THE INTERVENTIONIST CONCEPT OF MIRACLE AND THE POSSIBILITY OF MIRACLES

By

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submitted in partial fulfilment of the requirements for the degree of

MASTER OF ARTS

UNIVERSITY OF TASMANIA

HOBART

1981

to be conferred 1983

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This thesis contains no material which has been accepted for the award of any other higher degree or graduate diploma in any university and that, to the best of my knowledge and belief, the thesis contains no material previously published or written by another person, except when due reference is made in the text of the thesis.

ACKNOWLEDGEMENT

I would like to offer my sincerest appreciation to the following persons. To my supervisor, Dr. Ray Kearney, for his many hours, helpful comments and suggestions. To my friend, Dr. Edgar Sleinis, for his valuable criticism and suggestions. Lastly to my wife for her many sacrifices in allowing me to complete this thesis.

ABSTRACT

In this thesis I investigate the interventionist concept of miracle and the most serious objections to this concept. In the first chapter I introduce the topic and in Chapter Two I critically analyse D. Hume's attack upon the evidential value of claims about purported miracles. Hume's critique is the more significant since he was the first significant philosopher to define a miracle as a violation of a law of nature. After lengthy analysis I conclude that Hume's attack fails.

In Chapter Three I analyse the charge that the fundamentals of historical enquiry rule out the possibility of our knowing that an alleged miracle has occurred. My analysis concentrates on the major attacks made by Flew and Van Harvey and the various rebuttals offered by their critics. I argue that the fundamentals of historical enquiry do not in fact rule out, either epistemically or psychologically, the possibility of miracles. In Chapter Four I continue the debate begun in Chapter Three by focussing on the claim that there is no natural, as opposed to revealed, way of distinguishing between a violation and a falsification of a law of nature. On the prior assumption that such a distinction makes sense I find that the argument fails.

In Chapter Five I drop the assumption that the interventionist concept is coherent and take up a number of challenges to its logical coherence. In Chapter Six I continue this line by investigating the attacks from

science on the coherence of the violation model. In this chapter I note that refinement to the traditional violation model is required if it is to withstand some of these major criticisms. In this chapter I also consider the possibility of rejecting the violation model in favour of a non-violation interventionist model. I conclude that the violation model is the more acceptable but note that it requires further refinement.

In Chapter Seven I move away temporarily from the conceptual and epistemic appropriateness of defining a miracle as a violation of a law of nature and investigate the distinction between a violation of a law of nature and a miracle. In particular I look at the importance of the causal role of God; the sign structure of the event and its religious setting. I conclude that a miracle is in fact a complex mesh of elements bringing together the scientific and the religious. To define a miracle as a violation without giving due reference to religious factors is insufficient.

In the final chapter I tie up a number of loose ends. I argue that a distinction should be made between the laws of science and the laws of nature and that a miracle is not a physically impossible event but rather a scientifically inexplicable event. I conclude by offering the following definition of miracle.

> A miracle is a violation of a law of science brought about by the primary action of God, occurring in religious context as a divine sign.

CHAPTER ONE

Claims about the occurrence of miracles have a central place in orthodox Christian theism. If it could be shown that the concept of miracle was incoherent, or that miraculous events could not occur or be known to have occurred, then a foundation stone of orthodox Christian belief would be washed away.

According to the interventionist view of miracle it is claimed that an event is a miracle if it requires a causal explanation, in part or in whole, in terms of the action of God. Within the interventionist view one may further distinguish between the violation of a law of nature school and the non-violation school.

Despite their widely divergent views, D. Hume in his classic essay[1] and Richard Swinburne[2], agree that the most important concept of miracle is that of a violation of a law of nature worked by God. This violation concept has two distinct threads. The first of these is the notion of a special intervention by God in nature. The second is the notion of a rare counter instance to a law - the idea of a violation or transgression of a law of nature. Between these two elements there is taken to be a close nexus.

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1 D. Hume. Enquiries Concerning the Human Understanding and Concerning the Principles of Morals. 3rd Ed. Oxford: Clarendon Press, 1975. Section X 'Of Miracles', pp. 109-131. Henceforth referred to as Enquiry.

2 R. Swinburne. The Concept of Miracle. London: Macmillan, 1970.

The non-violation school adhere to the notion of a special intervention by God while at the same time dispensing with the idea of the violated law. Hume, it seems, rejected this idea without careful consideration. For him, the question of God's incursion was one which collapsed immediately into the question whether a law violation had been wrought by God. This also seems true of most in the debates which have centred around Hume's contribution. C.S. Lewis, however, not only looks askance at treating God's contribution as a violation of natural law but also offers an alternative. For him the divine act of miracle is not an act of suspending the pattern to which events conform but of feeding new events into the pattern.[3]

Prompted by this disagreement among the supporters of the interventionist model I will consider the arguments for and against the violation thesis. At the same time I will outline the major interventionist but non-violation models. What I will press for is the acceptance of a suitably qualified violation concept.

What does a defence of the occurrence of miracles in the interventionist sense involve? Clearly, it is necessary to distinguish a defence of the interventionist concept of miracle and a defence of the occurrence of miracles in the interventionist sense. To defend a certain concept of

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3 C.S. Lewis. Miracles. London: Macmillan, 1964.

miracle is to argue that the concept is coherent[4], and that the term 'miracle' should be reserved for events of such and such a type; it does not commit one to assert that any such events have occurred. To defend the occurrence of a miracle, on the other hand, is to argue that something has happened; it is not simply to defend the propriety of such and such a linguistic usage. In fact the defence of the occurrence of a miracle may be broken down into two components; first the assertion that a certain event has occurred, and second, that the event fulfils the criteria set up for the miraculous.

It is my aim in this thesis to describe and critically analyse the most serious objections to miracles under the interventionist analysis. These objections may be readily seen by an examination of the three steps through which any claim that an interventionist miracle has occurred must proceed. To know that a miracle has occurred we must know, first, that an event - the candidate miracle - did occur; second, we have to determine that the event had no natural cause, and third, that the event was caused (at least in part) by the direct action of God. D. Hume, in his Enquiry Section X 'Of Miracles', provides an argument against miracles based on the nature of human testimony. His conclusion was that there is never sufficient evidence to support the claim that a purported miracle had occurred.

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4 In practice this means refuting all claims that the concept is incoherent.

Most modern objections focus on the second and third claim. Flew, for example, argues that we can never be justified, in the absence of a strong natural theology, in claiming that a candidate miracle does not have a natural cause.

A number of writers have argued that there is in fact no need to look at the evidence for a purported miracle since the concept of miracle itself is incoherent. It will be my aim to examine these various objections and to provide a defence of the coherence of the interventionist concept of miracle. Having established the coherence of the interventionist model it will be my aim to evaluate the violation and non-violation models. Finally, I shall offer a refinement of the violation model which I believe is the most acceptable choice in the light of my prior analysis.

Prior to the commencement of my analysis I wish to make two general comments. Firstly, throughout the literature the terms 'law of nature' and 'law of science' are used fairly interchangeably while a few writers have preferred to make distinctions between the two. Throughout this thesis I have for the main part accepted the predominant trend and used the two quite interchangeably. However, on a few occasions and particularly in the final chapter I have quite deliberately drawn a distinction between the two terms. Secondly, I note that during the past twenty

years or so there has been a strong current among religious thinkers proclaiming that despite the relevance of the biblical miracle accounts they did not involve an intervention by God. For such thinkers nothing more than the existential and religious significance of the startling event constitutes its miraculous nature. Thus the concept of miracle employed, lacking an interventionist element, is clearly different from that on which I focus in this thesis. Without wishing to deny its importance I shall nevertheless treat the existential concept of miracle as being beyond the scope of this thesis.

CHAPTER TWO

1. INTRODUCTION

From earliest Christian history, miracles have been the mainstay of Christian apologetics. Taking their cue from Jesus' own assertion that the 'one sign' to His generation of the truth of His claims would be the 'sign of Jonah' (Jesus' Resurrection)[1] and from Paul's catalogue of witnesses to that Great Miracle apart from which Christians would be 'of all men most miserable'.[2] Patristic apologists such as Irenaeus, Origen and Eusebius of Caesarea confidently argued from the historical accuracy of Jesus' miracles to the veracity of His claims and the consequent moral obligation to accept them.[3] Every major apologist in Christian history from that day to the mid-18th century did likewise, whatever the particular philosophical or theological commitment he espoused. The list includes Augustine the Neo-Platonist, Aquinas the Aristotelian, Grotius the Arminian Protestant, Pascal the Catholic Jansenist, and Butler

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1 Mt. 12: 39-40; 16: 4. Luke 11: 29.
2 1 Cor. 15:
3 Joseph H. Crehan. 'Apologetics' in A Catholic Dictionary of Theology. I. London: Thomas Nelson, 1962, pp. 113-15. Rene Aigrain. 'Historie de l'apologetique' in Bulliant and Nedoncelle (eds.) Apologetique. Paris: Bloud and Gay, 1937, p. 950. G.W.H. Lampe. 'Miracles and Early Christian Apologetics' in C.F.D. Moule (ed.) Miracles: Cambridge Studies in Their Philosophy and History. London: Mowbray, 1965, pp. 203-18.

the High Church Anglican.[4]

But with the onset of modern rationalism in the 'Enlightenment' of the 18th century came D. Hume's attack on miracles as evidence for religious truth claims. Coupled with Kant's critique of the Aristotelian-Thomist Theistic proofs for God's existence and Gotthold Lessing's argument that historical data are never certain enough to establish eternal truth, Hume's attack on the miraculous altered the entire course of Christian apologetics. Indeed Hume's Enquiry can be said without exaggeration to mark the end of the era of classical Christian apologetics.

In this chapter I will outline the main thrust of Hume's attack on miracle evidence, as given in Section X of the Enquiry. I shall argue that Hume's case falls short of its intention to discredit the concept of miracle. However, before it is possible to determine the strength of Hume's position it is essential to establish Hume's purpose in Section X. Various interpretations of Hume's purpose have been suggested and may be given in three general forms.

(a) A person cannot, in principle, have justified belief in the occurrence of a miracle.

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4 Cf Avery Dulles. A History of Apologetics. N.Y.: Corpus; Philadelphia: Westminster Press, 1971 and Bernard Ramm. Varieties of Christian Apologetics. Rev. ed. Grand Rapids, Mich.: Baker Book House, 1961.

(b) We cannot believe in miracles because the concept of miracle is logically incoherent. This is because the defender of miracles holds to a uniformity thesis of the laws of nature and denies it at the same time. But it is impossible to have both a true violation of a law and a true law; either the violation occurred and hence the law was false or the law is true and hence the violation could not have occurred.

(c) Violations of a law of nature are logically possible but we cannot be justified in believing one has occurred because we have no natural (as opposed to revealed) means of distinguishing between violations and falsifications.

Integral to an interpretation of Hume's purpose in Section X is the need to understand exactly what Hume means by 'a law of nature'. After all, we cannot hope to understand what is meant by a violation (or transgression) of a law of nature until we understand how Hume understands laws of nature. Unfortunately, nowhere in Section X does Hume explicitly define what he means by a 'law of nature'. Fortunately he provides us with enough information, which, when coupled with his views on causation, provide us with an adequate understanding of his position.

Hume states that 'a firm and unalterable experience has established these laws'[5] and 'a uniform experience amounts to a proof'[6] and further that 'a wise man, therefore, proportions his belief to the evidence ... and regards his past experience as a full proof of the future existence of that event'.[7] Hume throws more light on this where he states: 'By proofs meaning such arguments from experience as leave no room for doubt or opposition',[8] and 'by proofs (I mean) those arguments which are derived from the relation of cause and effect'.[9] From this it is clear that a 'proof' is an argument from experience derived from the relation of cause and effect. Two important points follow from Hume's 'proof'. Firstly, since it is an argument from experience it is never an absolute guarantee of truth. Secondly, although there is no absolute guarantee of its truth - in any logical sense - Hume claims that a 'proof' must be entirely free from 'doubt and uncertainty'. But how can this be when Hume also allows for the possibility of an opposition of proofs?[10] It seems that Hume must be referring to a psychological assurance. On the one hand we have a feeling of

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5 Enquiry. p. 114.
6 Op. cit. p. 115.
7 Op. cit. p. 110.
8 Op. cit. p. 56.
9 David Hume. A Treatise of Human Nature. London: J.M. Dent & Sons, 1911, p. 124. Henceforth referred to as Treatise.
10 An opposition of proofs can be expressed in the form: Proof (1) All A's are B's; Proof (2) All C's are -B's. But if we find (Aa · Ca) we have the presence of B and the absence of B; something must give.

certainty about something, but at the same time have a further certainty about something else. The two certainties, however, lead to an incompatible conclusion. But then according to Hume we will give up the belief which has less weight in favour of the other. A 'proof' is, therefore, primarily an 'association of ideas' - that is, having seen A type events and B type events constantly conjoined we gain a full assurance or 'proof' that they are causally connected.

Hume clearly believed that the laws of nature were established and well known. Further it appears that Hume equates his idea of a 'proof' with the idea of a law of nature. Thus it would appear that for Hume a law of nature holds whenever A's are constantly conjoined with B's and a similar habitual association obtains. Statements of lawful connection should in this light be seen as statements of a merely numerical universal conjunction without implying any logical or nomic necessity. The necessity that Hume implies must be taken to be a form of psychological necessity.

A minority of philosophers have argued that Hume in Section X, Part I, attempts to show that it is impossible for miracles to occur. The reasoning behind this line of argument follows from Hume's belief (a) that laws of nature are formulated from uniform past

experience; (b) uniform past experience with similar events is the only justification for our belief in the actual occurrence of an event; (c) miracles by definition can have no uniform past experience in their favour and therefore the occurrence of a miracle must be impossible.[11]

The majority of contemporary philosophers who have written on the Enquiry, Section X, have placed emphasis on the last part of Section I and contend that Hume's overall argument is not tailored to demonstrate that miracles cannot occur, but, rather, to demonstrate that they can never be justifiably believed to have occurred. I concur with the view that Hume's claim is epistemic and not conceptual. Specifically, the argument is that the wise man will never find the singular, unverifiable nature of pro-miraculous human testimony to outweigh the verifiable, public, uniform nature of anti-miraculous, past experiential evidence.[12] Moreover, proponents of this interpretive stance accept as literal Hume's claim that it is always 'more probable that the witness deceive or be deceived than that the fact which he relates should really have happened'[13] as reported. Hence, they believe that Hume is not simply making a statement about the

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11 See for example Kyle Wallace. 'A Re-examination of Hume's Essay on Miracles'. The New Scholasticism. 44. Summer, 1971, pp. 487-90.

12 A. Flew. Hume's Philosophy of Belief. London: R.K.P., 1961, pp. 171-213.

13 Enquiry. p. 116.

inadequacy of past historical evidence for the miraculous, but an a priori statement about the nature of all possible evidence - past, present and future.[14] I conclude that Hume's purpose is to show that the very nature of the relevant evidence rules out the possibility of any valid epistemological claim concerning the occurrence of a miracle - expressed as (a) above.

Hume's critique in Section X, Part I, must be evaluated in terms of his definition of miracle and his understanding of laws of nature. Furthermore, the logic of his position rests heavily upon his claim of 'unalterable experience' and the related evaluation and balancing of relevant evidence. Hume's case must stand or fall on the accuracy or otherwise of his position on these two matters, and hence it will be on these features of his analysis that I shall concentrate.

2. HUME'S DEFINITION OF MIRACLE

A number of writers have charged Hume with inconsistency over his definition of miracle and if their claims are substantiated Hume's case must fall before it is commenced. Pomeroy[15], claims, for example, that Hume offers more than one definition

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14 A. Flew. Op. cit.

15 R.S. Pomeroy. "Hume on the Testimony for Miracles'. Speech Monographs. Vol. XXIX, No.1, March 1962, pp.5-6.

and is therefore open to the charge of inconsistency. He gives these as: (a) 'a violation of the laws of nature'[16]; (b) any event 'contrary to uniform experience'[17] and (c) as 'a transgression of a law of nature by a particular volition of the Deity, or by the interposition of some invisible agent'.[18] Pomeroy claims that these definitions are not equivalent and hence the charge of inconsistency.

I believe that Pomeroy is mistaken, and that Hume can be accurately interpreted as emphasizing the three elements in the traditional concept of miracle, viz. (a) a relation to experience (or laws of nature); (b) a dependence upon a presumed divine cause and (c) an apologetic use. Furthermore, in Part I, Hume defines a miracle as an extreme form of marvel, (a) above; whereas at the end of Part I he introduces the fuller definition, (c) above, with the three elements. Since in Part I Hume is considering miracles only in their relation to experience it is not essential to refer tothe fuller definition and hence he uses miracles as 'violations of laws of nature' as a working definition. To have relied on the fuller definition would only have distracted from his purpose.[19] However, this notwithstanding, it is

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16 Enquiry. p. 114.
17 Op. cit. p. 115.
18 Op. cit. p. 115 (note).
19 Flew hints at this in A. Flew. Op. cit. pp. 181-3.

unfortunate that Hume employed the word 'transgression' in his full definition in preference to the 'violation' of his working definition. Nevertheless, I take them to be synonymous.

It should also be noted that Pomeroy has made a slip when he has implied that because the definitions are not equivalent they are therefore inconsistent. In fact non-equivalence does not entail inconsistency. For example, if I define a triangle as an enclosed three-sided plane figure, and as an enclosed three-angled plane figure, these are not equivalent in the sense that three-sided and three-angled do not mean the same but clearly they are not inconsistent.

B. Langtry has claimed that Hume employed two different accounts of miracle. The first (c) above and the second given by Langtry as 'the limit case of the extraordinary and marvellous, viz., an event of such a kind that there is uniform experience 'against' its occurrence'.[20] I maintain that Langtry is incorrect in his claim that these are two different accounts of miracle. I would contend that the second account given by Langtry is simply an illumination of the first. That is, as I have already established, Hume regards laws of nature as reflecting uniform past experience and, therefore, a miracle, as a violation of a law

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20 Bruce Langtry. 'Hume on Testimony to the Miraculous'. Sophia. Vol. XI, No. 1, 1972, pp. 20-25.

of nature, must be an event of such a kind that there is a uniform experience 'against' its occurrence. A violation of a law of nature is an exception to an unalterable experience.

Although in disagreement with Langtry I do believe that he, like others before him,[21] has sensed some element of inconsistency in Hume's definition, without actually pinpointing this element. I hold that the inconsistency is not in Hume's definition of miracle, per se, but rather, in defining miracle as an unprecedented event. Hume is out of step with the usage employed by the 18th century apologists. In Hume's own words:

> A miracle is a violation of the laws of nature; and as a firm and unalterable experience has established these laws, the proof against a miracle, from the very nature of the fact, is as entire as any argument from experience can be imagined ... nothing is esteemed a miracle if it ever happened in the common course of nature ... There must, therefore, be a uniform experience against every miraculous event.[22]

Hume's use of the word 'violation' does express something of the orthodox view that considered a miracle as

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21 See in particular C.D. Broad. 'Hume's Theory of the Credibility of Miracles'. Proceedings of the Aristotelian Society. XVII, 1916-17, pp. 77-94.

22 Enquiry. p. 113.

'beside or contrary to the fixed laws of nature'. In fact Hume's definition is very similar to that given by S. Clarke.[23] However, as Clarke, and in more recent times, Downey[24], have been quick to establish, nowhere do the orthodox apologists consider that a miracle violates or transgresses nature. This follows from their belief that the course of nature is nothing more than the will of God producing effects in a regular and uniform manner. On this view, as stressed by Aquinas, it does not make sense to say that God violates his own laws since they are not in opposition to him.

> It is not against the principle of craftmanship if a craftsman effects a change in his product even after he has given it its first form.[25]

As I have already stressed Hume does not define what he means by law of nature in Section X. However, he does use it in such a way where 'law of nature', 'uniform experience' and 'proof' are used interchangeably.[26] Thus a law of nature appears to be regarded by him as any generalization for which extensive

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23 S. Clarke. Works. Vol. II. London: J. & P. Knapten, 1738, p. 701.

24 R. Downey. 'Divine Providence' in The Teachings of the Catholic Church. Ed. by G.D. Smith, 2nd ed. London: Burns Oates, 1951, p. 227.

25 Thomas Aquinas. Summa Contra Gentiles. Bk II, Ch. 100.

26 Perhaps not surprisingly not all contemporary writers hold this view. See for example D. Ahern. 'Hume on the Evidential Impossibility of Miracles'. American Philosophical Quarterly, Monograph Series No. 9. Oxford: Blackwell, 1975, pp. 2-8.

human experience can offer no counter-examples; that is, they are Humean 'proofs'. Hume refers to such experience as 'unalterable', whereas, in actual fact, all he is entitled to claim is that it is 'hitherto unaltered'. Hume uses the former firstly, because in either case any experience which was not highly consistent could not entitle us to infer a law of nature and secondly, he is concerned with the establishment of an event as miraculous. Events are believed to be miraculous because they are seen as violations of the (real) laws of nature. Hume does not view violations of anything less than (real) laws of nature as miraculous events. Clearly, it is necessary that the law be real not merely apparent. Naturally, Hume was limited by an inadequate conception of the laws of nature prevalent in the 18th century. Strictly speaking Hume is only entitled to argue on the supposition of a hitherto unaltered experience but his inadequate conception of the laws of nature force him to make the stronger claim.

The orthodox apologists undoubtedly viewed miracles as rare events, however, they certainly did not deny the possibility that God might wish to repeat an extraordinary event. Yet Hume quite clearly wishes to maintain that the laws of nature which miracles contravene are of such generality and supported by such uniform experience that a miraculous occurrence

must be unprecedented. Why does Hume adopt a view that was not accepted by the proponents of the miraculous?

Hume could not admit to the existence of God without undercutting the main thrust of his own argument, however, this posed a difficulty for him. The theistic view of laws of nature, as I have outlined above, was in terms of the will of God. From this viewpoint laws of nature were seen as somewhat analogous to civil laws. Since such laws are prescriptive they could quite easily be suspended by the sovereign - in this case, God. Furthermore, this religious view said nothing about the logical status of laws of nature and hence gave no criteria by which it was possible to distinguish laws from mere accidental regularities. If Hume were to be able to tackle the problem of the miraculous he had first to offer some more philosophically satisfactory account of the laws of nature.

As scientific explanation continued to reduce the workings of nature to orderly causal sequences the greater was the pressure to define miracles as exceptions. If miracles were not exceptions they must have either natural causes or be uncaused, and neither of these views could be accepted by the orthodox apologist. Hume could not admit that the

laws of nature were simply the regular workings of God, nor could he allow that laws of nature be both true and yet less than uniform. It followed from this that Hume believed that miracles had no place in the scientific view of the world since laws had to be universal and it had to be assumed that every event occurring in nature had a natural cause. Furthermore, the orthodox believers' main interest lay in the apologetic use of the miraculous rather than in the correct formulation of the laws of nature. If they had to adhere to an unscientific or seemingly inconsistent conception of the laws of nature in order to prop up their concept of miracle they were content - so Hume may have reasoned.

In offering his definition of miracle Hume may well have thought that he had satisfactorily solved the dilemma. The apologist accepted that miracles were exceptions to the laws of nature. Hume taking hold of this offerred his 'proof' in place of the more conventional conception of laws of nature. Thus, Hume is able to argue that miracles are exceptions to 'proofs' and quite clearly any event which is an exception to a 'proof' must be unique and unprecedented.

In this way Hume may have some justification for his use of 'violation' and 'proof'. In particular, Hume has clearly demonstrated some of the inherent

stresses in the concept of miracle. Nevertheless, his conclusion that a miracle must be unique attempts to force upon the apologist something that he simply will not admit to. Furthermore, the charge of inconsistency can be pushed further. Despite the fact that in Part I of Section X Hume goes to great lengths to stress the unprecedented nature of miracles, in Part II he appears to tacitly admit that an abundance of miracles is not considered to be inconsistent with the orthodox concept of miracle.

It appears that Hume may have created a straw-man and then proceeded with his demolition. However, there is still one possible line of escape, from the apparent inconsistency, open to him.[27] It might be argued at this point, on Hume's behalf, that his line of thinking here is: 'If I have refuted the view that there can be <u>even a single</u> occurrence of a miracle (violation of a law of nature), then a fortiori, I have refuted the view that there can be several repetitions of such an occurrence'. That is, he may hold the view that his argument against the modest view that a miracle of a certain kind occurs once, has even more force against a more extravagant view which holds that a miracle of a certain kind can occur several times. And why? If you cannot even have one, how can you have two, or three ...? The textual support for this view originates

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27 This line was suggested to me by Dr. Edgar E. Sleinis of the Philosophy Department, University of Tasmania.

from the fact that if it were accurate it would reconcile the inconsistency, mentioned above, of Part I and Part II.

The reasoning in this line of argument relies heavily on the implication that Hume had already demonstrated that miracles could not occur, or be known to have occurred, prior to his specification of a definition of a miracle in terms of a single exception. Alternatively, it implies that Hume could demonstrate his case even if he assumed that evidence for more than one exception existed. However, contrary to this, his argument depends upon his assertion that a miracle is an exception to a proof. Furthermore, the argument implies that Hume is attempting to demonstrate that miracles cannot occur whereas I have argued above that there is more textual support for the view that he is attempting to show that we cannot know that a miracle has occurred.

In the light of this reasoning it becomes clear just how essential it is for Hume to claim that a miracle is a single exception to a 'proof'. If this were not the case there would be no 'opposition of proofs' and hence no strong case against the occurrence of a miracle. It must, therefore, be concluded that Hume's definition of miracle is to some degree stipulative, only reflecting the contemporary conception in part

and being at variance on the very critical (for the purpose of his argument) element of rarity.

3. TESTIMONY

The main thrust of Part I may be viewed firstly as consisting of discussion and evaluation of testimony in the case of the extraordinary and marvellous and secondly, an application of the results of that discussion to the evaluation of testimony to the miraculous. However, it is in this very crucial area of testimony and evaluation of evidence that Hume commits a number of errors.

