Research Article

Is Statistical Analysis an Appropriate Tool to Apply to the Alleged Bodily Resurrection of Jesus?

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In this assessment of the use of Bayes Theorem (BT) for ascertaining the probability of Jesus' bodily resurrection, I argue that neither apologists nor sceptics succeed in making their case, since both work on a presuppositional basis, often entering improbable values into their BT equations. Although BT works well enough in many areas of ordinary life, it cannot be successfully applied to the resurrection of Jesus for which we have little reliable data by modern historical standards. In this paper I suggest that we might more fruitfully take an analogical approach, as secular historians often do, by comparing the Gospel accounts of Jesus' resurrection with contemporary claims by some to have "seen" Jesus, of which Phillip Wiebe has gathered a useful collection. Should we find that these recent claims lack credibility in affirming the real presence of Jesus then, by analogy, the same may be true of the resurrection *par excellence*.

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1. Introduction

During the past forty years or so, various attempts have been made to apply statistical analysis to the New Testament miracles, especially to the alleged bodily resurrection of Jesus. Some regard statistics as an adjunct to established historical methodologies such as analogy, antecedent probability and inference to the best explanation (IBE), or even as an essential component of historical enquiry[1], while others are much cooler towards its reception by historians[2]. With one or two exceptions[3], most New Testament scholars and philosophers who have made use of such analysis have opted for Bayes' Theorem (BT)[4][5][6][7][8][9][10][11]. However, there are some serious drawbacks to the use of statistical analysis in New

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Testament history, not least its unavoidably speculative nature, as well as the intervention of personal bias[12]. Further, the events surrounding the alleged resurrection of Jesus are beset with several singular difficulties, including the degree of reliability in the eyewitness testimony[13][14][15], and the extent to which scholars can separate the alleged factual evidence from the legendary overlay of subsequent generations. To this we must add the question of how the purported factual evidence is to be explained. The existence of God, of course, would lend weight to the traditional option. Without that, it is highly unlikely that Jesus rose in the manner suggested, which then permits other options such as hallucinations[16][17][18] or collective delusions[19][20][21][22], or a fusion of the two.

In the present paper, I wish to examine whether the application of BT should be considered more of a curse than a blessing, and to argue that its unavoidably presuppositional foundation simply obfuscates the essential historical issues. Certainly, the apparently unresolvable differences of stance displayed by the various protagonists suggest that we would be better advised to proceed from the premise that the claims for Jesus' bodily resurrection expressed particularly in the Gospels of Luke and John were intended by the original witnesses to be taken literally, and to apply purely historical, rather than statistical methodologies to assess their value as historically reliable data.

2. The Apologists' Exploitation of Bayes' Theorem for Resurrection Studies

During the present century BT has become a popular resource for New Testament apologists in establishing the probability of miracles[4], especially the bodily resurrection of Jesus, both historically[7][6] and philosophically[5][8]. Given that our present concern is a purely historical one, we must largely forego the latter here, although there is some inevitable overlap. In his book, Swinburne recognises the importance of establishing God's existence prior to any discussion of miracles, for only in doing so is it possible to discuss the resurrection as an act of divine fiat. As it is, the historical nature of our enquiry entails that we must assume, for the sake of argument, that those who argue for this singular event presuppose the existence of a divine agent who was not only able but inclined to bring it about. Despite this, however, I believe that the arguments of some apologists to the effect that BT demonstrates a near-certain probability for this scenario are highly dubious. I shall demonstrate this by reference to the detailed presentation of McGrew and McGrew[6]1 who begin with the proposition[2]:

$$\frac{P(F_1 \wedge \cdots \wedge F_n \mid R)}{P(F_1 \wedge \cdots \wedge F_n \mid \neg R)} \gg 1$$

From this, according to these authors, it follows that:

$$\frac{P(R \mid F)}{P(\neg R \mid F)} = \frac{P(R) \times P(F \mid R)}{P(\neg R) \times P(F \mid \neg R)}$$

The relevant facts, according to the McGrews, relate to i) the women's reports of the empty tomb (W);[3] ii) the reports of sightings by the disciples (D); and iii) the testimony of Paul's experience (P),[4] the BT formula of which is given as:

$$\frac{P(R \mid F_1 \wedge \cdots \wedge F_n)}{P(\neg R \mid F_1 \wedge \cdots \wedge F_n)} = \frac{P(R) \times P(W \mid R) \times P(D \mid R) \times P(P \mid R)}{P(\neg R) \times P(W \mid \neg R) \times P(D \mid \neg R) \times P(P \mid \neg R)}$$

The women and the disciples, where they appear as groups, are not treated collectively but as individuals. In each case the probability of their reports indicating in favour of the resurrection of Jesus as opposed to some natural alternative, is set at a ratio of 10:1. This, of course, is a pure guesstimate, as indeed it must be, but scholars with more liberal leanings would regard it as much too generous. Still, we must work with what the McGrews have given us – at least initially.

