lord Kelvin in his famous lecture in 1900, which made a Newtonian account of the universe impossible¹⁶). A comparable moment came in 1974 when Stephen Hawking 'put his finger on a crucial juncture between quantum theory and Einstein's theory of gravity, two theories that had hitherto seemed disjoint'. Taylor commented:

The implications of Hawking's insight [roughly, that black holes are not black, but glow in a definite and simple way, hence Hawking radiation] are by no means worked out, but surely it will be one of the keys to a future theory in which gravity is reconciled with quantum theory and with the other forces of nature.¹⁷

Gravity exemplifies in science the importance of persistence in knowing the unknowable. In our time, others include the self and consciousness; hidden universes; fallibilistic absolutism in theoretical physics; string theory and the possibility that it is only a coherent construction – if that.¹⁸

All these show clearly not only how the unknowable acts as invitation but also how the unknowable and the unknown interchange with each other: that which seems unknowable may turn out to have been merely unknown; further research or reflection makes it known. But, conversely, that which seems simply to be unknown and just needing a bit more work to turn it into the known, may in fact turn out to be strictly unknowable. It is the possibility of this constant interchange that emerges so clearly in John Rodwell's chapter (Chapter 1). It means that on the middle ground of the spectrum, the *discernment* of the distinction between the unknowable and the unknown is not guaranteed by external or objective criteria. It is a constant issue – and invitation. After all, Einstein himself had continuing doubts about the way in which quantum theory was developing. At the Fifth Solvay conference in 1927, Einstein expressed his doubts (it was at this conference that he asked his famous question 'whether God plays dice'), whereas Bohr persisted, while Pauli and Heisenberg paid little attention. According to Otto Stern's recollection:

Einstein came down to breakfast and expressed his misgivings about the new quantum theory, every time [he] had invented some beautiful experiment from which one saw that [the theory] did not work. . . . Pauli and Heisenberg, who were there, did not pay much attention, 'ach was, das stimmt schon, das stimmt schon'. Bohr, on the other hand, reflected on it with care and in the evening, at dinner, we were all together and he cleared up the matter in detail.¹⁹

The issue here was whether there can be a causal description of microphenomena as there should be in classical physics. For Pauli and Heisenberg, this was simply unknowable in the strong sense (see Bell's comment below), because there are no trajectories of particles which exist and are available for observation. For that reason, it is not possible to give a deterministic description of fundamental physical phenomena, so that, in the laws governing those phenomena, there must be an essential indeterminism or probability (which is not like the probability in classical physics, where it was simply a reflection of what we happen at any time not to know). Thus a causal description of such microphenomena is simply unknowable.

On the other hand (and as an example of persistence in knowing the unknowable), it actually *is* possible to write a logically consistent causal interpretation of quantum mechanics, in which a microentity (like an electron in a double-slit experiment) follows a trajectory through one of the slits from the source to the screen in a specific and definite way. That is exactly what David Bohm did in 1952, when he took the Schrödinger equation and rewrote it, by means of a mathematical transformation, in a form similar to Newton's second law of motion. According to this interpretation, the wave acts as a guide or pilot, and it exerts an influence on the particle. The wave then goes through both slits, but the particle passes only through one. Thus the wave function represents the causative effect of the environment on the microsystem involved, and that is why this interpretation is called 'the causal interpretation'.

In relation to the theme of this book, the important point is that a decision between the two interpretations does not and cannot depend on the discovery of further data, since they are both based on the same formalism and, if certain assumptions are made for both, they are indistinguishable in their predictions. The practical issue here was brilliantly summarised by John Bell:

Bohm showed explicitly how parameters could indeed be introduced, into nonrelativistic wave mechanics, with the help of which the indeterministic description could be transformed into a deterministic one. More importantly, in my opinion, the subjectivity of the orthodox version, the necessary

reference to the ‘observer’, could be eliminated. Moreover, the essential idea was one that had been advanced already by de Broglie in 1927, in his ‘pilot-wave’ picture. But why then had Born not told me of this ‘pilot wave’? If only to point out what was wrong with it? Why did von Neumann not consider it? More extraordinarily, why did people go on producing ‘impossibility’ proofs, after 1952, and as recently as 1978? When even Pauli, Rosenfeld, and Heisenberg, could produce no more devastating criticism of Bohm’s version than to brand it as ‘metaphysical’ and ‘ideological’? Why is the pilot wave picture ignored in the textbooks? Should it not be taught, not as the only way, but as an antidote to the prevailing complacency? To show that vagueness, subjectivity, and indeterminism, are not forced on us by experimental facts, but by deliberate theoretical choice?²⁰

The importance of this in illustrating persistence in ‘knowing the unknowable’ is that Bell went on from this to produce his famous theorem which showed that the hope of finding hidden variables in order to bring quantum mechanics into the general framework of classical physics could not be realised.

Darkness and light: the architecture of unknowability

If we hope to make progress in understanding human spirituality, it is vital to remember how many different kinds of response there have been to the unknowability of God and of the universe, understood as invitation. They go far beyond science, theology and philosophy, and we have tried to show this (in Chapters 8 and 11) by choosing the example of poetry. Even four-sided triangles and fairies at the bottom of the garden (p. 1) have become ‘knowable’ in poetry.

Poetry, however, is not alone. Many other forms of human imagination (expressed in music, for example, or in art, mythology, novels, dance, architecture) are equally important in the human attempt to ‘know the unknowable’ in the case of God and the universe. The explorations of spirituality are less often expressed in the form of propositions, because artists of all kinds have their own more fruitful ways of working on the

boundaries of the unknowable, of that which lies hidden and inviting behind the obvious. As the poet Henry Vaughan (1622–95) put it succinctly, ‘The skin and shell of things, though fair, are not thy soul’s desire.’

