

AN APPLICATION OF BAYES'S THEOREM TO THE CASE FOR THE
HISTORICITY OF THE RESURRECTION OF JESUS

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BAYES'S THEOREM EXPLAINED

Thomas Bayes's theorem, in probability theory, is a rule for evaluating the conditional probability of two or more mutually exclusive and jointly exhaustive events. The conditional probability of an event is the probability of that event happening given that another event has already happened.¹ The theorem may be expressed as:

$$P(h|e\&k) = \frac{P(e|h\&k) P(h|k)}{P(e|k)}$$

What the solution [$P(h|e\&k)$] represents is the probability of the hypothesis in question is given the evidence and the background information. The numerator [$P(e|h\&k) P(h|k)$] is the probability of the product of evidence and background knowledge and the background knowledge alone. The denominator [$P(e|k)$] is the probability of the event with the evidence alone. Each factor involved is assigned a probability between 0 and 1 with 0 as impossible and 1 being completely certain.²

When this theorem is applied to the historicity of the resurrection of Jesus the hypothesis in question is that God raised Jesus from the dead. The evidence for the resurrection will be Gary Habermas' minimal facts approach. The background knowledge will be commonly accepted dates, the actual existence and crucifixion Jesus, the roles other persons played in the crucifixion, and the method of inquiry.

ASSESSING THE EVIDENCE

The task in assessing the evidence will help assign a probability value to the evidence needed for the theorem. There are five minimal facts that will be examined. The first fact is that

¹ Patrick J. Hurley, *Logic* (Belmont, CA: Thomson Wadsworth, 2008), 519.

² For an in depth look at Bayes' Theorem applied to arguments, particularly theistic arguments, see Richard Swinburne, *The Existence of God* (Oxford: Oxford University Press, 2004) 66-72.

Jesus died by crucifixion. Second, Jesus' disciples believed that he rose from the dead and appeared to them. Third, the church persecutor, Saul of Tarsus, was changed and believed in the resurrection of Jesus. Fourth, the skeptic James, brother of Jesus, was suddenly changed. The fifth line of evidence is that the tomb was empty after Jesus' death.³

Jesus Died by Crucifixion

When dealing with biblical texts they will only be presented as mere historical texts and not divinely inspired Scripture. The four gospels bear no synoptic problem in accounting for the occurrence of the resurrection. The resurrection of Jesus is reported in each gospel giving different perspectives on that event. It may be easy to dismiss this as giving too much credence to the claims of the resurrection since this is internal evidence; however, there are extra-biblical attestations to the historicity of Jesus death by crucifixion.

There are a number of non-Christian sources that claim the death of Jesus by crucifixion. The first century Jewish historian Josephus writes, "When Pilate, upon hearing him accused by men of the highest standings amongst us, had condemned him to be crucified."⁴ Tacitus, a Roman historian, stated, "Nero fastened the guilt [of the burning of Rome] and inflicted the most exquisite tortures on a class hated for their abominations, called Christians by the populace. Christus, from whom the name had its origin, suffered the extreme penalty during the reign of Tiberius at the hands of one of our procurators, Pontius Pilate."⁵ Though this does not explicitly

³ As outlined in Gary Habermas and Michael Licona's *The Case for the Resurrection of Jesus* (Grand Rapids, MI: Kregel, 2004), 48-80.

⁴ Josephus, *The Antiquities of the Jews* 18:64. There is another mentioning of Jesus, the *Testimonium Falvianum* (*Antiquities* 18:3), which was more particular to the resurrection. Though it is believed to be the case there is a textual account of Jesus being discussed there, it is highly speculated that early Christian copiers have interpolated the *Testimonium*. I give credence to the belief that much of it has been interpolated but I do believe that Jesus was mentioned in that particular section. I will exclude this from the line of evidence since it is too controversial.

cite crucifixion, it is reasonably inferred by the “most extreme penalty during the reign of Tiberius” since this would be commonly recognized as crucifixion. The Greek satirist, Lucian of Samosata, wrote, “The Christians, you know, worship a man to this day—the distinguished personage who introduced their novel rites, and was crucified on that account.”⁶ Mara bar Serapion, reported in a letter, “Or [what advantage came to] the Jews by the murder of their Wise King, seeing that from the very time their kingdom was driven away from them?”⁷ By testimony of both Christian and non-Christian sources, Jesus’ death by crucifixion is a historical fact.

