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Mystery and Ignorance

This essay considers the difference between mystery and ignorance, where mystery is understood as that which cannot be comprehended by the human intellect. Confusion between these two categories may be an important element in the alleged conflict between religion and science. Different types of mystery are considered, some of which can be associated with experiences with religious overtones while others are of a more secular nature; these I call strong and everyday mystery respectively. In particular, we consider the view of Einstein that contemplation of the physical universe and its laws can generate exceptionally strong feelings of mystery. Although science is very accomplished at removing ignorance, mystery still remains after this has been achieved, and elements of mystery are a proper component of both religion and secular personal existence. I examine critically the world-view of rationalism, given that many affirmed rationalists see rational knowledge as being opposed both to mystery and religion. I argue that this is an erroneous position compounded by a confusion between ignorance and mystery. Some suggestions concerning how we relate to mystery in our lives are presented, together with a brief discussion of apophatic theology.

Key words: mystery, ignorance, religion, rationality, rationalism, science, Einstein, Russell, apophatic theology

Introduction

In a previous paper in this Journal,¹ I asked whether there can ever be an ultimate rational explanation for the universe that is fully understandable by ourselves, even in principle. My conclusion was that this is not to be expected. We might indeed believe in an ultimate explanation, and we might name this ultimate explanation ‘God’, but we would expect God viewed in this way to be largely beyond our understanding.

When faced with something that is not amenable to intellectual knowledge or is inexpressible in words, we are dealing with an instance of what I will call *mystery*. This is to be contrasted with *ignorance*, which is an absence of knowledge where knowledge can in principle be obtained. The methods of science, for example, are well able to reduce and remove ignorance, but mystery can remain when all the scientific facts are known. I will expand on these points, arguing that confusion between mystery and ignorance can be a significant fac-

1 Bussey, P.J. ‘Explanations in Science and Beyond’, *Science and Christian Belief* (2008) 20 (2), 175.

tor contributing to the perceived opposition between religion and science. The popular usage of the two words tends not to make much distinction between them; in daily language, 'mystery' and 'ignorance' mean roughly the same thing. Here I attach different meanings, because there seems no better way to point to some important areas of how we interact with the universe around us and perhaps with God.

Mystery, when properly characterised, is something positive and not negative. It refers to any situation where a central element is non-intellectual; sometimes rational or perceptual factors are present, sometimes not. It can sometimes carry religious connotations, but this is by no means always the case. Our entire lives are in fact permeated in mystery, but this does not devalue the role of rationality. These will be the themes of the present essay.

Strong Mystery

In much of today's world, the religious beliefs of many people are probably rather ill-defined – but what may be called a 'religious impulse' is still evident, seemingly built into human nature. It comes as a yearning for something more than the immediate, a seeking for something 'beyond'. The official atheism of the communist states failed to eradicate it in their citizens. It shows up in diverse ways – sometimes arriving by surprise, sometimes willingly accepted, sometimes resisted and suppressed. It is found in less developed societies more strongly than in the more developed – but it is not a primitive impulse in the manner of a physical hunger or other bodily urge. It is more to do with our mental and, if one may say it, our spiritual nature. It can be sensed as an element that tends to be missing from ordinary life, and it resembles an aspiration more than an appetite.

The physicist Albert Einstein did not hold conventional religious views, but he still regarded himself in his own way as religious – certainly not as an atheist unbeliever. As a basic expression of his beliefs, he wrote:²

The most beautiful experience we can have is the mysterious. It is the fundamental emotion which stands at the cradle of true art and true science... It was the experience of mystery – even if mixed with fear – that engendered religion. A knowledge of the existence of something we cannot penetrate, our perceptions of the profoundest reason and the most radiant beauty, which are only accessible to our reason in their most elementary forms – it is this knowledge and this emotion that constitute the truly religious attitude; in this sense, and in this alone, I am a deeply religious man.

² Einstein, A. 'What I believe', *Forum and Century* (1930) 84, 193f. and in Cotton, E.H. (ed.) *Has Science Discovered God?*, New York: Crowell (1931), pp. 93-97: quoted in Jammer, M. *Einstein and Religion*, Princeton: Princeton University Press (1999).

Now there could be many reactions to declarations of this kind. They can be seen as expressing a genuine and authentic type of spiritual awareness. Alternatively one might consider them as fine and noble sentiments, hinting at a religious statement, but inadequately as they stand. At the other extreme, they might be regarded as purely subjective emotions, lacking in any real significance at all – but this does not seem to do justice to the situation. Even many who would call themselves agnostics or atheists can experience feelings akin to those quoted above, which relate to an impression of something greater than oneself, and extending beyond our own rational understanding. They generate a feeling of humility. I will call this a perception of *strong mystery*, but it could equally well be called ‘transcendent mystery’.

There is no shortage of statements by scientists and others in which this type of experience is expressed, in varying degrees of ‘strength’. They come from religious believers and unbelievers. The astronomer Carl Sagan wrote: ‘Every aspect of Nature reveals a deep mystery and touches our sense of wonder and awe.’³ The physicist Marcelo Gleiser put it as follows:

We look at the cosmos with a mixed sense of awe and wonder, of terror and devotion. And we want to know. How can something come from nothing? What is the origin of all things? Can order emerge by itself, without a guiding hand? Is beauty a mere accident of Nature, or is there a deeper meaning to it? Why do we crave beauty, as junkies a drug?⁴

These are religiously oriented questions, and gazing up at the stars at night seems to be a typical way to open the door to them. At its most intense, a sense of ‘strong mystery’ requires language as uncompromising as that of Einstein. Here is something that verges on a profound spiritual experience, pushing words beyond their limits. Other versions make less forceful assertions: a lesser type of awe might be aroused as an experience of something almost infinitely bigger than the human observer, but in a physical rather than a spiritual sense. At a lower level, it could be a strong sense of amazement that there is so much we still do not know. In this kind of transition, we can trace even with strong mystery a gradual movement between our two main topics here of mystery and ignorance. The feelings associated with the two qualities can merge into each other, with a potential for confusion between them.