To each class of witness (W, D, P) the authors assign figures of two, thirty-nine and three respectively, thus giving factors of 10^2, 10^{39}, 10^3. "Sheer multiplication through gives a Bayes factor of 10^{44}, a weight of evidence that would be sufficient to overcome prior probability (or rather improbability) of 10^{-40} for R, and leave us with a posterior probability in excess of 0.9999."[6]

These figures leave me somewhat baffled, for I can see no clear explanation for them. The McGrews provide a factor of two for W. Does this refer to the two women in Matthew's Gospel to whom Jesus appeared, or to those two as a unit plus Mary in John's Gospel? The number given for the disciples is thirteen – the eleven originals (Judas having deceased), plus two others. Do these anonymous disciples refer to James (1 Cor. 15: 6) and the two on the road to Emmaus (Luke 24: 13–35) taken as a unit? The statistical value for these thirteen disciples is unaccountably tripled from 10^{13} to 10^{39}. Or have I missed something? At the very least the McGrews need to make their position far clearer than they do.

Far more attention needs to be paid to the plain testimony of the relevant texts. Apart from the apparently visionary appearances to Paul (Acts 9: 1–9; 22, et pars.; 1 Cor. 9: 1; 15: 8; Gal. 1: 12, 16), Stephen (Acts 7: 56) and John (Rev. 1: 9–20),[5] there are only three instances where Jesus is said to have appeared to an individual – to Peter (Luke 24: 34; 1 Cor. 15: 5), to James (1 Cor. 15: 6) and to Mary Magdalene (John 20: 10–18). The plethora of other appearances, in whatever form, occurred to groups of between two (Matt.

28: 8–10; Luke 24: 13–35) and over five hundred (1 Cor. 15: 6), and group appearances involving a deceased religious figure always invite collusion, with different members of the crowd providing different, sometimes contradictory accounts of what they witnessed. I shall elaborate on this point below.

Clearly, the McGrews regard the individuality of witnesses to be paramount, quoting John Venn[23] to good effect: "When two [or more] witnesses agree on a statement in a matter about which they might make many and various errors, the combination of their favourable testimony adds enormously to the likelihood of the event; *provided always that there is no chance of collusion*" [my italics]. But surely, this final clause is precisely the problem in the case of the resurrection accounts provided in the New Testament texts. In response the McGrews adopt a curious "win–win" approach, agreeing on the one hand that independence of testimony is better than collusion[23][24], but arguing on the other that in the case of R, collusion makes the reality of the event more likely because the disciples would have compared notes and assured each other of the reality of what they had witnessed prior to offering themselves up for martyrdom. Surely one cannot run with the hare and hunt with the hounds.

Perhaps self-conscious of the extraordinary claim they appear to be making, the McGrews supply a few provisos: i) that in matters beyond specific miracle claims, the Gospels and Acts are as trustworthy as any other source of secular history;[6] ii) that they are therefore accurate in reporting what the witnesses claim to have happened; iii) that the strength of their argument is not necessarily reduced by sceptical claims of collusion or dependence which is generally assigned to the accounts; and iv) that the statistical values they apply to each individual datum are contestable.[7]

There are several obvious drawbacks to this approach which most apologists overlook. The most basic of them is the commonsense observation that genuine resurrections (as opposed to resuscitations) are vanishingly rare. It has been estimated that, since the emergence of *homo sapiens*, some one hundred billion (100,000,000,000) individuals have walked our planet, only one of whom could conceivably lay claim to having recovered from genuine brain death after, say, thirty-six hours. Not one such claim has ever been proven. That alone is a challenge for the apologist's case.

Second, thought must be given to the question of whether BT is even appropriate for application to historical issues. Clearly, scholars are sharply divided on this issue. Richard Carrier[1], who happens to be a noted sceptic, appears to regard it as the fulcrum of historical enquiry around which traditional historical methods should revolve. On the other hand, Behan McCullagh, a historian highly respected for his even-handed approach despite his personal Christian convictions[2], comments:

> [BT] has seldom been recommended as a form of historical inference because the information required to apply it is often unavailable. … When there is no evidence in support of a contrary position, the probability expressed in the conclusion of a valid statistical syllogism whose premises are warranted may be taken as indicating a reasonable degree of belief in that conclusion. … When there is evidence supporting a contrary hypothesis, however, it is best to decide which proposition to believe (if any) by judging which provides the best explanation of all the relevant data. (1984: 57, 63–64)[8]

In the present case, the correct option is not manifestly the bodily resurrection of Jesus, as natural alternatives such as hallucinations and/ or collective delusions can and have been suggested. McCullagh intimates that the best method to apply here is that of inference to the best explanation (IBE) beyond which BT adds nothing more by way of proof.