Although, therefore, we have tried in this book to show how this happens in the case of poetry, we could have illustrated this in any of the arts. In painting, we could have taken icons as an example, or virtually the entire history of twentieth-century art in the West, epitomised in the famous ‘manifesto’ of Giorgio de Chirico, ‘Mystery and Creation’ (1913), which remains a remarkable statement of the involvement of artists in knowing the unknowable: ‘To become truly immortal a work of art must escape all human limits: logic and common sense will only interfere It is most important that we should rid art of all that it has contained of *recognisable material* to date, all familiar subject matter, all traditional ideas, all popular symbols must be banished forthwith.’²¹ de Chirico founded a school of art known as the *Metaphysical school* [italics mine] and was admired by the Surrealists, who found in him ‘a painter who shared their preoccupation with mystery, the unknown, the unconscious and the dream’.²² In India, painters are committed to ‘knowing the unknowable’ by the fundamental text on painting, *Viṣṇudharmottara* (a supplement to *Viṣṇupurāṇa*):

Vajra said – The Supreme Deity has been described as devoid of form, smell and emotion, and destitute of sound and touch – so how this form can be made of Him?

Markandeya replied – Prakṛti and Vikṛti [come into existence] through the [variation in] the form of the Supreme Soul. That form of Him [which is] scarcely to be perceived is called Prakṛti. The whole universe should be known as the Vikṛti [i.e., modification] of Him, when endowed with form. Worship and meditation [of the Supreme Being] are possible [only when He is] endowed with form The best position of the [Supreme] Soul [however] is to be imagined without form.²³

We could equally have looked at sculpture. Sculptors releasing form from stone are often seeking to know the unknowable through their work. Rodin, for example, believed that his task was not to rival photography by creating a surface resemblance, but to seek to know the unknowable

in the underlying *character* of those whom he was attempting to carve in stone.²⁴ In India, temple walls become chariots (bearers) of the reality of God in the form of innumerable carved images: for the pilgrim or the worshipper who approaches the temple, the images are not ‘all that God is’, but the bearers of God’s life (*jīva*), so that through them the unknowable can begin to be known.

Even more to the point, in the human attempt to know the unknowable in the case of God, is architecture itself. In India, the architectural geography of temples is designed to lead the worshipper deliberately from the familiar and everyday world to the unknowability of God, who nevertheless can begin to be known. In contrast to the familiar prayer from the Upanishads, ‘Lead me from darkness to light’,²⁵ temple architecture leads literally from light to darkness.

For those not familiar with Indian temples, it may be helpful to quote at length Stephen Huyler’s description of this literal movement towards God, in his account of two typical worshippers, Vivek and Manika, as they seek a successful birth of a first child. They move from the outside world, through the stages of the temple architecture, into the darkness of *garbhagrha*, ‘the womb chamber’. After buying their offerings at the temple gate, and leaving their sandals outside, ‘they pass through massive doors under a towering stone structure filled with niches containing sculptures of the Gods and mythological creatures’:

They immediately notice a change in atmosphere. It is not quiet here, but the intensity of noise is different. There are no vehicles, no market stalls, just throngs of people going in different directions and involved in many activities. They join the mass of people moving to the left in a wide walled passageway that encircles the central temple. As they walk, they compose their minds to focus on the reason that they are here: to pray for pregnancy and a successful childbirth. Their attention is diverted by the many rooms built into the enormous stone wall at their left. Some contain the sculpted carts and animal-shaped litters for carrying the processional images of the deities; others hold offices for the temple administrators; some are the kitchens for cooking the food offered to the Gods; and still others are stalls for the temple elephant and for the cows that provide milk for the pujas

As they turn a corner they come upon an ancient tree, its branches tied with bundles of cloth offerings and prayers written on bits of paper in a tiny flowing script. Beneath it are stone sculptures of cobras, some with human bodies: the Nagas, ancient Gods of healing and fertility. Manika opens a small tin she has been carrying in her purse and smears sandalwood paste on the sculptures, praying as she does so for the health of their firstborn child.

Finally, after walking almost a quarter-mile around the enclosure, Vivek and Manika return to their starting point and enter a second gate. Inside, although still crowded, the atmosphere is more intense, focused on prayer. Again they turn left along a corridor that encircles the central temple. They are progressively drawing closer, ritually preparing themselves for their encounter with the great God. The edge of this passageway is arrayed with a series of small shrines, some with images of Shiva,²⁶ many dedicated to Gods and Goddesses secondary to his worship, and others to Shiva's saints. Although the young couple are intent on their goal of puja to the central image of Shiva, they still stop to acknowledge each shrine as they pass, folding their hands in respect and touching them to their foreheads.

