

IS GOD A RULE-CONSEQUENTIALIST? BAYESIAN AND TOTAL PROBABILITY ARGUMENTS

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Abstract. If rule-consequentialism is a sound moral theory, then it would be known as such by an omniscient being. Moreover, if such a being was also omnibenevolent, then they would want to promote rule-consequentialist morality in human society. Such a being would be divine and, through the lenses of the three Abrahamic religions, also omnipotent. In this paper, I consider the attitude of such a being to rule-consequentialism in human society. I argue, from a probabilistic perspective, that the evidence of Abrahamic scripture confirms, to a degree, that God, as revealed in this scripture, would judge rule-consequentialism to be a sound moral theory in different societies. I also consider a similar argument from a secular perspective.

This paper is a probabilistic analysis in which I employ conditional probability in the form of likelihoods, and for such likelihoods to be well defined,¹ there are auxiliary assumptions that must be accounted for.²

There are explicit assumptions within the enigmatic title itself that first need to be addressed. The most glaring is the assumption that God exists; consequently, my total probability analysis accounts for a possible atheist's response to the question. Nevertheless, I do make the assumption that God, if He exists, possesses, *inter alia*, the attributes of omnipotence, omniscience and omnibenevolence. These are the primary divine attributes adopted by the three Abrahamic religions of Judaism, Christianity and Islam. The debate concerning the attributes of God is well-rehearsed.³ However, these attributes, and the title of this paper, make an anthropomorphic assumption concerning the nature and divine strategy of God. Grace Jantzen (1984) sums up the difficulty:

Even if the theological artist believes that his inspiration is divine, revealed from heaven, he must still portray it as best he can out of the paint box of human language and concepts: he has no other. [Jantzen, 1984, 1]

The justification of anthropomorphism is an extensive topic beyond the scope of this paper. However, it is an assumption in the following analysis, and the justification of anthropomorphic theism can be found elsewhere.⁴

There are other auxiliary assumptions that affect the probabilistic relationship in the conditional probability functions employed below and I will address these as they arise.

1 A likelihood is a conditional probability function of the form $\Pr(e|h \ \& \ k)$; where, in this case, the probability of the evidence *e* is conditional on the proposition *h* and background knowledge *k* which include auxiliary assumptions that create a well-defined probabilistic relationship between *h* and *e*.

2 The auxiliary assumption requirement is associated with the Duhem–Quine thesis. The thesis is a combination of Pierre Duhem's 1904/5 thesis and Willard Van Orman Quine's 1951 article "Two Dogmas of Empiricism". [Quine W. Van O. (1961), pp.20–46] In short, it is impossible to test a scientific hypothesis in isolation. It requires several background assumptions termed auxiliary assumptions or bundles of hypotheses. Also, Sober E. (2008), p.168

3 For example, Hoffman J. and Rosenkrantz G. S. (2002).

4 James E. O. (1950), Ch.IV; Schoen E. (1990); Forrest P. (2011). For some early concerns of the problem of anthropomorphic theism see: Freeman K. (1971); Aquinas T. St. [1265/74] (1991), questions 3–11; Kant E. [1738] (2004), 3rd part, sec. 57–58, pp.107–110. For some alternative secular explanations see: Hume D. [1757] (2010), Sec.III, p.8 and Guthrie S. (1993), Ch.7

I. RULE-CONSEQUENTIALISM

The teleological moral theory of rule-consequentialism is based upon the notion that what makes human action morally right or wrong is underpinned by adopted societal rules such as *do not murder, do not steal, help others in distress, support your family*. These rules are holistically orientated for the benefit of a society rather than individual members of it. Hence, rules emerge in a society because of their positive consequences for the well-being of that society.⁵

What is crucial to rule-consequentialism is not simply compliance with the rules by members of a society, but adoption and acceptance of the rules. Even a rule-breaker can accept the rules as right despite infringing them from time to time. Moreover, the moral framework of the rules provides a sense of security and well-being to the society.⁶ Thus, what counts as morally right or wrong behaviour by individual members of a society is correspondence or lack of it between an individual's behaviour and the adopted rules.

Moral rules, often tacitly adopted, develop over large tracts of time and can emerge and disappear and even re-emerge depending upon their consequences for that society. Hence, different societies can differ on peripheral rules such as *do not engage in homosexuality*, but are compatible with the more fundamental rules such as *do not murder*. Also, current rules can conflict with historical contexts, sometimes leading to the hermeneutic fallacy of morally judging historical events through the lens of current adopted rules. Rules combine in certain circumstances to guide action; for example, *help others in distress* with *protect personal welfare*, where the latter acts as a limiter on the help provided. Indeed, we tend to combine many relevant rules when attempting to arrive at the *right thing to do* in a particular context, and there is also consequential synergy in this concatenation of social rules.

Human action and its moral value through acceptance rather than compliance with societal rules, implies more than just an awareness of the rules; it implies a choice to accept the rules and to act in line or out of line with them. In this way moral responsibility is justifiably placed on the individual for the consequences of their choices in this regard. This is not to judge the consequences of the act itself as with act-consequentialism, but to appraise its correspondence with adopted societal rules.