(a) Type of Evidence

Hume claims that evidence comes from human testimony. He does not claim that this is the only source of evidence but he does (conveniently) neglect any others. It seems, however, that this neglect can only weaken his position. Hume claims 'I should not believe such a story were it told (to) me by Cato'.[28] But what if he had made the observation himself? It appears in that case Hume would have had to disbelieve his own senses. But what if his observations were supported and verified by observations made by others? Would Hume still be prepared to doubt his own senses? It would appear that he would be committed to

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28 Enquiry. p. 113.

this even though the self same senses have been relied on and trusted while observations of past regularities were made. Why should he doubt his senses only when he observes a break in the regularity and not when he observes the regularity itself? We may always distrust the extraordinary testimony of others since we can never be certain that they are not lying. But when the event is corroborated by our own senses what do we say? We don't lie to ourself!

Why does Hume ignore the availability of physical traces and the possibility of using indirect evidence, working from consequences to causes?[29] For example, we may make a case for the occurrence of a particular event E by arguing that certain states of affairs, the existence of which we cannot deny, can be best (only) explained by postulating the occurrence of E. In particular, in the miracle case, if we have evidence that some non-natural agent with the power to cause events contrary to the course of nature does exist, and evidence about the probability of that agent wishing to exercise that power, we have ipso facto reason to assign a higher probability to the occurence of an event contrary to the 'normal' course of nature, than if we have evidence for its

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29 C.D. Broad. Op. cit. p. 83-85 offers a good discussion on this point.

negation.

In the case of miraculous events the question of evidence must relate to the wider question of whether or not nature is an open or closed system. We must ask whether the event 'makes sense', whether it fits into an intelligible framework. Hence, for the theist, the action of God might serve as a causal explanation; it could not do so for the non-theist, any more than a disbeliever in Martians could countenance an appeal to their presence in explanation of the origin of human civilization. It follows then, that events which are possible for the theist are, in an important sense, impossible for the non-theist. The problem of evidence, in the content of miracle claims, must therefore be seen as hinging on the wider question of finding sufficient evidence for the existence and character of God independently of miracles, to assign a reasonably high probability to miracles.

(b) Balancing of Evidence

Hume regards a miracle as an unprecedented event; that is, an event which runs counter to our past uniform experience. According to him, one must balance testimony in favour of such an event against the prior presumption against it which is

generated by our experience. Only if the improbability of the testimony being false is greater than the prior improbability of the alleged event will one be justified in accepting the occurrence of the event. However, Hume goes on to point out that even if the testimony in favour of the miracle is impressive - even totally persuasive - it will always be outweighed by the vast mass of past contrary experience. It follows that no-one (Hume actually limits his claim to the wise and learned) could be justified in believing that a miracle had occurred. Thus:

> Suppose, having apparently observed an A that is not a B, one reasons: sensory experience is, on the whole, reliable. My sensory experience is, on the whole, in favour of all A's are B's. So if I rely on my sensory experience I will accept all A's are B's.[30]

Yandell[31] and Langtry[32], among others, have been quick to point to the defective logic in Hume's reasoning here. Both claim that what is involved, when one apparently observes an A that is not a B, is not which body of evidence is the greater but

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30 Keith E. Yandell. 'Miracles, Epistemology and Hume's Barrier'. International Journal for Philosophy of Religion. Vol. 7, No. 3, 1976, p. 406.

31 Ibid.

32 Bruce Langtry. 'Investigating a Resurrection'. Interchange. No. 17, 1975, pp. 41-47.

rather what does the total body of evidence indicate. Prior to the occurrence of the candidate miracle my sensory experience has supported the contention that all observed A's have been B's. However, now my sensory experience gives evidence that all A's but one are B's. If I were to deny this contention (in the absence of some independent evidence) I would be rejecting my sensory evidence. But once I reject my sensory evidence I can no longer retain any faith in the original contention that all A's are B's.[33] It is not the balancing of evidence that is relevant, but rather, whether or not, the occurrence of the candidate miracle is supported by one's total body of evidence. Simply to contend that there is an 'unalterable experience' against miracles and then to conclude that miracles do not occur is to engage in circular reasoning. Only a truly inductive approach to miracle claims (examining without prejudice the first-hand evidence for the alleged miracle) can ever hope to answer the question as to whether they in fact occur.

4. LAWS OF NATURE AND PARTICULAR EVENTS

Hume's faulty logic involved in his 'subtraction

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33 Strictly speaking, Hume is interested in the total body of human evidence rather than in any one observer's evidence; but this case can easily be extended to cover this.

principle' is due in part to his unsatisfactory conception of a law of nature as a report of our past uniform experience. This inadequacy produces a number of problems which Hume either fails to understand or overcome. Firstly, Hume fails to distinguish between the type of evidence required to support a particular law of nature all A's are B's and that required to support a particular event, this A is a B. Hume correctly points out that a law of nature is as a matter of fact, supported by a voluminous quantity of observation and experimentation; however, he appears to overlook that whereas laws of nature are universal in character, historical events are particular, expressed by singular propositions. This being the case it is unwarranted to require that any claim for such an event should be supported by the same quantity or weight of evidence as required to support a law of nature.

Secondly, Hume's conception of a law of nature together with his subtraction principle would prevent the falsification of any law of nature. This may not have mattered to Hume, who clearly believed that the laws of nature were well established but it is incontestably a feature of empirical laws that they are corrigible by experience. On Hume's account, no matter how strong the evidence for a particular event which appears to be an exception to the mass of past

uniform experience, it cannot be used to falsify that uniform experience - the law of nature. But ...

> If the testimony of others does not shake our belief in the law, there is no reason for me to think that there is anything that needs explanation or investigation. If scientists had actually proceeded in this way, some of the most important natural laws would not have been discovered.[34]

Langtry[35] describes two quite different ways in which on occasions we make plausible judgements ruled out by Hume's account. First, the original evidence together with the new event E may support a new theory replacing the old one. Second, the evidence for E may lead us to withdraw the current theory despite the apparent lack of an alternative. Gill[36] commenting on Langtry's observation notes that any wholesale rejection of the evidence for the unique and marvellous is inadmissable. He then asks, however, whether a wholesale rejection of the evidence for a sub-class of the unique and marvellous, the miracle is admissable. Flew[37] answers this when he says:

> It (is) impossible for Hume himself to justify a distinction between the marvellous or the unusual and the truly miraculous.

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34 Broad. Op. cit. p. 87.
35 Langtry. 'Hume on Testimony to the Miraculous'. pp. 23-
36 John B. Gill. 'On Miracles: A Case for Violations of Nature'. Unpublished Paper. p. 10.
37 Flew. Op. cit. p. 204.

Hence, Gill's question cannot be resolved by Hume.

Thirdly, as pointed out by a number of writers, Hume's notion of 'proof' and his case against miracles cannot be easily reconciled with his general position on the relationship between cause and effect. Blackman elucidates this point well:

> What we take to be a natural law is merely a kind of summary of constant conjunctions, which as far as we are able to determine, have held universally in the past and which we are led to believe will hold in the future, but no necessity is involved. If no necessity is involved, it is always possible that what we have taken to express a natural law will turn out to be false. Hume claims ... that in reasonings of matters of fact it is possible to reach conclusions which achieve the status of a 'full proof', but there is no way of reconciling this claim with his analysis of causality. It follows that there is no good reason, on Humean evidential grounds, to reject the claim that a miracle has occurred a priori. Hence the argument of Part I fails.[38]

5. HUME'S SUBSIDIARY ARGUMENTS

In addition to my analysis of Hume's critique at the end of Section X, Part I, I propose to round off my consideration of Hume by considering several further arguments from Part II.

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38 Larry Lee Blackman. 'The Logical Impossibility of Miracles in Hume'. International Journal for Philosophy of Religion. Vol. IX, No. 3, 1978, pp. 186-187.

The first three of Hume's subsidiary arguments[39] make purported factual claims and whether they are correct or not is essentially a matter for historical inquiry. However, as Swinburne[40] rightly claims, while Hume's standards of evidence are high, he appears to believe that it makes sense to suppose that they could be satisfied, that there could be sufficient evidence to show the occurrence of a miracle. But, when he comes to discuss in detail three stories of purported miracles, his standards seem to be so high that it does not make sense to suppose that there could ever be sufficient evidence to satisfy them. In the story of the miracles wrought in France upon the tomb of Abbe Paris, Hume dismisses the credibility of the witnesses, not in terms of their number, integrity and education - which is regarded as irrelevant - but because the miraculous nature of the events is alone sufficient to convince all reasonable people that they did not occur.[41] Hume, it would appear, rules out the very possibility that there could be sufficient evidence to satisfy his standards. Furthermore, Swinburne correctly notes that Hume's third claim that miracles

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39 These are (a) History contains no miracle attested by witnesses of such character and in such circumstances as to prevent suspicion; (b) The natural human love of the marvellous operates with particular force in the case of miracles; (c) Miracle stories are most common in barbarous nations; civilized nations accepting such stories received them from barbarous ones.

40 R. Swinburne. The Concept of Miracle. London: Macmillan, 1970, pp. 16-17.

41 Enquiry. pp. 124-5.

abound chiefly in ignorant and barbarous nations, could be analytically true if Hume means by an ignorant and barbarous nation 'one which is disposed to believe purported miracles'.[42]

In Section X, Part I, Hume admits the logical possibility of miracles but claims in Part II that as a matter of fact there never has been, nor ever will be, sufficient evidence to support a claim that a miracle has occurred. However, when judging specific reports Hume appears to cut short the process of investigation. He adjudicates the question not on the basis of evidence but upon the prior assumption of their impossibility. He refers to Tacitus' reports as 'so gross and so palpable a falsehood'; to the Cathedral door-keeper's report as 'more properly a subject of derision than of argument' and to the Abbe Paris reports as 'the absolute impossibility or miraculous nature of the events which they relate'. He then concludes that 'no testimony for any kind of miracle has ever amounted to a probability much less a proof'. Yet Hume did not even bother to investigate the evidence![43]

Hume does not apply his own conceptual skepticism to the purported miracles but simply short-cuts the enterprise and criteria which he set himself. But

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42 Swinburne. Op. cit. pp. 16-17.
43 Enquiry. pp. 122-127.

this short-cut is inappropriate. The question whether miracles have occurred is just the question whether the course of nature has been uniform, we cannot appeal to the uniformity of our past experiences as an argument against miracles. The problem with Hume's short-cut is that it must appeal to considerations which could be known to be true only if the evidence for individual miracles had been examined and shown to be false. Only if we have some way of demonstrating the uniformity of nature which does not beg the question of the truth of miracle narratives could we short-cut the need to examine the evidence in each case. But despite the fact that Hume admits the logical possibility of miracles he attempts to adjudicate the question not on the basis of evidence but upon the prior assumption of their impossibility.

Hume's fourth subsidiary argument is more philosophically interesting. Hume argues that any two religious systems are incompatible with each other. Thus every alleged miracle whose occurrence would be evidence in favour of a given religion is such that its occurrence would be evidence against any religion contrary to the first. Furthermore, Hume claims that the various bodies of testimony should be seen as conflicting, and so as wholly or partially cancelling each other out. The argument has been well put as follows:

> Let R_1 and R_2 be two incompatible religions. And let it be supposed that miracles occur only in connection with true religion ... Then the assertion 'Miracles occur in connection with R_1' implies that R_1 is true; this implies that R_2 is false and this implies that miracles do not occur in connection with R_2. Similarly, the assertion 'Miracles occur in connection with R_2' implies that miracles do not occur in connection with R_1. Now both these assertions are made (though of course by different sets of people). The compound proposition implies its own contradictory and therefore must be false, and therefore one of the separate assertions may be false, and both may be.[44]

As Broad correctly states, this argument is somewhat subtle and contains a suppressed premise which is essential to its validity: 'Miracles only occur in connection with true religion'.[45] Clearly, there are those who would be quick to give their assent to this premise[46] but clearly the onus is on Hume to show its truth - but this he patently fails to do. Even if the suppressed premise were true it does not follow automatically, despite what Hume says, that a miracle in favour of one religion must also be evidence against another. In actual fact it may be the case

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44 Eldon R. Hay. 'A Contranatural View of Miracle'. Canadian Journal of Theology. Vol. XIII, 1967, No. 4, p. 275.

45 Broad. Op. cit. pp. 81-82.

46 See for example J.B. Mozley. Eight Lectures on Miracles. London: John Murray, 1838.

that the occurrence of a miracle offers very strong evidence in favour of one religion but at the same time offers evidence in support of another religion. That is, the evidence in favour of the second religion is stronger than it was prior to the advent of the miracle. Furthermore, Hume is only partially correct in his claim that two conflicting miracle claims cancel each other out. The conjunction of what I learn from the conflicting miracle claims may give no grounds for preferring religion A to religion B but nevertheless may give good reason for preferring each to religion C.[47]

Clearly, Hume's argument from contrary religions is too strong and assumes too much. What would be necessary to threaten the argument from miracles for the truth of a particular religion would be genuine miracles worked in opposition of the claims made by that religion or in favour of incompatible claims. However, if the religion is to be falsified, and not merely revised, then the claims would have to be fundamental. But contra Hume, most purported miracles, do not appear to be of this type.[48]

6. CONCLUSION

In this chapter I have attempted to outline and

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47 Bruce Langtry. 'Hume on Miracles and Contrary Religions' Sophia. Vol. XIV, No. 1, March 1975, pp. 29-34.

48 See Richard L. Purtill. 'Proofs of Miracles and Miracles as Proofs'. Christian Scholars Review. Vol. 6, 1976, p. 45.

critically analyse Hume's critique of miracles given in Section X of the Enquiry. Hume was the first significant philosopher to define a miracle as a violation of a law of nature and it is with Hume that the violation model gains its credence. I have shown that Hume's conception of miracle was limited by his 'crude' understanding of a law of nature and hence his conception of a violation of such a law. The main thrust of Hume's critique is centred on an analysis of human testimony and the consequent notions of proof and opposition of proof but he also concerns himself in Part II with a number of interesting subsidiary arguments. I conclude that despite the tenacity of his argument, and the effect it has had on classical apologetics, the argument itself is unsound. However, the important question for the apologist is this: 'Given a better conception of a law of nature, (and consequently a better conception of a violation of that law) would the a priori epistemic argument Hume develops have more force?' To attempt to answer this question it is appropriate to turn to the writings of Antony Flew on miracles and to a lesser extent to those of Van A. Harvey on historical methodology.

CHAPTER THREE

1. INTRODUCTION

In the previous chapter I indicated that Hume's criticism of the evidential claims associated with purported miracles was severely weakened by his inability to distinguish between the marvellous and the miraculous. This inability is understandable given his unsatisfactory account of the logical character of a law of nature. Flew notes that as a result of this serious defect Hume:

> Could not offer any sufficiently persuasive rationale for employing, as canons of exclusion in historical enquiry, propositions which express, or which are believed to express, such natural laws.[1]

However, Flew emphasises that what Hume has established is that the apologist is faced with a conflict in the evidence whenever he claims that a miracle has occurred.

> The notion of a miracle is logically parasitical on the idea of an order to which such an event must constitute some sort of exception. This being so, a strong notion of the truly miraculous - a notion involving something more than the notion of the merely marvellous, the significant or the surprising - can only

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1 The Encyclopaedia of Philosophy. 'Miracles'. p. 351.

> be generated if there is first an equally strong conception of a natural order. The inevitable tension between the idea of a rule and of exception thus gives concepts of the miraculous an inherent instability.[2]

Flew maintains that exceptions are logically dependent upon rules. It is only when there is a strong order that it is possible to show that the order has been broken. Flew contends that the difficulty for the apologist is to simultaneously hold the strong rule and the genuine exception to it. The problem becomes: how can we infer from a purported miracle that the natural regularities have been interfered with when it is clearly possible that the event, if it happened as described, only indicates that the law-regularities with which we are working are inadequate. The task then is to discover the law which will explain the event.

Flew's position does not necessitate that genuine violations of true (real) laws be logically impossible, all that he has to show is that even if a true violation were to occur there would be no natural, as opposed to revealed, method available by which we could determine that the event did represent a violation rather than a falsification of the law.

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2 The Encyclopaedia of Philosophy. 'Miracles'. pp. 346-7.

Flew is steadfast in his assertion that he, like Hume, is questioning the epistemic, not the logical, possibility of miracles.

Prior to an examination of the substance of Flew's critique of the violation concept of miracle, it is essential to discover Flew's conception of a law of nature and subsequently what he understands by a violation of such a law. Let us begin with a number of semi-technical terms.

Flew takes a proposition to be whatever can be asserted or denied; a proposition is what comes or can come after the word 'that' in sentences like: 'He said that the cat was on the mat' or 'He said that it was all a load of rubbish'. A universal proposition is one that asserts that all or any such-and-such is this or that, or that no such-and-such is this or that. Flew divides universal propositions into those that are logically necessary and those that are logically contingent. The former is one whose denial would involve a self-contradiction. To deny the latter, however, does not commit the denier to a self-contradiction.

Within the class of logically contingent universal propositions, Flew makes a further distinction between those that are nomological and those that are non-nomological. Propositions of the former sort state

what are thought to be either laws of nature or causal connections: they state that certain things in fact must happen or in fact cannot happen, although, since they are logically contingent, these propositions assert not that something is logically necessary or logically impossible (inconceivable) but that it is in fact necessary or in fact impossible.[3] Flew maintains that nomological propositions, unlike merely numerical universal conjunctions, entail counter-factual conditionals - a warrant of the form, if A were not to have occurred no B would have occurred.[4]

Flew argues that a law of nature, as a universal nomological proposition, can in theory be tested at any time by any person. Whatever falls within its scope is physically necessary, and whatever it precludes is physically impossible.

> So just as it (the law of nature) possesses, and is designed to possess, the logical strength required, when combined with appropriate particular premises, both to licence and to demand inferences to substantial conclusions transcending those premises, it is also constitutionally adapted to serve as a criterion of exclusion, which must rule out a range of

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3 See Antony Flew. 'Parapsychology Revisited: Laws, Miracles and Repeatability'. The Humanist. May/June 1976, pp. 28-29.

4 Antony Flew. A Rational Animal and Other Philosophical Essays on the Nature of Man. Oxford: Clarendon Press, 1978, pp. 50-55.

logical possibilities as impossible in fact.[5]

In Flew's sense a violation of a law of nature is, therefore, logically possible but physically impossible. The physically impossible being understood as that which contradicts a law of nature.[6] Furthermore, Flew even concedes that miracles might occur, but he maintains that we have no natural (as opposed to revealed) criterion which enables one to say, when faced with something which is found to have actually happened, that here there is an achievement which nature, left to her own unaided devices, could never encompass.[7]

2. THE FIRST ARGUMENT - FUNDAMENTALS OF HISTORICAL INQUIRY RULE OUT MIRACLES

(a) Flew

It is essential to Flew's position that he does not deny that a miracle might actually occur. Flew simply argues that by our normal methods of evaluating evidence we must reject any claim that a particular event was a miracle. He claims:

> Whether or not anything did in fact happen in the past inconsistent with what we at present believe to be a

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5 Antony Flew. Hume's Philosophy of Belief. London: R.K.P., 1961, p. 208.

6 More correctly 'What is physically impossible is whatever is inconsistent with a true nomological'. A Flew. 'Miracles'. The Encyclopaedia of Philosophy. p. 351.

7 A. Flew. 'Miracles'. Op. cit. pp. 347-349.

> law of nature, one cannot possibly know on historical evidence that it did so happen. The reason is simply that, if something miraculous is to have occurred, the miracle is precisely something that in the light of present knowledge is thought to be impossible; it is precisely an event overriding, or an account inconsistent with, what we presently believe to be a law of nature. To the extent that we have good reasons for thinking that there are laws of nature, that there are nomological regularities or necessities in the world that rule out such and such ongoings, as historians we have to say that one thing we cannot know on historical grounds is that a miracle occurred. After all, what we are doing as historians is applying all we know, or think we know, to the interpretation of the evidence. Suddenly to say that in the past things were different and that miracles occurred is to abandon quite arbitrarily fundamental principles of historical inquiry.[8]

Thus, in the case of miracle there is an opposition between the law and the candidate miracle and either we must reject that the event, as described, occurred or that the evidence in favour of the event is so great that we must question the validity of the law. In the latter case we look for modification or rejection of the law. In either case the event is rejected as a miracle because it is no longer an

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8 A. Flew. 'Parapsychology Revisited'. Op. cit. p. 29.

exception to a law of nature.

It should be noted here that Flew does not commit Hume's error of rejecting the occurrence of an event, which violates a law of nature, regardless of the evidence available in support of it. What Flew contends is that we will, as a first step in historical enquiry, reject claims of miraculous events unless the evidence for their occurrence is substantial. Flew maintains that the occurrence of such events may lead to a re-evaluation of the accepted law(s) of nature. This, however, is still not discovering that a genuine miracle did occur, since the violation was a violation of an assumed, not actual, law of nature. However, it may not be immediately possible to discover an appropriate 'new' law, under which the apparent anomaly can be subsumed. In this case Flew argues that we can never give up the hypothesis that there is an as yet unknown law which explains the occurrence of the event.

> The nomological proposition might survive even our further tests ... Yet in this case, no matter how impressive the testimony might appear, the most favourable verdict that history could ever return must be the agnostic, and appropriately

Scottish, 'not proven'.[9]

Flew, it should be noted, does not directly rule out the possibility of a theistic universe. In such a universe, Flew believes we could still formulate laws of nature which expressed natural necessities, such that everything that happens must be determined by these laws save in so far as these natural necessities are on a few occasions overridden by exercises of supernatural power. Flew then sees the problem for the scientist, in such a world, as that of identifying those seeming exceptions, to what he had thought was a law of nature, which are in fact supernatural overridings. Such really supernatural overridings will look to the stubbornly atheist scientist like falsifications of what had previously been thought to constitute a true law of nature. Without a well supported claim to possess an authentic revelation, what in the different context would be recognized as an authentic overriding would have to be dismissed as simply evidence that the law of nature, the statement of natural necessity, did not in fact hold.

Flew, who adheres to a standard covering law

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9 A. Flew. 'Miracles'. Op. cit. p. 352.

model of scientific explanation,[10] claims that laws of nature are like a geographer's map. Just as the geographer uses his map to describe the actual landscape, so the scientist uses laws to describe what actually occurs in our experience. Hence, just as discrepancy between the actual landscape and a map necessitates a change in the map, an unusual event which is not presently subsumable under a law of nature demonstrates only that the relevant laws are inadequate and in need of revision or extension. This is not to say that all such revisions will be immediately forthcoming. Some observable occurrences might remain in 'explanatory limbo' for lengthy periods of time. Nevertheless, as a result of the descriptive nature of the scientific enterprise, even the most recalcitrant of events must be seen as, in principle, subsumable under scientific laws.[11] This in turn means that every event - no matter how unusual or bizarre - must be seen as, in principle, explicable scientifically.

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10 The fundamental idea in the covering law (C.L.) analysis is that the occurrence of an event is explained when it is subsumed under or covered by a law of nature. Under this model of explanation, the crucial 'permanent inexplicability' question is whether all observable phenomena are, in principle, subsumable under scientific laws. Only if the answer is no, is the concept of a 'permanently inexplicable' event intelligible.

11 Flew has never adumbrated any distinction between laws of science and laws of nature.

Flew's case rests heavily on a number of distinctions. Flew makes it clear that talk about violations of a law of nature is coherent talk. That is, he is happy to make the conceptual distinction between a violation of a law of nature and a falsification of a law of nature. However, where Flew is prepared to distinguish on conceptual grounds he is not prepared to do so on epistemic grounds. Flew is adamant that there is no natural method available by which one could know that an exception to a nomic regularity was a violation rather than a falsification. Flew also makes much of his distinction between what is logically possible and what is physically possible. Miracles when defined as a violation of a law of nature are accordingly not inconceivable but rather impossible in fact. A number of critics have in fact argued that Flew is mistaken in this distinction and I shall take this up below.[12]

(b) Van Harvey[13]

Although his conclusions are not identical with those of Flew Van Harvey does cover common ground. Harvey argues that modern methodological principles

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12 See Section 3, p. 51-55 below.

13 Van A. Harvey. The Historian and the Believer: The Morality of Historical Knowledge and Christian Belief. New York: The Macmillan Co., 1966.

of historical enquiry produce an inevitable clash with the supernatural Weltanschauung of orthodox Christianity. He argues that the Christian's will-to-believe must be subordinate to the modern historian's canons of historical knowledge. Harvey's questions about historical method involve neither the problem of discovery (as discussed for example by Collingwood in terms of his detective model)[14] nor the problem of explanation (with the Dray-Hempel dispute about the historian's use of laws)[15], but the problem of justification. How do historians defend their assertions?

In chapters two and three of his work, Harvey develops his critical philosophy of history under four rubrics: the radical autonomy of the historian, rational assessment of the historian's judgements, sound judgement, and the role of present knowledge in the evaluation of reports of past events. The crux of his argument is his contention that the historian must presuppose present knowledge. The principles of autonomy, rational assessment and sound judgement are essentially formal in character. They have, since the Enlightenment, produced an intellectual

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14 R.G. Collingwood. The Idea of History. Oxford: O.U.P., 1935.

15 See for example Sidney Hook (ed.). Philosophy and History. New York: N.Y.U.P., 1963.

revolution only because they have been informed by the new scientific view of the world. Harvey is quite aware that if one judges past reports on the basis of present thought, one may preclude discovering new events because one's very method compels one to force the witnesses' experience to conform to one's own.[16] Nonetheless, he is very certain that present scientific knowledge is important for historical investigation. Present scientific laws play the negative role of telling us what could and therefore what could not have happened in nature.