Jesus’ Disciples Believed the Resurrection to be True

The disciples were not expecting the Christ and Messiah to be a spiritual Messiah, rather, they expected the Messiah to be a political Messiah redeeming indentured Israel from Roman captivity and rule. According to church tradition, eleven of the twelve disciples (later apostles) died for their belief in the resurrection of Jesus. What can account for such belief and fortitude? It would be unlikely that the disciples contrived the resurrection as a means of social, spiritual, or a political influence. All eleven died independently from each other and never retracted their belief. There are martyrs today but there would be no reasonable explanation for why the disciples would die for something *they knew* to be false and never retracted it, independent of each other’s influence, before their deaths. Paul accounted for the disciples’ belief in the resurrection in 1 Corinthians 15.9-11 and Galatians 2.1-10.

⁵ Tacitus, *Annals* 15:44.

⁶ Lucian of Samosata, *The Death of Peregrine* 11-13.

⁷ This document is currently at the British Museum, Syriac Manuscript, Additional 14,658. The translation is from Logos Protestant Edition of the early church fathers, A. Roberts, J. Donaldson, and A.C. Coxe, eds. and trans., *The Ante-Nicene Fathers: Translations of the Writings of the Fathers Down to A.D. 325* (Oak Harbor, OR: Logos Research Systems, 1997). As cited by Habermas and Licona, *The Case for the Resurrection*, 257.

Apostolic Fathers acknowledged the resurrection. Clement of Rome (AD 30-100) wrote to the Corinthian church, “Therefore, having received orders and complete certainty caused by the resurrection of our Lord Jesus Christ and believing in the Word of God, they went with the Holy Spirit’s certainty, preaching the good news that the kingdom of God is about to come.”⁸ Polycarp mentions the resurrection five times in his letter to the church in Philippi.⁹ The contemporary biblical critic and skeptic, Bart Ehrman concedes: “We can say with some confidence that some of his disciples claimed to have seen [postmortem] Jesus alive.”¹⁰

The Testimony of Paul

The pre-Christian Paul, Saul of Tarsus, was a respected Pharisee who had persecuted the church. He had been on hearings and had been a factor in determining the death of Christians. He had a testimony to the Galatians as “He who once persecuted us is now preaching the faith he once tried to destroy,” verifying that others either knew or had heard of his pre-Christian actions against the church. Paul’s own testimony is given by Luke’s record in Acts, and a story that was circulating among Christians in Galatia (Gal. 1.22-23).¹¹ What is important to note in Paul’s conversion is that his belief was based on the initial primary evidence available to him.

The Testimony of the Skeptic James

The gospels report that Jesus had at least four brothers, James, Joseph, Judas, and Simon, plus unnamed sisters.¹² Josephus, the Jewish historian, mentions “the brother of Jesus who was

⁸ First Clement 42:3.

⁹ Polycarp, *To the Philippians* 1:2; 2:1-2; 9:2; 12:2

¹⁰ Bart Ehrman, *Jesus: Apocalyptic Prophet of the New Millennium* (Oxford: Oxford University Press, 1999), 200.

¹¹ Habermas and Licona, *The Case for the Resurrection*, 65.

called the who called the Christ, whose name was James.”¹³ There is evidence to suggest that James, and Jesus’ other brothers, were not believers during Jesus’ ministry (Mk. 3.21, 31; 6.3-4; Jn. 7.5). The ancient creedal material in 1 Corinthians 15.3-7 lists an appearance of the risen Jesus to James: “then he appeared to James.” Subsequent to the alleged event of Jesus’ resurrection, James is identified as a leader of the Jerusalem church (Acts 15.12-21; Gal. 1.19). Finally, not only did James convert to Christianity, his beliefs in Jesus and his resurrection were so strong that he died as a martyr because of them. Josephus, Hegesippus, and Clement of Alexandria attest James’ martyrdom. These Hegesippus and Clement of Alexandria testimonies are cited by Eusebius, since the works no longer exist, thus, there is both Christian and non-Christian attestation.¹⁴

The Empty Tomb

This is the most disputed of the five minimal facts being that, according to Gary Habermas, 75 percent of scholars on the subject accept the empty tomb as historical fact.¹⁵ If the tomb had not been empty, once the claims of a resurrection took place, all that the skeptics would need to do would be to go to the tomb and produce the corpse. It is unlikely that that the tomb’s location was unknown since it was the tomb of an esteemed Jew, Joseph of Arimathea.