Everyday mystery

Mystery, we have said, is not a mere absence of intellectual knowledge. It refers to whatever the rational intellect is unsuited to deal with, and when we have

3 Sagan, C. *Cosmos*, New York: Ballantine (1980), p. 275.

4 M. Gleiser, in Harper, C.L. Jr, (ed.) *Spiritual Information*, Philadelphia: Templeton Foundation Press (2005), p. 147; Sacks, O. (ed.) *The Best American Science Writing 2003*, New York: Harper Collins (2003), p. 102.

a direct perceptual awareness of this quality, this awareness is not of a rational kind. We do not need to go to the cosmos for mystery, however, because it is to be found all around us.

What I will term ‘everyday mystery’ relates to questions of ordinary existence and personal experience, and even extends into the scientific realm. Let us try to ask ‘what something is’. One approach is by a method of subdivision. We can ask questions such as ‘What is water?’ and be told that it consists of oxygen and hydrogen atoms. We can then ask what the atoms are and obtain an answer in terms of elementary particles. But unless the subdivision goes on for ever, which would be both unexpected and unprovable, we will eventually arrive at some kind of fundamental objects, which at present might be quarks, gluons and electrons, or quantum fields. What then can we say that the ultimate things are? No rational reply is available. What ultimate things ‘are’ – and hence what anything ‘is’ – must be assigned to the category of mystery.

There is a type of answer to this class of question that theoretical physicists sometimes try to give, but which in the end will not do. Suppose, say, that elementary particles are claimed to be objects with certain kinds of quantum structure. We would naturally like to ask what these quantum objects ‘are’. A likely reply from a theorist would be to present the mathematical properties of the postulated entities. ‘The fundamental physical entity is an object whose mathematics is given by the following equations, which I will write on the board for you. That is what it *is!*’ Now it is true, no doubt, that the physical objects have mathematical properties. It may also be true that this is all we can say about them. But if the claim is made that the mathematics tells us what a particle ‘is’, then an error is made in confusing the object’s properties with the object as such. Even mathematical properties do not constitute what something ‘is’.

Here I have been recounting the kind of argument used two centuries ago by the philosopher Immanuel Kant, in his analysis of the limitations of human reason.⁵ Kant concluded that the ‘thing in itself’, whatever kind of thing it may be, remains always unknowable by the human intellect. We can know a thing’s properties and attributes, but not its ‘is-ness’. The properties can be observed and rendered within our minds, but the ‘is-ness’ cannot. It remains outside, and we must simply infer it and believe in it. It therefore falls into the kind of category I here refer to as ‘mystery’. Anything and everything around us, given that it ‘is’, possesses this type of mystery of existence, which can be regarded as a prime example of ‘everyday mystery’.

Definitions of terms establish conceptual relationships, but these cannot address the final ‘is’ question. A set of definitions always requires a starting

⁵ Kant, I. *Abhandlungen nach 1781*, p. 209. There are of course other philosophical treatments of this topic which might have been brought into the present discussion. That of Kant, however, does seem to provide a particularly good reference to some of the central issues here.

point that is just accepted. What is an electric field? A property of a point in space, such that electric charges placed there experience a force. What then are electric charges? At some point we must just accept the basic phenomenon, without having an answer to 'what it is'. Definitions of course have a practical utility. An electron, for example, may be uniquely defined as a negatively charged particle with a certain value of its mass. Given this, we can in principle recognise any electron we come across. But definitions are still only about properties and do not answer the unanswerable accompanying question regarding existence.

We will meet other examples of 'everyday mystery' as we proceed.⁶ Overall, one might say that strong mystery tends to lie 'beyond' our rational understandings, while everyday mystery lies in and around them, although the two categories are not completely separate. Perhaps some would prefer to avoid referring to anything as elusive as mystery, and would rather drop matters when our understanding stops. For others, though, this would be deeply unsatisfying. The absence of one type of answer to a question does not remove the possibility of other, different ways of dealing with it, as we shall see later.

Mystery and rationalism

Our references to human rationality have so far focused on distinguishing it from mystery, but it will not do just to say that mystery begins where rational knowledge stops. Rationality is itself embedded in mystery. Consider science: in order for the scientific enterprise to proceed, it must employ a basic framework of concepts and methods which must be taken, used and trusted. They may be called science's 'tools of rationality'. The high credentials of science come because the understandings it generates are self-consistent and can usually be verified experimentally, but this does not mean that its methodology itself has a justification that is purely rational. For this, we would need to justify the justification, and so on. Even the tools of scientific rationality, in the end, must be taken as having an objective validity that is 'self-evident'. We just see their truth, and can explain no further.⁷ So here is another 'everyday' example of mystery.

6 D. H. Lawrence wrote:

Water is H₂O, hydrogen two parts, oxygen one,
but there is also a third thing, that makes it water,
and nobody knows what it is.