In BT the initial probability of a proposition depends on the reliability of the data. The method is widely applied to everyday life such as medical diagnosis, weather forecasting, risk assessment and spam filtering (proving that BT has its limitations). In these areas it is comparatively successful because it relies on verifiable prior information. It can no doubt be applied to modern history in cases where the initial facts are known. In ancient history, however, it is much less useful because so many of the details are vague; and in cases where the sources are clearly biased, as in the Gospel accounts, BT is not a useful tool at all, especially as we have no useful alternative accounts of Jesus' activities from the period in question.[9]

Third, many scholars, including Craig[4], McGrew & McGrew[6] and O'Connell[7], appear to think that multiplying the statistical values for a proposition will produce the desired results, but McCullagh[2] again points out that distortions accrue from this procedure, producing some manifest absurdities. In discussing the reliability of the resurrection accounts Craig asks us to imagine five witnesses to the event, each of which is 99% reliable (99:100), with odds of 1% (1:100) against for each witness. He then multiplies the results for the probable unreliability for all five witnesses as follows: 0.01 × 0.01 × 0.01 × 0.01 × 0.01 = 0. 0000000001 – or odds of ten billion to one against the collective reliability of the witnesses. But here something does not quite match up. Let us suppose that instead of the witness's unreliability being just 1%, it is 50%. When we apply Craig's method to this revised figure and repeat the calculations, we get 0.5 × 0.5 × 0.5 × 0.5 × 0.5 = 0.03125. In other words, the unreliability factor diminishes with accumulation, which defies common sense.

In order to drive this point home, let us consider the flip side; for if each witness is 50% unreliable, s/he must be 50% reliable. Are we to believe that five 50% reliable witnesses must be collectively 6.25% less reliable (0.3125) than they were individually? Not only is this unlikely, it fatally flaws Craig's statistical argument for the reliability to Jesus' resurrection.

Jake O'Connell[7], comes to grief using the same process of multiplication. He divides the resurrection stories into separate pericopae, awarding each one odds of 100:1 or 10:1, depending on circumstances, in favour of the bodily resurrection of Jesus as opposed to any alternative hypothesis (~R), finally arriving at a figure of one quadrillion to one (1,000,000,000,000,000:1) – a figure of virtual certainty for R. The McGrews (2011: 630) adopt a more or less identical process, reaching the same inflated figure of probability – in excess of 0.9999 in their case.

Finally, returning to the McGrew's earlier point that the possibility of collusion could be regarded as actually strengthening the argument for the validity of the resurrection accounts, it seems that they may inadvertently be drawing parallels between this event and accounts of various alleged mass "sightings" much closer to our own time in which hundreds, or even thousands of onlookers claim to have witnessed visions of Jesus[25] or the Virgin Mary[26][27][28] over varying periods ranging from seconds to hours at a time. I shall return to this a little later, but first we need to consider the use of BT by sceptics who hope to show by means of it that the initial probability of a bodily resurrection is very low, thereby discrediting the approach taken by apologists like Craig and the McGrews.

3. The Sceptical Riposte

The use of BT by sceptics set on refuting arguments for bodily resurrection only serves to demonstrate the futility of using the method in cases of this kind where hard data are so difficult to obtain. In practice sceptic and apologist alike tend to resort to claim and counter-claim, simply applying whatever statistical values suit his/her respective case, each of which is underpinned by personal presuppositions. As McCullagh[12] has pointed out, bias is ever with us but should not be allowed to get the upper hand in hard-headed scholarship. Yet here it seems to do so. Some sceptics can be as vehement in using BT to argue their case against the historicity of the gospel accounts as some apologists are in arguing the opposite. Foremost among these is the late Michael Martin who conducted a fruitful, if inconclusive, discussion with Stephen Davis in the pages of the journal *Philo* [9][29][30][31][32], and affirmed his position in further publications[10]. He explains that his focus is on the prior probability of the resurrection which

ought to be established on the strongest evidence available. If this can be shown to be initially low, the prospects of R being enhanced by subsequent data will be slim because the kind of "history" enshrined in the New Testament texts is likely to be somewhat lacking in the light of the standards expected by modern historians. It is difficult, too, to imagine where such new data could be obtained, short of some astonishing archaeological discovery providing corroborating independent evidence for that in the canonical gospels.

Setting the bar for rationality at 0.5, Martin's aim is to show that the initial probability for the resurrection fails to clear the hurdle and must be considered irrational. He lists the reasons for his judgement as follows:

i. A miracle claim is initially improbable relative to our background knowledge [e.g. that a miracle, as traditionally conceived, is rare and would be incompatible with, say, the Standard Model in particle physics]
ii. If (i) is true, and the evidence for a miracle is not strong, it should be disregarded
iii. R is regarded as a miracle
iv. Evidence for R is not strong [e.g. it relies almost exclusively on data presented in the New Testament documents which are likely to fall well short of modern historical standards]
v. Hence, R should be disregarded.