Harvey's discussion of the historian's use of present scientific knowledge deserves careful examination.[17] He believes that it is necessary to update and modify Bradley's[18] view that modern science with its presupposition of the uniformity of nature provides the standard for determining what the modern historian can or cannot accept as fact. First, since history is a field-encompassing[19] field, the present knowledge presupposed by the historian is (contra Bradley) much broader than just scientific

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16 Harvey. Op. cit. p. 71.
17 Harvey. Op. cit. pp. 68-99.
18 F.H. Bradley. Collected Essays. Oxford: O.U.P., 1935.
19 Harvey borrows this idea from Stephen Toulmin. The Uses of Argument. New York: C.U.P., 1958.

knowledge. Thus he accepts Collingwood's view that scientific laws tell us 'What could have happened' only in the case of natural events. At the same time, Harvey insists that we not minimize the importance of such negative judgements, for it has been the historian's adoption of knowledge produced by the sciences which has led to the development of the concepts of myth and legend. Secondly, as a result of the 'new physics' one should no longer speak of 'a natural order governed by immutable laws'. However, in the final analysis Harvey's modification of Bradley's position is rather limited.

> It is difficult therefore to conceive ... of the new physics precipitating an angonizing reappraisal of reports of ... men in chariots ascending bodily into heaven. Nature to be sure, may be far more refractory to mathematical description at the sub-atomic level than hitherto believed, but this does not warrant a return to ... credulity.[20]

One might suggest that Harvey has fallen into the trap of Troeltsch's[21] position that history is a closed causal nexus immune to supernatural

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20 Harvey. The Historian and the Believer: The Morality of Historical Knowledge and Christian Belief. New York: The Macmillan Co., 1966, p. 76.

21 Ernst Troeltsch. 'Uber historische and dogmatische Methode in der Theologie'. Hamburg. 1898.

intervention. That is, miracles are impossible as a result of metaphysical presuppositions. However, this cannot be the case because Harvey has been quick to argue that the historian qua historian should carry along as little metaphysical baggage as possible. Harvey frequently cautions against saying that miracles are 'impossible'.[22] On the other hand he also writes of 'reports of the impossible'.[23] The 'impossibility' envisioned is neither logical impossibility nor presumably, the metaphysical impossibility which follows from dogmatic uniformitarianism. In what sense then is it 'impossible' to accept reports of alleged miracles? It becomes clear that Harvey is talking about what is taken to be extremely improbable in the light of present experience. Since this probability is essentially a psychological factor the impossibility involved turns out to be a historically conditioned psychological impossibility on the part of the modern historian. Harvey identifies himself with those:

> Who believe that it is impossible to escape from the categories and presuppositions of the intellectual culture

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22 For example Harvey. Op. cit. pp. 85, 229.
23 Harvey. Op. cit. p. 75.

> of which one is a part, the common sense of one's own time ... We are in history as fish are in water, and our ideas of possibility and actuality are relative to our own time ... That is, no doubt, what Bultmann meant when he wrote that 'it is impossible to use electric lights ... and believe in the New Testament world of spirits and miracles' ... We in fact do not believe in a three story universe or in the possession of the mind by either angelic or demonic beings. It is to say more however. It is to say that we cannot see the world as the first century saw it ... These beliefs are no longer practically possible for us.[24]

Harvey, like Flew, arguing from the warrants of historical methodology arrives at the conclusion that in a very important sense miracles are impossible. Both are quick to emphasize that there is no logical reason for this impossibility; however, in an important sense they remain impossible. In Flew's terminology miracles are physically impossible; in Harvey's view they are both psychologically and epistemically impossible. Do their arguments stand up under critical analysis?

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24 Harvey. Op. cit. pp. 114-115.

3. FIRST REPLY: D.M. AHERN

Ahern[25] argues that Flew's conceptual distinction between logical possibility and physical possibility is, given his conception of the physically impossible and law of nature, no distinction at all. He claims, therefore, that Flew's analysis, resting on a mistaken conceptual division, is open to severe criticism.

According to Ahern, Flew defines a miracle as:

(a) An event is physically impossible and a violation of the laws of nature if and only if the statement that the event occurred is logically incompatible with the statement of the laws of nature.[26]

Flew then argues that laws of nature support counterfactual claims[27] but according to Ahern there is an ambiguity in the precondition that accompanies such a counterfactual. This ambiguity may be demonstrated by showing that the precondition may be stated as either (b) or (c) below.

(b) There are no other causally relevant (natural or supernatural) forces present.

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25 Dennis M. Ahern. 'Miracles and Physical Impossibility'. Canadian Journal of Philosophy. Vol. VII, No. 1, March 1977, pp. 71-79.

26 Ahern. Op. cit. p. 72.

27 Counterfactual claims are variously described as counterfactual conditionals and subjunctive conditionals.

(c) There are no other causally relevant natural factors present.[28]

Ahern argues that (c) together with (a), although seemingly preferable, is not, because if there were supernatural forces present the laws of nature would be false since they would entail false counterfactuals about what would happen when no other natural forces were present. Consequently, one must prefer (b) together with (a). This combination, unfortunately, produces incompatability since the precondition now includes both natural and supernatural forces and consequently it does not make any sense to say that a violation could occur. Therefore, (b) together with (a) simply show, contra Flew, that it is not logically possible for the physically impossible - in Flew's sense - to occur.

Ahern claims that:

> Whatever basis there may be for believing in supernatural interventions in nature is also a basis for rejecting such formulations of nature (that is laws with (c) as precondition) as inadequate.[29]

It seems to me that Ahern is incorrect here. If we were to prefer precondition (b) to (c) we would automatically impose special and perhaps

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28 Ahern. Op. cit. p.74.
29 Ahern. Op. cit. p.77.

insurmountable obstacles in the path of falsification of laws. If laws of nature are equated with the true laws of science then given that the scientist qua scientist does not have the methodology or the equipment to investigate the supernatural, how could one save laws of nature from the threat of them becoming analytically true and immune from revision?

To illustrate this point, take for example, the following statement of a law of nature L.

(a) $L = P \longrightarrow (x)(Fx \cdot Gx)$. Here P stands for supernatural forces in the conditional form. 'God does not intervene to make it otherwise'.

If this law L were to be shown to be false the scientist would need to find an occurrence E as follows:

(b) $E = P \longrightarrow (Fa \cdot \sim Ga)$.

However, the test of falsification does not stop there. In order to be certain that (b) is a falsifying instance of (a) the scientist must be certain that P has the same truth value in (a) and (b). He must be certain that the P in (b) is correct and should not be replaced by $\sim P$. Unfortunately, the scientist qua scientist has no means of establishing the truth value of P. Consequently any scientist faced with a purported falsification of a law would reject the candidate and maintain the law on the ground that the

truth value of P in E was not identical to that in L.

Ahern claims in addition that:

> If the laws of nature do not determine the limits of the physically possible then first, they could not be used to accurately explain or to accurately predict, and second, they could not be given as support for counterfactual conditionals.[30]

Now all this rests on the prior assumption that there are supernatural forces operating in nature. But why sould the scientist, if he is framing laws of nature, make this assumption? Without evidence to support the claim the scientist cannot either assume that supernatural forces exist or do not exist. The scientist simply attempts to explain what happens by offering the best laws that he can. If it turns out that there are no supernatural forces, then there are, a fortiori, no miracles. If it turns out that there are supernatural forces then it is true that the laws of science cannot accurately explain, accurately predict and support counterfactual conditionals all the time. However, so long as supernatural interventions are rare, such laws will determine the limits of the physically possible most of the time and hence they can be used to explain, predict, and support counterfactuals which will be true unless God does

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30 Ahern. Op. cit. p. 75.

intervene to make it otherwise.

Faced with the possibility that we live in a theistic world the scientist has two possible avenues open to him. Either he can offer laws of science which explain and predict most of what happens most of the time but cannot explain and predict everything or he can refuse to offer laws at all. The former alternative is clearly the more appropriate especially on the assumption that supernatural forces operate on rare occasions. The laws of science are true in so far as they are the best that science, in principle, could offer. To add a P clause to the laws of science does not improve the predictive power of the laws. In fact, as I have argued above, adding a P clause would only create additional problems for the confirmation, revision and rejection of laws. I therefore conclude that Ahern's case against Flew fails and that there is a legitimate distinction to be made between the logical and physical possibility of a violation of a law of nature.

4. SECOND REPLY

Flew claims that every historical claim purporting that a violation of a true law has occurred generates a serious evidential conflict. On the one hand we have the evidence of historical testimony affirming that the event in question did occur; on the other,

we have the evidence of scientific experimentation - upon which the relevant laws of nature are based - ruling against the possibility of such an occurrence. It would be a mistake, Flew contends, to regard the historic and scientific claims, as having equal evidential value. The historical testimony affirming the occurrence of such an event is always 'singular, particular and in the past tense',[31] but the scientific evidence implicitly denying the occurrence of such an event is always general and presently testable, in principle, by any person at any time. On this basis Flew is certain that no amount of historical evidence supporting the occurrence of a purported 'violation' could ever be stronger than the scientific evidence supporting the relevant nomologicals.

> The basic propositions are: first, that the present relics of the past cannot be interpreted as historical evidence at all, unless we presume that the same fundamental regularities obtained then as still obtain today; second, that in trying as best he may to determine what actually happened the historian must employ as criterion all his present knowledge, or presumed knowledge, of what is probable or improbable, possible or impossible; and, third, that since miracle has to be defined in terms of practical impossibility the application of these criteria inevitably precludes proof of a miracle.[32]

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31 Flew. Hume's Philosophy of Belief. p. 208.
32 Flew. God and Philosophy. London: Hutchinson, 1966, p. 146.

It follows, according to Flew, that such scientific evidence is adopted to serve as a criterion of exclusion which must rule out a range of logical possibilities as impossible in fact. In short scientific evidence has 'ultimate precedence' over its historical counterpart. This entails that the historian must always rule that the 'true violation'[33] in question could not have occurred in its purported form.[34] In other words 'we now have the best of reasons for insisting that what it (the true violation) purports (to have occurred) is in fact impossible'.[35]

Swinburne[36] argues that, contra Flew, 'historical evidence' is in some ways presently testable. The number and reliability of witnesses, and the availability and amount of physical indirect evidence - e.g. traces - are all presently testable by scientific method. He claims:

> ... apparent memory, testimony and traces could sometimes outweigh the evidence of physical impossibility.[37]

I think that Swinburne's remarks are helpful here,

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33 Violations of 'assumed but not true' laws are ultimately scientifically explicable; at least in principle by a 'best science'.

34 It should not be assumed that the argument applies only to temporally distant historical occurrences although the case is stronger the more distant the event. Flew's argument is relevant whether the event is temporally past or present.

35 Flew. Hume's Philosophy of Belief. p. 208.

36 Richard Swinburne. The Concept of Miracle. London: Macmillan, 1970, pp. 33-51.

37 Swinburne. Op. cit. p. 51.

but I think he is partly mistaken. On the positive side he is successful in establishing that the distinction between 'historical' and 'scientific' evidence is not nearly as great as Flew contends. If the historical event occurred in the more recent past, the evidence for the occurrence of the event would be open to much the same sort of tests as the relevant nomological which excludes it. Despite this, he has not established that such indirect evidence could ever be as 'general' and as well confirmed 'by any person at any time' as directly testable 'scientific evidence'. Furthermore, it is pointless to argue against Flew, that no matter how strongly confirmed the law is, it may nevertheless be false. This would simply fall into Flew's hands as he adds 'and that goes to show that since the law was not true but apparent the violation was also apparent, not real'. Consequently, even if Flew were to admit that his distinction between 'scientific' and 'historical' evidence is too strong, he could still argue that in relation to 'permanently inexplicable' events[38], the <u>direct</u> presently testable 'scientific evidence' would <u>in every case</u> outweigh the <u>indirect</u> presently testable historical evidence.

Having demonstrated that there is a greater similarity between science and history than Flew had allowed

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38 That is, a violation of a true law of nature.

Swinburne misdirects his attack. Blackman notes, for example:

> Swinburne does a disservice to his own cause in arguing that the two kinds of claims are similar, and hence that both call for essentially the same sort of verification. He does this because he believes one might in fact adduce sufficient evidence to make plausible the claim that a given miracle occurred. But in granting that the kind of evidence required in support of such a claim is on an epistemological par with that required in support of natural laws, he merely plays into ... (Flew's) hands. The skeptic need only point out that one may believe in the genuineness of a natural law or the occurrence of a miracle, not both, and the quantitative evidence in favour of the former always exceeds that in favour of the latter. The proper response is to point to the disanalogy between the two kinds of claims and hence the unreasonableness of the requirements that as much evidence be required in support of a miracle as that in support of a natural law.[39]

Flew's claim against the possibility of a violation rests heavily on his general premise that established laws of science serve as the primary criteria for judging the 'occurrence status' of past events. Specifically, he believes that an event must be

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39 L.L. Blackman. 'The Logical Impossibility of Miracles in Hume'. p. 186.

subsumable under, or not inconsistent with, established nomologicals before the historian can legitimately claim that the event actually occurred.

Flew's argument may be taken in two ways. On the one hand, it might be argued that he seems to be saying that the proponent of miracles has no right to argue for them on the basis of a consistent underlying method of investigation (empirical method), since one cannot assume its absolute regularity and applicability and then use it to prove deviations from regularity. Once a miracle is granted, there would be no reason to consider empirical method as necessarily applicable without exception, so it could perfectly well be inapplicable to the investigation of the miracle claim in the first place!

This argument involves a confusion between what may be termed formal or heuristic regularity and substantive regularity. To investigate anything of a factual nature, empirical method must be employed, and it involves such formal or heuristic assumptions as the laws of non-contradiction, the inferential operations of deduction and induction, and necessary commitments to the existence of the investigator and the external world. Empirical method is not 'provable'; its justification is necessity - the fact that we cannot avoid it when we investigate the world. (To prove it

we would have to collect and analyse data on its behalf, but we would then already be using it). One cannot emphasize too strongly that this necessary methodology does not in any way commit one to a substantively regular universe; to a universe where events must always follow given patterns. Empirical method always investigates the world in the same way - by collecting and analyzing data - but there is no prior commitment to what the data must turn out to be. In short, whereas irregularity in basic empirical methodology would eliminate the investigation of anything, the discovery of unique, non-analogous events by empirical method in no way vitiates its operation or renders the investigator liable to the charge of irrationality.

The second way of taking Flew's argument appears to involve an inconsistency with his own claim about the status of laws of science. Flew maintains that these laws may be represented as descriptive statements which map certain regularity patterns existing within the realm of empirical phenomena. This raises two questions: first, why does Flew regard violations as subsumable under a law when violations are not regarded as part of a regularity pattern and second, if they are to be covered by the law, as these law statements are descriptive, however well founded a law may be, intransigent factors may yet be found such that a

revision of the law is required, no matter how drastic.[40] However, if scientific laws are (a) descriptive statements about existing phenomena and (b) revisable in the face of recalcitrant counter examples, the question of whether an event has actually occurred must be seen as prior to and separate from any question concerning the relationship between such and such an event and various scientific laws. It therefore seems that Flew is mistaken or confused about his claim that laws determine the occurrence status of events.

According to Flew, laws are used as the primary evaluative factor when judging the 'occurrence status' of past anomalous events. It therefore seems that no matter how strong the actual a posteriori evidence may be, the notions of what seems probable or improbable contained in the relevant scientific laws must always be given priority over it. This approach to historical investigation runs the risk of choosing laws without regard to hisorical limits, and then attempting to rewrite history to fit the law.[41] Furthermore, since Flew believes that every past anomalous event has only past tense, particular 'historical evidence' favouring its actual occurrence, but general, public, present, 'scientific evidence' ruling against it, his 'occurrence

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40 See R.C. Wallace. 'Hume, Flew and the Miraculous'. The Philosophical Quarterly. Vol. 20, No. 80, July 1970.

41 Gordon Clark. 'Miracles, History and Natural Law'. The Evangelical Quarterly. Vol. 12, January 1940, p. 34.

criterion' actually applies to all presently (as well as to permanently) inexplicable events. Clearly few scientists would want to claim that - on the basis of present laws of science - every past event which has been labelled 'presently inexlicable' must now be considered not to have occurred in its purported form. Flew, it appears, has simply failed in his argument to make any meaningful distinction between permanently and presently inexplicable events. Thus, in his desire to offer a strong a priori epistemological argument against the former, his conclusions inadvertently also apply to the latter.

Flew's confusion appears to have resulted from his failure to distinguish between the following positions:

(a) Given no independent evidence to the contrary it is unreasonable to believe that the physically impossible will occur. That is, given a uniformity in our experience, it is reasonable to suppose that the uniformity will continue.

(b) Given an exception to the uniformity of our experience it is reasonable to believe that an exception to a law of nature has occurred. But then the reasonable question is: is this a falsifying exception or a violation?

Since Flew is prepared to make a conceptual distinction between a falsifying exception and a violation of a law of nature the fundamental questions involved are ones of rational belief. Is it always rational to believe either (a) that the event did not occur in its purported shape, or (b) that the event is explicable by science, at least in principle?

I believe, contra Flew, that we could have good evidence to rationally believe that an anomalous event of the kind which believers have wished to call 'permanently inexplicable' has actually occurred. This follows from the necessity of deciding whether an event has actually occurred prior to a decision regarding the relationship of the event to the laws of science.[42] Having got this far the apologist faces the second of Flew's hurdles. Given that we have good reason to believe that an inexplicable event has occurred can we be justified in claiming that the event in question is not simply presently inexplicable but permanently scientifically inexplicable?

5. THIRD REPLY

Harvey is quite correct in arguing that present

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42 Of course where there is very little evidence to support the occurrence of an event which if it had occurred as reported would have been an exception to a law of nature we would normally use the law to infer that the event did not occur. The relevant question here is: how much evidence is required to pursuade us to take reports of recalcitrant events seriously?

scientific knowledge is relevant to historical inquiry. The fact that an alleged event is not what one would expect on the basis of observed regularity in a given scientific field 'activates a warning light'.[43] The historian knows better than anyone that many miraculous tales have been concocted and passed on by dishonest or superstitious persons. However, in the case of an alleged miracle what does the historian do after he has taken note of the warning signal and is on guard against knaves and fools? One can, Harvey suggests, either attack the warrants upon which similar judgements generally are made or enter a rebuttal. The alleged resurrection of Jesus provides a good example. Jesus died (data). Since, on the basis of observed regularity, dead men stay dead (warrant), Jesus was not alive on the third day (conclusion) unless in this particular case the usual warrants do not apply (rebuttal). Obviously, no-one could successfully challenge the warrants in this case and Harvey believes a similar failure awaits the attempt to develop a rebuttal.

Harvey describes a miracle as 'an event alleged to be absolutely unique, which is to say, an event to which no analogies or warrants grounded in present experience can apply'.[44] In the case of something absolutely

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43 Harvey. Op. cit. p. 87.
44 Harvey. Op. cit. p. 225.

unique, one would not know what one was talking about nor could one bring arguments for or against it, 'for there are no criteria for dealing with an event unlike any other'.[45]

Harvey may be correct in asserting that one could neither perceive nor conceptualize an absolutely unique event but are alleged miracles 'absolutely unique'? Frequently the only unusual aspects of a reported miracle are its basic structure (e.g., the supposed phenomenon of living again after death) and its apparent non-explicability in terms of scientific knowledge. Lesser aspects of the total event, on the other hand, are quite common and analogous with present experience. For example, in the case of the reported resurrection of Jesus, by analogy with one's experience of how living men appear, one could in principle at least decide whether or not one were seeing a living person and whether he bore any continuity with some person who had died. The historian would want to examine the accounts of alleged meetings, visits to the place of burial, and so forth. In principle, then, the historian can isolate data and mount arguments on the basis of the non-unique aspects of alleged miracles. Even if in specific instances the historian decides that he lacks sufficient evidence to arrive at a firm conclusion, it will not be because of 'the absolute

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45 Harvey. Op. cit. p. 228.

uniqueness' of the alleged event, but because of the inadequacy of the sources. One must conclude that although Harvey correctly asserts that there are no criteria for dealing with absolutely unique events, he has confused the issue by his definition of miracle. Consequently his argument that the historian cannot deal with miracles because of their uniqueness fails completely.

The historian qua historian cannot assume that traditional theism is either true or false, since to do either would be to include a significant metaphysical presupposition in one's historical methodology. The historian must remain methodologically neutral. Personally, the historian may be a theist or a non-theist, but qua historian he ought to be an agnostic. As a methodological agnostic, he knows that the God of traditional theism just may happen to exist and that miracles would therefore be a 'real possibility'.

> If God exists, miracles are not merely logically possible, but really and genuinely possible at every moment. The only condition hindering the actualization of this possibility lies in the divine will. For the theologian to say that scientific knowledge has rendered belief in miracles intellectually irresponsible is to affirm that scientific knowledge provides us with knowledge of limits within which the divine will always operate. Since the question of

> morality has been introduced, one may perhaps be permitted to inquire about the intellectual integrity of such an affirmation. Is peace with one's age to be purchased at any cost?[46]

I conclude that Van Harvey is incorrect in his claim that modern historical methodology prevents a positive evaluation of some report of an alleged miracle. I believe that the historian could say that the evidence for the event was strong enough to warrant his affirming its historicity even though the event was inexplicable in terms of present scientific knowledge. Thus, in the case of the alleged resurrection of Jesus, the historian might, if he found the evidence adequate, conclude that Jesus probably was alive on the third day. What still has to be ascertained is whether or not the 'alleged miracle', the scientifically anomalous event is in fact a 'miracle', a scientifically inexplicable event; not just in the present but by a 'best science' in the future. This question will be taken up in the next chapter.

6. CONCLUSION

In this chapter I have investigated the claim made by Antony Flew and Van Harvey that the fundamentals of historical enquiry rule out the possibility of us

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46 Merold Westphal in his review of The Historian and the Believer. Religious Studies. II. 1967, p. 280.

knowing or having a rational belief for believing that an alleged miracle has occurred. I have argued that neither writer has produced a convincing argument and that in the final analysis nothing in the application of historical methodology rules out the positive affirmation of alleged miracles. What has been established is that the important question is whether or not it is reasonable to believe that some alleged miracles are real miracles, i.e. permanently inexplicable by the scientific enterprise.

CHAPTER FOUR

1. INTRODUCTION

In the previous chapter I dismissed the claim that the fundamentals of historical enquiry rule out the possibility of our knowing that an alleged miracle has occurred. Having jumped this hurdle the apologist faces yet another in his defence of a violation concept of miracle. It is not enough for the apologist that any recalcitrant event regarded as a miracle cannot be explained presently by science. If the event is a miracle, and not merely an assumed miracle, it must be not only presently inexplicable by science but permanently inexplicable by science. In a theoretical sense the miracle is scientifically inexplicable by a 'best science'.

The apologist needs both a true law and a legitimate exception to establish rational belief in a miracle as a violation. The rationality of this move depends on the one hand on the legitimacy of a distinction between a vicious falsifying exception to a law of nature and a non-vicious violating exception, and on the other on the rationality of accepting that in certain circumstances it is possible to justify a belief that the recalcitrant event is a violation not a falsification of the law.

As I noted in the previous chapter, Flew is happy to accept that a legitimate distinction can be made between a violation of a law of nature and a falsification of a law of nature. Throughout this chapter I shall assume that Flew is correct on this matter but later (see Chapter Five) I shall critically examine the validity of such a distinction. In this chapter my attention will be devoted to a critical assessment of Flew's claim that one can at best be agnostic with regard to any claim of knowledge of a miracle (expressed as a violation of a law of nature).

Flew maintains that if it can be shown that an event E is an exception to a law of nature L there is no natural way of knowing that E is a violation since this knowledge would entail that we also knew that L was true. However, Flew argues that it is always possible that science, at least in principle, could explain E and then modify or replace L by L_1. Flew correctly maintains that the apologist, in claiming that miracles are violations, is committed to the claim that when E is a miracle it is scientifically inexplicable. Flew backs the case that it is always appropriate to believe that science could explain E. I argue against this, that there cannot be any a priori argument excluding the possibility of rational belief in the scientific inexplicability of E.

2. THE CLAIM OF SCIENTIFIC EXPLICABILITY

In this section I shall review and answer two somewhat related considerations which induce people to believe that one could not rationally believe that an exception to L is actually a violation of L.[1] The first consideration deals with the success of modern science in explaining events once thought to be inexplicable. Thus, it is argued that any actual event alleged to be a miracle would fall under some law though it be presently or perhaps forever unknown. The second consideration rests on a theory about the revolutionary nature of science and urges us to regard all present laws as likely to be overthrown with the elapse of sufficient time. It follows from this, so the argument goes, that since all laws are open to revision or wholesale rejection in this way, we cannot know presently which laws are true so equally we cannot know what would be a violation of a true law.

(a) The argument against rational belief in a violation of a law of nature from the progress of the scientific enterprise may be viewed under two headings: (i) all events alleged to be miracles will in the end be explained by science and (ii) continued failure to discover a natural factor as cause of an event never permits belief in its

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1 These two considerations and some of the illustrations I use in this section were first drawn to my attention by John Gill in an untitled, unpublished paper.

absence. The former suggests that since in the past science has been able to explain more and more anomalous events in the future science will be able to explain what we now regard as violations. Erlandson[2] argues along these lines:

> Events have occurred in the past which have been extremely bizarre and disruptive to the then present laws of nature. Many such events have subsequently been explained. That the present cases are more bizarre and disruptive merely shows that the explanation will be extremely difficult to achieve, at most that the laws of nature are more complex than we had until now supposed. We cannot legitimately infer from bizarreness and disruptiveness no matter how extreme that we are confronted by the permanently inexplicable or the miraculous.[3]

Erlandson argues from the premise that some bizarre and disruptive events have been explained by science to the conclusion that all bizarre and disruptive events are at least in principle explainable by science. However, his actual argument falls short of reaching its desired conclusion. On the one hand, the fact that many extremely bizarre and disruptive events have

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2 Douglas K. Erlandson. 'A New Look at Miracles'. Religious Studies. 13, pp. 417-428.

3 Op. cit. p. 419.

subsequently been explained would only seem to warrant our believing that many similarly bizarre and disruptive events would later be explained. However, Erlandson himself admits that 'the present cases are more bizarre and disruptive'. On the other hand he might contend that the bizarre and disruptive features, no matter how significant, cannot by themselves make us despair of explaining the events scientifically. Of course this simply amounts to a begging of the underlying question itself. The issue being whether all natural events can be naturally explained he cannot then assume from the start that the explanation achieved will only be got with extreme difficulty or that the laws of nature are far more complicated than those we have yet obtained.