At last they enter the third and final gate. Directly in front of them is a huge plinth, on which sits a gigantic granite sculpture of the bull Nandi, the beloved mount of the Lord Shiva. He faces away from them and directly toward the open door of the main temple. This interior building is a large edifice, its exterior walls inlaid with numerous niches, each holding an image of a God or Goddess, crowned by an elaborate tower rising in sculpted tiers to resemble the peak of a fantastic mountain. Vivek and Manika are overcome with awe. As they walk around this building, they, like the rest of the crowd, are quiet, concentrating on their prayers. When the newlyweds return to Nandi's shrine they begin to climb the steps into the temple's entrance hall. Inside it is cool, the light filtered from windows on each side. Both the pillars and the ceiling they support are elaborately carved with images of Shiva, his wife, Parvati, and their sons, Ganesha and Kartikeya, along with many other Gods, demigods, and mythical beings. Ahead of them is the sanctum sanctorum, the heart and soul of the entire temple complex.²⁷

This 'holy of holies' is the *garbhagrha*, which Huyler goes on to describe:

It holds within its dark and unadorned recesses the potency of the central image, the Absolute Power of the God or Goddess. No one but qualified priests is allowed to enter here – to do so might adulterate the purity of the power. Even the priests must undergo rituals of purification each time they wish to enter this ‘womb’. All other devotees approach as close to the image as possible for darshan with the deity. In some temples they are allowed to touch the base of the image or the feet of the Divine, believing that by doing so they absorb the God’s radiance through their fingertips. Non-Hindus are not permitted to enter the innermost areas of many of the most important temples, as it is feared that by inappropriate thoughts or gestures they might desecrate the image. Some temples, such as the Jagannath Temple in Puri, are considered so pure that no non-Hindus may enter the compound at all.²⁸

In Hindu temples, inert matter (*prakṛti*, such as stone or wood) has been imbued through ritual with the life of God or Goddess (*jīva*), which in turn fills the temple with the power and reality of that which endures when all else has passed away (*puruṣa*). Temples are laid out and constructed according to careful rituals and rules, so that the whole building becomes a coded way through which people can begin to know the unknowable.

A counterpart in the Christian tradition would be that part of the nineteenth-century Gothic revival which saw church architecture as a code: properly deciphered, it points beyond itself to God, and it increases the sense of awe and mystery in the presence of God beyond human understanding. As Coleridge observed in his *Tabletalk*, ‘The principle of Gothic architecture is infinity made imaginable.’

In the Gothic revival, the use of architecture as a coded language is associated particularly with the architect Pugin, who believed that a building should be ‘illustrative of its purpose’. As Brooks has put it,

Structure was the basis of architectural semantics, but was not itself enough. ‘The smallest detail should *have a meaning or serve a purpose*.’ . . . A pinnacle, to take one example, is both ‘mystical and natural’, its verticality making it ‘an emblem of the Resurrection’, while it is simultaneously ‘an upper weathering to throw off the rain’.²⁹

Of course superficially this is not an exploration of the unknowable in the case of God. The building as a whole is indeed to be a code, but one that people with educated understanding can read. That, however, is simply ‘the skin and shell of things’ – fair, certainly, but not an end in itself. The code points far beyond itself to the unknowable God, whose glory can be dimly discerned *through* the beauty and the integrity of the building, but certainly not fully comprehended within it. To quote Brooks again, ‘The ecclesiologists were driven by a hunger for meaning [i.e., the attempt to know the unknowable], and in Gothic found a way of filling the built world with significance – with the Glory of God indeed.’³⁰

That was certainly true of the members of the Camden Society who, in 1843 (to use the words of Kenneth Clark) ‘struck a great blow for ecclesiology’. Clark went on:

Two of its founders, Mr. Neale and Mr. Webb, published a translation of Durandus, the chief expounder of medieval symbolism, to which they added an introduction on the place of ecclesiology in architecture. They set out to prove that correct symbolism – they preferred the obscure but solemn word sacramentality – was essential to Christian architecture³¹

Although Kenneth Clark assumed that the word ‘sacramentality’ was ‘an obscure but solemn word’ meaning the same thing as ‘symbolism’, it was nothing of the kind. Neale and Webb were using it in the sense of Jeremy Taylor (and many others) to mean ‘that which creates and constitutes the reality of that to which it points’ – hence Jeremy Taylor, defending a doctrine of the real presence while rejecting transubstantiation, insisted on the importance of the elements of bread and wine, writing, ‘He therefore that takes the wine away, takes away the very Sacramentality of the mystery.’³²

There is thus much more at stake here than symbolism. What the Gothic revival aimed at in the sacramentality of its architecture and detail was the attempt to know the unknowable in the case of God through *worship* (cf. the same priority in the passage from *Viṣṇudharmottara*, quoted above, p. 15). Advocates of the revival had only to look, by way of contrast, at the existing condition of church services in order to make

their point, exactly as Charles Eastlake did in 1872, in his famous history of the Gothic revival:

We must tax the recollections of our childhood, if we would realise to some extent the cold and vapid nature of the ceremonies which passed for public devotion in the days of our grandfathers. Who does not remember the air of grim respectability which pervaded, and in some cases still pervades, the modern town church of a certain type, with its big bleak portico, its portentous beadle, and muffin-capped charity boys? Enter and notice the tall neatly grained witness-boxes and jury-boxes in which the faithful are impanelled; the 'three-decker' pulpit placed in the centre of the building; the lumbering gallery which is carried round three sides of the interior on iron columns; the wizen-faced pew-opener eager for stray shillings; the earnest penitent who is inspecting the inside of his hat; the patent warming apparatus; the velvet cushions which profane the altar; the hassocks which no one kneels on; the poor-box which is always empty. Hear how the clerk drones out the responses for a congregation too genteel to respond for themselves. Listen to the complicated discord in which the words of the Psalmist strike the ear, after copious revision by Tate and Brady. Mark the prompt, if misdirected zeal, with which old ladies insist on testing the accuracy of the preacher's memory by turning out the text. Observe the length, the unimpeachable propriety, the overwhelming dullness of his sermon! Such was the Church, and such the form of worship which prevailed in England while this century was still in its teens.³³