Martin sets out his initial BT formula as follows[10]:

$$P(R \mid E \wedge T) = \frac{P(R|T)\ P(E|R \wedge T)}{P(R|T)\ P(E|R \wedge T) + P(\neg R|T)\ P(E|\neg R \wedge T)}$$

Of course, the crux comes with the application of statistical values to the formula, especially given that scholars on opposite sides of the divide are likely to supply figures that best suit their own respective position. The fact that these can only be guesstimates when applied to a topic as convoluted as the one under present consideration undermines all hope of reaching a consensus. By applying values of 0.1 to P(R|T), hence 0.9 to P(~R|T), and 0.2 to P(E|R&T), hence 0.8 to P(~E|R&T), Martin claims to calculate a final value for R of 0.36, which falls well below the 0.5 required for rational belief in R, a conclusion disputed by Davis – especially as there was apparently some confusion over the intended positioning of the decimal point in Martin's initial presentation.[31]

On Martin's sceptical position, Davis[31] comments: "... the case for the Resurrection of Jesus based on accounts in the New Testament is exceedingly strong – far stronger that any of the alternative theories ...

[or in Bayesian terms,] the probability of the overall evidence for any one of the alternative theories is exceedingly low."

However, this – along with some of Davis's other points – is somewhat trivial. No hypothesis, R included, has a high probability value on its own, so this tells us nothing significant. Why, then, should R fare any better than all the others? Davis's only response is that we need to apply the correct assumptions, namely those of Christian supernaturalism[31]. This is merely to restate the problem rather than solve it. He acknowledges that the question of miracles *per se* is a difficult nut to crack, yet he continues to maintain his belief in the miracle *par excellence* because it was "the free choice of an agent, viz., God"[31]. But surely the same must be said of all miracles in the traditional sense. His further argument that "the very infrequency of resurrections may actually *increase* the probability of the resurrection of Jesus" is a curious one, with a touch of sophistry about it, and is certainly not amenable to BT.

Although Davis labels himself as a "soft" apologist in contrast to, say, William Lane Craig or Gary Habermas, he still toes the party line when he applies BT to resurrection studies, claiming that only R has sufficient explanatory power to maintain a probability of at least 0.5, while all naturalistic hypotheses have "exceedingly low" probabilities. Perhaps it is this off-the-cuff assessment that convinces him they are not worth the trouble of a serious investigation. However, not all such theories carry the same weight. The view that Jesus had a twin brother who impersonated Jesus after his death or was mistaken for him by others[33][34] is admittedly highly improbable. So, too, the idea that Jesus was taken from the cross in an unconscious state, recovered in the cool of the tomb and escaped[35][36]. On the other hand, claims that individuals among the bereaved and guilt-ridden disciples hallucinated Jesus' presence[16][17][18], subsequently leading to delusional "sightings" among groups of believers[20][21] (1998) are not as far-fetched as Davis may imagine, and deserve serious investigation before they can be dismissed. I have examined elsewhere[37][38][39][40] this possibility on the basis of the relevant psychological literature[41][42][43][44][45].

Where does this discussion leave us? – I think at an impasse as far as BT is concerned. One reason that this method is unsuitable here (although ideally suited in many other fields) is that it cannot handle the kind of "history" presented in the Scriptures, in which Davis seems to place his full trust. Another is because the assignation of statistical values depends heavily on the presuppositions of the applicant. In this way it is easy for scholars like Martin and Davis to arrive at diametrically opposed results in support of their respective views.

4. If not Bayes' Theorem, then What?

The question arises, therefore: If BT is not helpful in the present context, what historical method is? Previously, I have engaged with scholars who have taken the Inference to the Best Explanation (IBE) approach[38], but here again it is not as clear to me as it is to Craig[4] and Licona[46] that the Resurrection Hypothesis (R) is streets ahead of the best of the natural alternatives such as the Hallucination Hypothesis (H) and/or the Collective Delusion Hypothesis (CD), and opponents like Colombetti and Cavin[47] present a decent case to the contrary.

For present purposes, however, I have decided to focus on an alternative historical method which seems not to have been much applied in the previous literature, namely that of historical analogy, which is based on the principle that we can, given certain limitations[48], learn from the past. Conversely, however, it is surely possible to apply our current science-based discoveries to shed light on some of the claims being made centuries ago and to see whether they still hold up to scrutiny. The New Testament affirms that, following Jesus' crucifixion, various of his followers, both singly (Luke 24: 34; John 20: 10–18; Acts 7: 56; 1 Cor. 9: 1; 15: 5–8; Gal. 1: 12, 16; Rev. 1: 10–16) and in groups (Matt. 28: 8–10, 16–20; Luke 24: 13–35, 36–53; John 20: 19–23, 24–29; 21: 1–14) "saw" Jesus alive, either as a bodily manifestation or in visionary form. How do these accounts square with contemporary reports by people who claim to have "seen" Jesus in modern times? And if it is possible to dismiss the latter as hallucinations or delusions, must we apply the same judgement to the biblical accounts?