'The Third Thing', in *The Complete Poems of D. H. Lawrence*, (many publishers' editions). This certainly sounds like our present idea of everyday mystery, but it is not easy to tell whether he was referring to the primary existence of water, or to the holistic nature of the water molecule.

7 See e.g. the discussion in Nagel, T. *The Last Word*, Oxford: Oxford University Press (1997), chap. 2. To make sense of itself objectively, reason must be objective, not subjective. It must be self-consistent, but cannot rationally justify itself without using itself. So reason is in one sense ultimate. How then can it stand? The point is discussed further in a theistic context – for reason can still have an ontological *cause* underlying it – by McCann, H.J., in Stewart, R.B. (ed.) *The Future of Atheism*, London: SPCK (2008).

I do not think it is correct to claim that scientific method and other forms of rationality are justified 'because they work'. That would lead, in any case, to a philosophy of pragmatism rather than rationalism. Our normal practice is to consider rationality to be something that is valid prior to its application in activities such as science.

Rationality is a mode of thinking in which we form logical structures between ideas, drawing conclusions according to this logic. This process is central to science, where it will be valid only if there is a consonance between the world and the ideas we form about it. Kant had doubts about taking this assumption too far; he proposed that we can think only in certain ways, and that these comprise a kind of conceptual filter that enables us to have correct thoughts only about those aspects of the world that match our own mental capabilities. Bearing in mind that Kant wrote before modern science had become fully developed, we might ask how his proposal could apply to science. It would say that we are able to think scientifically only about certain things: chiefly, those that can be observed and measured experimentally and whose behaviour is described by humanly understandable concepts and laws. Other aspects of reality, if they exist, lie outside the capability of human science.

However the suggestion that human rationality might have limitations can meet resistance. Just as there is a philosophy of physicalism that says that everything is at heart physics, and a closely related attitude of scientism that says that everything conforms to human science, so there is an ideology of *rationalism* that in its purest form asserts that all our thinking about the world around us should be rational. All of us have an element of rationalism in our make-up, being rational creatures, but those who would call themselves rationalists profess to take this to a very high level.

'Rationalism', in fact, is a word whose meaning has changed over time. In the eighteenth century, it was a philosophy that was held in opposition to *empiricism*. Rationalism asserted a fundamental reliance on ideas, held to be knowable in a clear and direct way, while empiricism claimed that knowledge comes solely from direct observation of phenomena in the world around us. The later philosophy of positivism said much the same thing as empiricism, but was somewhat less open-minded. The eighteenth-century empiricist might have allowed that unobservable things could exist, but would have denied that there was any way to know about them. The twentieth-century positivist attempted to deny that there was even any meaning in speaking about something that is unobservable. Unobservable things were not merely unknowable but were conceptually invalid – they could therefore have no reality even in principle. This implies a radical denial of many kinds of mystery.

Positivism has now largely lost its appeal. The realisation grew that observations have to be made sense of, because otherwise they are useless, and that to do this requires the deployment of assumptions and beliefs that are not themselves observable things, but are in some sense a priori ideas. Raw observations, in other words, do not provide their own interpretation. This must be

supplied by us, and to do so we have no choice but to be old-fashioned rationalists to some degree. Einstein was once a positivist, but later rejected the position for reasons of this kind.⁸

The disagreement between rationalists and empiricists was an important theme in eighteenth century thought, and there were some rationalists who went so far as to assert that *only* mental ideas are real. That would certainly seem a hard position for a scientist to take. Kant argued against both empiricism and rationalism as absolute statements by saying that while we can think rationally about observed features of things, the unobservable ‘thing in itself’ remains unknown.

In its modern usage, rationalism has come to stand in opposition not to empiricism, but rather to any reliance on intuition, tradition, faith, authority or mystery. In particular, the new rationalism tends to be against religion, which normally contains elements of all these things. The well-known thinker Bertrand Russell was prominent in promoting this kind of rationalism in the first half of the twentieth century. Here is his basic declaration of his position:⁹

I am, in this age when there are a great many appeals to unreason, an unrepentant Rationalist. I have been a Rationalist ever since I can remember, and I do not propose to cease to be so whatever appeals to unreason may be made.

Russell proceeded to define rationalism as the attitude of ‘not believing a proposition or causing others to believe it unless there is at least some reason for supposing it to be true.’ This he felt was a ‘modest proposition’. The rational habit of mind was a rare one. However in the short piece quoted here, entitled *Why I am a Rationalist*, Russell provided no clear rational reason for his rationalist position other than a hatred of ‘unreason’. He apparently felt that his viewpoint was self-evident.

The obvious difficulty with this definition is that in practice, almost all of us are able to find reasons of some kind for whatever our beliefs may be. A more typical definition of modern rationalism may be found in the online Catholic Encyclopedia:

Rationalism, in the broader, popular meaning of the term, is used to designate any mode of thought in which human reason holds the place of supreme criterion of truth.

This is much stronger than Russell’s proposal, and in practice he appeared to follow something closer to this statement than his own.¹⁰ A perfect rationalist

8 Heisenberg, W. *Encounters with Einstein*, Princeton: Princeton University Press (1983), p. 114.

9 Russell, B. ‘Why I am a rationalist’. This was a talk delivered to the Rationalist Press Association in 1928 and was reprinted in an early edition of Russell, B. *Why I am not a Christian*, Girard: Haldeman-Julius (1929). It is easily located on the Internet.