The critic may attempt to strengthen his case by showing that much of what was once put down to acts of God is now explicable by science. Occurrences such as lightning, eclipses, and general meteorological and astronomical phenomena have in the past been attributed to God and in some places still are. Today it is believed that science can explain such phenomena and hence it might be concluded from this by induction that all physical events attributed to God will gain a

scientific explanation. This conclusion is, however, too strong. In the former cases science has managed to explain the natural causes of a whole class of observably similar phenomena allegedly caused by God. In the miracle case we are concerned rather with single or exceptionally few instances of observable phenomena. To use results about the first as a reliable indicator for the second is clearly a mistake since the two are not analogous.

The second argument under this heading, namely that continued failure to discover a natural factor as cause of an event never permits belief in its absence, rests on a number of subtle assumptions. Nielsen[4] offers the following example illustrating this line of argument.

> Suppose certain very extraordinary events suddenly and inexplicably began occurring in great numbers; for example, suppose all over North America it turned out that sick people get well whenever they sincerely with their whole heart and mind ask God for help. Suppose further that this happens even when they have diseases that doctors believe are quite incurable. Those who have faith, that is, those who can really bring themselves to believe in God, and who ask God for help in this

4 K. Nielsen. 'Theoretical Constructs and God'. Journal of Religion. 54(3), July 1974, pp. 199-217.

> manner get well; those who are without unwavering faith do not. No known medical account of how they could have gotten well exists. There is not, let us suppose, even a plausible psychosomatic account. Further suppose that no naturalistic explanation is found for their getting well when they pray, and yet these happenings go on regularly for several generations. If these extraordinary but quite empirically describable events were to take place, would it not then become reasonable to assert that there is a God or that there probably is a God who answers the prayers of those who truly beseech him?[5]

Nielsen claims that the correct response to such a fantastic circumstance would be to admit that these are extraordinary events of a thoroughly baffling kind. Nevertheless he would be right in asserting that he sees no reason for saying that in principle there can be no naturalistic explanation of such events. The apologist is not, it should be clear, committed to the view that for every presently inexplicable occurrence there is no natural explanation or cause. The apologist backing the violation argument only has to support the view that there is not always a natural cause. How does the critic mount his argument against this position?

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5 Nielsen. Op. cit. p. 200.

Firstly, he might contend that every event has a natural cause. Nielsen, however, is careful to avoid this position since it involves a metaphysical dogmatism and clearly begs the question. Secondly, he might resort to the claim that it must always remain logically possible for a natural cause to be present and discovered. Now it seems to me that there is ambiguity in the notion of logical possibility when applied in this case. Given a definition of a miracle as a violation of a law of nature and which therefore has (tenselessly) no scientific explanation, it is logically necessary that if an event E is a miracle, then E has (tenselessly) no scientific explanation. In this sense it is logically impossible that a miracle has a scientific explanation. On the other hand it is not logically necessary for any particular event that it be miraculous, and hence it is not necessary for any particular event that it be scientifically inexplicable. In this sense it is not logically necessary that a miracle has no scientific explanation. Clearly the apologist need not believe that it is logically impossible (sense 2) that the event have a natural explanation. He need only believe (sense 1) that it is logically impossible. He need believe only that in fact the event will receive no scientific explanation

(because there is none), not that it could not do so. Furthermore, he believes that he has positive backing to support his claim that the event is in fact a miracle.

Thirdly, the critic might resort to the claim that no matter how detailed the search for the natural cause, it might be of such a type that it might always fall outside of the scientific net. That is, the search is cut short, or it is not wide enough in its span. The apologist does not deny that at times this does explain failure by the scientific enterprise to ascertain the cause of unusual events. However, given positive backing for his belief that certain events are caused by God, he will not accept that it is never rational to believe that some extraordinary events are violations of a law of nature.

It seems, therefore, that on close examination progress in science gives us no overriding grounds for supposing that the reputed major miracles will be reduced to normal occurrences. In fact it would seem that if an argument from scientific progress were to be effectively employed against the legitimacy of miracle claims it should be couched throughout in terms of miracles. In other words it would make more sense if it could be shown

that many bizarre events - bizarre in the sense of being supposedly miraculous; for example, the raising of the dead, walking on water, turning water into wine - had with the passing of time been explained by science. In actual fact these events have remained as bizarre and disruptive today as they have ever been, and there is no sign that science is any closer to offering an explanation of them.

(b) Nowell-Smith[6] has strongly supported the argument against rational belief in a violation of a law of nature taking his stand from the revolutionary nature of the scientific enterprise. He argues that today's science is not committed to yesterday's science. In other words science is not committed to any law, theory or concept but rather it is committed to a particular method of explanation. He argues that the scientific vocabulary is continually being revised and enriched[7] and that the history of science strongly indicates that many of our present laws and theories will also go by the board.[8] From this

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6 Patrick Nowell-Smith. 'Miracles'. Hibbert Journal. XLVIII, 1950, pp. 354-60. Reprinted in Flew and MacIntyre (eds.). New Essays in Philosophical Theology. SCM. London, 1955, pp. 243-253. My references are to the latter volume.

7 Nowell-Smith. Op. cit. p. 247.

8 Friedman. 'Hume on Miracles: A Critique'. (1974 unpublished paper), p. 10 claims that 'the probability in favour of any actual formulation of a law of nature is not close to one, but instead, is rather low, at any given period in history'.

Nowell-Smith argues that even though we may not know which present laws will suffer that fate it may well be those very laws which, for example, make men rising from the dead sound so impossible. In this light those who now claim that a particular law has been violated will have the ground swept from under them. The supposed violation becoming just one of a range of cases falling under the new law.

In reply to Nowell-Smith it should be noted that science is a multi-level enterprise and while it may be granted that science is revolutionary at the highest levels there are a minimum of changes at the lowest levels. Yandell supports this contention. He claims that generalizations couched in terms of ordinary observable 'middle sized objects' seem unlikely to be revised in the light of progress in knowledge and are little, if any, subject to revision in the light of paradigm shifts.

> Unless such shifts are purely arbitrary, there are criteria for appraising them. Unless such criteria are purely formal, appraisal will include reference to what some philosophers have called 'empirical fit'. Part of the empirical data to which theories must render their due - must 'fit to', so to say - is just that

> which confirms such generalizations. Without supposing our knowledge of these generalizations, or of their confirming instances, is incorrigible or indubitable, or completely safe from revision, one can nonetheless hold it in high regard as part of the touchstone any theory must satisfy.[9]

Furthermore, while science may be revolutionary at the higher levels at the lower levels it tends to be progressive and cumulative. At the lower level, generalizations if they change at all, change only in detail leaving much of the scope of the law unchanged. On this basis I would argue that an adequate consideration of the revolutionary nature of science does not rule out knowledge of the miraculous on the ground that each and every law currently held will be revised or rejected by some future revolution in science.

Nowell-Smith, faced with this answer to his charge, might well reinforce his position by accepting much of what has been said and yet argue that strictly speaking, any change in a law results in a new and different law. Since the old formulation did not in fact express a true law, there was in fact no violation either. On the surface this renewed charge against the

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9 Keith E. Yandell. 'Miracles, Epistemology and Hume's Barrier'. International Journal for Philosophy of Religion. Vol. 7, No. 3, 1976, pp. 414-415.

violation theory poses substantial difficulty in the path of rational belief of a violation of a law of nature. In actual fact the difficulties are not as severe as they seem.

In the vast majority of miracle claims the supposed violation occurs within a range of cases where the operation of the law has been thoroughly tested and yet the event is markedly discordant with the law. Since typically purported miracles are markedly discordant or anomalous events any small modification to the lower level law in question would mean that what has been regarded as a violation of the former law will also be a violation of the new law; its closely related successor. Since most lower level laws and reports of purported miracles are normally couched in observational[10] terminology a statement of the supposed violation will clearly contradict the new law as much as it did the old one. It might well be argued, in effect, that no matter how infinite the changes to law formulation at the revolutionary levels of science we could still be certain that a particular event couched in observational language is a violation of the lower level laws.

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10 Bruce Langtry. 'Investigating a Resurrection'. Interchange. No. 17, 1975, p. 42.

In this section I have examined the claim that one could never have positive reason for believing that reputed violations of laws of nature could not be brought within the embrace of science. I have examined this claim from the broad perspectives of the progress of scientific explanation and the revolutionary nature of science. My analysis of the claim from both perspectives leads me to conclude that there is no positive reason for believing that all reputed violations will be, or could be, explained by science.

3. IS IT REASONABLE TO BELIEVE THAT SOME EVENTS WILL NEVER BE EXPLAINED BY SCIENCE?

The violation theorist may gain some solace from the argument of the preceding section, but the absence of any cogent argument against the rationality of belief in the occurrence of a violation of a law of nature does not of itself amount to an argument for genuine violations. In this section I hope to show that on the assumption that a coherent dichotomy of exceptions to laws of nature into falsifications and violations can be made,[11] given certain circumstances one would be irrational to believe that a purported violation could in principle be explained by science.

Langtry[12] argues that certain types of events if they

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11 See Chapter Five and Six for a critical examination of the coherence of this assumption.

12 Bruce Langtry. Op. cit. p.44.

occurred would indicate God as their cause and hence would justify the belief that they were scientifically inexplicable. He offers the following example:

> Suppose that a great voice were simultaneously heard over all the earth, speaking to each nation in its own language; suppose also that the voice claimed to be from God, and in support of this claim issued detailed predictions about events unforecast by human scientists, predictions which were subsequently verified. Clearly one would be justified in saying that almost certainly there was some non-human intelligent and purposive agent at work.[13]

If this event were to occur a number of possible hypotheses concerning the origin of the voice could be given. The scientific enterprise could examine many of these in practice, such as the possibility that the voice was issued from a number of radio stations throughout the world or that the voice was projected from a satellite. On the assumption that no natural cause could be found, after exhausting all the apparent possibilities, I believe that the predictive element in this event compels one to accept that the rational choice in the situation is to accept that the voice did in fact come from God. Clearly to say that the rational choice is to accept that the voice came from God does not entail any degree of

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13 Ibid.

infallibility in the matter. It may in fact turn out that a being from another planet caused the event. Nevertheless, lack of infallibility cannot encourage one not to make a decision based on all available evidence. The very strong evidence in this case supports the hypothesis that the voice came from God.

Let us imagine that when Moses returned from Mt. Sinai he actually carried with him a tablet of stone with the ten commandments engraved on it.[14] Let us imagine further that Moses claimed that God, by directing bolts of lightning, had caused the engraving. What should one believe? We could imagine a large number of alternative hypotheses. Perhaps Moses did the engraving himself, perhaps someone else did it, or perhaps it just happened by chance. However, let us imagine that upon investigation it is discovered that the technology required to engrave on stone was in fact not available at that point of time and that scientific tests made upon the rock support the hypothesis that bolts of lightning were the most likely cause of the marks upon the stone. If the engraving upon the stone were not intelligible one might conclude that this event happened by chance. However, the intelligible nature of the marks together with the lack of suitable alternative hypotheses leaves no alternative but to believe that some intelligent agent

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14 See EXODUS 19, 20.

more advanced than ourselves and commanding a superior technology caused the event. The question is then whether we have more reason to believe that the intelligent agent was God or some other being.

In both preceding examples it was the inability of science to offer a viable alternative which led us to the conclusion that the event was scientifically inexplicable. Of course one might attempt to counter the violation theorist by arguing that in principle at least it is possible that sooner or later science will offer such an alternative hypothesis. This claim might be based on the fact that in these cases science has an indication of some of the possible causes of the event. It knows what sorts of things might count as causes, the problem is that they appear to be absent. In the face of this objection the violation theorist can strengthen his case by indicating that many events if they occurred would be scientifically inexplicable because science would not even be able to hypothesise as to what would count as causes.

Firstly, imagine that there are, as a matter of fact, no elephants in Australia. Imagine further that 2,000 people are seated in a closed auditorium when suddenly, what appears to be a live elephant appears in the midst of the audience. One might imagine that

an illusion has been created. However, scientific investigation indicates that the supposed elephant is alike in all respects to other elephants. Later, another elephant is brought into the country and both elephants are placed in a zoo where they eventually have offspring. Secondly, imagine that there is an apple orchard in which there are one hundred apple trees all of the same variety, all with the same characteristics except that one of the trees produces bibles rather than apples. Both of these events are totally baffling. The scientist faced with the task of offering some explanation for the events is faced with an insurmountable problem. The method of investigation used by science is dependent on the underlying principles of cause and effect; the notion of cause implies some sort of 'constant connection' between events. Unfortunately for the scientist in each of the preceding cases there is no constant conjunction, the scientist is given no clues, no idea, where to even look for a possible cause, he has no starting point whatsoever. The rationality of a belief that an event has a natural cause rests partly on the ability to decide what sorts of things would count as causes followed by an investigation to determine whether or not they were in fact present. When one is faced with an event for which one cannot even suggest the sorts of things which would count as

natural causes, one has no idea where to begin an investigation, one has no grounds for optimistically expecting that even in principle science can offer an explanation. Rationality demands that one accept that the event is scientifically inexplicable.

In the preceding examples I have attempted to draw out some of the positive reasons characteristic of reputed violations which strengthen our resolve that these events would never be brought within the embrace of science. It is now time to attempt to sharpen the analysis and draw together the criteria for recognition of the scientifically inexplicable.

A number of writers[15] have suggested that one of the very important criteria is the demand that any law of nature must pass the restriction of simplicity. That is, given a choice of two laws which predict and explain in the same array of cases, science will prefer the one with fewer concepts and theories over the one with more. Likewise, the demand for a criterion of simplicity puts a brake on theorists who add bits to an established theory or law every time the facts look as though they will tell against it. Swinburne[16]

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15 See for example (a) R.F. Holland. 'The Miraculous'. American Philosophical Quarterly. January, 1965, pp. 48-50. (b) Margaret A. Boden. 'Miracles and Scientific Explanation'. Ratio. XI/2, December 1969, pp. 140-141. (c) Tan Tai Wei. 'Recent Discussions on Miracles'. Sophia. XI/3, October 1972, p. 24. (d) Richard Swinburne. The Concept of Miracle. London: Macmillan, 1970, pp. 29-32.

16 Richard Swinburne. Op. cit. pp. 29-32.

argues that it is unreasonable to believe, for example, that the anomalous case of water turning into wine could be incorporated into the set of laws covering water and wine. He claims that to modify existing laws in the face of this one event, which despite considerable attempts has never been repeated, would be ad hoc and unreasonable. Any apparent gain in achieving trouble-free-regularity from such a modification would be more than counter-balanced by the loss of rationality in one's interpretive technique.

The argument for belief in violations of a law of nature from simplicity has not gone without criticism. Robert Young[17] urges that we cannot rule out the possibility of some quite unthought formulation being discovered in the future, which will successfully cover the supposed violation. He argues that to claim otherwise is to claim that we can know the future and he believes that it is more likely that it is our lack of imagination which prevents us coming up with a law to cover both the old law and the alleged violation.

Young's appeal to possible lack of imagination is only strong if the initial case for the violation is relatively weak. Paucity of imagination is never by itself a sufficient argument that there is not just a slim chance but a considerable likelihood that something

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17 Robert Young. 'Miracles and Physical Impossibility'. Sophia. October, 1972, pp. 29-35.

has been overlooked. In fact the imagination argument is weak in aother way; it is extremely double edged. One could argue that it is only our paucity of imagination which blinds us from realizing that certain events which appear to be in conformity with laws are in fact not. These events having characteristics of which we have not conceived which make them exceptions. Imagination is quite neutral and works for both sides; it cannot be used to favour one side over the other. More imagination may enable us to fit more apparent exceptions into regularities, but then it may enable us to find more exceptions to our apparent regularities.

Is there then any positive reason to believe that even the most fertile of imaginations would not be able to accommodate the purported violation into a law? Is there reason to believe that no other theory is in fact available? On this issue let me make the following observations.

At the lower levels of science it is usual to have only one theory in any established area. This together with the fact that such lower level theories are couched in observational terms would seem to indicate that there is in fact only one theory adequate to the data and that we already have it or at least some very close approximation to it. Since the

theories we have are good predictors it seems intuitively implausible to suggest that there are as yet undiscovered, quite different and significantly more complex laws and theories covering the same areas.

If the alleged violation is taken as indicating that our present formulation of law is mistaken, then, by modus tollens, any theory from which the original law could be derived would equally be mistaken. To demand wholesale changes to a body of theories and laws simply to accommodate one recalcitrant occurrence seems too high a price to pay.

If there were a set of initial conditions which in a law like way triggered the anomalous event - for example, water into wine - one might suspect that it might have chanced to happen again. Yet as a matter of fact, despite the ready availability of water, it has remained impossible to reproduce.

J.C. Carter[18] and K. McNamara[19] both argue that we are able to discern the scientific inexplicability of part of the set of presently inexplicable events as a result of the sign structure or meaning of the event together with the religious context associated with the event. Carter claims that once an event has been

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18 James C. Carter. 'The Recognition of Miracles'. Theological Studies. Vol. XX, 1959, pp. 175-193.

19 Kevin McNamara. 'The Nature and Recognition of Miracles'. Irish Theological Quarterly. Vol. 27, 1960, pp. 294-322.

testified as definitely 'beyond the known powers of nature'[20] or in other words, is presently inexplicable by science, we are able to discern whether the event is a miracle through the recognition of its meaning. It follows from this that while there is presently no scientific explanation for water turning into wine in the Cana context or of a man coming back to life after three days in the grave the sign-context and the religious significance of these events give positive reinforcement to the rationality of a belief that these events will never be explained by science. Thus, as Langtry suggests:

> The mere occurrence of a resurrection would not by itself justify appeal to the direct primary causal activity of God. What is normally involved is a claim of a resurrection plus an accompanying word of interpretation, allegedly coming from God. The context is crucial, and so is the preferred description of the purposes and motives of God.[21]

It is the religious coherence[22] of the event which provides positive backing for the claim that the event

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20 Carter. Op. cit. p. 194.
21 Bruce Langtry. Op. cit. p. 45.
22 Christopher M.N. Sugden makes some interesting points about coherence and resurrection in 'The Supernatural and the Unique in History'. Theological Students Fellowship Bulletin. Vol. 67, 1973, pp. 1-5.

is a miracle.[23]

4. CONCLUSION

In this chapter I have been concerned with the question of the recognition of a miracle expressed as a violation of a law of nature. In the first part of the chapter I concluded that there were no compelling reasons why we should reject the view that a purported violation of a law of nature was scientifically inexplicable. In the second part of the chapter I have attempted to outline a positive program for the recognition of the scientifically inexplicable. I conclude that while our reasoning can never be infallible, nevertheless, given the occurrence of certain recalcitrant events we would have good reason for accepting that the event was permanently scientifically inexplicable. In fact I maintain that to insist that an alternative explanation is correct would be unreasonable.

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23 E. Dhanis ('Qu'est-ce qu'un miracle?' Gregorianum XL, 1959, pp. 201-241, particularly p.213) argues that it is sometimes possible to prove with certainty the physical transcendence of an effect solely from an examination of the effect itself. These circumstances are given as:

> First, the phenomenon must depart from the habitual course of nature observed in very many and varied circumstances. Further, it must appear in an ordinary environment, so as to exclude the suspicion that unusual natural circumstances or new artificial factors may be responsible. Finally, there must be no knowledge of the existence of a phenomenon of the same type and more or less comparable, unless perhaps it be a sacred prodigy, intelligible precisely as an exception of natural laws.

CHAPTER FIVE

1. INTRODUCTION

The epistemological defence of the violation model has of necessity rested on the coherence of the underlying assumption that it makes sense to distinguish between a falsifying exception to a law of nature and a non-falsifying exception or violation to a law of nature. In fact I noted earlier that there was an implicit argument in Hume's Section X to the effect that such a distinction is in fact incoherent.[1] This argument undeveloped by Hume and rejected by Flew has been taken up by a number of contemporary writers. In fact there is no longer a single argument for the incoherence of the violation model, but rather a number of arguments which may be grouped collectively under two major headings. The first of these may be termed the 'definitional attacks'; the second, as the 'scientific attacks'.

The arguments under the former heading attempt to demonstrate that there is an inescapable logical inconsistency in the concept - that is, that it involves a self-contradiction. Arguments under the latter heading attempt to show that the violation concept of miracle is incompatible with the scientific enterprise and that the concept could never be

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1 See Chapter 2, page 10.

legitimately predicated on an observable occurrence, and is therefore meaningless. Clearly it is not possible to outline all the attacks made under these two headings nor is there always a clear indication available to determine under which heading the attack fits best. Nevertheless, it will be my aim to analyse the major arguments in both areas. In this chapter I shall investigate the definitional attacks and leave the attack from science to the next chapter.

2. McKINNON[2]

McKinnon has attempted a refutation of the claim that a miracle should be defined as 'a permanently inexplicable event'. McKinnon's refutation is based on two arguments and I shall look at each in turn.

(a) Miracles are normally defined as events which violate or suspend natural laws; that is, they are scientifically inexplicable.

But natural laws are simply 'shorthand descriptions' of how things do, in fact, happen. Or in other words natural law is definitionally equivalent to 'the actual course of events'.

Thus to claim that an event is a miracle is implicitly to assert both that such an occurrence

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2 Alistair McKinnon. 'Miracle and Paradox'. American Philosophical Quarterly. Vol. 4, No. 4, October 1967, pp. 308-314.

> is (i) an observable phenomenon, part of the actual course of events; and (ii) as a violation or suspension of a natural law, not part of the actual course of events.
>
> But such an affirmation and denial of the same statement is obviously self-contradictory.
>
> Accordingly, the 'miraculous' as initially defined, must be viewed as conceptual nonsense.

Whether or not one accepts McKinnon's first argument will depend largely on whether his definition of natural laws as summary statements about what happens, is acceptable. Swinburne, for example, claims that such laws should not be understood in this way, but rather, should be understood as descriptive generalizations about repeatable natural phenomena. Laws do not describe things that happen in an entirely irregular and scientifically unpredictable way. He, therefore, concludes that since laws should be understood in this way they do not cover 'non-repeatable counter instances' and therefore they do not cover all events.[3] If Swinburne's claim is accepted the laws of 'best science' would in fact be ones with restricted generality. Now one might object to this by claiming that if there is an attested counter-example to a supposed law of science this shows not

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3 Richard Swinburne. The Concept of Miracle. London: Macmillan, 1970, p. 26.

that the law has to be understood as weakly quantified but that it is false. A supposed law of nature either describes what happens or it does not, and in the latter case it must simply be abandoned. N. Smart[4] provides a good illustration of this point.

> How then can a miracle violate a law of nature? If it is an exception to it, then the law of nature is already (so to speak) destroyed. There seems to be a paradox in the definition of miracle. The miracle seems forever frustrated in its attempt to violate; for as soon as it imagines that it has succeeded, it finds that there was nothing there after all to violate! It is like someone trying to live in a state of conjugal bliss with a bachelor; for as soon as there is conjugality, there is (by definition) no bachelor.[5]

Smart believes that this illustration is based on a fallacy. He points out that a falsifying negative instance to a supposed law of nature is not a single event, but a repeatable event. Smart refers to this as the operation of 'a small scale law of nature'. It is described as of the form 'under these special conditions that occurs'.

> The large scale law of nature is supposed to apply to a number of particular types of

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4 Ninian Smart. Philosophers and Religious Truth. N.Y.: Macmillan, 1970, pp. 15-44.

5 Ninian Smart. Op. cit. p. 25.

> situations; these are its instances, not single events. Suppose the law of gravitation (a large scale law) implies that balls will roll down an inclined plane at a certain pace, given the mass of the earth, the angle of the plane, and so on. And suppose that the experiment always comes off as predicted; the small scale law holds. And then suppose that one unfine day some new Galileo finds that we had not got the conditions as we thought we had, in their purity, and that some unseen factor always entered into our experiments. And suppose that we remove that factor and lo! the balls move at the wrong pace. Now we have a new small scale law which is an exception, an anomaly. Now we have to scrap or modify, that is, to scrap the large scale law.[6]

According to Smart's thesis, miracles, not being experimentally repeatable are not small scale laws and consequently they cannot force modification upon or destruction of large scale laws. Uncaused events would be counter-instances to known laws of nature; they would by definition be experimentally unrepeatable counter-instances and as such they would not falsify these laws. It is only events which are, at least in principle, scientifically repeatable that falsify scientific laws. If an event E is an unrepeatable counter-instance to a law L it would be folly to

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6 Ninian Smart. Op. cit. pp. 29-30.

abandon or modify L in the light of E. Any new formula which accommodated the occurrence of E would allow us to predict similar events in similar circumstances, but since E is an anomalous event which does not fit into any patterns of natural causation, this new formula would yield false predictions in a whole range of future cases. The character of E is such that we know that like circumstances will not yield like events in future. If any law of science is operative here it is L. Any modifications of L which allowed it to encompass E would yield false predictions in a wide range of future cases and hence would be of less value than L.

If the world is not completely regular, scientific laws have to be understood in a weakly quantified way in the light of irregularities which are unrepeatable; and hence do not generate new universal statements. At least some true scientific laws would have to be understood as applying to not quite all of the events that strictly fall under them. A genuine counter-example to a scientific law - one that falsifies it - can at least in principle be reproduced and will therefore generate a new universal statement about what happens under specified conditions. This may in turn be incorporated into the statement of the original law, so that although it may be more detailed and more complex as a result, it can still be affirmed

universally. Where the counter-example is not repeatable a weakly quantified law would be the best that science could offer and I therefore conclude that the first of McKinnon's arguments fails. What then of the second?

(b) Miracles are normally defined as events which actually violate or suspend true laws of nature.

But these true laws of nature as adequate descriptive statements about the way things actually happen, are non-violable. If an event occurs which can be proven to be a valid counter-instance to a present law of nature, this only demonstrates that such a law is not truly adequate.

It follows that anyone claiming that a miraculous event has occurred has involved himself in an inescapable dilemma - or mutual destruction of arguments. If such a person wishes to hold that a valid counter-instance has actually occurred, then - as we have seen - he must deny that the supposed counter-instance is truly valid. In either case the believer is forced to give up something essential to his definitional conception of the miraculous.