Let me begin with the hallucination problem by affirming that hallucinations are psychological experiences restricted to the individual brain and devoid of any corresponding external stimuli. They are wholly personal and do not lend themselves to any shared experience, despite the occasional claim to the contrary[49][50][51],[11] nor are they restricted to those with clinical conditions such as schizophrenia or other mental defects; anyone can hallucinate[52][53][54][55]. Of those who do, some experience repeated hallucinations, while others may have just one in their lifetime. The forms taken by hallucinations, too, can be very diverse, ranging from mere shapes, patterns or colours to full-blown human images[56] that can sometimes be recognised by the percipients as acquaintances, including the deceased.

It is generally acknowledged that stress of various kinds, such as post-traumatic stress disorder (PTSD), can result in single or multi-modal hallucinations[52], but of special interest here are the many studies that have been done with regard to hallucinations among the bereaved[41][42][43][44][45], since there is a very real sense in which Jesus' disciples may have suffered bouts of PTSD (as we would call it) in the wake

of his sudden, unexpected death. It is not without interest that the first person to "see" Jesus subsequently was Peter (Luke 24: 34; 1 Cor. 15: 5) – the one disciple who had more reason than anyone else to feel the guilt of his abandonment of Jesus in his hour of need (Mark 14: 66–72).[12]

Surprising as it may seem, it is still the case that some people, when burdened with stress or guilt, claim to "see" Jesus. Take the following example witnessed by a courting couple while walking down a country lane:

Then a figure emerged, a most brilliant sight. We were both speechless, but not afraid, it was so beautiful. The figure, Jesus Christ, glided onto the centre of the road while we were on the rough pavement. … We could see the white gown with a broad, twisted girdle around his waist, knotted and falling down his left side. The figure glided along, but we could see no feet, and as it got nearer to us, we tried to make out his face features, but could not, and as it got level with us, it gradually faded away from the bottom of the gown up to the head[57].[13]

This description is fairly typical of other modern-day Christophanies in that it bears an uncanny resemblance to the Jesus depicted in Victorian picture books for children – long brown hair, kind face, blue eyes, white gown, and so on. It is the kind of image that inevitably rests on our age-old presuppositions – generally that of a normal human being with a few subtle details that suggest otherwise: "we could see no feet",[14] "it gradually faded away" – both descriptions more often associated with ghosts,[15] and remarkably similar to the accounts of the risen Jesus in Luke 24 and John 20–21.

Why would Jesus suddenly turn up in this seemingly idyllic situation? The woman telling the tale does not explicitly state that she and her fiancé perceived the figure simultaneously. What we are told, however, is that the couple were beset with worries. It was 1915 and the man was about to join the army and depart for the killing fields of France, making for a very uncertain future.[16] Perhaps it was this that induced the vision.

Phillip Wiebe's valuable study, *Visions of Jesus* [25] provides us with a mine of analysis based on twenty-eight individuals he interviewed personally, with a total of thirty-six visions to their name. Particularly helpful are the summary tables he includes in the appendices which tell us something about the social background of the percipients, as well as the nature of their experiences. In terms of formal education, 53.58% appear not to have progressed beyond high (secondary) school and may not have been familiar with the process of analysing mystical experiences. The most common reaction, in fact, was to impulsively identify the figure as Jesus. No description extended beyond the common presuppositions

about what he would look like if he appeared today. A wide range of religious affiliations was represented by the experients, but only 17.87% professed no affiliation at all. The essential features of Wiebe's survey can be distilled in the following table:

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a) **The Participants**			
i) Gender:	Male – 39.28%	Female – 60.72%	
ii) Age bands:	0–15 years	5.55%	
	16–30	44.44	
	31–50	38.90	
	51–70	8.33	
	71+	2.77	
iii) Presence of stress symptoms at time of experience:	51.05%		
b) **Mode of Experience**			
Ocular sighting only:	61.11%		
Sighting by another means:	2.77		
Auditory experience only:	2.77		
Both “seeing” and “hearing”:	30.55		
Uncertain:	2.77		
c) **Environment**			
	Normal: 69.45%	Altered: 30.55%	
	Percipient alone: 50%	With others: 50%	
d) **Form of Jesus’ Appearance**			
i) Traditional appearance?	Yes – 83.33%	No – 16.67%	
ii) Complete humanoid form?	Yes – 72.22%	No – 27.78%	
iii) Solid or transparent?	Yes – 86.11%	No – 8.33%	Uncertain – 5.56%
iv) Distinct facial features?	Yes – 72.22%	No – 27.78%	
v) Radiance?	Yes – 36.11%	No – 63.89%	