10 By the time Russell wrote *The Faith of a Rationalist* in 1947 he claimed to require rational proof in order to believe anything, based on sense-data, mathematics and logic.

would presumably hold human reason to be the *sole* criterion of truth. But no one is a perfect rationalist, a point readily granted by Russell, who portrayed perfect rationalism as a distant prospect rather than a present human achievement. Indeed, those who claim to be rationalists display a diversity of viewpoints, rationalism often being employed as a flag-waving word to advertise a person's own brand of sceptical philosophy.

Between Russell's earlier definition and the Encyclopedia definition, an important line seems to be crossed, between rationalism as an epistemological statement and as an ontological statement. In other words, is rationality the only way to 'know' something, or are rationally knowable things the only things that exist? If the former, then one would have to give up attempts to know more about what is here termed mystery. If the latter, then even the existence of most of what lies in the 'mystery' category would have to be denied. Individual rationalists need to know where they stand on this point.

There is a more basic issue, however. To say 'I believe in rationality because it is rational to do so' is a circular justification, and thus invalid by rational criteria. Just as we saw above in the context of science, rationality cannot in the end rest on a foundation of rationality. So it must either rest on something different, or else on nothing. If the former, then there is something important going on other than rationality. In either case, all that we really have to go on is an intuitive perception of the authentic nature of rationality – an everyday mystery. Rationalism as an ideology, therefore, amounts to a belief system like others, and the existence of 'perfect rationalism' is an illusion.

Mystery is not opposed to reason and should not be despised as 'unreason'. It extends beyond and around human reason. In this area, a crucial difference of emotional attitude is often to be observed between two classes of people: there are those for whom a recognition of mystery is quite acceptable, even attractive, and others for whom the entire notion of mystery is repellent. Opponents of mystery, possibly tagging it as 'unreason', often assert a strongly rationalistic stance with vociferous opposition to religion, desiring to co-opt science on their side. Under the mistaken impression that science opposes mystery, a number of them become scientists. But the example of Einstein shows without any doubt at all that an acceptance of mystery does not harm the practice of science. Why then should it be perceived as a threat?

Mystery and science

The psychologist Abraham Maslow made the suggestion that a certain kind of 'narrowed' scientific attitude, which he termed 'desacralising', arises essentially out of fear and emotional fragility:¹¹

11 Maslow, A.H. *The Psychology of Science: A Reconnaissance*, Chicago: Regnery (1966), pp. 138, 139.

Orthodox desacralizing science has for various reasons tried to purge itself of these transcendent experiences...

This desacralization can be used as a defense against being flooded by emotion, especially the emotions of humility, reverence, wonder, and awe.

But many good scientists, as Maslow goes on to say, do not show this trait. The qualities he lists are those we have associated with a sense of 'strong mystery', and it is clear that they are in conflict with the attitudes of narrow rationalism, not with rationality itself. The fact that mystery is not rational knowledge should not be held against it.

Another noteworthy feature of science is that it tends to reveal a universe possessing considerable beauty. Sometimes this beauty is of a rather esoteric kind – it may be appreciated only by mathematicians – but then, a Bach fugue makes its own specialist demands. This beauty seems to be something that defies rational analysis, another example of mystery. Not everyone seems to feel these emotions. Richard Dawkins supportively quotes an opinion that 'Most scientists are bored by what they have already discovered. It is ignorance that drives them on.'¹² – a surprising remark from one who is so clearly enthusiastic about what has been discovered in his own field of evolutionary biology. We shall find some very different attitudes in the following paragraphs.

Even those who are irreligious in the usual sense can sometimes obtain a rudimentary religious outlook from feelings of wonder evoked by science.¹³ The physicist Richard Feynman was responsible for developing much of the basic theory of elementary particles. In his autobiography he related his reasons for wanting art lessons, in words which are worth quoting at length:¹⁴

I wanted very much to learn to draw, for a reason that I kept to myself: I wanted to convey an emotion I have about the beauty of the world. It's difficult to describe because it's an emotion. It's analogous to the feeling one has in religion that has to do with a god that controls the whole universe: there's a generality aspect that you feel when you think about how things that appear so different and behave so differently are all run 'behind the scenes' by the same organisation, the same physical laws. It's an appreciation of the mathematical beauty of nature, of how she works inside; a realisation that the phenomena we see result from the complexity of the inner workings between atoms; a feeling of how dramatic and wonderful it is. It's a feeling of awe – of scientific awe – which I felt could be communicated through drawing to someone who had also had this emotion. It would remind him, for a moment, of this feeling about the glories of the universe.

12 Dawkins, R. *The God Delusion*, New York: Houghton Mifflin Harcourt (2006), p. 125.

13 See e.g. Einstein's own attitudes, quoted above, and the account given in Jammer *op. cit.*, (2), p 151 of the effect of Einstein's religious statements on other people.

14 Feynman, R.P. *Surely you're joking, Mr Feynman*, London: Unwin (1986), p. 261.

Here is a religiously sceptical scientist's very intuitive interpretation of what we have called mystery, expressed in a certain type of beauty. The rationality and the intellectual understanding are both there, but are overlaid with a different quality, one that is 'difficult to describe' and characterised by Feynman as an emotion. Far from being anti-rational, this quality is actually aided by the presence of scientific rationality.