Consequently, it is obvious that any believer

> contending that a miracle is a violation or suspension of a true natural law is uttering conceptual nonsense.

I believe that McKinnon's second argument rests on an ambiguous use of the term 'adequate law of nature'. It appears that he is claiming that if everything that occurs in nature cannot be adequately explained by the laws of nature then by definition they are inadequate. He seems to be saying that:

> ... Anything which happens I propose to call a 'natural' event. On this showing there can be no supernatural events (or violations) because there is, so to speak, no basket for them; anything that happens will be classified in a different basket.[7]

This move is clearly sleight of hand and does not offer an adequate response to the problem. To look for regularities in the behaviour of data is entirely legitimate, and pragmatically to expect such regularities is the quintessence of wisdom, but to insist that all data conform to ordinary expectations and fit a non-miraculous model is the antithesis of the scientific spirit. Models must arise as constructs to fit data, not serve as beds of Procrustes to force data into alien categories.

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7 T.R. Miles. 'On Excluding the Supernatural'. Religious Studies, 1, 1966, p. 144.

The truth of this point may be demonstrated with reference to modern studies of the nature of light; it could be argued that today's physicists finding empirically that light tests out in a contradictory fashion as both undulatory and corpuscular (wave-like and particle-like), is even willing at that point of necessity to shelve normal standards of rational consistency for the sake of the facts and conceptualize the unit of light as a 'wave-particle' (the photon). If the true scientist is willing to subordinate interpretation/explanation to the facts even if rational consistency suffers in the process, surely he cannot insist on forcing facts into the mould of substantive regularity. Regularity (like consistency) is properly employed up to the point where the data are no longer hospitable to its operation as an interpretive category: in the face of recalcitrant, non-analogous uniqueness, regularity - not the facts - must yield.[8]

McKinnon might push his case by arguing that a law of nature is inadequate if it is not strictly universal. There are two replies to this charge open to the violation theorist. Firstly, it might be emphasized that many philosophers of science are now prepared to accept that some laws of nature may be accurately represented in statistical form and hence on this basis,

8 I am offering this interpretation of the 'wave-particle' model for the purpose of discussion. It may be argued that there is another more acceptable interpretation of the model.

lack of universality cannot be used to infer that a law is inadequate. Although the law may not be strictly universal it is adequate as a law of science if it is the best predictor that science can offer. Secondly, if the idea of a not strictly universal law is unacceptable it could be replaced by a universal law whose quantifier (x) applies to only those x's which occur naturally - that is, which occur as the result of scientifically investigatable causes. Now the law is strictly universal but provides for exceptions to it through its limited domain.[9]

M. Diamond[10] suggests that McKinnon's case involves the following assumptions: (a) all true exceptions to present laws are natural exceptions, and (b) any true exception necessarily shows the natural law in question to be inadequate. He concludes:

> This a priori argument can be refuted by noting that a supernaturally caused exception to a scientific law would not invalidate it, because scientific laws are designed to express natural regularities.[11]

However, despite this claim that supernatural exceptions to laws of nature are logically possible occurrences it

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9 Further implications and discussion of this suggestion will be left until later. See page 114ff.

10 Malcolm L. Diamond. 'Miracles'. Religious Studies. 9. 1973, pp. 307-324.

11 Malcolm L. Diamond. Op. cit. pp. 316-317.

seems that McKinnon could still defend his claim, that only natural exceptions occur by appeal to the theory of universal determinism. That is, the commitment that all events in nature are connected by causal laws. Kant, for example, in the Second Analogy of his Critique of Pure Reason argued that universal causation is a necessary condition of our experience of an objective world. According to Kant if we are to have knowledge of the world of objective particulars, that is, objects which exist independently of our experience of them, it must be the case that the behaviour of these objects is in complete conformity with the laws of cause and effect, all changes must be causally explicable. However, as Bennett[12] and Strawson[13] have convincingly argued, this project will not succeed. The most that Kant can show is that for objective experience to be possible it must be of a world which manifests a high degree of causal order. But, this high degree of causal order is compatible with the occurrence of events which are causally inexplicable.

I conclude that there is no acceptable basis for McKinnon's assumptions and hence his second argument against the coherence of miracle defined as a violation of a law of nature fails. It is neither possible to

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12 J. Bennett. Kant's Analytic. Cambridge, 1966, pp. 219-220.

13 P.F. Strawson. The Bounds of Sense. London, 1966, pp. 140-146.

demonstrate that it is a necessary truth that all natural events have a natural cause, nor is it possible to rule out some degree of indeterminism in nature by means of a Kantian transcendental deduction.

3. P.S. WADIA

A more recent attempt to illustrate the incoherence of the concept of miracle, when defined as a violation of a law of nature, has been proposed by Wadia.[14] Wadia directs his attack at the claim made by the violation proponent that when a miracle occurs the physically impossible occurs. Wadia claims to clearly demonstrate that the argument for vindication of the violation model is based upon an inconsistency and is therefore fallacious.

Wadia presents what he claims is a schematic presentation of the violation model and claims that premise (a), although obviously necessary to the argument, is clearly inconsistent with premise (j). Wadia also claims that the violation argument for the rationality of belief in miracles is not one argument among many but the only reasonable argument. Thus by demonstrating that the violation argument is invalid he believes that he has demonstrated that belief in miracles cannot be justified and must be rejected as irrational. Wadia

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14 P.S. Wadia. 'Miracles and Common Understanding'. American Philosophical Quarterly. 26, 1976, pp. 69-81.

presents the following eleven point schema.[15]

(a) Law L is a law of nature.
(b) Event E is an exception to L.
(c) O is an observer.
(d) E, though physically impossible, is logically possible.
(e) It is not unreasonable to believe that the physically impossible may sometimes occur.
(f) Assume that E occurs.
(g) It is logically possible for O to perceive E.
(h) O perceives E.
(i) It is logically possible for E to have an as yet unknown natural cause which, if and when discovered, would necessitate a revision of L. Thus it is logically possible that E is merely an apparent exception to a law of nature. But though such a thing is logically possible, it is physically impossible.
(j) But it is unreasonable for O (or anyone else) to believe in the occurrence of the physically impossible.
(k) Therefore, in the circumstances described in (h) above, it would be reasonable for O to believe that E was a real, and not merely an apparent, exception to a law of nature.

Prior to an examination of the main thrust of Wadia's attack I think that it would be wise to point to the

15 P.S. Wadia. Op. cit. p. 81.

existence of a number of weaknesses and sources of ambiguity in his schematic presentation. The first difficulty is that we are not told how many of the points are premises, how many are derivations, and from which of the premises the derivations are made. Secondly, there is an element of ambiguity involved in his use of the key terms 'law of nature' and 'physically impossible'. It is integral to the violation model that a miracle is an event which occurs and is an exception to a true law of nature. Therefore, one assumes that by law of nature L in (a) Wadia refers to a true law and not merely to a supposed law. However, this is not so clear because in (i) he introduces the possibility of revision of L. But if L is true it is not possible to revise it without replacing it with a new L_1 which is inferior. If L is not a true law then clearly a counter-instance to it might well be a falsifying instance. It is my view that Wadia is somewhat confused between conceptual and epistemological issues. His own claim is that he is investigating conceptual claims, however, it seems likely that when he talks of the possibility of the revision of L what he is getting at is the epistemological problems inherent in the recognition of a violation. That these epistemological questions have a bearing on the issue of the coherence of the violation model is something that needs to be

demonstrated and cannot just be assumed.

From Wadia's lines (b), (d) and (f) it appears that what is physically impossible is an event E where E occurs and is an exception to L, where L is true. Yet in line (i) Wadia uses the physically impossible to refer to something relating to the law L rather than to an event. To claim that it is physically impossible that L could be revised appears to misapply the term. Keeping these problems in mind I now move on to an analysis of the schema proper.

Wadia claims that lines (e) and (j) are essential to the violation case but since they are quite clearly inconsistent he concludes that the violation case is fallacious. In line (e) he claims that the violation apologist argues that it is not unreasonable to believe that the physically impossible may sometimes occur. Furthermore, it appears from the schema that Wadia is proposing that the apologist believes this even prior to having observed E the exception to L. Let us first of all be clear about what this claim entails.

It might be contended that what is being claimed is that it is reasonable to believe that not all supposed laws of nature are true laws of nature; to claim otherwise would be to claim infallibility. If this is the claim then it is rather trivial. Clearly

this cannot be what is meant since the violation argument is built upon the assumption that L is a true law; if L were known to be false there could be little credence for a miracle claim. It seems that the claim being made is that it is not unreasonable, prior to E, to believe that true laws of science may have exceptions. If this is the claim, and I think that it must be, it seems to be unjustified. Prior to the occurrence of E the reasonable thing to believe is that E is impossible and therefore will not occur. If it were reasonable to believe that E were impossible and yet at the same time believe that it might occur it would appear that the meaning of possible in the two instances has changed. But why would one claim that it is physically impossible for a normal man to run a mile in less than two minutes if at the same time the same person actually believes that this might nevertheless actually occur? We believe something to be impossible precisely because we do not believe that it can occur, if we think it may occur we don't believe that it is impossible.

Line (e) in the schema does not appear to be an accurate reflection of the violation argument for rational belief in miracles; how should it be expressed? I think that line (e) should follow line (h). That is, the apologist may only reasonably believe in the possibility of the physically impossible occurring if he has

observed an event E which he is certain has actually occurred and which at the same time cannot be explained by any law of nature. Line (e) should go something like: 'It is not unreasonable to believe that certain events which occur are physically impossible'. That is, they could not have occurred if natural processes of cause and effect had been operating unhindered. It seems that Wadia has confused the belief that the physically impossible can occur prior to E, with the belief that the physically impossible can occur after E has occurred. There appears to be no reasonable grounds for justifying the first whereas the latter may be reasonably held. No doubt it is logically possible that a man might fly, without artificial aids, but does the mere logical possibility provide us with reasonable grounds for the belief that it might happen? Surely not! However, having observed a man flying unaided, is it now reasonable to believe that what occurred was physically impossible? Clearly the two positions are entirely different.

Wadia claims, line (j), 'But it is unreasonable for O (or anyone else) to believe in the occurrence of the physically impossible'. It seems rather paradoxical that the violation apologist should wish to claim this since it would appear to be contrary to the whole thrust of his argument. The violation model rests on the rationality of believing that an event which

actually occurs is scientifically inexplicable. That is, its occurrence cannot be explained by any of the true laws of science. How can he possibly include in his argument this line which appears to undermine his entire case? How then is this line to be interpreted?

It might be contended that the intention of line (j) is simply to point out what I have argued above; that is, that it is unreasonable to believe in the occurrence of the physically impossible prior to the actual occurrence of E. I do not believe that this can be the intention. It seems that the only reasonable explanation for (j) is that either it does not mean what it appears to mean or that it is not a true reflection of the violation argument. Let us turn to an examination of line (i) in an effort to discover the origin and intention of line (j).

In line (i) Wadia represents the violation theorist as claiming that 'it is logically possible for E to have an as yet unknown natural cause ...'. At first glance this may seem to be perfectly reasonable but this is far from the case. In line (b) we are told that E is an exception to L. Clearly it is logically possible that L is false and it therefore follows that it is logically possible that E has a natural cause. This would imply that L needs revision or replacement. The

violation theorist is claiming, however, that E is not an exception to L where L is false but an exception to L where L is true. Once this is granted, it no longer makes sense to say that it is logically possible for E - where E is an exception to a true law of nature - to have an as yet unknown natural cause. Clearly the fundamental distinction rests on the status of L; is it true or false?[16] The apologist has never claimed that an exception to a false law is a miracle, nor has he claimed that an event E given the status of miracle might in fact turn out to be a falsifying instance to L and hence no longer be regarded as a miracle. That is, all claims about violations, like all claims about laws must be open to revision. Nevertheless, one should not confuse the fundamental issue. If an event E occurs in nature it is logically possible that E has a natural cause - known or unknown. However, if E occurs in nature and is a violation of a true law of nature then it is not logically possible that E has a natural cause - known or unknown. There is no conceptual contradiction involved, however, since the apologist does not claim infallibility, he must, in the light of new evidence, be prepared to revise his claim that a particular event E is a miracle.

It is clear that line (i) is not a correct representation

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16 It should be borne in mind that we are talking about conceptual distinctions here not the epistemological difficulties discussed in the previous chapter.

of the violation argument. Wadia's confusion stems from his ambiguous use of logical possibility and his failure to designate L as a true law of nature. Furthermore, his conclusion '... though such a thing is logically possible, it is physically impossible' is confusing. How can it be logically possible that a true law requires revision? The apologist does not deny that it is possible that what are regarded as true laws may turn out to be false. Since our claims about laws are open to revision and since the violation concept of miracle is in some degree parasitic upon the claims about the truth of laws it follows that claims about miracles must also be open to revision. This does not, however, mean that these claims are irrational or incoherent - since being rational or coherent does not entail being right.

I conclude that Wadia's lines (i) and (j) do not accurately represent the violation apologist's position and therefore the apparent contradiction between the lines does not indicate that the violation model as correctly represented is fallacious. I think however that something of the spirit of line (j) can be retained. Part of the violation argument hangs on the reasonableness of believing that L is true and not merely apparent. Although the possibility of error is recognized, nevertheless the apologist argues that in certain circumstances it is rational

to believe that L is a real law and yet has an exception. This, the fact that L has an exception should not, of itself, guarantee that L is false. Thus perhaps line (j) could be rewritten as:

(j) It is not unreasonable for O to belive that L is a true law and that L has an exception - E.

4. REFINEMENT OF THE WADIA CRITIQUE

Having demonstrated that Wadia's attack upon the violation model fails through inaccurate representation of the apologist's position it still needs to be determined whether or not, when accurately portrayed, the violation model is incoherent. In particular, does it make sense to claim that the physically impossible may occur?[17] Smith[18] claims that it does not make sense. He bases this belief on the following argument: Either miracles are incompatible with the laws of nature and therefore they do not occur or miracles are not incompatible with the laws of nature and hence they are not physically impossible or violations. More formally: Given that by modus tollens it is possible to declare a counter-instance (E) to a law (L) physically impossible when the law (L) is true, then the occurence of the counter-instnace (E) leads us to conclude that the law is false ($\sim$L), while the

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17 At this stage I shall assume Flew's view that by physically impossible is meant those events which are logically incompatible with the true laws of nature.

18 Adrian Smith. 'Miracles as Violations'. Unpublished paper delivered at a seminar at La Trobe University during 1979.

existence of the law (L) leads us to conclude that the counter-instance is false ($\sim$ E). However, the violation theorist requires that there is no incompatibility in holding that the law (L) is true and at the same time that the counter-instance (E) actually occurred. Smith argues that in holding both these propositions, that is:

(a) $(L \rightarrow \sim E) \rightarrow \sim (L \cdot E)$

(b) $(L \cdot E) \cdot (L \rightarrow \sim E)$

the violation theorist is in fact, since (a) and (b) are clearly inconsistent, holding that the logically impossible can occur. Since the violation theorist would want only to support a view that the physically impossible and certainly not the logically impossible can occur, what possible defence does he have against this seemingly powerful attack?

Firstly, the violation apologist might contend that typically, the possibility of event E is not implied by the law L but by the law L together with a set of initial conditions (L · IC). Furthermore, the validity of the argument by Smith rests on the assumption that in (a) and (b) the sets of initial conditions are identical. However, this begs the question. The violation theorist claims that the initial conditions are not the same since when the counter-instance ($\sim$ E) occurs, it is God's causal activity as part of the set

of initial conditions which ensures that the counter-instance ($\sim E$) will occur. If God is present as an active agent factor the initial conditions are different and different in a causally relevant way. Hence one cannot use laws of nature alone to argue that a particular unusual situation is logically impossible.

This reply has some merit but it presents further difficulties for the violation model. Firstly, if God is written into the set of initial conditions it would appear that no violation has occurred since the law is inapplicable when God acts or the law itself covers God's acts and so miracles are no longer physically impossible. On the other hand, if one does not write God into the set of initial conditions, the law is either falsified or must be understood in some weakly quantified way. Let us examine the implications of these two possibilities.

The second attempt at resolution of the paradox, takes the now familiar line of expounding the law statement of the form $L = (x)(Fx \rightarrow Gx)$ as not strictly applying to all the x's that might be supposed to fall under it. Swinburne claims that we have to understand the law L as stating that 'so and so's always do such and such' and yet allow for E 'this is a so and so and does not do such and such'.[19] Swinburne claims that we must be

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19 Richard Swinburne. Op. cit. p. 27.

prepared to accept this apparent paradox or be prepared to say that no law of nature operates in the field. To say that there is no law does not, however, do justice to L's success in prediction. Gill[20] believes that this explanation is insufficient; he states:

> This is indeed correct and very important, yet it leaves a major part of the original problem, that of alleged contradiction, unanswered. Be it on a class of its own among counter-instances and insufficient to justify the scientist in seeking a new law, the violation is nevertheless incompatible with the complete universality expressed in the standard account.[21]

In an attempt to come to grips with this dilemma Flew contends that laws of nature or natural necessities should not be depicted as logical necessities, that is, they do not have to be universal; something may at a given time, or for a given group, be necessary and inevitable without being necessary and inevitable for all men at all times; and of course, something can be a natural necessity, necessary and inevitable for and by one-one or anything within the universe, without being a contingent necessity which limits God.[22] What Flew says certainly provides a way out of the logical contradiction but since it is no longer

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20 John Gill. Revamping the Violation Concept. (Unpublished paper).
21 John Gill. Op. cit. p. 20.
22 See for example Antony Flew. A Rational Animal. Oxford: Claredon Press, 1978, pp. 49-74.

regarded as impossible for miracles to occur it seems also that the miraculous is no longer ruled out by the laws of nature. But if this is the case how can a miracle be regarded as a violation of a law of nature, since the law permits it?[23]

Gill[24] believes that he has been able to restate the violation model in such a way that it clearly escapes the problems of contradiction and yet at the same time remains as a violation model. His revamp includes the following points:

(a) No genuine law statement is less than an exceptionless, universal one. (It is assumed that there are no statistical laws.)

(b) Certain laws are false and yet acceptable.

(c) Certain regularities, complete but for a solitary counter-instance, are registered by an acceptable law.

The law statements referred to in (b) are false solely because of the existence of non-repeatable cases. Likewise, the regularities referred to in (c) are less than complete solely because of the existence of non-repeatable counter-instances. A violated law would,

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23 It is interesting to note how Flew's views about contingent necessity have been shifting in the last few years. He now stresses the essential relativity of contingent necessity while this was almost unnoticeable in his God and Philosophy and Hume's Philosophy of Belief.

24 John Gill. Op. cit. pp. 10-15.

on this account, be a statement of completely universal form registering a regularity, complete but for a solitary - or very rare - counter-instance. Gill's (b) amounts to a partial redefinition of the term law in so far as it no longer has truth built into it.

Gill argues that a violated and hence strictly false law is better than no law at all. To reject the use of the violated law would be to reject the use of any law since this must be the inevitable consequence if there were indeed a non-repeatable counter-instance. In these circumstances no matter how alike we were to make the circumstances, we could not obtain repeatability. It follows that neither the counter-instance nor the opposite and repeatable instances could be covered by a law registering complete universality.

Gill's revamp of the violation model has the advantage of avoiding the conflict between complete regularity and genuine exceptions and it also has the added advantage of highlighting the inadequacy of laws of science as comprehensive explanatory devices. Gill's fundamental distinction is between false and replaceable laws, and false and unreplaceable laws. The latter are false because they are not strictly universal but they are still laws because they are the best that science can in principle offer. Gill, no doubt,

avoids the attack of incoherence but he creates certain other difficulties.

Firstly, consider the possibility that a non-repeatable, counter-instance, such as water turning into wine, occurs once; occurs twice; occurs a hundred times! What faith would we have in a 'false law' violated so often? What would happen to the predictive power of the law? It seems that the notion of a false but best law of nature relies heavily on the belief that violations are extremely rare and close to one. Secondly, by avoiding the problems of contradiction in this way Gill may at the same time somewhat deflate the value of the concept of miracle. In one sense, at least, since there is no longer contradiction there is no longer special interest. Since there is no longer special interest why should the scientist not regard the law as statistical thereby explaining both E and ~ E. In this way the events are explained and the law has no peculiar properties. Taking this a step further it seems that Gill's account makes it somewhat obscure as to why God's intervention or causal activity is required in the production of a so called miracle. On the normal conception of miracle, things would have been <u>different</u> if only the laws of nature had operated without God's intervention. On Gill's account which permits laws with rare exceptions,

there is no guarantee that the exceptional event would not have occurred without the intervention of God. Put differently, how are we to distinguish a single non-God caused exception to an otherwise sound law, to a single God caused exception. The critic could argue that if allowance is made for the former much drive will be taken out of believing in the latter.[25]

5. CONCLUSION

In this chapter I have investigated and analysed the charge that the violation concept of miracles is incoherent by definition. Having dealt with the major attacks in this area I have concluded that none of these are persuasive, although I have indicated that refinement of the violation model has been necessary to deal with the charge made by Smith.[26]

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25 Development of this idea and further refining of the violation model will be developed later. See Chapter Eight, Section 2.

26 I have chosen to deal specifically with Smith's criticisms although other writers have made similar claims. See for example R. Young. 'Miracles and Physical Impossibility'. Sophia. October 1972, pp. 29-35.

CHAPTER SIX

1. INTRODUCTION

In this chapter I shall outline and examine the major attacks upon the violation model which stem from the claim that the violation model and the scientific enterprise are in conflict and consequently the concept of a violation of a law of nature could never be legitimately predicated on an observable occurrence.

2. G. ROBINSON[1]

It has become increasingly popular to argue that because of the insatiable explanatory capacity of the scientific enterprise the concept of a 'permanently inexplicable event' is incoherent. That is, it is illegitimate since to accept its coherence would undermine the scientific enterprise. G. Robinson, one of the chief advocates of this position argues the case as follows:

> Some people believe a miracle to be an event which 'prima facie belongs to the scientific sphere - of the right type to get a scientific explanation - but somehow will never get such an explanation'.[2] In other words some people believe a miracle to be a permanently inexplicable event.

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1 Guy Robinson. 'Miracles'. Ratio. 9, 1967, pp. 155-166.

2 Guy Robinson. Op. cit. p. 155.

> But before we could conclude that any observable phenomenon is permanently inexplicable, we would need to show that there could be no theory which we called scientific, which could explain it.
>
> Before we could be certain that no relevant scientific theory could be forthcoming we would need to be certain (a) that 'the class of the scientifically explicable was finite'[3] and (b) that this class had within its boundaries no relevant, but as yet undiscovered, scientific theory to offer.
>
> But we do not even have any reason to believe that (a) is true, let alone any way to verify (b). Therefore, a scientist could never legitimately claim that an event is permanently inexplicable. This means that the concept of a 'permanently inexplicable event' is incoherent.

Robinson suggests that we should think of a miracle as something permanently excluded from scientific explicability only if this exclusion were necessary and conceptual. The necessary and conceptual exclusion of an event from a particular class could be made, it seems, only if its inclusion were logically impossible. Thus, Robinson appears to be claiming that we could believe that an event was miraculous only if we could show that it was logically impossible that it be given

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3 Guy Robinson. Op. cit. p. 162.

a natural explanation. But because miracles are events occurring in the natural world, and because events so occurring are candidates for scientific explanation, a proof that miracles cannot (logically) be candidates for scientific explanation is impossible.

I believe that Robinson is mistaken and that his error is based on an ambiguity in his notion of the logical impossibility that a miracle be scientifically inexplicable. Given a definition of a miracle as an event which has (tenselessly) no scientific explanation it is logically necessary that if an event E were a miracle then E would have no scientific explanation. In this sense it is logically impossible that E, where E is a miracle, has a scientific explanation. However, it is not logically necessary for any particular event that it be miraculous, and hence it is not necessary for any particular event that it be scientifically inexplicable. In this sense it is not logically necessary that E, where E is thought to be a miracle, has no scientific explanation.

If the apologist calls an event E a miracle he thereby states his belief that E will never be given a natural explanation, but he need not believe it logically impossible that it will, at some future time, be given such an explanation. He need only believe that it will not do so, not that it could not. He may not argue

that E could be given a natural explanation and still be appropriately termed miraculous, but he may argue that the event could - logically - be given a natural explanation someday, upon which occasion he would admit his mistake and withdraw the label 'miracle' from it.

Robinson commits himself to the view that there are events where despite intensive efforts, an anomalous result cannot plausibly be escaped by assailing testimony, experimental accuracy or background assumptions. However, despite this, he urges that a corollary of any miracle claim is that:

> It would necessarily be a matter of whim whether one invoked the concept of miracle to explain an awkward result or on the other hand accepted the result as evidence of the need to modify the theory one was investigating.[4]

Gill[5] argues, contra Robinson, that even in this case it is method not whim which governs the scientific enterprise. Gill is happy to accept that the strong initial presumption from a result contrary to present formulations of laws is that the result does in fact indicate weakness in those formulations. This is the way scientific change is brought about. However, he

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4 Guy Robinson. Op. cit. p. 159.
5 John Gill. 'Miracles with Method'. Sophia. XVI.3.1977, pp. 19-26.

then argues that one should not follow this presumption, come what may. In particular consider the presumption in the light of the following additional factors.

(a) The case is closely scrutinized and can't be indentified as of some repeatable type despite observing and experimenting with everyone and every set of conditions which it is thought could have produced the contrary result.
(b) The law or regularity was a strongly confirmed one and no less so in the type of circumstances where the extraordinary occurrence had happened.
(c) Not only is the case not consistently repeatable but it never (or only in very exceptionally rare cases - to allow for claims of repeated miracles) occurs again.
(d) The contrary result diverged widely from the law or regularity.[6]

The presence of each of these factors, when an awkward result occurs, offers a very strong counter to the underlying presumption that the exception was an indication of the inadequacy of the law. By relying on these factors as the criteria for exclusion, it is clearly method not whim which determines which anomalous events will be regarded as violations and which as falsifications. Gill believes that whilst

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6 John Gill. Op. Cit. p. 20.

the scientist is guided by the criteria above, the progress of science would not be adversely affected were he to claim that a violation had occurred. This follows from the fact that his investigation would be much the same regardless of whether the event represented a violation or a falsification of a law.