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vi) Moving or still?	Yes – 83.33%	No – 16.67%	

Table of Experiential Data

The extent of the diversity shown in this table speaks for itself, but it is worth reiterating that this generally suggests a good measure of subjectivity among the visionaries. Although a large majority thought they were encountering the Jesus who the original apostles are said to have encountered, the likelihood is that if they could have compared notes, their descriptions for the most part would not have tallied. Indeed, their individual descriptions in Wiebe's book confirm this. Half the visionaries testify that others were present in the room as the vision was occurring, but while some could observe the percipient's strange behaviour, no-one else shared the vision – a factor that is also suggested in the accounts of Paul's Damascus road experience. Radiance is a feature of some of the visions in the New Testament (Acts 9: 3; 22: 6; 26: 13; Rev. 1: 10–16), but it did not occur in the accounts of 63.89% of the contemporary visionaries. Most (83.33%) of the experiences recorded by Wiebe belong to people who were in early or mid-life adulthood at the time of their visions. Few were of pensionable age, and there was one eight-year-old child.

Applying the method of historical analogy here, there are just six cases in the New Testament where the risen Jesus appears to a single witness – to Peter (Luke 24: 34; 1 Cor. 15: 5), Mary Magdalene (John 20: 10–18), James (1 Cor. 15: 6), Paul (1 Cor. 9: 1; 15: 8; Gal. 1: 12, 16), Stephen (Acts 7: 56) and John (Rev. 1: 9–20). The last two of these are clearly visionary encounters, and regarding James there is insufficient data to invite comment. Admittedly, any analogy between ancient and modern in this case is tentative, and there is one vital difference. The disciples claimed to have seen someone they had known personally for around three years and would still have had a good recollection of his distinctive features in the period immediately following his crucifixion. On the other hand, this does not prove that they encountered him in the flesh. Peter may have thought he did, but by the time others saw him, they would already have had Peter's testimony in mind. None of Wiebe's correspondents knew what the original Jesus looked like and were probably influenced largely by traditional iconography.

The most remarkable of Wiebe's cases, and the only one to claim a collective sighting, is the final one in his collection (Case 28, pp. 77–82) in which an entire congregation of some fifty people on one occasion in

1954 and two hundred in 1959 supposedly observed Jesus' presence at their Pentecostal Holiness Church, Oakland, California. More striking still is the fact that, on the second occasion, one member of the congregation happened to have an 8mm cine camera with him and filmed the entire incident. Wiebe twice interviewed the pastor of the church, Kenneth Logie, in 1965 and again in 1991. During his first visit he was able to view the film for himself. The views of those who saw it were mixed, even among those who had been present on the evening in question. Some believed it to be genuine while others took it to be a clever hoax. Wiebe, taking a measured stance, agreed that the figure looked like the traditional conception of Jesus, but denied Logie's claim that his face could be clearly seen and also cast doubt on the figure's animation. This range of reaction indicates that a degree of suggestibility might have been at work – that people viewed these images according to their presuppositions. At his 1991 interview with Logie, Wiebe naturally wanted to view the film again but was told that it had been stolen from the pastor's apartment.

I will leave Wiebe to fill in the details of these events. Meanwhile there are one or two suggestive points that indicate they cannot simply be taken at face value. First, full account must be taken of the charismatic aura of the church, of which Wiebe provides a flavour:

> [The pastor] says that the church went through a period of extraordinary healings, exorcisms, prophetic insights, glossolalia, resuscitations, and so on. ... He reports an experience ... in which the roof of the church was bathed in visible but nonconsuming fire, causing the neighbors [sic] to call the fire department. He also reports that images and crosses, hearts and hands mysteriously appeared on the walls of the church [from which] flowed streams of liquid having the consistency of oil[25].

Here we have a curious mixture of Pentecostal charismata (Acts 2: 1–13) and other wonders that might have been suggested by these. It is surprising that neither the pastor nor anyone in his congregation produced any written account of these events[25]. It also seems suggestive that the less spiritually effusive denominations such as Methodist, United Reform, Quaker and Salvation Army, whose members are equally as faithful, rarely record charismatic episodes of this frequency and fervency.

A second point is that signs and wonders are easy enough to describe but not amenable to explanation, unlike the structure of the physical world which, in principle, is conducive to a complete explanation. Surely, it is incumbent upon the charismatic believer to concede that all events, including the "miraculous", may be explicable in principle.

Third, the importance of the film appears to cut in two directions. Apart from the fact that the visual quality was poor and probably contributed to the split reaction to it, presumably it was intended to convince doubters that Jesus was still alive and able to appear at will as the resurrection accounts suggest. If so, however, this would surely diminish the need for faith which takes pride of place in the Scriptures and is consistently commended by Jesus himself (Matt. 8: 10; 9: 2, 22, 29; 15: 28; 17: 29; 21: 21; Mark 4: 40; 5: 34, 36; 10: 52; 11: 22; Luke 7: 50; 17: 19; 18: 8; 22: 32, etc.).