Einstein wrote in a similar way:

The individual feels the futility of human desires and aims and the sublimity and marvellous order which reveal themselves both in nature and the world of thought.¹⁵

[The scientist's] religious feeling takes the form of a rapturous amazement of the harmony of natural law, which reveals an intelligence of such superiority that compared with it all the systematic thinking and acting of human beings is an utterly insignificant reflection.¹⁶

The error of equating mystery with scientific ignorance is made completely evident here. The biologist E. O. Wilson has written in a slightly more complex way that seems to combine wonder, knowledge, mystery and, possibly, ignorance:¹⁷

Our sense of wonder grows exponentially: the greater the knowledge, the deeper the mystery and the more we seek knowledge to create new mystery...

Overall, the sense of mystery operates within science by contemplating what we *know* and realising the wonder surrounding this, the wonder within it, and the wonder of the apparent fact that there is so much beyond. Scientific knowledge itself becomes a vehicle for a sense of mystery.

Mystery and ignorance in the search for God

It is my hope that the reader, even if of a rationalist disposition, has by now been persuaded that mystery should not be identified with obscurantism, but is something positive. Moreover, the frequent association of mystery with some kind of religious dimension cannot be honestly ignored. At the same time, science is often held to be opposed to all this. We must try to explore the situation further.

I would first mention the long-standing tendency in western society to keep the secular and religious sides of life in separate compartments – a habit that

15 Einstein, A. *The world as I see it*, Harris, A. (trans.), London: The Bodley Head (1935), p. 28.

16 Einstein, A. to Wright, P. 24 Jan. 1936, Einstein Archive, reel 52-337, quoted in Jammer *op. cit.*, (2), p. 93.

17 Wilson, E.O. *Biophilia*, Cambridge, MA: Harvard University Press (1986), p. 10.

is obviously inconsistent with a faith present in all of a person's life. A common lifestyle has consisted of one day a week with God, and six days without. This pattern inevitably leads to a view of the world as something that is on the whole self-subsistent, running with its own set of rules, namely the laws of nature and of human nature – at least for six days a week.

In this way a division between the secular and the religious is easily established. A rational, scientific world is perceived, in which one lives most of the time, together with a separate religious domain which is entered occasionally and where a different set of rules applies. This domain may even be regarded as spatially located – in a church building, for example. Meanwhile, scientific knowledge has become secularised.

From such a perspective, it would seem natural to say that 'religion begins where science leaves off'. There are two sides to existence, and science denotes the governing principle of the secular side. Those who take secular physicalism as their philosophy will at this point make plain their view that physical science never leaves off, and so religion should never begin. But in any case, science has acquired the habit of expanding its domain. Once, comets and meteorites were seen as having direct supernatural causes, and the planets were associated with deities. Over the centuries, these phenomena have become well understood within physics and astronomy, and similar examples may be quoted from other sciences. In this way, the area of human existence once seen as a reserve of religion has had a continued tendency to shrink – like a nature park encroached by industrial zones. 'As science advances, religion retreats,' so it has seemed. Thus it has proved easy for six days a week without God to turn into seven.

In this type of thinking, we have what Charles Coulson, in a famous phrase, called the 'God of the gaps'.¹⁸ Excluding God from weekdays and from the world known by science, we locate him in regions where current scientific knowledge stops: that is to say, the 'gaps'. Here we allow God to exist. But the gaps tend to shrink with time. One of the traditional ways of arguing against religion is centred on dismissing the God of the gaps.¹⁹

Clearly, such attitudes have always lacked logic. God has to be God of all existence, and not just where science has gaps. Why should there be the irrational feeling that God is seen only here? Now, God is surely enwrapped in mystery, and in directing one's attention towards God, the acceptance of mystery is a prerequisite. However, if we fail to distinguish between mystery and ignorance, then, confusing the two, we will link them together. We will then associate the gaps in our knowledge with mystery. In this way the sceptic, noting that the task of science is to reduce ignorance, takes science as equally reducing

18 Coulson, C. *Science and Christian Belief*, Oxford: Oxford University Press (1955).

19 Miracles are something different, anomalies rather than gaps. But it is important to note that Jesus and his followers saw miracles primarily as signs of God's power, not of his existence.

mystery. By implication, science then comes to be thought of as acting against religious thought and belief.

A variant of this type of argument is more rationalistic. A true-believing rationalist will hold that everything of importance is at least in principle rationally knowable. So-called mystery is thus just another kind of ignorance. But God seems to be both invisible and unknowable, immediately presenting a problem. To gain knowledge about something removes it from the realm of darkness and ignorance into that of light and rationality. Science, in advancing, provides knowledge and takes away ignorance. This process will eventually leave no place for God to hide!²⁰

An obvious objection here is that God is surely able to create things, such as a universe, that we can know about. The progress of science thus has no logical bearing on his existence. Rationalists just try to define God away. A further reply from believers is that God is by no means wholly unknown but has revealed to us aspects of his nature over the ages, as recorded in the Scriptures. So the presupposition of God's total unknowability is false; in fact St Paul taught that in the next life we will have a full knowledge of God.²¹ At the same time, the world of nature, as God's handiwork, may also be able to suggest things about God. Galileo, among others, considered this world to be God's 'second book'.²²

Mystery, meanwhile, does *not* know gaps. It is omnipresent. Our discussion has shown scientists referring to mystery, awe and wonder in areas where rational scientific knowledge is certainly present as well. In other words, the rational intellect can perfectly well have a coexistence and indeed a partnership with a sense of mystery. The universe of laws can be also a universe of mystery. The rationalist argument evaporates.