At the point that (a) and (c) have been met there is little incentive for the scientist to continue investigations. If (a) is met, all the possible conditions suggested as possible explanations of the anomalous event would have failed to provide any repetition. Once (c) has been met, the potential source of new sets of promising conditions needing investigation has been unproductive. At this point there is nothing left to offer the investigator even a slight hope of success, and hence further effort must be regarded as unprofitable. Clearly, once these criteria have been satisfied even the agnostic should recognize that further investigations should be abandoned. It should, therefore, be apparent that the claim that the awkward result is a violation, should not prematurely halt the investigation into the possible causes of the event.

It follows from the adoption of the criteria above that the claim that an awkward result is a violation should not rule out the possibility of re-consideration

and further investigation of the event in the light of new evidence. Miracle claims should not be regarded as immune from revision and as new evidence is always a possibility it may turn out that upon further re-consideration the anomalous event can be explained scientifically and the law revised to accommodate it. However, there is no conflict between the scientific enterprise and the violation theory here since any new evidence indicating that new investigations should be undertaken would clearly remove an essential element of the scientific backing for the miracle claim. Thus the claim that an event is a violation does not justify any delay in the re-opening of the investigations following the discovery of new and relevant information.

3. M. DIAMOND[7]

In an attempt to reinforce and strengthen Robinson's position, Diamond claims that autonomy is essential to the scientific enterprise. He believes that scientists cannot function as scientists if they must appeal to leading figures in other fields - in particular to those in the religious enterprise - to tell them what to do. Scientists, as scientists, must operate with autonomy, that is, they must set their own rules and referee their own games. Therefore, although nothing

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7 Malcolm Diamond. 'Miracles'. Religious Studies. 9. 1973, pp. 307-324.

logically would prevent a scientist from accepting the supernatural interpretation of an utterly extraordinary occurrence, on the function level, this would involve a sell-out of science.[8] Diamond builds up his argument by 'sketching a far fetched scenario'.[9]

Scientists arrange to test a thermonuclear device. All mechanisms are properly triggered but the bomb remains intact and there is no explosion. There is no blast even after repeated attempts. The situation is scientifically baffling and so a top expert is called in to form an investigation team. The team hear of a priest whose protests against the tests had culminated in a prayer vigil. The investigating team admit the possibility of a supernatural exception to the scientific status quo; their techniques however are not capable of investigating supernatural interventions. If supernatural intervention were known to have occurred there would be no need to pursue expensive and time consuming research into the detonating mechanism. On the assumption that the scientists do not want to spend large amounts of money unnecessarily Diamond concludes that the head of the team would have to 'phone the Pope and ask him to send one of his investigating teams to the area.

Diamond's scenario is indeed far fetched and weak at

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8 Malcolm Diamond. Op. cit. p. 321.
9 Malcolm Diamond. Op. cit. pp. 320-321.

crucial points. Firstly, his general conclusion follows from an example which is quite atypical of events associated with miracle claims and secondly from the contingent expense of scientific research in a difficult area. Economic costs aside, there does not appear to be any genuine reason why the scientific investigation should be cut short. Diamond's emphasis on the cost of scientific research is quite unjustified. What is being focussed upon is the coherence of the concept of miracle, not the cost of scientific investigation. Since it is the coherence of a concept that is being debated, only conceptual analysis, not economic analysis, should be used to test this coherence. To attempt to illustrate the incoherence of a concept through the introduction of contingencies - such as the lack of funds - is completely unfounded. Whether or not the concept is coherent is completely independent of these non-conceptual matters.

Since the four underlying scientific requirements of any miracle claim ((a) to (d) listed above) have not been met it is difficult to see any scientific justification for giving up the scientific investigation. Diamond makes it clear that, while failure to detonate was utterly extraordinary, there still remains a real hope that future scientific enquiry, though expensive, might identify a natural

cause. Quite clearly the scientific preconditions for a violation ascription are not fully satisfied and therefore there can be no justification, other than expediency, for the surrender of scientific autonomy to an outsider.

Under the pressure of these objections to his example and consequent conclusions Diamond might well attempt to justify his position by arguing that the true scientist never reaches a position where continuing a scientific investigation of an utterly extraordinary event is a waste of time. There is always a possibility, no matter how slim, that we might discover a natural cause. Clearly, it is undeniable that there is always a logical possibility that the extraordinary event is not a violation and hence possible that some natural cause will be found. However, mere logical possibility is not a sufficient reason for continuing the investigation since mere possibility does not tell us anything about actuality. It is equally true for instance that it is logically possible that the extraordinary event is a violation. A time comes when reason demands that the enquiry be concluded. Once this point has been reached, and only at this point, will the requirements for the scientific conditions for a violation ascription be met. I therefore conclude that even this suggested amendment to Diamond's case

fails.[10]

4. R. YOUNG[11]

R. Young argues, in much the same vein as D. Ahern[12], that the account of laws demanded by the violated concept ultimately fails to mark them off from mere de facto universal generalisations like 'all the apples in the basket are red'. Young supports this contention by pointing out that genuine laws are normally distinguished from mere de facto universal generalizations by their power to support counter-factuals. Since the counter-factual associated with a violated law cannot be relied upon in all cases Young claims that the criterion for dividing the genuine laws from the merely accidental regularities is lost. The admission of a counter-instance to a law effectively denies the law of its counter-factual backing.

I believe that this attack is far too strong. Firstly, as I have argued previously,[13] the existence of a counter-instance to a law of nature does not entail

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10 For further discussion of the resolution of conceptual disparity between the scientific enterprise and the religious enterprise see D.M. MacKay. 'Complementarity in Scientific and Theological Thinking'. Zygon. Vol. 9, No. 3, September 1974, pp. 225-244 (particularly pp. 237-244).

11 Robert Young. 'Miracles and Physical Impossibility'. Sophia. October 1972, pp. 29-35.

12 Dennis M. Ahern. 'Miracles and Physical Impossibility'. Canadian Journal of Philosophy. Vol. VII, No. 1, March 1977, pp. 71-79. See my Chapter 3, 3. First Reply: Dennis M. Ahern for earlier discussion of this point.

13 See Chapter 3, Section 3.

that the law does not support counter-factuals. Since the law of nature will determine the limits of the physically possible almost all of the time they can be used to explain, to predict and to support counter-factuals. In short, to subscribe to the miracle of water turning into wine would not prevent us from asserting the following counter-factual. 'If John Smith were to pour water into an empty wine cask, it would suffer no change'. Clearly, the same counter-factuals would be assertable as before the law's violation.

Secondly, in emphasising the role of counter-factuals as the criterion for dividing genuine laws from merely accidental regularities, Young overlooks the role of a number of other factors which may be used to fulfil this task. Swinburne suggests the criteria of simplicity, scope, near or complete generality and the lack of suitable alternatives to mark off the class comprising violated and unviolated laws from the class comprising de facto exceptionless generalizations and de facto generalizations with a solitary exception. These criteria, according to Swinburne, warrant the use of acceptable laws in making predictions and in backing counter-factuals.[14]

5. ARE VIOLATED LAWS LAWS?

Undoubtedly the most persuasive argument against the

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14 Richard Swinburne. The Concept of Miracle. London: Macmillan, 1970, Ch. 3.

coherence of the violation concept of miracle can be made in the form of the following dilemma. As one horn: the generalizations which have traditionally been advanced as the violated laws, cannot be so, being too crude to be laws. As the second horn: the genuine law, the modern scientific one, as a complex type of evidential backing, effectively precluding the identification of specific violated laws. Either way the theist cannot single out a law at once genuine and violated.[15]

The first horn is that, with traditional examples of alleged violations, the laws in question are not laws; a fortiori, not violated ones. Generalizations such as 'All men must die; that lead cannot, of itself, remain suspended in the air; that fire consumes wood, and is extinguished by water'[16] are hardly the sort of law mentioned by modern scientists. Indeed, in discussion about miracles not just the examples above but virtually all the statements which are termed laws and which have been supposedly violated seem to lack these features regarded as essential elements of any law.[17] One can thus conclude, the objection goes, that statements singled out as being violated are

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15 John Gill outlines this dilemma in Revamping the Violation Concept (Unpublished paper). Although it is also implicitly mentioned by a number of writers. See for example James Wills. 'Miracles and Scientific Law'. Review and Expositor. Vol. 59, 1962, pp. 137-145.

16 David Hume. Enquiries. Section X, Part I, p. 114.

17 See for example E. Nagel. The Structure of Science. London: R.K.P., 1961, pp. 47-78. Laws of nature may be represented by true universal statements which contain no individual names and whose predicates are all purely qualitative.

mistakenly described as laws. A fortiori, they are not violated laws.

The second horn of the dilemma alleges that the pin-pointing of violations is impossible. It is argued that when modern scientific laws are used, the explanation or prediction of any situation is calculated by adding up the various forces or factors involved. On the assumption that for any given situation we could be close to certain that all the kinds of natural force factors present were detected; if God were to intervene the actual outcome would not conform to the scientific calculations based on the knowledge of those force factors. Even if we knew for certain that God had intervened there would be no way of knowing which of the force factors he violated. Indeed we could not be certain that he had not introduced some 'supernatural' force with a counter-vailing effect. If we did in fact know that the latter had not occurred there would still not exist a method by which we could pinpoint the force which did not have its customary effect; a fortiori, we could not pin-point the violation.

The epistemological difficulties associated with the typical contemporary use of 'law' has been the dominant reason why it has not been adopted in the miracle context. Typically it is very much harder to

argue for there being a violation of a modern scientific law than it is to argue for a violation of a garden-variety law of nature[18] such as 'water never of itself turns into wine'. In these cases it would appear that we do not have to rely on the dependability of anything other than our normal sensory powers. It would, therefore, seem to be a great deal easier to detect violations of these than of the typical modern law. Likewise, if violations could only be detected at the scientific level the symbolic significance associated with the miraculous would be lost since the ordinary person would not be able to detect them. Clearly, it is at the garden-variety level and not the highly complex level of modern science that significant miracle claims have been made. But what then of the first objection; if the violation theorist works with something less than a generalization, appropriately called a law, neither would there be a violation thereof.

It would appear to be quite clear that the violation model depends for its coherence on a wider use of law. If it were to regard the modern scientific sense of law as the only legitimate one, its tenability would be cast into the most serious doubt. The crucial question before us is, therefore, whether

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18 This term is borrowed from Keith E. Yandell. 'Miracles, Epistemology and Hume's Barrier'. International Journal for Philosophy of Religion. Vol. 7, No. 3, 1976, pp. 414-415 for example.

or not this widening of the modern use of law is legitimate within the context of miracle claims? The answer to this question is far from easy but would seem to depend on a number of factors. Firstly, are there shared features common to the garden-variety law and the modern scientific law and do these features help to divide these 'laws' from merely accidental generalizations? Secondly, can it be shown that one or more of these shared features is essential to the underpinning of violation claims?

The first of the two requirements listed above appears to be satisfied since the 'laws' used in miracle discussions share crucial features with the standard account of laws. It would appear that both forms can be properly expressed in universal form; both may be used to support counter-factual conditional claims; both register contingent necessities, not mere conjoinings; both provide a sound basis for predictions. The second of the two requirements, that one or more of these shared features is essential to the underpinning of violation claims, also appears to be met. It is the shared characteristic of universality which is crucial for the presupposition of an alleged violation. It would seem, therefore, that there is nothing amiss in the extension of the modern term 'law' in the context of the miracle debate. In effect this amounts to a retention of the older - pre modern science - use

of law. However, as I have noted, it is largely the claim of universality upon which this widening is based. Is this assumption that the two 'laws' are universal justified? A number of writers have suggested that this may not be the case.

Nicolls[19] suggests that:

> When Peter, for example, did not sink as he walked on the Sea of Galilee, the apostles witnessed an extraordinary event and recognized therein the hand of God. Now the modern scientist would realize how extraordinary Peter's walking on the water actually was. However, the scientist might modestly suggest that the probability of the natural occurrence of such an event as a man's walking on water is not zero, but only very, very small. After all, a still atmosphere and a calm sea really consist of myriads of sub-microscopic molecules moving randomly at large velocities. Now, one possible situation in which the molecules could find themselves is this: the air molecules immediately above Peter's head are moving quite slowly, so that the resulting downward force on Peter is so diminished that he no longer sinks into the water; rather, the earth's gravitational pull on Peter is now balanced by the unusually large buoyant force of the air and water. The probability of occurrence of such a situation is small,

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19 William H. Nicholls. 'Physical Laws and Physical Miracles'. Irish Theological Quarterly. Vol. XXVII, 1960, pp. 49-56.

> exceedingly small, but it can be calculated. Strictly speaking, then, walking on the water is not in itself an exception to physical laws.[20]

Likewise, Langtry[21] claims that: 'most laws couched in observational terms are not universal in form. They contain implicit qualifications, what I call 'other things being equal' clauses'. Langtry contends that:

> ... an important truth is conveyed when one says, 'men cannot walk on water'. But if one took it as universal in form, it would turn out false: I can walk on water in an indefinite number of circumstances, for example, by equipping my feet with suitable rubber floats.[22]

Keith Yandell[23] claims that this widening of law is subject to at least two defects.

> For one, the class of 'true garden-variety generalizations' is obviously ill-defined. For another, such generalizations are eminently qualifiable. Iodine kills (without antidote); water quenches fire (except grease fires); and even when no known qualification is required, there remains the possibility that a qualification be made without destroying the generalization. Dead bodies stay so - except perhaps (in Hume's hypothetical case) for Queen Elizabeth's or

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20 William H. Nicholls. Op. cit. p. 49.
21 Bruce Langtry. 'Investigating a Resurrection'. Interchange. No. 17, 1975, pp. 41-47.
22 Bruce Langtry. Op. cit. p. 42.
23 Keith E. Yandell. Op. cit.

> the more famous instance which provides the model for Hume's hypothetical case. To be direct: suppose Jesus Christ died and then rose on the third day. The garden-variety generalization that dead men remain dead would strictly be rendered false, but, since eminently qualifiable, could be easily itself resurrected as 'On the whole, dead men remain dead' or 'The bodies of non-divine persons remain dead' or the like. A world view whose sole parameters are set by garden-variety generalizations is plastic; its shape is alterable.[24]

These writers have pinpointed a source of real difficulty for the violation theorist. As a result of the fact that garden-variety laws are framed in observational terms and not in the technical language of the modern scientist they are not typically true unless they are accompanied by some form of ceteris paribus clause, either explicitly or implicitly. A modern scientific law which accords with criteria of generality of terms may be represented in the following simplified way:

(a) $L_s = (x)(Fx \rightarrow Gx)$. That is, the law of science states that for any x if x has F-ness, then x will have G-ness. However, typically a true garden-variety law of nature must be formally

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24 Keith E. Yandell. Op. cit. p. 415.

represented as:

(b) $L_n = Q \longrightarrow (x)(Fx \longrightarrow Gx)$. Here Q has the meaning of 'all other things being equal'.

The introduction of ceteris paribus clauses - or 'escape clauses'[25] - poses certain difficulties for the violation theorist. To begin with it is essential that the ceteris paribus clause is not used as a 'waste-paper basket' where come what may L_n is true because any apparent falsifying instance is explained by a change - known or unknown - in the surrounding conditions; that is, other things are not equal. Kurtzman argues that if ceteris paribus clauses are to avoid this difficulty they must, at least in principle, be eliminable. This means that if a law of nature (L_n) is true it must, at least in principle, be reducible to a set of true fundamental[26] laws of science (L_s) together with a set of initial conditions. However, although it is clearly possible for the untrained observer to know that 'other things are not equal' in certain circumstances - for example, the addition of rubber floats - in other circumstances - for example, those described by Nicholls above - this is clearly impossible. It is not such a simple matter to pick out a violation of a garden-variety generalizatio as was at first thought. This is so, since one of these

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25 D.R. Kurtzman. 'Ceteris Paribus Clauses: Their Illumination and Elimination'. American Philosophical Quarterly. Vol. 10, No. 1, January 1973, p. 35.

26 Fundamental in Nagel's sense.

generalizations when expressed as a law of nature (L_n) includes a ceteris paribus clause and therefore it maybe either that the regularity ((x) $Fx \longrightarrow Gx$) is violated or that the ceteris paribus clause (Q) is false. A violation only occurs where the regularity (x)($Fx \longrightarrow Gx$) is true and the counter-instance occurs yet there are no unusual features about the situation. That is where E = (Fa · ~ Ga) and Q is true.

A number of problems clearly confront the violation theorist. It will be remembered that the reason for introducing a wider use of 'law' was to avoid the immense difficulty of determining in any extraordinary situation, which, of the many laws covering that situation, if any, were violated. Now, however, it appears that this difficulty has been replaced by another. The garden-variety laws being by definition less technical rely for their accuracy much more on the 'normality' of the surrounding conditions. That is, a true law of science which is completely general, not restricted in time and space, and which is composed of purely qualitative predicates, will be true for any and all circumstances (for all possible worlds). However a garden-variety law such as 'men cannot walk on water' is not true for a possible world where, a situation, as described by Nicholls above, is quite usual, or where a special force operates below the surface of the water to prevent a person from sinking.

Furthermore, even within this actual world, it is possible that such a generalization is geographically limited. There may, for example, be some areas of water which have such a high saline content that the water is so buoyant that a man may walk on water. Since the truth of the garden-variety law may be restricted in this way, one cannot simply rely on the sense to determine that a violation has occurred. Furthermore, if a violation of the garden-variety law has not occurred it follows that the fundamental laws will likewise not have been violated.

Various writers have suggested that a law of nature which includes a ceteris paribus clause (what I have been referring to as garden-variety laws) cannot be violated by God because if God were to act in an unusual way, the initial or surrounding conditions would not be normal. C.S. Lewis,[27] for example, argues that the ceteris paribus clause is an essential element of every law of science and hence when God intervenes in nature the law is not violated since the law only explains what happens when God does not intervene. He argues that since the law loses application, it cannot be violated. Young, who argues along the same lines as Lewis, suggests, for example, the following law: 'Ceteris paribus bodily resurrection is altogether improbable'. However, he adds 'but if God raised

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27 C.S. Lewis. Miracles. London: MacMillan, 1964, pp. 59-65.

Jesus a new factor was involved in the incident and the probabilities change'.[28] Young claims:

> If God were to act as a causal agent in situations then he would (other things remaining equal) count as a not insignificant agent-factor change. Suppose that one happened to boil water at the Mexico Olympic Games and that the water did not boil at 100°C. Would this give ground for dismay? We know that it would not of course ... (because of) the presence of the new factor in the water-boiling situation (height above sea-level) ... God was an agent factor in the occurrence of the miraculous event such that since he does something he does not normally do, a new (possibly unique) set of factors becomes causally operative. There is no violation.[29]

Clearly if Lewis and Young are correct, the violation model will have to be abandoned. In the next section I will critically analyse their non-violation interventionist alternatives.

6. NON-VIOLATION INTERVENTIONIST MODELS

If laws of nature include either an indefinitely vague and expansive ceteris paribus clause or a rider 'unless God intervenes to make it otherwise', they could not be violated when God acts to bring about a

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28 Robert Young. 'Miracles and Epistemology'. Religious Studies. p. 124.

29 Robert Young. Op. cit. p. 124.

miracle since the law itself is compatible with such events.[30] Nevertheless, one should note that fundamental regularity[31] would be violated. What has to be determined is whether or not the laws of science should include such riders?

I have already indicated[32] that the ceteris paribus clause attached to garden-variety laws are there to indicate that these laws are not the sort of generalization that any scientist would consider as a modern law of science. Furthermore, I believe that such generalizations can only be true if in principle the ceteris paribus clause can be eliminated. That is, the truth of the garden-variety law gains its backing from the truth of a set of fundamental laws of science together with description of the initial and surrounding conditions. Is it, however, legitimate to use the availability of a ceteris paribus clause to cover the presence of God when he acts as an active agent factor? Such a use would undoubtedly be non-standard and as I have argued in an earlier section[33] would provide insurmountable falsification and confirmation problems for science. Science has no way of investigating the active presence or otherwise of

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30 John Gill, however, overlooks this in 'Miracles with Method'. Sophia. Vol. XVI, No. 3, October 1977, p. 25.

31 The fundamental regularity is that part of the law covered by the universal quantifier, e.g. $(x)(Fx \rightarrow Gx)$ in the law: $L = (\text{ceteris paribus}) \rightarrow (x)(Fx \rightarrow Gx)$.

32 See Section 5 above.

33 See Chapter Three, Section 3.

God, it could never establish the truth or falsity of its laws. Furthermore, if the laws of science did have such a rider the concept of physical impossibility would have to be radically altered or even abandoned, since any physical event could be said to be within the confines of the law, nothing - not even contradictory events - need be excluded.

Young, perhaps with this difficulty in mind, does not (unlike Lewis) commit himself to the view that all laws of nature necessarily include a ceteris paribus rider. He distinguishes between two types of laws:

> Firstly, there may be laws which specify a genuine sufficient condition of an effect. There will be no cases under such laws in which the antecedent is satisfied but not the consequent. Secondly, there may be laws whose antecedent does not specify a genuine sufficient condition of the effect (for the other conditions of the effect are only tacitly specified). Thus given an instance of the antecedent without the consequent the law has not been disconfirmed if one of the tacit conditions is not satisfied.[34]

Since Young commits himself to the view that there are laws which do not have tacit conditions, it would seem that God's intervention would not make such antecedent clauses inapplicable. Thus, since the

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34 Robert Young. Op. cit. p. 121.

antecedent clause makes no implicit or explicit reference to the action or otherwise of God, it cannot be rendered inapplicable if God does in fact act. Consequently, if the causal action of God does in fact prevent what is specified in the consequent clause from happening there would be a violation of the law. Yet, this notwithstanding, Young claims that there is no violation of laws which do not have tacit conditions when 'God is an agent factor in the occurrence of the miraculous'. How does Young justify this conclusion?

Gill[35] suggests that there may be a means by which Young could establish his conclusion and at the same time maintain a standard view of laws. The argument is outlined as follows:

(a) God's action in working a miracle would always be 'a not insignificant agent factor'.

(b) The addition of a 'not insignificant agent factor' would mean a change in the antecedent conditions (even in a fully explicit law).

(c) But if there is a change in the (antecedent) conditions then we would no longer have the antecedent conditions mentioned in the initial law.

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35 John B. Gill. 'Revamping the Violation Concept'. pp. 23-24.

(d) If we no longer have these conditions then the law fails of application.

(e) Therefore, a fortiori, it is not violated.

The validity of this argument for the claim that, when God intervenes laws are not violated, depends on there being two interpretations of (c) above, and in particular of the phrase 'no longer have the antecedent conditions mentioned in the initial law'. The first interpretation is to be understood as 'no longer having all and only the original conditions'. The second interpretation is to be understood as 'no longer having even all of the original conditions'.

On the first interpretation statement (c) above is no doubt true but what is required by Young is the second interpretation, viz. that we no longer have one or another out of the original set of conditions. This is required because whereas the first interpretation demands that laws as such be necessary and sufficient condition statements, the fact is that laws may be and often are simply statements of sufficient conditions. With sufficiency, given that $(P \longrightarrow R)$, adding any factor to P, no matter how mighty it might be, does not increase the efficiency of the expanded set; that is, $[(P \cdot God) \longrightarrow R]$. Likewise if P is really sufficient to bring about R then adding any factor to P, no matter how powerful, cannot prevent P from bringing

about R. Thus adding God's active presence to P does not alter the antecedent factors so that the law fails of application. It would, therefore, seem that Young's argument, that God's interference rules out the violation of the law, is incorrect.

Faced with this apparent clear cut refutation of his position Young might attempt a justification in the following manner. Taking it for granted that traditionally in logic $P \longrightarrow R$ does entail $(P \cdot Q) \longrightarrow R$ nevertheless certain examples suggest that there may be more here than meets the eye. Suppose, for example, a certain poison is sufficient for death. Suppose further that after administering poison to an individual we administer the antidote. Do we want to say that in such a case what is sufficient for death is (poison and $\sim$ antidote)? If this is so the formulation will have effects on the standard account of natural law.[36]

Clearly Young's example does have a cutting edge, however, I do not think it is sufficiently persuasive to redeem his position. To make this clear it is necessary to clear up an ambiguity in the use of the term 'sufficient conditions'. In one sense something P may be sufficient to bring about R in any and all possible worlds. In the second sense something P may

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36 The gist of this example was suggested by R. Young in correspondence.

be sufficient to bring about R in particular well described circumstances. If the administering of poison to an individual is sufficient (sense one) to bring about death the introduction of other factors cannot alter the result. However, if it is sufficient (sense two) any change in the conditions surrounding the event could bring about a different result.

In Young's hypothetical example of poisons and antidotes he is clearly using 'sufficient conditions' in the second sense. However, what should be clear is this: if the antecedent of a law is only sufficient in this second sense, the law must be accompanied by tacit conditions and/or a ceteris paribus clause if it is to be a law statement at all. This cannot help Young, however, since he was attempting to show that <u>even laws which do not have tacit conditions</u> cannot be violated. Young it seems is caught in a vicious circle from which there is no escape.

Langtry who supports a non-violation interventionist concept of miracle somewhat akin to that of Young places a great deal of stress upon the contextual considerations of miracle claims. Langtry believes that the relevant question to focus on in the circumstance of the extraordinary is 'what is the best explanation of this extraordinary occurrence?' According to Langtry it will be the existence or otherwise of a religious context

which will have a major influence on the decision whether or not the extraordinary is miraculous.

There is no doubt that religious context is significant but to cut the question of miracle adrift from the scientific backing provided by the violation (scientifically inexplicable) claim has a number of serious drawbacks. Firstly, it would appear, under this presentation, that all and not just some unexplained events occurring within suitable religious contexts would be picked out as miracles. Yet unexplained but ultimately explicable events would on general statistical grounds be sometimes expected to occur in religious contexts. In order to avoid this problem one requires some criterion to differntiate the miraculous extraordinary from the non-miraculous extraordinary. In rejecting the violation model it seems that this very criterion has been rejected. We need to combine the contextual considerations with a positive scientifically based argument that the event is incapable of scientific explanation.