Speaking analogically, it appears that, despite the obvious discrepancies of detail, there are certainly points of similarity between the events that occurred at Kenneth Logie's church and the Gospel accounts of Jesus' alleged post-resurrection appearances. In both cases, the most avid believers were the ones most likely to interpret the Christic visions as manifesting Jesus' real presence, either bodily or in spirit visually interpreted. The assumption in either case is that Jesus himself would have been conscious of being present at the time and in the place where his followers claim to have encountered him. On the other hand, "some doubted" (Matt. 28: 17) and were more circumspect about their experience. After all, there is a mountain of evidence now for the view that some people "see things" that simply are not there, or are misrepresentations of objects that are, not to mention those whose claims are fraudulent. In sum, historical analogy seems to suggest that whatever conclusions we draw in respect of Wiebe's Case 28, they are equally as applicable to the Gospel accounts of Jesus' post-resurrection appearances.

Our consideration of Wiebe's work draws us full circle back to BT which he applies to the problem in his own distinctive manner. He argues that if the New Testament data are considered sufficient on grounds of BT to suggest that R is highly probable, the data for the contemporary accounts which he presents can be deployed as confirmation on the same grounds[25]. Indeed, the inclusion of modern Christic visions alongside R renders the latter more probable than the New Testament evidence alone. Thus[17]:

$$T: \ P(R, N \wedge C) > P(R, N)$$

He then applies his values as follows[18]:

$$P(N, R \wedge C) \times P(R, C) > P(R, N) \times P(N, C)$$

$$1.0 \times 0.1 = 0.1 \ > \ 0.9 \times 0.11 = 0.099$$

It should be noted that these values refer only to the interplay of R, N and C – i) the claim that Jesus was raised, ii) the New Testament reports of the appearances and iii) the contemporary reports of Christic

visions – and have nothing to do with any comparison of R with alternative hypotheses such as H. That is why Wiebe can feel free to use values approaching certainty in some places.[19]

Clearly, Wiebe's chief interest in his use of BT relates to the claim that the contemporary Christic visions to which he had direct access through the percipients' testimonies counts as fresh evidence for R, thereby clarifying and strengthening its statistical probability. But Wiebe neglects to emphasise the wide diversity of the Christic visions when compared one with another as well as the obvious differences between each of these and the Gospel accounts of Jesus' post-resurrection appearances. He is simply not comparing like with like. A glance at the table above will show just how diverse the forms of the Christic visions are, and although all the seers identified their apparition with Jesus, the variety of their descriptions testifies to their subjectivity. The New Testament accounts, on the other hand, are much more homogenous. After all, the original witnesses testified to their experience on the grounds that they had known Jesus well and were in an ideal position to identify him from his facial and other features – despite the odd reservation (Matt. 28: 17; Luke 24: 16; John 20: 14; 21: 4). None of the Christic visionaries could boast these advantages. It can hardly be argued, then, that their testimonies are sufficient to enhance the probability of R taken on the strength of the New Testament accounts alone.

5. Conclusion

In this paper I have attempted to show that BT is inadequate to use as a tool for demonstrating the probability of Jesus' resurrection. Successful application of BT depends largely on the availability of highly reliable data with which to work and can help determine a set of statistically viable values to apply to the equations. These are grossly overestimated by Craig and the McGrews in their quest to underscore their apologetic presuppositions, while Michael Martin's attempt to do something similar in support of the sceptical position merely emphasises the subjective nature of the enterprise. Playing with figures, therefore, does not take us very far – except in circles, perhaps.

I have suggested as an alternative the method of historical analogy to see if this holds out any greater promise. Keulen[48] reminds us that this method is no magic bullet for our research, but it does allow us to compare the claims made for Jesus' resurrection with those of the visionaries examined in Wiebe's book. If the nature of past events is generally regarded as compatible with the nature of those in the present, as the principle of analogy appears to suggest, the question arises as to whether the "seeing" of Jesus two thousand years ago was a genuinely unique kind of seeing, or alternatively a mere sub-class of the Christic visions of the modern era. Perhaps it was simply the manner of story-telling that was

different. What we do know of the latter is that in cases where others were present, they seem not to have shared the seer's singular experience.

The one obvious exception among Wiebe's twenty-eight cases is the final one in which Jesus is said to have appeared on two separate occasions to Pastor Kenneth Logie and his congregation; but that, too, has it's modern counterparts – for example, the alleged appearances of the Virgin Mary over a three-year period to mass gatherings of Coptic Christians and Muslims at Zeitoun in Egypt. This, however, may well be a matter for the psychologist[58][59][60]. The suggestibility of crowds gathered for a single purpose is no figment and has frequently been noted[61][62].