In contrast to that, the advocates of Gothic revival were aiming to create a way of knowing the unknowable in the case of God through worship, and they were issuing an invitation to others to become a part of that exploration, to move towards God in wonder, awe and praise. And as in India, so here, the word 'movement' was literally meant: their architecture developed 'unbroken internal vistas'³⁴ along which not only the eye but people themselves could approach the altar and sacrament, the very threshold of heaven:

Now I sink before thee lowly,
 Filled with joy most deep and holy,
 As with trembling awe and wonder
 On thy mighty works I ponder;
 How, by mystery surrounded,
 Depths no man hath ever sounded,
 None may dare to pierce unbidden
 Secrets that with thee are hidden.³⁵

Any attempt to glimpse the unknowable nature of God, or to approach the unapproachable majesty of God, has to be in fear and trembling. A way of achieving that was by abandoning one of the founding principles of *early* Gothic. Suger's vision, which had created the distinctive architecture of early Gothic, had been to introduce light – light from Light.³⁶ In contrast, many Gothic revival churches introduced darkness – long vistas still, but now, often, leading into darkness and the faint flicker of far candles emphasising the mystery of God. They created deliberately what Barry's son called 'the dim religious light of impressiveness and solemnity'.³⁷ The question of 'progress in spiritual information', in the context of the Gothic revival, was raised sharply by Compton Mackenzie when he wrote of Michael Fane, both at his first High Mass when 'his brain reeled in an ecstasy of sublime worship' and during his stay at Clere Abbey:

Michael was the only guest staying in the Abbey on the vigil, and he sat almost in the entrance of the quire between the drawn curtains, not unlike the devout figure of some youthful donor in an old Italian picture, sombre against the blazing Vespers beyond. Michael was always hoping for a direct manifestation from above to reward the effort of faith, although he continually reproved himself for this desire and flouted his weakness. He used to gaze into the candles until they actually did seem to burn with angelic eyes that made his heart leap in expectation of the sign awaited: but soon fancy would betray him, and they would become candles again merely flickering.³⁸

Poetry and the Unknowable

The general point, therefore, is obvious: there are people in all the arts who exemplify what it means to be seeking to know the unknowable, and they are at the heart of what we need to understand in order to make progress in spiritual information (see pp. xiii–xiv). But in order to keep this book within limits, poetry was chosen for two main reasons: first, because words are more easily brought into discussion than images; and second, because so many poets have been a part of this progress in spiritual information, by being themselves explorers of the hidden and the unknowable in the case of God.

I examined an early and striking example of this in my chapter, ‘The Death of God in the Greek and Jewish Worlds’.³⁹ The Greek dramatists, Sophocles, Aeschylus and Euripides, did not simply tell the surface stories of Oedipus, or of Hippolytus, or of Orestes, or of Agamemnon, or of Pentheus, and so on: they sought to know what they acknowledge is unknowable, the underlying thread of consequence, of *δίκη*, in which their protagonists are caught up. The result is *tragedy* precisely because humans do not discern what is (from their point of view) the hidden and the unknowable. The question, in the unfolding history of Western theatre, is whether the unknowable *can* be known, and if so how.

An equivalent in Indian poetry is the hidden thread of dharma⁴⁰ in the great epics, *Ramayana* and *Mababharata*. Both of these might be told quite simply as exciting stories. But both are more than that: they explore the consequence of dharma in the forming of human lives and events. *Ramayana* is set in the second of the four ages through which the cosmos passes, the Treta Yuga. Although the golden innocence of the first age has begun to fade, it is still possible for people in the Treta Yuga to live as they should, according to that rule of law, order and obedience which is the meaning of dharma. *Ramayana* displays in its characters, and especially in Rama and Sita, what the embodiment of dharma actually involves; and since Rama is a manifestation (*avatara*) of Vishnu, *Ramayana* becomes a way of knowing the otherwise unknowable: dharma and the nature of God. In the words of Lakshmi Lal:

He [Rama] is a lesson in that most obsessive of ancient Indian preoccupations – dharma, rule of law and order in the life of a human being, the personal destiny that each one has to discover and then largely follow, but partly shape. The Ramayana is in that sense a compendium of object lessons in morality, a treatise of high thinking. It is the Indian book of values, in which dharma, the code, is all.⁴¹

Mahabharata is set in the next age, Dvapara Yuga, in which dharma has been increasingly forgotten. Superficially, *Mahabharata* is an epic poem about the conflict between two rival branches of the same family, but in fact it is an exploration of the hidden and seemingly unknowable, the working out in human affairs not just of dharma but also of karma;⁴² and beyond that, the relation of God to both. Seen as a conflict between dharma and adharma, it should be the case that dharma always wins, but of course it does not. If karma as the thread of consequence is brought in, can that explain why, for example, Yudhishthira loses all in the game of dice with Duryodhana? It seems unlikely, and *Mahabharata* therefore explores far more deeply the hidden and the unknowable, especially in relation to God, culminating in the eighteen chapters of Book 6 known now as ‘The Song of the Lord’, *Bhagavadgita*.

Those examples of poets (in Greece and India) exploring the hidden and the unknowable in the case of God and the universe come from millennia ago. But there are examples in every age. In India, Rabindranath Tagore (1861–1941) won the Nobel Prize for Literature in 1913 – mainly for his translation of his own *Gitanjali*. He wrote a great deal in prose (twelve novels, about two hundred short stories, thirty-eight plays), but it was in poetry that he explored the unknowable nature of God and the universe. He recalled in *My Reminiscences* (1917) how a life-changing experience of what we would now call AUB⁴³ had led him in his poetry to explore what was otherwise unknowable. He came to think of the infinite and ultimately true, Brahman or God, as bringing into being the canvas on which the universe is painted. That is the work of *maya*,⁴⁴ the power to bring the universe into being in such a way that it invites a deeper understanding and response – and that is why Tagore insisted that the work of a poet is nothing other than an extension of *maya*.