A further remark: although in science much is often made of the diminishing 'gaps', there is another common theme that states that the more questions science answers, the more unknown territory appears to lie beyond. While old gaps are filled, others open up elsewhere. Some, and E. O. Wilson may be in this category, enjoy the sense of mystery by associating it with the new scientific gaps, though in a non-religious way. My comment would be that this is one of the weaker forms of strong mystery discussed earlier, and that it leads to confusion unless the real distinction between ignorance and mystery is firmly made.

In all this, it should not be automatically assumed that mystery in nature is in itself the mystery of God. Pantheists might say so, but others would see nature instead as *iconic* with regard to God: it opens up the mind and heart in

20 For further completeness one should mention, but only parenthetically, another traditional rationalist 'ignorance' argument that goes, as it were, 'The peasants believe in superstitions, the peasants believe in God, therefore God is a superstition.' The elementary logical error here hardly needs pointing out.

21 I Cor. 13: 12.

22 Galileo Galilei, *Letter to the Grand Duchess Cristina*, (1615).

God's direction. In either case, though, an appreciation of nature has the potential to expand our spiritual awareness and so perhaps act as a means towards God. This would be an important aspect of nature as God's 'second book', and it is perhaps the true sense in which nature may be seen as 'sacralised'. Rationalism, with its superficial, know-it-all attitude, is unable to view nature in this way.

The Romantics

There is a contrary opinion on what we have been saying, however, which is typified by the views of the Romantic poets Samuel Taylor Coleridge and William Blake. For these writers, mystery and knowledge stand in mutual practical opposition. Whenever we encounter an area of life which is new and unfamiliar to us, we begin in a state of natural ignorance. In this condition it is not possible to employ the intellect to evaluate what lies before us: a learning process is first required. Only a non-rational kind of awareness is available, and it seems to allow a relatively easy entry to wonder and awe. Later, alas, knowledge and experience supplant the original mystery-tinged mode of awareness. Ignorance and mystery thus disappear together and so our knowledge comes at a heavy spiritual price. Coleridge and Blake believed that young children are in this sense more spiritually privileged than knowledge-degraded adults.

But if knowledge in the sciences can be accompanied by a sense of mystery, as we have seen, this cannot be the whole story. Coleridge and Blake were to a serious degree mistaken. The problem evidently does not lie in knowledge itself. Perhaps it is in part due to our use of our intellect to exert control over our surroundings. In knowing about a thing we seek to 'understand' it, 'grasp' it and mentally 'possess' it, so as to subdue it and allow its use for our active designs and goals. This is a necessary part of practical life, but it strikes a discord with mystery. Mystery is associated with humility, and requires a different, more self-denying, more receptive mode of the mind.

A more basic point, however, may be that knowledge is something residing within me, whereas mystery is not: it is associated with relating to outside things. Knowledge is an internal possession and focuses an important part of our attention inwards; mystery is outgoing. So perhaps knowledge can indeed crowd out a person's awareness of mystery, although we need not let it do this.²³

²³ A well-known example of this kind of effect can be found in a letter written by Charles Darwin to a friend, at a late period in his life:

Up to the age of thirty, or beyond it, poetry of many kinds, such as the works of Milton, Gray, Byron, Wordsworth, Coleridge, and Shelley, gave me great pleasure. But now for many years I cannot endure to read a line of poetry... My mind seems to have become a kind of machine for grinding general laws out of large collections of facts... The loss of these tastes is a loss of happiness, and may possibly be injurious to the intellect, and more probably to the moral character, by enfeebling the emotional part of our nature.

Charles Darwin: His Life Told in an Autobiographical Chapter & in a Selected Series of his Published Letters, Darwin, F. (ed.), London: W. Clowes and Sons Ltd (1892), p. 51.

Contextual mystery

We have been treating the idea of mystery in a very general way, associating it with whatever may lie intrinsically beyond rational analysis. This is quite an ambitious line to take. In many situations it could be helpful to adopt a more restricted approach, and define 'contextual' mystery and ignorance in terms of the situation within a given human context. Viewed from outside this context, both are a total mystery.

For example, the laws of theoretical physics have nothing to say about the appreciation of the culinary arts, and so the idea of 'la bonne cuisine' will be a total mystery to a physicist who lacks any kind of refined palate. Conversely, the subject of theoretical physics will be completely inaccessible to a chef with no scientific background. Each of these people will have no rational knowledge of what the other is talking about, apart from a few common concepts such as temperature. A similar juxtaposition could be made of physics with poetry. A physicist cannot hope to develop a deeper understanding of refined meals, or of poetry, through deeper advances in physics, nor can a chef understand physics better by developing finer recipes. An appreciation of poetry would not help in understanding either of these areas, except perhaps to encourage a more receptive mood. Each of the areas is virtually a complete mystery from the limited point of view of each of the others. Of course, we must add, human beings can be multi-faceted, and nothing prevents a given individual from having separate talents as a physicist, as a chef and as a poet.

Inside a given subject-area, elements of mystery are likely to exist beyond that area's rational discourses, and the difference between mystery and ignorance applies as before. From outside, however, both appear as mystery. In physics, then, ignorance can be reduced by uncovering broader and deeper laws, but the kind of mystery sensed by Einstein remains. *Neither* of these can be comprehended by a non-scientist. The appropriate context must first be entered if one is to remedy the ignorance and appreciate the mystery pertaining to it. Only one who is conversant with poetry can hope to eliminate his ignorance of poetry and thereby properly experience the element of mystery in poetry. A poetry-blind prose-reader will regard everything about the subject as unfathomable mystery. To the outsider, nothing is rationally accessible, and so the mystery element is indistinguishable from what an insider would see to be mere ignorance.