If early Christians were to create an account of the discovery of the empty tomb, they would not have done so by the testimony of women since a woman’s testimony was unreliable

¹² Mt. 13.55-56 and Mk. 6.3. That Jesus had brothers is well attested, being recorded in all four gospels and some of the earliest writings in the New Testament: Mt. 12.46-50; Mk. 3.31-35; Lk. 8.19-21; Jn. 2.12; 7.3, 5, 10; Acts 1.13-14; 1 Cor. 9.5; Gal. 1.19. As cited by Habermas and Licona, *The Case for the Resurrection*, 67.

¹³ Josephus, *Antiquities* 20:200.

¹⁴ Habermas and Licona, *The Case for the Resurrection*, 68.

¹⁵ Habermas has counted a total of twenty-three arguments for an empty tomb posited by a number of critical scholars from 1975-2002. *Ibid.*, 70, 287.

and inadmissible.¹⁶ It would be more probable that if the account were created, then they would have used accepted testimony for the initial discovery of the tomb.

Not only are there Christian testimonies of the empty tomb, but enemy attestation as well. Jesus' enemies admitted it as well. Rather than pointing to an unoccupied tomb, early critics accused Jesus' disciples of stealing the body (Mt. 28.12-13; Justin Martyr, *Trypho* 108; Tertullian, *De Spectaculis* 30). There would have been no need for an attempt to account for a missing body, if the body had still been in the tomb.¹⁷ William Wand, Oxford church historian, writes concerning the empty tomb: "All the strictly historical evidence we have is in favor [of the empty tomb], and those scholars who reject it ought to recognize that they do so on some other ground than that of scientific history."¹⁸

ASSESSING THE BACKGROUND KNOWLEDGE

There will be a few assumptions, which will account for the aggregate background information. The existence and roles of the Jewish Sanhedrin, the disciples of Jesus, and Pontius Pilate will all be assumed and genuine historical facts. The assumption of the existence of Jesus and the methodological inquiry will be examined and then assigned a probability value.

The Existence of Jesus

Much of the evidence for the existence of Jesus has already been presented as evidence for his death. There are many texts, a few already cited, that warrant the existence of Jesus by Christian, Jewish, and secular sources. There is a recent uninterpolated version of the *Testimonium* that will be used as evidence for the mere existence of Jesus.

¹⁶ See Talmud, Sotah 19a. Talmud, Kiddushin 82b. Josephus, *Antiquities* 4.8.15. Talmud, Rosh Hashannah 1.8.

¹⁷ Habermas and Licona, *The Case for the Resurrection*, 71.

¹⁸ William Wand, *Christianity: A Historical Religion?* (Valley Forge, PA: Judson, 1972), 93-94.

At this time there was a wise man called Jesus, and his conduct was good, and he was known to be virtuous. Many people among the Jews and the other nations became his disciples. Pilate condemned him to be crucified and to die. But those who had become his disciples did not abandon his discipleship. They reported that he had appeared to them three days after his crucifixion and that he was alive. Accordingly, he was perhaps the Messiah, concerning whom the prophets have reported wonders. And the tribe of the Christians, so named after him, has not disappeared to this day.¹⁹

To deny the existence of Jesus would be to deny the reliability of many commonly accepted historical-inquiry methodologies. To either generalize the sources as incorrect and unreliable altogether would eliminate what is currently accepted as historical fact. Additionally, it would seem too *ad hoc* to deny each particular instance as being unreliable and inadmissible.

Methodological Naturalism

Methodological naturalism suggests that the only acceptable explanation for scientific inquiries is that of natural explanation. Since the universe is a closed system, the only cause and effects or that that adhere to the natural course of events within physics.²⁰ Any introduction of an external or unknown and unfamiliar cause, as Bart Ehrman argues, should not be permissible since that causation cannot be accessed. However, it should not be the case that when causation cannot be experienced or observed, like that of experiencing and observing supernatural causation, physicists make these inferences regularly. Physicists posit all sort of entities to which they have no direct access: strings, higher dimensional membranes, and even the

¹⁹ This rendition of the *Testimonium* is cited in Paul L. Maier's "Did Jesus Really Exist?," in *Evidence for God*, eds. William Dembski and Michael Licona (Grand Rapids, MI: Baker, 2010), 145.