What, then, is to be seen beneath the veil or cloak of *maya*? The universe is the Infinite finding a finite form of expression (cf. the fundamental statement of this in *Viṣṇudharmottara*, quoted above, p. 15), so that the Creator and the created are bound to each other in mutual love. In a strong sense, they require each other for the love of God to be more than self-love:

O thou lord of all heavens, where would be thy love if I were not? . . .
 And for this, thou who art the King of kings hast decked thyself in beauty
 to captivate my heart. And for this thy love loses itself in the love of thy
 lover, and there art thou seen in the perfect union of two. (*Gitanjali*).

For Tagore, therefore, Purusha, the Supreme Person, is like an artist (or poet) who creates a work of art to give expression to an emotion or mood, and also to evoke that emotion or mood in others. Thus the Supreme Person creates the cosmos to express and to evoke love. Of course Tagore knew, as all humans must, that nature includes death-dealing and terrifying disasters, and like all Indians, he did not suppress their terror. In ‘Sea Waves’, in *Manasi*, he confronted the wreck of a ship carrying eight hundred pilgrims to Puri in 1887 (cf. Gerard Manley Hopkins, ‘The Wreck of the Deutschland’, 1875–6). Where is God in these ‘enraged phenomena’? God is not superficially obvious (obvious on the surface of those events), but is discernible in redemptive love.

Tagore is an obvious example of a poet in the Indian tradition seeking to know the unknowable. So in his own way is Auden in the Christian. Just as Tagore drew on the Indian tradition, so Auden drew on the Greek and then Christian tradition to make a comparable attempt in his poetry to know the unknowable. Throughout his working life, Auden sought to read and understand what he called ‘the hidden law’, and as a result his understanding of ‘the hidden law’ changed greatly. In an early formulation, it is indistinguishable from $\delta\iota\kappa\eta$ (the working out of a just and inexorable consequence) as the Greek tragedians had understood it – perhaps not surprisingly, because Auden was born early enough for his education to have immersed him in the classics:⁴⁵

The Hidden Law does not deny
 Our laws of probability,
 But takes the atom and the star
 And human beings as they are,
 And answers nothing when we lie
 Its utter patience will not try
 To stop us if we want to die:
 When we escape It in a car,
 When we forget It in a bar,
 These are the ways we're punished by
 The Hidden Law.⁴⁶

This sense in Auden of an underlying and unknowable purpose working itself out ('Doom is dark and deeper than any sea-dingle/Upon what man it fall') is often expressed in the form of judgement, of the Eumenides in particular. But increasingly his poetry became a quest to know *Deus absconditus* – not, as in this phrase from the Vulgate translation of Isaiah 45:15, the hidden God, but, as in the original Hebrew, the God who hides himself – God who makes himself unknowable as a way of invitation. This is already apparent in the sequence 'The Quest' (1940):

Swaying upon the parapet he cried:
 O Uncreated Nothing, set me free,
 Now let Thy perfect be identified,
 Unending passion of the Night, with Thee . . .

The Nameless is what no free people mention;
 Successful men know better than to try
 To see the face of their Absconded God

Poet, oracle and wit
 Like unsuccessful anglers by
 The ponds of apperception sit,
 Baiting with the wrong request

The vectors of their interest,
 At nightfall tell the angler's lie.
 With time in tempest everywhere,
 To rafts of frail assumption cling
 The saintly and the insincere;
 Enraged phenomena bear down
 In overwhelming waves to drown
 Both sufferer and suffering.

The waters long to hear our question put
 Which would release their longed-for answer, but.⁴⁷

The impediments of 'but' are increasingly dissolved in the continuing response to the invitation to come further, the unyielding struggle, in Auden's subsequent poetry, to know the unknowable. The important point is that it is hard, if not impossible, to imagine a struggle of this kind, at this level of intensity and truth, in prose. If we are trying to make progress in understanding what human spirituality involves, we have to ask ourselves why and how it is poets who struggle in such distinctive ways to know the unknowable. Just before he died, Auden came to this (no doubt provisional) resolution of the hidden law, no longer as impersonal as it had been:

Spring-time, Summer and Fall: days to behold a world
 Antecedent to our knowing, where flowers think
 Theirs concretely in scent-colors and beasts, the same
 Age all over, pursue dumb horizontal lives
 On one level of conduct and so cannot be
 Secretary to man's plot to become divine.

Lodged in all is a set metronome: thus, in May
 Bird-babes still in the egg click to each other *Hatch!*;
 June-struck cuckoos go off-pitch; when obese July
 Turns earth's heating up, unknotting their poisoned ropes,
 Vipers move into play; warned by October's nip,

Younger leaves to the old give the releasing draught.
 Winter, though, has the right tense for a look indoors
 At ourselves, and with First Names to sit face-to-face,
 Time for reading of thoughts, time for the trying-out
 Of new metres and new recipes, proper time
 To reflect on events noted in warmer months
 Till, transmuted, they take part in a human tale.