Not all mysteries are 'deep'. The mystery behind the existence of the universe with its laws is a much more serious matter than anything associated with the culinary arts.

A caveat

At this point a general word of caution should be stated. We should be alert to the fact that when different areas of human experience contain unanswered

questions, a common temptation is to wish to connect all of these by means of one all-embracing theory.

So it is sometimes hard to browse through a popular bookshop without encountering the kind of volume that takes UFO's, the Bermuda Triangle, the Egyptian pyramids, or whatever is of interest to the author, and seeks to pull all the selected areas of ignorance together so as to allow one grand theory that will account for everything. This may be called a 'conflation of ignorances'. In science, we do not properly understand quantum events; nor do we understand much about human consciousness. According to this style of approach, therefore, let us elegantly connect the two areas, and thereby reduce two areas of ignorance to one! Now there may be a connection between quantum events and consciousness, or there may not be. But we should be extremely wary of assuming that a connection exists just because we currently understand neither.

Viewed charitably, this kind of practice might be seen as a pardonable intellectual overindulgence, like putting too much food on one's plate at once. It is likely to be misguided, because different areas of human ignorance usually have to be sorted out one by one, each by means of its own specialist approach. Archaeologists may succeed in resolving questions about the Egyptian pyramids; nautical experts may clarify if anything is happening in the Bermuda Triangle. Finally we may be able to say if the areas are actually connected. To attempt to bring it all together prematurely is overbold, but possibly entertaining if not taken too seriously.

This leads into the far deeper issue of mystery. To repeat, ignorance concerns questions that can in principle be answered with the rational mind, with an outcome of conceptual understanding. Mystery cannot be resolved in this way. Better vocabulary might be brought in to talk about the matter, but the mystery is not reducible to words or intellectual ideas, even within a particular context. Now, if there is such a thing as conflation of ignorances, there is also such a thing as conflation of mysteries. That is, one tries to merge a number of limited mysteries together to form one big Mystery. This might occasionally be appropriate, but more likely not. An element of mystery in quantum physics may well have nothing to do with the mystery of consciousness, neither of which is necessarily connected with the mystery of beauty, or that of goodness, or any other mystery. Mysteries can presumably be manifold and diverse.

To use the big word Mystery to encompass everything that possesses mystery is therefore naive and perhaps even a little dangerous. A conflation of ignorances will in the end be sorted out with no serious consequences. The situation could be otherwise with regard to mystery, as I shall try to explain.

Relating to mystery

The human intellect is able to cope with different types of ignorance in the same fundamental way. We investigate to uncover more facts, and we think

about the subject to gain a better understanding. Such are the means to bring about the goal of replacing ignorance by knowledge.

Mysteries, on the other hand, are dealt with not by intellectual means but by direct human interaction on our part. Each requires that we interact with it in its own appropriate way, and these different ways will involve different aspects of our personal existence. At one level, there are mysteries such as those of physics and of natural existence, that we just live with, no special demand being made on us. We interact with the mystery of the basic nature of physical matter by living physically in the physical world. In this practical way we deal with its mystery. The mystery of beauty demands a more conscious personal interaction on the other hand, because it is in some sense able to feed our souls.

Mystery probably resides in almost anything. We have mentioned the mystery in the basic existence of human rationality: the scholar or scientist interacts with this implicitly by the fact of using the mind to do study and research. The mystery of God is grappled with by means of prayer. There is a human mystery in each one of us, and personal relationships are our way of managing this type of mystery. Kicking a stone à la Samuel Johnson²⁴ might be a very explicit way of interacting with the mystery of the material existence of the stone. Dealing with mystery is in most cases practical, relational and personal, rather than intellectual and informational.

There is no comprehensive human faculty, analogous to the rational intellect in the case of ignorance, that can generically and globally deal with every type of mystery. Depending on the context, the issue need not be mental at all. With mystery, various different kinds of personal interaction are needed, and so any attempt to connect different mysteries may well have practical repercussions on ourselves, which could be of an adverse nature if we get it wrong. It is unwise to regard different examples of mystery uncritically as species of one grand genus of Mystery, at heart the same, and to be related to in the same way. For example, there is a mystery in sensual experience and a mystery in spiritual contact with God, but it is dangerous to try to unite these two things. Even though sensual experience is sometimes claimed to be also spiritual, this is usually a mistake and the true spiritual experience suffers.

Ignorance is something negative, an absence. In the intellectual area, every specific absence of knowledge can be simply seen as an instance of a generic absence of knowledge, that is to say generic ignorance. By contrast, all true mysteries have something positive about them. This, in the end, is the crucial difference between ignorance and mystery. The positive element in a given

²⁴ Dr Johnson refuted Bishop Berkeley's philosophy of extreme mental idealism, with the non-existence of matter, by kicking a large stone with great force: Boswell, J. *The Life of Samuel Johnson*, New York: Penguin Books (1986), p. 122.

mystery is found by means of a suitable way of interacting with it, and it will not be the same way in each case.