²⁰ This would include quantum physics. The quanta particles behaving in anomalous ways do not constitute a miracle, and so anomalies would be included in a methodological naturalistic inquiry, which, in some cases, are hypothesized to be states of quantum irregularities. However, it would be important to note that if we live in a multiverse, a popular model from within the scientific community, then supernatural causation would not and could not be dismissed since the multiverse is an open system allowing for *any* external causal events to occur.

multiverse and parallel universes. They postulate such entities as the best explanation for the evidence to which they do have access.²¹

It should be noted that the *type* of scientific inquiry being used to investigate the plausibility of the resurrection would be that of an Augustinian science as opposed to a Duhemian science. Augustinian science permits and carries open metaphysical presuppositions with science. Duhemian science strips science of all metaphysical imports. The modest methodology is simply the introduction of agent causation, namely God raising Jesus from the dead. However, this is not as controversial as much as the scientific community makes it out to be. Agency is publically accepted evidence by experience, the controversy is identifying who the agent in question is.

ASSESSING THE PROBABILITY OF THE RESURRECTION

Given the above information, to fill in the probabilities needed to apply Bayes' Theorem, each individual probability needs to be assigned a value. $P(h|e&k)$, the probability that the facts and background information would be there given the hypothesis, will be assigned a 0.8 (given the provided information alone), if the hypothesis is true, the evidence and background knowledge is expected. Now the probability of the hypothesis given the background information alone, $P(h|k)$, will have a value of 0.2. Given common sense, the laws of nature, and the roles individuals played in Jesus' execution, it is highly improbable that Jesus be raised from the dead. If the universe is closed, it would be near impossible, a 0.1 perhaps; however, credence will be given to the multiverse hypothesis given methodological naturalism functioning in an open system, so that boosts the probability to 0.2. Now the denominator, $P(e|k)$, the probability of finding the evidence if the resurrection did not happen, must be assigned a value. What will be

²¹ William Lane Craig, *Reasonable Faith ed. 3* (Wheaton, IL: Crossway, 2008), 352.

considered as influencing factors will be primarily the disciples' belief and the testimony of James. What would be included in the background information is the messianic prophecies that are interpreted as non-political, it could have been the case that they believed in a resurrection, namely, a spiritual resurrection and they came to adopt this. Additionally, the disciples' beliefs may have pressured Jesus' brother James to convert, though that remains a small chance.

Recognizing a spiritual resurrection, they steal the body since that is the earliest testimony for why the tomb was empty. This can bear some type of probability, but it does not bear much. This will be assigned a 0.3 value conceding the possibility that there is a functioning orchestration of naturalistic accounts.

Now that there are individual probabilities, they can now be inserted into the theorem. The numerator is $P(h|e\&k) P(h|k)$, which would be 0.8 multiplied by 0.2 giving a value of 0.16. The denominator is already assigned as 0.3. Next, 0.8 must be subtracted from 1, which is 0.2. This number must then be multiplied by the denominator, 0.3, which is 0.06. The numerator is then added to 0.06, which produces a sum of 0.22. Now the final numerator and denominator are given as .16 over .22, which yields a 0.72. Thus, with Bayes' Theorem applied to the historicity of the resurrection, there is a 72 percent likelihood that the resurrection happened.

BIBLIOGRAPHY

- Craig, William Lane. *Reasonable Faith ed. 3*. Wheaton, IL: Crossway, 2008.
- Ehrman, Bart. *Jesus: Apocalyptic Prophet of the New Millennium*. Oxford: Oxford University Press, 1999.
- Habermas, Gary; Licona, Michael. *The Case for the Resurrection of Jesus*. Grand Rapids, MI: Kregel, 2004.
- Hurley, Patrick J. *Logic*. Belmont, CA: Thomson Wadsworth, 2008.
- Maier, Paul L. "Did Jesus Really Exist?," in *Evidence for God*, eds. William Dembski and Michael Licona. Grand Rapids, MI: Baker, 2010.
- Wand, William. *Christianity: A Historical Religion?* Valley Forge, PA: Judson, 1972.