Furthermore, Dhanis[37] argues that to disregard the element of physical transcendence or violation in the definition of miracle is to weaken the evidential

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37 E. Dhanis. 'Qu'est-ce qu'um miracle?' Gregorianum XL. 1959, pp. 201-241 and E. Dhanis. 'Un chainon de la preuve du miracle' in Problemi scelti di teologia contemporanea. Rome, 1954, pp. 63-86.

value of the argument from miracles in apologetics. For in order to prove with certainty that a particular prodigy is a divine sign, it is not sufficient that it occur in conjunction with a religious context; it must also be demonstrated that similar prodigies are not found in non-religious contexts. Only then is it possible to rule out the possibility of chance co-incidence. Dhanis concludes: but how can we be quite certain that the prodigy is confined to religious contexts unless we establish that it is a physically transcendent fact?[38]

7. CONCLUSION

In this chapter I have outlined and analysed the major attacks upon the violation model which stem from the claim that the violation model and the scientific enterprise are in conflict and that consequently the concept of a violation of a law of nature could never be legitimately predicated on an observable occurrence. I have shown that the major arguments put forward by Robinson, Diamond and Young fail but that the dilemma suggested by Gill is more difficult to solve. The problem for the violation theorist lies in the difficulty of ascertaining that the conditions surrounding the extraordinary occurrence are not themselves extraordinary when the theorist relies on the use of 'garden-variety'

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38 E. Dhanis. 'Qu'est-ce qu'un miracle?'. pp. 224-228.

laws. One possible solution to this difficulty is to give up the violation model in favour of a non-violation interventionist model. However, I conclude that such models as suggested by Lewis, Young and Langtry[39] create more difficulties than they overcome. The unresolved difficulty associated with 'garden-variety' laws raised in Section 5. will therefore be taken up again in the next chapter.[40]

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39 George Landrum in 'What a Miracle Really Is'. Religous Studies. 12, 1976, pp. 49-57, outlines an alternative non-violation model which rests on an interesting distinction between natural laws and non-natural laws. I raise a number of points relating to this paper in my next chapter.

40 See Chapter Seven, Section 5.

CHAPTER SEVEN

1. INTRODUCTION

In previous chapters I have investigated the conceptual and epistemic appropriateness of defining a miracle as a violation of a law of nature. Despite the fact that I have indicated two unresolved questions[1] at this stage I wish to move to the following question: 'How does one distinguish a mere violation of a law of nature from a miracle?' In order to answer this question I shall look at a number of factors including the action of God; religious setting; sign and faith. I then move on to offer a solution to the second of the unresolved questions.

2. THE ACTION OF GOD

A miracle is not simply a violation of a law of nature but one brought about by the action of God. Nowell-Smith[2] and Nielsen[3] are two writers who have vigorously criticised the coherence of explanations

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1 See Chapter 5, note 24 and Chapter 6, note 40.

2 P. Nowell-Smith. 'Miracles' reprinted in New Essays in Philosophical Theology ed by Flew and MacIntyre, London, 1955, pp. 243-252.

3 Kai Nielsen. 'Empiricism, Theoretical Constructs and God'. Journal of Religion. 54(3), July 1974, pp. 199-217.
Kai Nielsen. 'Is God So Powerful That He Doesn't Even Have to Exist?' Religious Experience and Truth ed. S. Hook, N.Y.: N.Y. Univ. Press, 1961, pp. 270-81.
Kai Nielsen. 'Christian Positivism and the Appeal to Religious Experience'. Journal of Religion. 42, October 1962, pp. 248-61.

in terms of God's action causing such and such to happen. Nowell-Smith argues as follows:

(a) For an explanation of an event to be considered adequate it must be stated in terms of predictive scientific laws. Thus, if supernatural causation is to be an adequate explanation for a given event, we must be able to stipulate in connection with which predictive laws God brought this event about.

(b) But a predictive scientific law must be: (i) based on evidence; (ii) be of a general type - 'under such and such conditions, so and so will happen', and (iii) be testable by experience.

(c) Thus, an inescapable dilemma can be generated for anyone who wishes to claim that an event has a supernatural explanation. On the one hand, if such a person wishes to claim that such an explanation is adequate, he cannot maintain that it is truly supernatural. Such adequacy entails that the explanation be formulated in terms of laws which are based on experience, universal in scope, and testable by experience. But if the supernatural explanation is stated in these terms, then it loses its supernatural identity and becomes indistinguishable from its natural counterpart. On the other hand, if such a person wishes to maintain that a given supernatural

explanation is distinguishable from its natural counterpart; then by arguing in reverse, we can obviously show that such an explanation cannot be adequate. In either case the concept of an adequate supernatural explanation is rendered inconsistent and confused.

(d) Therefore, the use of supernatural hypotheses as a criterion for identifying acts of God is indefensible.

Nowell-Smith's argument is only as strong as his initial premise: that for an event to have an adequate explanation it must be stated in terms of predictive scientific laws. It may well be that Nowell-Smith is providing a stipulative premise. Now if this is the case the apologist must simply say 'on this understanding of what an adequate explanation is I will refer to events caused by God, not as an explanation of the event but as a quasi-explanation of the event'. However, in this case it would be clear that Nowell-Smith's argument has no bite. If, on the other hand, Nowell-Smith is simply claiming that there is only one type of adequate explanation - the scientific one - the apologist has only to reply as does Swinburne[4] that this is simply not the case. Swinburne establishes that there are a number of types of explanations

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4 R. Swinburne. The Concept of Miracle. London: Macmillan, 1970, Ch. 5, pp. 53-60.

including explanations in terms of the act of an agent. Likewise Sugden[5] argues that on the basis of a coherence theory of truth, rather than on a theory based on a rigid adherence to uniformity, one can validly posit the resurrection of Jesus from the dead as an explanation of data which belongs to space-time history and which are claimed to be the consequences and effects of an act of God.[6] Nowell-Smith's argument I conclude is unsound.

Nielsen, arguing in the verificationist tradition attempts to present a much more radical attack than that made by Nowell-Smith. He claims that such claims as: God loves mankind; God hates mankind; God caused Peter to walk on water; God did not cause Peter to walk on water; need an empirical anchorage. That is, we need to know what purely empirical states of affairs count for or against their truth so that we can distinguish the conditions under which we would be justified in asserting that there is an infinite saviour transcendent to the world and the conditions under which we would not be justified in making such

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5 Christopher M.N. Sugden. 'The Supernatural and the Unique in History'. Theological Students Fellowship Bulletin. Vol. 67, 1973, pp. 1-5.

6 C.S. Lewis. Miracles. London, 1947, p. 47 asks who has the right to presuppose uniformity. He states that the naturalist bases his position on reason, but cannot establish the validity of reasoning. For the theist the orderliness of nature is derived from the reason of the Creator, and the human mind in the act of knowing is illuminated by the divine reason.

a putative assertion.[7] Nielsen is vigorous in his denial that such an anchorage exists as a matter of fact and also denies that it could exist as a matter of principle. Nielsen states:

> It might be responded that even if all my objections against empiricists and cognitivists in religion are sound, I have only given good evidence for the claim that there is no possible decision procedure for these theistic claims: there is no possible way of deciding which are true or probably true. But I have not shown that the believer's statements are meaningless.
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> To this my reply is that I have not said or implied that they were meaningless; indeed I have stressed that they are meaningful. I have only shown - given nonanthropomorphic use of God-talk, talk involving what is thought to be a transcendent reference - that they are factually meaningless ... They simply do not come off as factual statements. Indeed, I would maintain that they are pseudo-factual ideological statements, and have the kind of meaning and illocutionary and per-locutionary force appropriate to ideological statements. If there can be no conceivable tests that would, either directly or in-directly, singly or in conjunction with other statements, give us empirical grounds for asserting the theistic claims and retracting the non-theistic ones or retracting the

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7 Kai Nielsen. Empiricism ... Op. cit. p. 199.

> theistic claims and asserting the non-theistic ones, then these claims are without factual content, that is, they do not succeed in making factual claims or claims about what there is.[8]

One might attempt to undercut the force of Nielsen's argument by observing that (a) he is too much of a verificationist and (b) that he is too rigid in his classification of types of statement. There are, it might be maintained, factual statements that are in no way confirmable or disconfirmable even in principle. There are empirical facts and non-empirical facts. To this charge Nielsen offers the following rebuttal:

> I am, with regard to factual statements, an unrepentant verificationist, and I do believe that in an important sense 'empirical fact' is a redundancy. I shall simply throw out this challenge: can we give a case of a statement whose factual status is accepted by all parties as quite unproblematic which is not at least confirmable or disconfirmable in principle? I do not think we can. And if we cannot, does this not at least give some prima facie plausibility to the contention that a statement to be factual must be confirmable or disconfirmable in principle?[9]

As was the case with Nowell-Smith's argument Nielsen's conclusion - 'that theistic claims do not succeed in

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8 Kai Nielsen. Empiricism ... Op. cit. pp. 208-209.
9 Kai Nielsen. Empiricism ... Op. cit. p. 209.

making factual claims about what there is' - is only as good as his premise - 'that a statement to be factual must be confirmable or disconfirmable in principle'. One may object to the verificationist's hypothesis on at least two grounds, viz. (a) argue against the hypothesis itself and (b) test the hypothesis by its own criteria. I shall only look at (b) here. The problems for the verificationist is that his own position fails to meet the requirements it establishes as necessary criteria for what is factually meaningful. To be factual the verificationist criterion of factual statements is that there must be some conceivable test that would either directly or indirectly, singly or in conjuction with other statements, give us empirical grounds for asserting the verificationist prinicple. The fact that there is no agreement over the soundness of the verificationist theory of truth and meaning itself illustrates that there is no such test either in fact or in principle. Therefore, by his own criteria the verificationist has no empirical grounding for his own position and therefore by his own criteria he defeats himself.[10]

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10 This conclusion might well be termed the verificationist's paradox. E.E. Sleinis 'Quine on Analyticity' Philosophy 48, 1973, pp. 79-84 points out a similar paradox generated by the statement: 'Any statement is in principle rejectable'. One sees the paradox straight off when one considers the question 'Consider the above statement, is it in principle rejectable or not?' The same paradox confronts the verificationist who makes the claim that: 'All factually meaningful statements are in principle confirmable or disconfirmable'. Consider then the question: 'Is the above statement confirmable or disconfirmable in principle?'

I conclude that both Nowell-Smith and Nielsen fail in their attempts to show that explanations in terms of God's actions are incoherent, inadequate or factually meaningless. The miracle stands apart from a mere violation of a law of nature in that whilst the violation may be an event not caused by the primary action of God (or may perhaps be uncaused), the miracle is a violation caused (at least in part) by the primary[11] causal activity of God.[12]

3. RELIGIOUS SETTING

That historically religious context has been central to the concept of miracle may be seen from a quick overview of the Biblical understanding of miracle. As I pointed out in Chapter Two the biblical conception of nature and laws of nature differed significantly from the predominant view since the period of the

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11 I use the term 'primary' in the sense that the event could not have occurred without the direct causal involvement of God. That is, it cannot be adequately explained by reference to the (secondary) causal powers of human beings, physical objects, etc.

12 I have deliberately avoided two questions within this section. The first, an attempt to elucidate the concept of 'God'. I have avoided this because it is really a thesis on its own, yet the concept has enough general acceptance to be understood by the reader. The second is the question whether or not a violation brought about by any god, not just by God, is a miracle. This is really a theological question and so falls outside the competence of this writer. However, on the assumption that some god - example, Satan - could work a violation of a law of nature, wholly independent of the will of God, we could simply stipulate that such an event was a quasi-miracle and only those violations worked by God, wholly or in part, are miracles.

Enlightenment. The biblical realisation of the organic unity of the cosmos which receives its most definite and systematic expression in the account of creation does not lead to anything like the climate of thought in which the mind of modern man moves. So far from the cosmos coming to be considered as a rigid mechanical system, its order and unity are felt to testify to the constancy and steadfastness of God's creative purpose yearning to reveal its inherent glory in both man and nature. All is felt to depend upon the personal will of the creator God who longs to manifest His goodness and set up His kingdom at the heart of His creation. The splendours and terrors of nature are the garments in which He clothes Himself as He comes to judge the world and establish His righteousness.

This dynamic approach to nature as a theatre which testifies to the immanence and nearness of the living God forms the background for an understanding of the biblical conception of miracle. In a world of thought where the whole of creation is conceived as rooted in the steadfast purpose of God to reveal Himself and manifest His glory, and would cease to exist apart from the continuous operation of that purpose, miracle cannot be sufficiently explained as a temporary suspension or violation of the laws of nature in the interest of some higher object, or as a wonder

surpassing, if not contradicting, the normal ordered processes of nature. Miracle is seen rather as an intensified supreme expression of that which is the fundamental meaning of nature or creation as a whole. It is seen as the manifestation of the divine glory in mighty acts or phenomena which arouse in man the emotions of awe and amazement, and subdue his heart to adoration and submission. The very words used in the Hebrew suggest such an interpretation. Thus we have the term beriy'ah[13] (a product of creative action) implying that miracle is a fresh revelation of the creative energies of God pointed now to some concrete situation of human need and supplication. Niph^{e}la'ah[14] (a wonder or marvel) suggests the power of miracle to arouse astonishment, nora'[15] (a terrible thing), its capacity to subdue the human heart with fear and awe, g^{e}burah[16] (a deed of power) its manifestation of the plentitude of divine power, ma'^{e}lal and ma'^{e}seh[17] (an action) its aspect as a deed flowing from the output of divine energy. Likewise in the New Testament account the miracles of Jesus were felt by their witnesses to be mighty deeds exciting awe, fear and amazement in the beholders and were characterized by Jesus Himself as the works of God.

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13 Exod. 34:10; Jer. 31:22.
14 Exod. 3:20; Judges 6:13.
15 2 Sam. 7:23.
16 Ps. 20:7, 106:2.
17 Ps. 9:12; Isa. 12:4.

Thus miracle, according to this biblical conception, should be seen as the special quality of an event in which faith apprehends the answer of God to human need, the coming of God to transform a human situation, the finger of God pointing to some ultimate dimension of meaning in human affairs. There is a suggestion of a whole complex of rich religious significance, an adumbration of a cycle of events in which man is tensely confronted by the self-revealing will and action of God. It is the religious significance of the event's contextual setting, which points beyond itself to the dimension of infinity and eternity in which it is ultimately set.

Without miracle the immanence of God in nature is less apparent and we are left with an ultimately meaningless interplay of natural and human cause and effect, and history resolves itself into a series of patterns and rhythms which cry aloud for some absolute and comprehensive meaning and truth which of themselves they are powerless to yield. Miracle is therefore to be seen as essentially the sudden revelation of transcendent truth and reality, the conviction of the challenge of God and the activity of God at the heart of human life. Quite clearly the miracle, whether defined along biblical lines or along modern scientific lines, cannot be cut adrift from the essential element of religious context. Indeed, 'it is hard to imagine

how any wondrous event outside of a religious context could serve as a sign of the supernatural'.[18] 'Extraordinary events lacking religious significance are more appropriately characterised as magical or psychic phenomena rather than as miracles'.[19]

4. MIRACLE AND SIGN

> As long as miracles are defined only in terms of transcendence, we have indeed a norm to distinguish miraculous phenomena from extra-ordinary natural events. But the norm is mostly negative, eliminating the presence of a natural agency. Whereas if we add the concept of miracle as a divine sign, we have at hand an index to determine the miraculous not only negatively, by the exclusion of nature, but positively, by giving evidence of the purposeful presence of God.[20]

This claim that the sign or semeiological aspect should be included in any adequate definition of miracle has gained wide acceptance among theologians during the last twenty years. Beaudry, for example,

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18 James C. Carter. 'The Recognition of Miracles'. Theological Studies. Vol. XX, 1959, p. 195. See also Kevin McNamara. 'The Nature and Recognition of Miracles'. Irish Theological Quarterly. Vol. 27, 1960, p. 299. 'A miracle makes its appearance in a religious context and apart from this context it cannot be adequately understood. The total miracle is not simply the physical prodigy but that prodigy clothed in its religious circumstances.

19 R. Swinburne. Op. cit. pp. 8-9. For a sharp discussion of the concept of 'religious significance' see Swinburne pp. 7-10.

20 John A. Hardon. 'The Concept of Miracle from St. Augustine to Modern Apologetics'. Theological Studies. 15, 1954, p. 250.

claims 'that the time is ripe to propose a well-balanced theory of miracle which would integrate its religious intentionality with its physical, preternatural aspect'.[21] Likewise, Dhanis claims:

> If a miracle really has the structure of a divine sign given it by God, this function should not be omitted from its definition. Most of the objections against the possibility of miracles arise from the fact that the objections wrongly conceive the whole essence of a miracle to consist in its quality of prodigious transcendence. Viewed in this way, a miracle seems to be some kind of arbitrary exception and unacceptable deordination. (Medieval) scholastics gave a handle to this sort of objection; so that the definition of miracle which they propose needs to be complemented by the express mention of its semeiological aspect, which the scholastics themselves admit on the basis of Scripture ...[22]

Still, the practice of including the semeiological aspect of miracle in its definition is by no means general and even where it exists, there is no general agreement on the precise nature of the sign aspect of a miracle. Landrum[23] argues against the inclusion of

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21 J. Frederick Beaudry. 'Miracle and Sign'. Studia Montis Regii. Vol. 3, 1960, (pp. 65-94), p. 67.

22 E. Dhanis. Tractatio de Miraculo. 8. (An unedited set of graduate course notes on miracle given at the Gregorian cited in J. Hardon. Op. cit. p. 254).

23 George Landrum. 'What a Miracle Really Is'. Religious Studies. 12, 1976, pp. 49-57.

the sign aspect in the definition of miracle in the following passage.

> Nowadays it is common to add a third condition ... to the effect that miracles are signs. One concentrates on the nature of the revelation involved in the miracle and not on the nature of the event that constitutes the miracle.
>
> In keeping with this way of doing things, one might insist that miracles reveal God's divinity, or something of this nature. One would, after all, feel a reluctance to speak of a miracle if God should bring it about that a certain worm should deviate ten degrees from the path it would otherwise follow. But I think that this reluctance stems not from any problems involved in the nature of miracles, but rather from a notion of the appropriateness of God's performing such a trivial act. It is not that we are reluctant to say that his trivial acts are miraculous, but that we are reluctant to say that he acts trivially.
>
> Therefore, if we clearly separate what it is to be a miracle from what it is to be a miracle performed by the sort of God one is disposed to worship, I think that we will feel no need to insist that miracles, as part of their nature, be signs of a certain sort. It is not part of the <u>nature</u> of a miracle that it should be a sign, though miracles <u>function</u> as signs.

> Even if it is insisted that every miracle should be a sign, there is no reason to make that part of the definition of 'miracle'.[24]

No-one seems to question the fact that miracles are divine signs. Traditionally speaking, from Augustine to the present day, miracles have always been so regarded, and this view is entirely in keeping with the evangelical concept of miracles. Yet neither in Augustine nor Thomas Aquinas is miracle defined as a divine sign. It was not until the eighteenth century that the semeiological aspect of miracle became a part of its definition. The reason for this incorporation at that time was based on the practical necessity of finding a means of distinguishing miracles from diabolical prodigies. Its inclusion by apologists today stems from the similar practical difficulty of separating the permanently scientifically inexplicable from the mere presently scientifically inexplicable. There is a clear need for an index which will successfully divide the true miracle from the purely natural occurrence whose cause is not yet known.

Without necessarily denying the convenience or even the legitimacy of this pragmatic view, some recent theologians have affirmed that there is an intrinsic, rather than merely functional, reason why miracles

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24 George Landrum. Op. cit. pp. 49-50.

should be defined as signs and that an adequate theological view of them demands that they be so defined. For them the semeiological value of miracle belongs to its very essence; it is not something extrinsically connected to it and brought into its definition simply to meet an ad hoc apologetical need. Whereas in this case an adequate definition of miracle must necessarily include its significative aspect, no such necessity exists in the pragmatic view. What has to be determined, therefore, is whether or not the semeiological aspect is intrinsic or extrinsic to the definition of miracle.

In order to answer this question it is helpful to make a division of the concept of sign, established on its relation to the signified, into natural and conventional. If the order existing between a sign and its signified results from the laws of nature, such for example as smoke with regard to fire, one is said to be in the presence of a natural sign. If, on the contrary, the order of sign to signified is the result of a voluntary decision, which in fact will often be a collective one, the sign is called conventional. In any analysis of the nature and division of sign in the miracle context it is necessary to extend the notion of natural signs beyond the realm of nature to include those phenomena

which are 'beyond nature' or 'supernatural'.[25] In order to incorporate this move it has become standard amongst theologians to rename the 'natural' sign of the philosopher as 'spontaneous' sign, so as to be able to include not only phenomena which occur according to the ordinary course of nature but also those which go beyond it. A spontaneous sign is one which points to something other than itself by reason of its own internal tendency or ordination to it. It is to be contrasted with conventional sign which has its meaning stamped on it from some external agency.

A miracle is no doubt at least in part a spontaneous sign in so far as it is an event which is irreducible to natural efficient causes and which lacks meaning without reference to the primary causal activity of God.

Exactly what proportionate finality is spontaneously signified by the transcendent causality of a miracle is less easily determined. The very least that can be demanded of a miracle is that it be a sign addressed to a person; for it is absolutely without meaning to

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25 Although I use the concept of 'supernatural' here and in other places I do not offer a precise account of what the supernatural is. I consider that the concept is widely enough accepted to allow me to introduce it but too difficult to allow for a simple yet precise definition. An outline of the historical evolution of the concept of 'supernatural' may be found in De Broglie 'La Vraei Notion Thomiste Des 'Praeambula Fidei'', Gregorianum. 34. 1953, pp. 141-162.

beings incapable of knowing in some degree the network of laws of nature operating in nature. It is thus not a spontaneous sign in the limited and accidental way that the footprint of an animal is a sign of its past presence. Further, as a sign addressed by God to men, a miracle appears as an intermediary enabling God to enter into special relations with men; it must, therefore, be a religious sign. In other words, under penalty of having no raison d'être, a miracle necessarily postulates the ordination of its prodigious aspect to a religious end. Viewed concretely, this religious finality or intentionality must be able to be inferred from the context and circumstances surrounding a miracle.

> Why should miraculous phenomena spontaneously be recognized as signs of God's intervention? The reason is, first of all, because they are, ex hypothesi, extraordinary and naturally unexpected events. But, more specifically, they always occur under circumstances which indicate that God is here, speaking in a special way to men, in answer to their invocation of His aid. Historically these religious adjuncta which identify miracles as 'divine response' are of two kinds: the circumstances preceding the phenomena are such as somehow petition for an answer from God, and the miracles themselves possess qualities which are clearly proportional to this petition.[27]

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27 J. Hardon. Op. cit. p. 252.

Hardon claims that the adjuncta or circumstances preceding a miracle exhibit a petitional quality that is unmistakable. Often an explicit prayer is addressed to God, asking for a certain prodigy.[28] At other times a person's communion and union with God is so constant as to be a kind of living prayer which invites the outpouring of God's miraculous power. The public ministry of Jesus Christ offers a perfect example of this type of petition.[29]

According to Hardon the close correspondence between the petition and the fulfillment of the request is the most striking feature of miraculous phenomena as divine signs. There are two aspects to this close correspondence. Negatively, the prodigy does not occur indifferent to the petition or contrary to what had been requested. Clearly, this does not mean that a miracle always follows a petition, but when it does occur it is in harmony with the petition. Positively, the prodigy always occurs in a way that shows a causal connection with the antecedent circumstances.[30]

In line with the above analysis, the solution to the question under investigation - whether or not the semeiological aspect is intrinsic or extrinsic to the definition of miracle - seems clear. The spontaneous

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28 Peter, for example, before curing the cripple at the gate called Beautiful, prayed: 'In the name of Jesus Christ of Nazareth, arise and walk'. Acts. 14:10.

29 J. Hardon. Ibid.

30 J. Hardon. Ibid.

signification of a miracle is essential to it because it is part of the defining characteristics of miracle (is intrinsic to it). On the other hand, the conventional signification is related to the accompanying characteristics of miracle (is extrinsic to it) and is therefore not part of its essence or definition. It follows that by providing a fitting explanation for the exceptionality to the laws of nature of a prodigious phenomenon, the semeiological aspect of miracle constitutes a valuable criterion for discerning a true miracle from a false one, whether this latter be a diabolical prodigy or an extraordinary, not yet explained, natural happening. With this in mind it is time to take up the unresolved question from the previous chapter.[31]

5. VIOLATION, RELIGIOUS CONTEXT AND RECOGNITION OF MIRACLE

In the previous chapter I indicated that the adoption of 'garden-variety' laws of nature brings forth difficulties in knowing with reliability that the extraordinary event has not occurred as a result of special conditions. In the face of this difficulty a number of 'solutions' have been proposed by various writers. I propose to look at two of these.[32]

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31 Chapter 6, note 40.

32 The two 'solutions' which I investigate assume that it is necessary to retain the element of physical transcendence in the definition of miracle. Some, however, who claim that it is hardly ever possible to prove physical transcendence have opted to emphasise the semeiological aspect of miracle and to reduce the emphasis on the aspect of physical transcendence.

(a) The first 'solution' is characterized by varying degrees of scepticism about the possibility, at least in practice, of establishing that a violation has occurred independent of a consideration of the religious context.

> The qualification 'at least in practice' is necessary as there can be no doubt that, given certain happenings, e.g. a dead man raised to life, the feeding of thousands of people with a few loaves, it would readily be conceded that the impossibility of a natural explanation can be established with certainty. In reality, however, such facts are not given, strictly speaking. We depend for our knowledge of them on observation and testimony and this immediately opens the door to various possibilities which militate against a certain judgement. Appeal is made to the religious context, therefore, for evidence of a free and intelligent being acting for a religious purpose. Until such evidence is clearly discernible one can scarcely ever be certain that the prodigy is not the result of natural causes. In other words one can never be sure of physical transcendence until one has taken account of the sign-structure of the prodigy. It is the coincidence of an apparently transcendent effect with significant religious circumstances that unmistakably points to divine causality. Order,

> finality, the framework of a religious dialogue between God and man - these cannot result from the chance operation of natural forces.[33]

Thus, according to this view it is the sign-structure of the event which guarantees that the extraordinary event is a miracle. That is, the religious context, together with the semeiological aspect of the event ensures its physical transcendence.