The chief presupposition of the Christian apologist is that Jesus was a unique figure in history who, being divine, possessed qualities that no-one else had. On the strength of that view, it may be possible to believe that this extended to his ability to overcome death. If, however, we are prepared to take his humanity seriously we should be prepared to consider the alternative – that Jesus did die and that his followers, first singly and then in groups, began to experience visions of him and took this to mean that God had raised him from the tomb. One thing is for sure: on an analogical basis, the probability of R on the grounds of contemporary Christic visions alone is far less than the near-certainty touted by some apologists.

Footnotes

[1] The full argument takes some unravelling, so I shall restrict myself to the essential features here.

[2] That is to say: the probability of the various relevant facts supporting theism, given the resurrection, is far higher than the probability of the relevant facts given no resurrection, where 0 = absolute negative and 1 = absolute certainty on a scale of 0–1.

[3] Here the women's testimony should be restricted to the sightings (Matt. 28: 8–10; John 20: 10–18) rather than the empty tomb itself.

[4] Note that Paul never claimed his experience of the risen Jesus to be a physical one (contra the accounts of Jesus' appearances in Luke 24: 36–49 and John 20: 24–29), a fact that appears to be confirmed by Luke in Acts 9: 1–9; 22: 4–26; 26: 12–18.

[5] By "visionary experiences" I am referring to the experiences of an individual which could not be ratified by anyone else who happened to be present. None of Paul's companions on the road to Damascus "saw" the risen Christ. Indeed, there appears to be a contradiction between their hearing a sound but seeing

nothing according to one version (Acts 9: 7) and their seeing a light but hearing nothing according to another (Acts 22: 9). In Acts 26: 14, Paul is credited with saying "*We* all fell down," but that need only indicate that the companions sensed that something was going on in Paul's mind.

[6]I take this to mean that all biblical references to *secular* events in the story (e.g. the death of Herod Agrippa I in Acts 12: 20–23, which is corroborated in Josephus[63], *Antiquities* XIX. 343–50), should be treated on a par with accounts of secular history by competent historians generally. Of course, this does not necessarily imply that accounts of miraculous events with religious significance should be treated in the same way.

[7] In case we should think that the McGrews are a couple of lone wolves howling in the wilderness, it should be remembered that they are merely representative of others who assign very high probability values to R. Swinburne's final estimate of 100/103[8], for example, is remarkably close to that of the McGrews, while Jake O'Connell[7] devotes an entire book to reaching the same overwhelming conclusion.

[8] Admittedly, this judgement dates back over forty years.

[9]There are intriguing snippets, such as the famous comment by Tacitus[64] (*Annals* XV. 44) that "Christus … had undergone the death penalty, in the reign of Tiberius, by sentence of the procurator Pontius Pilate." This incidental comment is good evidence for the facts as revealed, but not for the Christian belief that Christ had been raised from the dead, for which Tacitus, and most Romans in the late first century had nothing but contempt, as the context of this comment makes clear.

[10] P(R|E&T) = probability of R, given background evidence and supernatural background theory; P(R|T) = probability of R, given supernatural background theory alone; P(E|R&T) = probability of evidence, given R and supernatural background theory; P(~R|T) = probability of an alternative hypothesis to R, given supernatural background theories; P(E|~R&T) = probability of evidence, given an alternative to R and supernatural background theory.

[11] In some cases, the discrepancy may be the result of a faulty definition of the term rather than a belief that hallucinations can be collective.

[12] True, they all forsook him in the Garden of Gethsemane (Mark 14: 50), but only Peter denied him.

[13] Strictly-speaking, this is a siting by two people rather than one, but in instances of this kind it is often the case that one person draws the other's attention to the phenomenon, perhaps by the power of suggestion.

[14] Traditionally, ghosts were supposed to lack feet and simply glided along.

[15] For a fascinating account of ghosts in antiquity, see D. Fenton, *Haunted Greece and Rome: Ghost Stories from Classical Antiquity* [65].

[16] In the event he survived the war, despite being gassed.

[7] That is to say: the testimony (T) to the probability (P) of the resurrection (R) on the grounds of the New Testament reports (N) and the Christic visions (C) is greater than the probability of the resurrection on the grounds of the New Testament alone.

[8] That is to say, the probability of N, given R&C × the probability of R, given C, is greater than the probability of R, given N × the probability of N, given C.

[19] Indeed, I would challenge Wiebe's use of the whole number for part of his equation [P(N,R&C)] because that *does* imply certainty which, of course, is not possible according to BT – a theory of *probability*. On this basis, suppose we were to reduce Wiebe's figure 1 to 0.9 and leave everything else intact, the final equation would be: 0.9 × 0.1 = 0.09 < 0.9 × 0.11 = 0.099, which would reverse the probability Wiebe is seeking. If a proposition is certain, it cannot be probable.

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