There, responding to our cry for intelligence, Nature's mask is relaxed
 into a mobile grin,
 Stones, old shoes, come alive, born sacramental signs,
 Nod to us in the First Person of mysteries
 They know nothing about, bearing a message from
 The invisible sole Source of specific things.⁴⁸

This is the struggle in which poets are so often engaged, to explore the unknowable in the case of God and of the universe. The struggle may be expressed in direct terms, as it was in Tennyson's *In Memoriam*, or it may be more oblique, as it was in the case of Emily Dickinson, especially if Martha O'Keefe is right: in her remarkable book *The Farthest Thunder* she relates specific poems to the writings of John of the Cross, but *not* in order to claim that Emily Dickinson was influenced by John of the Cross – indeed, it is extremely unlikely that she had ever heard of him, let alone read anything written by him. O'Keefe's claim is that the profound correspondence of ideas has arisen simply because Emily Dickinson entered into the experiences of which John wrote, as a matter of this struggle to know the unknowable even in and through the dark night. If that is so, it raises truly important questions about the universality of the way in which humans make the deepest spiritual progress or growth through this determination to know the unknowable beneath or beyond the surface appearances of the world.

Notes

- 1 H. Mearns, 'The Psyched' (Antigonish).
- 2 The point is summarised, in the case of Jains, by Dundas:

The *loka* [the universe as Jains understand it] is without beginning or end in time and was not brought into existence through the agency of any divine being. To this extent, Jainism is an atheist religion inasmuch as it regards it as an illegitimate conclusion that there is a conscious creator who can intervene in or control the affairs of living creatures. Such a being, it is argued, would have to be either without a body, in which case a locus for the intention and effort of creation would be lacking or, alternatively, if embodied, unable to fulfil the necessary requirement of being all-pervading, since in that case the ontological categories would not find any room in the *loka*; alternatively, if non-pervading, such a god would have to be an entity possessing component parts and thus non-eternal. In short, for the Jains, deities such as Brahma and Vishnu, whom Hindus credit with a creative role in the universe, are themselves subject to the process of rebirth in the same manner as all other embodied souls in the *loka*.

(P. Dundas, *The Jains*, London: Routledge, 1992, p. 77).
- 3 *Prakriti* and *purusha* are the two fundamental constituent principles that bring all appearances into existence. *Purusha* is the consciousness of personal being which, if it gets entangled in inert matter (*prakriti*) is bound to rebirth until it recovers its independence. Samkhya and Yoga are systems that teach the way of liberation.
- 4 M. C. Taylor, *Erring: A Postmodern A/Theology* (Chicago: University of Chicago Press, 1987), p. 4.
- 5 There is a highly compressed introduction to these terms and their relation to analogy in my *God: A Brief History* (London: Dorling Kindersley, 2002), pp. 268f.
- 6 'The soul enters the unity of the Holy Trinity but it may become even more blessed by going further, to the barren Godhead, of which the Trinity is a revelation. In this barren Godhead, activity has ceased and therefore the soul is most perfect when it is thrown into the desert of the Godhead, where activity and forms are no more, so that it is sunk and lost in this desert where its identity is destroyed and it has no more to do with things than it had before it existed. Then it is dead to self and alive to God.' R. B. Blakney, *Meister*

Eckhart: A Modern Translation (New York: Harper, 1941), pp. 200f.

- 7 On the failure of memes as a theory, see my *Is God a Virus: Genes, Culture and Religion* (London: SPCK, 1995), pp. 67–77.
- 8 Among the most popular of the many stories told about Krishna are those that concern his dealings with the Gopis, the young milkmaids who herd the cows in Vṛindavana. His passionate dances with them are described in ecstatic physical terms of human love, a love that both prefigures and is the furthest reach of the exchange of love between humans and God. Although there are 16,000 of the Gopis, each feels that she alone is the love of Krishna. But there are repeated episodes in which Krishna deliberately absents himself, so that their love of Krishna/God is tested and deepened through the grief that his absence causes. Thus each day Krishna takes the cows into the forest and returns only in the evening to the gopis: this encourages them to keep him in mind and thought during the time of his absence, knowing that he will return. Or again, whenever Krishna became aware of their self-conceit and pride, because they were the recipients of his love, he deliberately hid himself for as long as it took for them to come to their senses, to learn to live with his absence, and to calm down. But far more dramatic was the final separation, which resembles something not unlike the Christian understanding of the Ascension, after which, for Christians, the absence of Christ is nevertheless a continuing form of invitation.
- 9 There is an elementary and brief account of this in my *God: A Brief History*, pp. 92–101. The major account is that of F. E. Hardy, *Viraba-Bhakti: The Early History of Kṛiṣṇa Devotion in South India* (Oxford, Oxford University Press, 1983; Oxford India Paperbacks, 2001). However, it should be borne in mind that his main thesis, the distinction between intellectual Krishna *bhakti* and emotional Krishna *bhakti*, has been challenged by Indian scholars: see, e.g., S. M. S. Chari, *Philosophy and Theistic Mysticism of the Alvars* (Delhi: Motilal Banarsidass, 1997), pp. 155–7. It would also be challenged by the neuroscientific research of recent years on the ways in which rationality and emotion work together, summarised in my *The Sacred Neuron* (London: I.B.Tauris, 2005).
- 10 J. T. Cushing, *Philosophical Concepts in Physics: The Historical Relation Between Philosophy and Scientific Theories* (Cambridge: Cambridge University Press, 2003), p. 103.
- 11 Quoted from D. J. Boorstin, *The Discoverers: A History of Man's Search to Know His World and Himself* (London: Phoenix, 1983), p. 407.
- 12 J. C. Maxwell, 'Action at a Distance' and 'Ether', in *Scientific Papers*, vol. 2 (Cambridge: Cambridge University Press, 1890).