There may well be no means at all of dealing with a mystery if approached from an inappropriate context, because appropriate knowledge may in fact be needed. In the examples mentioned earlier, we have to start by establishing separate appreciations of theoretical physics, good eating, and poetry, interacting with each within its own context in a suitable way. Unification may perhaps follow later, although in the three cases quoted this seems unlikely.

Seen from this viewpoint, rationalism, if it is taken as a rejection of all that is non-rational and non-intellectual, is an extremely life-impoverishing principle. It may protect its practitioners from certain types of erroneous belief, but this comes at a very heavy price of what is lost. It is a blinkered philosophy.

A theological perspective

A little more should finally be said about mystery and ignorance in a theological context. This is a profound subject, about which many things have been written, and I can only attempt to sketch a few basic themes here. New Testament use of the Greek word *mysterion* refers to things that were unknown to us before God revealed them, and this has led to a Church tradition of designating as ‘mysteries’ those teachings that cannot be proved logically, or deduced from experience, but are truths that constitute part of the Church’s beliefs by virtue of revelation.²⁵ This differs somewhat from our present use of the word ‘mystery’, since the doctrinal teachings can be intellectually understood, even though their divine origins may be examples of mystery in the sense of this essay. In neither case, of course, does the word refer to any kind of esoteric teaching known only to a select few, as in the so-called Gnostic ‘mystery religions’.

The contrast that we have been examining here between mystery and ignorance is found in two kinds of theology that were stated around the year 500 by a writer often known as St Denis, or today as ‘pseudo-Dionysius’. On the one hand there is a familiar theology of revelation and intellectual knowledge. Here, positive statements about God are made, and if we do not know them we are ignorant. But God is not in any way an idea in the human mind, and there is a deeper relationship that comes through his spiritual presence in our hearts. A Platonist might seek absolute Beauty through an increasingly pure mental image of beauty; God however cannot be ultimately sought in terms of images or mental concepts at all. According to the second kind of theology, then, we can relate more closely to God by setting aside attempts at mental understanding. This is a ‘theology of darkness’, or ‘apophatic’ theology, and over the centuries it

²⁵ For more details, see e.g. the online Catholic Encyclopedia.

has been a common theme in Christian contemplative practice. A well-known western account is that given by an anonymous late fourteenth-century English monk, who was well aware of the earlier teachings of St Denis, in a set of instructions on contemplative prayer entitled *The Cloud of Unknowing*.

Revelation removes intellectual ignorance, and is an essential part of the Christian faith. It orients us. However knowledge as such does not make us godly – this is the Gnostic error. We become godly by spiritual contact with God, and this must be driven by the heart and will rather more than the mind. It corresponds to an attitude to God as mystery in the sense defined in this essay. Note again that mystery is something positive. Followers of the apophatic tradition seek closer contact leading to union with God by an intense programme of prayerful contemplation, the intellect taking a back seat.

Conclusions

In this essay I have attempted to classify two different types of absence of knowledge, referring to them as mystery and ignorance. Both of these concern the way we relate to other things, but confusing them is a serious mistake. Ignorance is something that scientific research, in particular, can reduce or eliminate, but mystery lies outside the remit of science and its means of investigation. As science advances, ignorance retreats, but mystery remains – or even deepens. There are types of ‘everyday mystery’ that we familiarly live with, with no further ado. But there are dimensions of mystery with very much stronger overtones, which can become a starting-point for an experience of a deep and awesome sense of wonder, and this could have a religious connection.

Although primarily non-intellectual in its functioning, mystery awareness is well able to partner the participation of the rational mind. The elimination of many historic scientific ‘gaps’ has been seen by sceptics as a death sentence for religion, but this notion comes largely from a confusion of ignorance and mystery, linked to a secularised attitude to scientific knowledge. God must be seen as God of all things, including both rationality and mystery, and also science. Every scientific result that accounts for a new area in terms of laws of nature makes it more manifest how remarkable these are. As has often been said, rather than a God of the gaps we should see a God of the laws. Like all other aspects of the created order, laws of nature are capable of evoking wonder and a sense of mystery, while being at the same time supremely rational.

The rational intellect must therefore be prepared to cooperate with other aspects of our personal existence and situation, including mystery. Where an element of mystery comes in, the intellect cannot expect to do all the work. However it is not always easy to know the boundary where ignorance stops and mystery begins.

Ever since the Industrial Revolution, there has been a nostalgia for simpler times, when mystery seemed more accessible. The more passive element in

mystery awareness, and its likely expulsion when we impose our own designs on things, may help to explain why we see natural environments as more mystery-imbued than cities. It helps to explain some of the opposition to our increasing control over nature. Mystery is being driven out: a sacrilege! Powerful and captivating as the sense of mystery may be, though, it amounts only to a rather rudimentary type of religious consciousness. A much more dismissive opinion has been characteristically expressed by Richard Dawkins, who says that 'A quasi-mystical response to nature and the universe is common among scientists and rationalists. It has no connection with supernatural belief.'²⁶

Many however, notably Einstein, have seen these experiences as powerful and intensely meaningful. Something lies beyond. Perhaps they really ought to make rationalists and others more receptive to supernatural belief. But in an experience-oriented age such as our own, interesting experiences easily become ends in themselves, and mystery cultivated for its own sake can amount to a mere religion-substitute. A sense of mystery must be a path to something further and deeper if it is to be of real significance and not just an emotional indulgence, however congenial that may be.

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²⁶ Dawkins *op. cit.*, (12), p. 11.



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