(b) The second 'solution' is characterized by the claim that it is possible and necessary to establish physical transcendence without any aid from the religious context. According to this view once physical transcendence is established, the religious context then points to the adequate reason which makes it worthy of divine wisdom to depart from that system of secondary causes established at the beginning for the ordering of the universe.

> Suppose, then, we have a scientist who, though rigorously faithful to scientific method, grants the possibility at least of a direct supernatural intervention in nature. What conclusion can he reach about

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33 K. McNamara. Op. cit. p. 311.

> Peter's walking on the water, or about the instantaneous disappearance of a cancerous tumour? According to some, of whom Dhanis is a notable representative, he can be certain that these events are preternatural, strict exceptions to the natural order. They do not merely lack a natural explanation in our present state of knowledge; they are naturally inexplicable and in that sense violations of the laws of nature. But what of the possibility ... of statistical fluctuations or some other, as yet unknown, explanation? To this question Dhanis replies ... that the fantastically remote possibility of a statistical exception (this is the 'explanation' he is considering) cannot rob the mind of genuine certainty that no such exception will be witnessed. In the practical affairs of life we do not allow the mere abstract possibility of error to influence us when we have sufficient positive grounds for making a certain judgement.[34]

Thus according to this view one can be certain that the event is scientifically inexplicable, a violation of a law of nature, without direct recourse to the sign-structure of the event. Such certainty is based on the process of induction; 'experience of millions of instances, constantly subject to fresh verification by men

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34 K. McNamara. Op. cit. p. 309.

everywhere, provides within certain limits sure knowledge of what given natural causes must inevitably, or on the other hand, cannot at all accomplish.[35]

Both of these 'solutions' make an appeal at some stage to the light thrown upon the prodigy by its sign-function. They both agree on the need to take the sign-function into account if one is finally to rest secure in affirming that the extraordinary event is a miracle. They differ, however, on the question: At what moment is assent to physical transcendence justified? It is to the resolution of this difficulty that I now turn.

Is it possible and necessary to establish physical transcendence without any aid from the religious context as Dhanis suggests? As we have seen Dhanis claims that given a major religious prodigy, one is certain from an examination of the fact itself and of its physical circumstances that it has a transcendent cause. But such a phenomenon lacks meaning as long as there is no explanation of the extraordinary departure from the normal order of the universe. The religious context, however, supplies the explanation. In

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35 K. McNamara. Op. cit. p. 310.

these circumstances, one wonders how it is possible, while conceding that the prodigy as a physical event remains unintelligible apart from the religious character of the context, to qualify as certain the judgement which affirms this physical transcendence prior to a recourse to the context? Is it possible to affirm the truth of the claim yet at the same time not see how it makes sense? Is it not more likely that the absence of intelligibility - at the precise moment under consideration - in what one is being led to affirm prevents one from actually affirming it? It would seem to me that apart from a recourse to the total context there is a conflict between the certainty of physical transcendence which the nature of the effect seems to justify and the puzzlement which the admission of such transcendence entails.

How then is it possible to affirm physical transcendence with certainty without regard to religious contextual factors? It seems clear in fact that predominantly one cannot affirm it with final security - a further question of intentionality remains to be answered. One cannot predominantly have certainty that any purported event is a miracle without backing for the claim from the area of science (that the event is scientifically inexplicable) and from the area of religion (there is a religious intentionality in the

event). It seems, however, that if one could separate out the various stages involved in the complex recognition of the miraculous and allow no reciprocal action between them, the situation would be as Dhanis has presented it: In the first place a certain judgement of physical transcendence on the basis of human experience of what natural forces can and cannot accomplish; secondly, amazement at the implication of this judgement, viz. disorder introduced into the universe, and finally, recognition of the presence of an explanation for this disorder in the religious context of the prodigy. However, in practice these stages act and react on one another and one can hardly feel certain about physical transcendence until recource to the religious context has conferred final intelligibility upon it.

> There is no point in inventing arbitrary and undefined theories, when all the circumstances of a miraculous event sufficiently indicate that the phenomenon is the effect of a free and transcendent agent, namely, God Himself. Certainly, if no antecedent circumstance renders a prodigy intelligible, we should abstain from passing judgement and admit that the cause is unknown. But if the finality and semeiology of a phenomenon clearly identify it as belonging to the religious

> sphere, it is there we must look for its 'raison d'être' and not postulate the action of an unknown cause.[36]

6. CONCLUSION

In this chapter I have indicated that a miracle is not merely an event which violates a law of nature. A miracle is a complex mesh of elements. It is an event brought about at least in part by the direct action of God; it occurs in a religious context and is a divine sign. That is, the miracle has both a scientific and a religious aspect. I have indicated further that predominantly one cannot know that an event is a miracle without recourse to both the scientific and the religious aspect and that there exists a dynamic interplay between the two. One cannot claim to know that a miracle has occurred without strong backing from both the scientific and the religious aspect. The existence of strong backing from both provides good reason to believe that a miracle has occurred.

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36 A. Van Hove. La doctrine der miracle chez S. Thomas: Paris, 1927, p. 376.

CHAPTER EIGHT

1. INTRODUCTION

In the preceding chapter I indicated that miracle is a complex phenomenon not simply a violation of a law of nature. We do not recognize a miracle because of its exceptionality alone but rather we see the miracle in the complex: scientifically inexplicable event, religious context, sign from God. It is this complex mesh of elements which is transcendent, which demands the (special) intervention of God as its adequate explanation. Only God communicating His message can account for the complex. In this chapter I offer a solution to the difficulty noted in Chapter Five[1] and a final refinement of the violation model.

2. IN WHAT SENSE CAN A LAW OF SCIENCE BE VIOLATED?

Let us assume that there is a law of science of the form $L_s = (x)(Fx \longrightarrow Gx)$. This might be read for example as: for all x if x is a crow then x is black. If on a particular occasion John Smith observed a crow that was white this could be represented as an event E where $E \supset (Fa \cdot \sim Ga)$. That is an object a was both a crow and was not black. We now have:

(a) $(x)(\textcircled{F}x \longrightarrow Gx)$

(b) $(Fa \cdot \sim Ga)$

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1 See Chapter Five and particularly Section 4.

In terms of the violation model (a) represents the law and (b) represents the violation of that law. Simply and absolutely (a) and (b) are incompatible and therefore their conjunction is logically impossible. If we are to make sense of this situation it seems that we are faced with a number of alternate hypotheses.

Either (a) Miracles when defined as violations cannot occur.

Or (b) Miracles are not violations of a law of science.

Or (c) Miracles are violations of a law of science differently conceived.

Of course the violation theorist cannot accept either (a) or (b) and must therefore adopt hypothesis (c). At this point he has two possibilities open to him. He can accept:

Either (a) The law is universal and violation is only prima facie - the occurrence of (b) is a violation of what was held to be a law but now needs revision.

Or (b) The law is not universal, but has a restrictive clause (that is $L = C \rightarrow (x)(Fx \rightarrow Gx)$) and an event $\sim C \cdot (Fa \cdot \sim Ga)$ constitutes a violation.

Of these two broad possibilities alternative (a) is quite unacceptable to the violation theorist. This follows from the fact that it fails to distinguish between violations and falsifications of the law. It simply admits all falsifying evidence as violations. The violation theorist is left with possibly (b) and the only question that remains is what sense can be given to the restrictive condition 'c'? I will investigate the following possibilities:

(a) There is nothing else relevant (ceteris paribus).

(b) God does not intervene.

(c) There is a law covering the particular circumstances.

(d) There is an alternative law covering the particular circumstances.

(e) The situation is scientifically explicable.

(a) As I have argued in earlier sections ceteris paribus clauses tend to be very slippery and pose severe difficulties for the theorist attempting to confirm or falsify laws. Furthermore, by the use of the ceteris paribus clause <u>any</u> universal statement can be made true. For example: 'ceteris paribus, all attempts to walk on water are successful'. I, therefore, conclude that this possibility is unsatisfactory.

(b) There are a number of substantial difficulties associated with this possibility. In the first place I would maintain that the laws of science are areligious; they operate independently of any religious circumstance, and depend entirely on the natural conditions being rightly placed to evoke a definite predictable effect. It is, therefore, out of place to attach such a condition. Furthermore, such a condition makes it necessary for the scientist to have an independent way of establishing whether or not God intervenes. That is, an exception to the universal statement cannot, of itself, be evidence that God has intervened, unless previously there has been evidence that God has not intervened. Quite clearly the body of science has never claimed to have such evidence and I, therefore, conclude that this possibility is unsatisfactory.[2]

(c) As I noted in Chapter 5, Section 5, Swinburne argues that in cases where we have a well confirmed law and a well confirmed counter-instance E such that if we leave L unmodified, it will, we have good reason to believe, give correct predictions in all other conceivable circumstances we must either say that if there is any law then it is L

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2 George Landrum. 'What a Miracle Really is'. Religious Studies. 12, 1976, p. 51 provides a concise attack upon the use of a rider such as 'if God does not intervene' attached to laws of nature.

or that there is no law.[3] However, as I have pointed out this explanation does nothing to solve the apparent contradiction between the law statement and the existence of a counter example. Landrum illustrates this point well:

> Miracles are not supposed to be violations of what scientists think natural laws are: they are not supposed to be violations of formulations of natural law; they are supposed to be violations of actual natural laws. Consequently any heuristic practices scientists employ in arriving at natural law are simply irrelevant to what natural laws actually are. Doubtless it is sound scientific practice to discount one piece of apparent evidence that is inconsistent with everything else one knows. But that does not change the fact that a single white raven is inconsistent with its being a law that all ravens are black. One ought not be overly impressed by a report from a non-scientist of the existence of a single white raven; but one will not insist on two white ravens in one's laboratory.[4]

What Landrum establishes is that the scientist may express the laws of nature, as they are known to him, in a variety of ways. Some of these statements will be more acceptable to the scientist than others according to various criteria. However,

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3 Richard Swinburne. The Concept of Miracle. London: MacMillan, 1970, pp. 26-28.

4 G. Landrum. Op. cit. pp. 51-52.

there is always the more fundamental question involving the actual ontological status of the law. If there are laws of nature which, so to speak, actually attach onto the ontological things that exist, then there should be, I would maintain, a precise way of expressing these laws. It is a question of whether it makes sense to talk of a violation of such a law not a violation of a law statement made for reasons of practicality or simplification that is at issue.

Gill[5], recognizing this issue, sought to offer a solution involving the notion of a false but best law which while expressed in universal form allows for exceptions to it. The (violating) exception is proof that the law is false. The fact that the law cannot be replaced indicates that it is best. The difficulty with this position is that there does not seem to be any good reason why the false but best universal law cannot be adequately replaced by a true and best statistical law. But once the law is statistical the 'violation' is explained or covered by the law rather than contrary to it. I, therefore, conclude that while Gill's suggested remodelling of the violation concept does overcome some of the difficulties inherent in Swinburne's treatment, it does also

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5 See Chapter Five, Section 5.

create certain problems and is, therefore, not fully satisfactory.

(d) According to this possibility it is suggested that the restrictive clause C in the law of science takes the form 'there is an alternative law covering the particular circumstances'. What is not so obvious about this possibility is that it actually allows for two interpretations depending upon the sense applied to 'law' in the restrictive clause.

On the one hand it might be interpreted as saying that unless there is an alternative (natural) law ... Now on this view it hardly makes sense to call a non-falsifying exception to the law a violation since the exception simply indicates that the wrong law or set of laws is being used to predict or explain the event which has occurred. The event is as a matter of fact explainable through the use of natural law - known or unknown. The apologist certainly does not wish to conceive of violation in this sense!

On the other hand the interpretation might be - 'unless there is an alternative (non-natural) law covering the circumstance'. Landrum in suggesting that a distinction can be made between natural and non-natural laws offers the following illustration:

> Let us tentatively suppose that a coherent natural/non-natural distinction can be drawn. It has certainly seemed to many philosophers that this is a perfectly clear distinction, or if it is not a clear distinction it has seemed clear that there is such a distinction. The distinction is supposed to generate two classes of predicates: natural and non-natural. Further, it is supposed that predicates from one of these classes can not be defined in terms of predicates from the other class. Apparently all natural laws can be formulated using only natural predicates, though, as I have argued, lawlike generalizations can be formulated which involve non-natural predicates. If these remarks are more or less correct, they would seem to provide a basis for the claim that 'Heretics are to be punished' could not formulate a natural law: neither 'heretic' nor 'punish' is a natural predicate. (But it could formulate a non-natural law with the corresponding counter-factual 'If anyone were to commit heresy he would be punished'.[6]

Landrum's interesting suggestion rests on a number of fundamental assumptions. Firstly, he claims that there is no reason why miracles should not be repeatable in the same circumstances: the

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6 G. Landrum. Op. cit. p. 54.

natural circumstances are only part of the circumstances.[7] Secondly, he says 'one tends to think of miracles as being rare ... but I can not see that it is part of the concept of a miracle that they are rare'.[8] Thirdly, he says 'On the conception I am recommending, a universe with miracles is still a universe that can be understood, a universe that can be explained ... but not a universe that can be explained by science alone'.[9] Now while I have no argument with the third of these assumptions the others are open to criticism.

In the first place there is perhaps no doubt that if God exists and He wills it, he could repeat miracles in similar circumstances. However, if this were in fact the case we would have to know the 'mind' of God if we were to be able to formulate the circumstances in which God would work a miracle. Secondly, throughout history, purported miraculous events have not appeared to follow any discernable pattern at all. In modern times the extraordinary cures at Lourdes offer a remarkable example of the lack of uniformity and regularity in the purported occurrence of miracle. Yet if miracles occur according to law - natural

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7 G. Landrum. Op. cit. p. 52.
8 G. Landrum. Ibid.
9 G. Landrum. Op. cit. p. 57.

or non-natural surely one would expect to discern some regularity. After all the notion of regularity is deeply interwoven in the concept of law.

> If the cause which effects the truly remarkable cures at Lourdes were a purely natural, impersonal and unintelligent cause we should expect that, like all such causes, it would act in a uniform and constant manner. Having observed its behaviour over the space of a century, having analysed and compared one with another, the thousands of cures it has effected, we should now be able to formulate the law according to which it works. And in the light of this we should be able to predict with some certainty how and how not it will act in the future. We should be able to say with some measure of confidence that given the same circumstances this cause will invariably produce the same effects. We should expect, too, that some regular pattern would be discernible either in the type of disease which is cured or in the type of person who is cured or at least in the circumstances of the cure. But nothing of all this is revealed in the cures at Lourdes. No law, uniformity, regularity or pattern can be discovered in them. Far from being limited to a particular type or even types of disease, this mysterious cause

> ranges at will over the entire field of disease and cures the most diverse ailments. Yet, it is an accepted medical principle that diverse ailments require diverse remedies and treatment. Nor is there any law or pattern discernible in the type of person who is cured, neither in their age, sex, temperament, way of life or religious disposition. And the same is true of the circumstances of the cures ... These cures, then, bear the character not of uniformity and regularity but of diversity and multiplicity.[10]

Thirdly, although it may not be part of the concept of miracle that they are rare, nevertheless, it is partly the rarity of the miracle that marks it off from other events. If one were not to hold that miracles must occur infrequently it would perhaps be enough to claim that they do as a matter of fact. In fact a world in which miracles occurred regularly would be a world with a much higher amount of uncertainty than our own. However, contrary to this, in the view of many theologians, there is ample scriptural support for a high degree of uniformity in the present cosmos.[11]

On the basis of these criticisms I conclude that even this second interpretation of law is unacceptable and that as a consequence this possible

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10. John J. McGreevy. 'The Lourdes Miracles'. Irish Ecclesiastical Record. Vol. 89, February 1958, p. 116.
11. Henry M. Morris. 'Biblical Naturalism and Modern Science' Bibliotheca Sacra. July 1968, pp. 195-204.

interpretation (d) of the restrictive clause ①, is unacceptable.

(e) Throughout the history of intellectual reasoning many writers and thinkers have attempted to define the aims and methods of science. That there has been a vast range of opinion on this is well known. However, there does appear to be a general agreement among theorists that science will never be able to fully unravel the ontological or epistemological mysteries of reality.[12] For one thing the scientific enterprise is largely descriptive; for another, it is limited by its own methodology and apparatus. In so far as it is capable of investigating physical phenomena it investigates only part of reality since it is incapable by definition, of investigating non-physical (or non-empirically investigable) phenomena. Consider the following opinions:

> The very common idea that it is the function of natural science to explain physical phenomena cannot be accepted as true unless the word 'explain' is used in a very limited sense ... Natural science describes, so far as it can, how, or in accordance with what rules, phenomena happen, but it is

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12 Margaret A. Boden. 'Miracles and Scientific Explanation' Ratio. Vol. 11, No. 2, 1969, p. 137, argues that the properties or the nature of the universe as a whole are conceptually debarred from scientific explanation.

> wholly incompetent to answer the question why they happen.[13]
>
> In Hellenistic times, scientists came to see their tasks as restricted to mathematical forecasting: what followed was disastrous. For most of us nowadays the task of understanding nature is a wider one. Prediction is all very well; but we must make sense of what we predict. The mainspring of science is the conviction that by honest, imaginative enquiry we can build up a system of ideas about nature which has some legitimate claim to 'reality'.[14]

If the scientific enterprise is largely descriptive in its nature, then so too must be the laws it establishes.[15] But if the laws which science establishes are descriptive they can only approximate reality. Even a theoretical 'best' science could not accurately predict and explain everything that happens, all of the time, if some of the things that happened were not subject to its investigatory techniques.

I would argue that the laws of science have as a basic underlying assumption that they apply only to events, phenomena, processes, regularities and

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14 Stephen Toulmin. Foresight and Understanding: An Enquiry into the Aims of Science. New York: Harper and Row, 1960, p. 115.

15 On this point see for example A.J. Ayer 'What is a Law of Nature?' in Ayer The Concept of a Person and Other Essays. London: Macmillan, 1973, pp. 209-234.

so on, which are capable of scientific explicability If, for example, an event was beyond the ability of a 'best' science to explicate, science would have to remain silent on it. Is this not the position of science vis-a-vis an occurrence of an event, brought about by the direct primary action of God, which does not fit the expected pattern established by scientific theory?

On the traditional view, a miracle is an observable event which cannot be explained by natural law. However, the fact that the phenomenon is observable distinguishes the concept of 'miracle' from the religious concept of 'mystery'. Furthermore, its observability is that feature in virtue of which we regard the phenomenon of miracle as falling within the natural world. Since miracle falls within nature it is the sort of event which prima facie seems to be capable of scientific explicability yet turns out to be scientifically inexplicable. It is inexplicable because it is contrary to that which, according to the laws of science, should have occurred yet no unusual natural characteristic can be found which would explain the recalcitrant event. The natural cause cannot be found! Furthermore, the recalcitrant occurrence cannot be experimentally repeated. The event (its contrary nature) is

simply inexplicable in scientific terms but is explicable in religious terms.[16]

If my reasoning is correct it would appear that there is an implicit restrictive clause attached to a law of science such that we should understand that when L is stated in the form $L = (x)\ (Fx \rightarrow Gx)$ it should be read as: In so far as the relationship between F-ness and G-ness is scientifically explicable all x's which have F-ness will also have G-ness. Explicitly stated L should be written as $L = C \Rightarrow (x)\ (Fx \rightarrow Gx)$, where C is 'the situation is scientifically explicable'. An event that occurs contrary to the regularity $(x)\ (Fx \rightarrow Gx)$, but which is not currently explicable, may fall into two classes: those which are set aside as anomalies and those which are regarded as violations. From among the latter class some events will fall into the sub-class of miraculous. Miracle is therefore to be understood as that which is a violation or that which is permanently scientifically inexplicable.[17]

3. LAWS OF SCIENCE AND LAWS OF NATURE

Throughout this thesis I have for the most part used the concepts of 'Laws of Science' and 'Laws of Nature'

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16 M.A. Boden. Op. cit. p. 138 offers a similar appraisal.

17 It should be clearly understood that while all miraculous events are scientifically inexplicable events this does not necessarily imply that all scientifically inexplicable events are miracles.

fairly interchangeably, however, at this stage I wish to draw out some distinctions.

Traditionally it seems, apologists have used the term 'Law of Nature' in preference to that of 'Law of Science' when they have involved themselves in the miracle debate. On the other hand those writers arguing against the coherence of the concept of miracle and more particularly against the violation concept have used the two terms fairly interchangeably. What is the significance, if any, of these differences?

In Chapter Two I pointed out that Hume in proposing his definition of miracle in terms of a violation attempted to cut adrift the theistic overtones which had tied arguments for miracles to arguments for the existence of God. Nevertheless, since Hume, the violation concept has been the predominant one. However, it seems to me that whereas the sceptics have willingly accepted the non-theistic conceptions of scientific law the apologists have in general maintained a wider formulation of law of nature. This distinction has created tensions which rest largely on the fact that the concept of miracle hinges the realm of science and religion. This mediatory role of miracle has, I believe, special implications for the application of the concepts of 'Law of Science' and 'Law of Nature' within the context of the concept of miracle.

Throughout Section 2 above I argued that the sense of violation that is applicable to the violation concept of miracle rests on the assumption that the law is not universal, but has a restrictive clause - that is: $L = C \rightarrow (x)(Fx \rightarrow Gx)$ - and an occurrence $\sim C \cdot (Fa \cdot \sim Ga)$ constitutes a violation. Of course, in most contexts the law of science would be expressed simply as $L = (x)(Gx \rightarrow Fx)$. Within the context of discussion about the concept and possibility of miracle it is essential to draw out this distinction between the strict and loose formulation of laws of science. The loose formulation or law of science $L_s = (x)(Fx \rightarrow Gx)$ is in fact the law regularity from the strict formulation or law of nature $L_n = C \rightarrow (x)(Fx \rightarrow Gx)$. Since the law of nature L_n has a built-in restriction C which limits the application of the law to those events, phenomena and so on that are scientifically explicable strictly speaking such a law cannot be violated. If a scientifically inexplicable event E occurs which is an exception to what might have been expected in the circumstances, E is strictly speaking a violation of the regularity $(x)(Fx \rightarrow Gx)$ expressed by the law, rather than a violation of the law itself. By regarding the law regularity as a law of science, however, (rather than a law of nature) it makes sense to talk of a violation of such a law.

It may be argued here that what I am proposing is mere stipulation. Clearly what I am proposing does in fact suggest a change in common practice but I would argue that it is a change which helps to clear up a fundamental misunderstanding in the miracle debate. Furthermore, I would maintain that it makes sense to refer to the law regularity as a law of science since 'textbook' laws of science are invariably expressed without added tacit conditions. On the other hand many writers have argued - sometimes for mistaken reasons - that laws of nature do include tacit conditions.

4. ARE MIRACLES PHYSICALLY IMPOSSIBLE?

It is normally accepted that the event E is physically impossible if and only if the statement that the event occurred is logically incompatible with the statement of the law that expresses what is physically possible. By drawing out a distinction between the statement of a law of nature and the statement of a law of science I have at the same time implicitly drawn a distinction between what is physically possible and that which is scientifically possible or explicable. That which is logically incompatible with a law of nature is physically impossible because the statement of the law of nature expresses the ultimate regularities in nature. I have argued that a miracle is not a violation of a law of nature and hence when a miracle

occurs the physically impossible does not occur. On the other hand if a violation of a law of science occurs it makes sense to talk of the occurrence of a scientifically inexplicable event or of the occurrence of the scientifically impossible. Let me draw out this distinction in the following manner.

The very question of the possibility of miracles rests on the prior question of the existence of God and on His ability and willingness to intervene in nature. Clearly, if there is no God who fits this description then, on the further assumption that nature is as a matter of fact regular, every event that occurs does so in conformity with a law of nature. In this case it makes no sense to talk of the physically impossible actually occurring. Likewise, if the laws of science were formulated by a hypothetical 'best science' it would not make sense to talk of the scientifically impossible occurring. Science, being able to explain everything that happens would, by definition, never be faced by something that it could not explain. In this hypothetical model the physically impossible and the scientifically impossible would be identical.

On the other hand, it may well be the case that there is a God who fits the above description. Now it seems to me that if this is the case the laws expressed by a 'best science' cannot be regarded as reflecting the

ultimate fundamental regularities in nature simply because they do not include those occasions when God does intervene. In this situation only science plus God can explain all that occurs. The limits of the physically possible are, therefore, not open to science alone to determine. What is scientifically impossible is not, therefore, to be equated with that which is physically impossible. Once again the distinction is between what is possible in a theistic universe and what is explainable in a theistic universe.

5. CONCLUSION

In this chapter I have argued that it makes sense to talk of a violation of a law of science. I have also argued that such a violation is physically possible though scientifically impossible or scientifically inexplicable. Furthermore I have suggested that in the context of the miracle discussion it makes good sense to draw out a distinction between the concept of a 'law of science' and that of a 'law of nature'.

Throughout this thesis I have attempted to show that arguments designed to illustrate the incoherence of the violation concept of miracle cannot be substantiated. I have also argued that if a miracle were to occur it would be possible to identify and to distinguish it from the non-miraculous. I have therefore argued for the logical and epistemological coherence of the violation concept. At the same time

I have observed that the traditional violation concept requires certain modifications and refinements in order to withstand certain of the charges against it. However, I have shown that these modifications are quite acceptable to the apologist. Lastly, I have demonstrated that the violation concept of miracle is a complex mesh of elements deriving substance from both the scientific and religious enterprise. Part of the strength of the violation concept is to be found in the fact that it rests for its coherence and applicability on these two, rather than on either one.

I conclude this thesis by offering the following definition of miracle:

> A miracle is a violation of a law of science brought about by the primary action of God, occurring in a religious context as a divine sign.

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