- 13 A. Moskowski, *Einstein the Searcher: His Work Explained from Dialogues with Einstein* (Berlin: Fontane, 1921), p. 4.
- 14 B. Bertotti, 'The Riddles of Gravitation', in R. Duncan and M. Weston-Smith, eds, *The Encyclopaedia of Ignorance*, vol. 1 (Oxford: Pergamon Press, 1977), pp. 92–8.
- 15 J. C. Taylor, *Hidden Unity in Nature's Laws* (Cambridge: Cambridge University Press, 2001).
- 16 The lecture was entitled, 'Nineteenth Century Clouds over the Dynamical Theory of Heat and Light'. The first cloud was to know how, in a Newtonian universe, one could account for the uniform speed of light (established through the Michelson–Morley experiments) if the earth is moving through 'an elastic solid as essentially is the luminiferous ether' (the ether having been postulated in order for light waves to have something through which to propagate). The second cloud was to know how to account for 'the Maxwell–Boltzmann doctrine regarding the partition of energy'. Many attempts were made to circumvent these two clouds of unknowability – in, for example, the suggestion of Fitzgerald and then of Lorentz to rescue the aether by supposing that the apparatus of the Michelson–Morley experiment had been foreshortened in the direction of its own motion. But plunging into the two clouds were Einstein and Planck who persisted with the apparent unknowability of the behaviour of light and of molecules of gas. By responding to the invitation of unknowability, the worlds of relativity and of quantum mechanics were opened up. For a summary and discussion of the 'clouds' in Kelvin's lecture, see my *Licensed Insanities: Religions and Belief in God in the Contemporary World* (London: Darton, Longman and Todd, 1987), pp. 44–9.
- 17 Taylor, *Hidden Unity*, p. 367.
- 18 On the distinction between coherence and correspondence in science, see my *The Sacred Neuron*, pp. 122–30. For a recent challenge to string theory, see P. Woit, *Not Even Wrong: The Failure of String Theory and the Continuing Challenge to Unify the Laws of Physics* (London: Cape, 2006). The title comes from the three categories of error ascribed by the physicist Wolfgang Pauli to unconvincing theories, wrong, completely wrong, and not even wrong (i.e., without even the merit to be considered).
- 19 Quoted from A. Pais, *Subtle is the Lord* (Oxford: Clarendon Press, 1982). Bohr's recollection of the statement 'Gott würfelt nicht', God does not play dice, is in P. A. Schlipp, ed., *Albert Einstein: Philosopher-Scientist* (Evanston: Library of Living Philosophers, Inc., 1949), p. 218. By that statement, he meant that the statistical laws necessary to explain the subatomic world are only a provisional

- necessity. The hidden or more fundamental laws would surely determine events rather than their probabilities. But that statement, God does not play dice, would make no sense at all to Shaivite Indians. For them, it belongs to the nature of God in relation to creation that the game of dice belongs inherently to it. God playing dice appears in poems, carvings, myths, and paintings, all over India. It is an expression of the belief that there must be some contraction on the part of God, even some risk on the part of God, if the universe is to appear, and if its history is to unfold. One might imagine that when God plays dice, God must know the outcome in advance, and thus is not really committed to the game. But the point being expressed here is that even an omniscient God can only know what there is to be known: what is, from the point of view of the game, a future outcome does not exist to be known. In that sense, God has to approach the universe as being, in important ways, unknowable. God, therefore, puts himself at risk in creation, and even, so the myths claim, loses something of himself: that, at least, is what happens when the God plays dice with the Goddess, because he loses some of his attributes to her. On all this, see D. Handelman and D. Shulman, *God Inside Out: Shiva's Game of Dice* (Oxford: Oxford University Press, 1997).
- 20 J. Bell, *Speakable and Unsayable in Quantum Mechanics* (Cambridge: Cambridge University Press, 1987), p. 160.
- 21 G. de Chirico, 'Mystery and Creation', quoted from H. B. Chipp, *Theories of Modern Art: A Source Book by Artists and Critics* (Berkeley: University of Californian Press, 1968), p. 401f.
- 22 *Phaidon Encyclopedia of Art and Artists* (Oxford: Phaidon, 1978), p. 126.
- 23 Translation from S. Kramisch, *The Viṣṇubharmottara*, Pt. 3: *A Treatise on Indian Painting and Image-Making* (Calcutta: University of Calcutta Press, 1928), reprinted in B. S. Miller, ed., *Exploring India's Sacred Art: Selected Writings of Stella Kramisch* (Philadelphia: University of Pennsylvania Press, 1983), p. 263.
- 24 For the claim that Rodin had cast from life, and for his response, see my *The Sacred Neuron*, pp. 57f.
- 25 *Bṛihadaranyaka Uṣp.* 1.3.28. Shankara's Commentary makes it clear that 'darkness' is understood as 'ignorance' and 'death'.
- 26 Krishna was given earlier (p. 6) as an example of the deliberate withdrawal of God into unknowability, but the theme occurs constantly in the Indian traditions, as, for example, in the deliberate withdrawal of Shiva, who turns deeply inward to exist simply in his own essence and nature. In a widely told myth, Shiva was plunged into inconsolable grief after the death of his wife, Sati. He wandered for many days carrying her body and refusing to yield it.

In order to dissipate his grief, the gods cut her body into pieces and scattered the pieces throughout the land – an aetiological explanation of how the shrines of the goddess came into being. None of this, however, consoled Shiva, and he decided to withdraw from the world and from contact with humans in order, in the central practice of yoga, to generate *tapas*, the consuming heat of the Divine nature deeply within himself. But Sati was reborn as Parvati, and her desire for God, for Shiva, was reborn with her. With her father's permission, she also devoted herself to *tapas*, in order to find and espouse herself to God. But Shiva was of course withdrawing further into himself and further from her, even as she sent out her desire and longing for him. Meanwhile, the fierce Demon Taraka was ranging about the world, seeking whom he might devour, and the gods knew that no one could ever defeat the Demon except a son of Shiva. But since Shiva had withdrawn into his own inner nature, clearly he would never produce a son, so Indra, the ruler of the gods, decided to send Manmatha, also known as Kama, Desire itself, on a final mission to shoot his arrows at Shiva and thus to bring him back into connection with the world and with those who seek and desire him. Manmatha/Kama found Shiva on the mountain, performing the yoga which was on the point of leading him into the final realisation of his own essence. Manmatha/Kama shot an arrow and struck Shiva in the heart. Shiva turned and saw Manmatha/Kama and in anger burned him to death with the fire from his third eye. But at the same moment, he also saw Parvati and immediately desired to be united with her. To test her, he disguised himself as an old and ugly beggar and attacked Shiva and the way in which he lives in burial grounds and smears himself disgustingly with ashes from cremated bodies. Parvati was not swayed at all and insisted on her love for Shiva. Shiva therefore revealed himself as he is and they are committed to each other in mutual love. In this myth, God deliberately withdraws and absents himself from the world, and he creates grief and desire in so doing. But out of that grief and desire comes a final and complete union.

- 27 Stephen Huyler, *Meeting God: Elements of Hindu Devotion* (New Haven: Yale University Press, 1999), pp. 116–120.
- 28 *Ibid.*, p. 132.
- 29 C. Brooks, *The Gothic Revival* (London: Phaidon, 1999), pp. 239f.
- 30 *Ibid.*, p. 250.
- 31 K. Clark, *The Gothic Revival: An Essay in the History of Taste* (London: Constable, 1950), pp. 215f.
- 32 *Doctor Dubitantium*, 1660, 2.3 (Rule 9.31).

- 33 C. L. Eastlake, *A History of the Gothic Revival* (New York: Leicester University Press, 1970), p. 117.
- 34 When James Wyatt created these 'long internal vistas' in the cathedrals of Salisbury and Lichfield by clearing out whatever stood in the way, he earned for himself the nickname, 'the Destroyer'.
- 35 C. Winkworth, trsl. of a hymn by J. Frank, 'Deck thyself, my soul, with gladness'.
- 36 See, e.g., 'Architecture: The Houses of God', in my *God: A Brief History*, pp. 276–7.
- 37 Barry was, with Pugin, the architect of the House of Commons. In using this phrase, Barry's son was writing about the compromises that his father had had to make in order to accommodate in Gothic churches worship based on the Book of Common Prayer: see Clark, *The Gothic Revival*, p. 142.
- 38 C. Mackenzie, *Sinister Street* (London: Macdonald, 1949), pp. 192, 213.
- 39 J. Bowker, *The Religious Imagination and the Sense of God* (Oxford: Oxford University Press, 1978; Oxford: Oxford Scholarly Classics, 2000), pp. 97–120.
- 40 Dharma, a fundamental word in Indian thought and life, comes from a Sanskrit root meaning 'to hold' or 'to uphold'. Dharma pervades the whole of Hindu life, and refers to the way in which all things and all people ought to behave if the order of the cosmos and of individual and social life is to be maintained. What is now called 'Hinduism' (i.e., the Indian family of related religious beliefs and practices) is really a map of *dharmā*, a map of how people should behave appropriately in whatever circumstances they find themselves. In fact, an Indian name for its own religion is *sanātana dharmā*, everlasting *dharmā*.
- 41 L. Lal, *The Ramayana* (New Delhi: Disha Books, 1992), p. 3.
- 42 Karma is the strict law of consequence with regard to action, which is the driving force behind the continuing process of rebirth or reincarnation in Asian religions. By this law, every action has a consequence that will come to fruition, either in this or in a future life. Karma is not in itself 'reward and punishment', but is the law as natural in the universe as the law of gravity which produces consequence.
- 43 Absolute Unitary Being. Tagore described his experience in *My Reminiscences* (London: Macmillan, 1921). On this, see further my 'Tagore and India', in *Hallowed Ground: Religions and the Poetry of Place* (London: SPCK, 1993), p. 39.
- 44 *Maya* is often translated as 'illusion', but more fundamentally it is the power through which God brings the universe and all things into being. *Maya* therefore belongs intrinsically to the nature of God, since the universe expresses that nature not 'at a distance' but as God and as access to God. Nevertheless,

the universe and all appearances within it are to most people a veil behind which the true nature of God remains hidden, because through ignorance such people 'read' the universe in deficient ways. In that sense *maya* as cloak or veil is equivalent to ignorance and illusion: *Brahman satya jagat mithya*: Brahman is real, the world is an illusion.

- 45 Some of the earliest poetry that Auden could remember and recite to the end of his life were the mnemonics in Kennedy's *Shorter Latin Primer*: see his *A Certain World* (London: Faber, 1971), p. 263.
- 46 W. H. Auden, 'The Hidden Law', in E. Mendelson, ed., *W.H. Auden: Collected Poems* (London: Faber, 1994), p. 264.
- 47 'The Quest', in Mendelson, *W.H. Auden*, VII, p. 288; XVII, p. 294; XIX, p. 295.
- 48 'In Due Season', in Mendelson, *W.H. Auden*, pp. 801f.