There are other teleological ethical theories such as rule-utilitarianism and act-consequentialism with adherers and critics, but they are beyond the scope of this paper.⁷

The attributes of God, justified religious anthropomorphism and rule-consequentialism as a warranted moral theory are the primary auxiliary assumptions in this probabilistic analysis, but there are others that follow, and I address these as they arise.

II. SUBJECTIVE PROBABILITY

A probabilistic method to assess a rational degree of belief in a proposition based upon evidence is that of subjective probability, and its veracity is another auxiliary assumption of this analysis. Subjective probability is a form of epistemic probability which comprises two theories:⁸ the logical theory and the subjective theory. The former is a case of partial entailment where, if a proposition p partially entails a proposition q then we should believe q to the same degree as we believe p .⁹ However, the logical theory is problematic as, although it complies with the axioms of probability, it relies upon the Principle of Indifference, a principle that leads to several paradoxes.¹⁰ The subjective theory is based upon the per-

5 Hooker B. (1990), pp.67–77.

6 Kagan S. (2000), p139.

7 Chappell T. D. (1993) for a critique of divine utilitarianism and Parfit D. (1987), 1:10, pp.24–28 for a critique of act-consequentialism.

8 Epistemic probability contrasts with objective probability of which there are two theories: frequency theory — Von Mises (1919) and propensity theory — Karl Popper (1959).

9 Keynes J. M. (1996), p.56.

10 Gillies D. (2003), p.37ff.

sonal credence someone gives to the chance of an event occurring. Warranted credence is expressed as a *rational* degree of belief in a proposition given the evidence. Such warrant means that one's credence is coherent, and in this context coherence is derived from the act of placing a bet, and defined in terms of avoiding a Dutch-book bet.¹¹ This is where odds are set by the bookmaker to win more money than the better, even if the better wins. A Dutch-book is avoided by coherence with the axioms of probability.¹² Like logical probability credence is expressed as a numerical value between 0 and 1 on the probability continuum.

II.1 Subjective Bayesianism

A useful probabilistic tool in rationally assessing whether some evidence provides justifiable credence in accepting a proposition to a certain degree is that of Bayes theorem.¹³ If the evidence does provide such additional credence over that prior to consideration of the evidence, it is said to confirm the proposition; if does the opposite, it is said to disconfirm it. The theorem is expressed as follows:

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

and can be reformulated, in its comparative form, e.g. h v's $\neg h$ using a likelihood ratio as follows:

$$\Pr(h|e \& k) = \frac{\lambda \times \Pr(h|k)}{[\lambda \times \Pr(h|k)] + [1 - \Pr(h|k)]} = \Pr(h|k)^{\text{NEW}}$$

Where, the likelihood ratio $\lambda = \frac{\Pr(e|h \& k)}{\Pr(e|\neg h \& k)}$

This reformulation of Bayes theorem is useful when used with subjective probability, as the probability of the evidence on background knowledge $\Pr(e|k)$ can be eliminated. Also, likelihood ratios are much easier to assess subjectively than likelihood values, although the prior degree of belief in the proposition $\Pr(h|k)$ still has to be allocated a value.

$\Pr(h|k)$ is the prior degree of belief in proposition h , prior that is to consideration of the evidence e . $\Pr(h|e \& k)$ or $\Pr(h|k)^{\text{NEW}}$ is the posterior degree of belief in the proposition h ; that is, the new degree of belief that would be formed if the person *conditionalized* on the evidence e with respect to h .¹⁴ k is background knowledge, which includes auxiliary assumptions referred to above. The proposition h of interest in this analysis is:

*God knows that rule-consequentialism is the best moral practice in the social world of fallible free-willed persons*¹⁵

11 Coherence, as defined, was proposed almost simultaneously by Frank Ramsey (1926) and Bruno De Finette (1930).

12 The axioms most widely accepted are the Kolmogorov axioms; Kolmogorov A. N. (1933). Donald Gillies demonstrates that subjective probability is both necessary and sufficient for the axioms of probability: Gillies D. (2003), pp.59–64.

13 It was the Reverend Thomas Bayes of Tunbridge Wells (1702–1761) who stated the theorem, although it was his colleague Richard Price who first presented it to the Royal Society in 1763 after Bayes' death. Bayes' theorem can be derived from the definition of conditional probability: Howson C. & Urbach P. (1991), p.26f.

14 Revising one's degree of belief in light of the evidence is termed Bayesian conditionalization and can only be expected to occur if the evidence is actual rather than hypothesised.

15 I have included free will in proposition h , as it can be argued that moral responsibility presupposes its existence. It is an additional auxiliary assumption in this analysis that is beyond the scope of this paper; List C. (2019) for a positive view on its existence.

Its negation $\neg h$ is:

God does not know that rule-consequentialism is the best explanation of moral practice in the social world of fallible free-willed persons.

However, because of the divine omniscience condition, if God does not know that *rule-consequentialism is the best moral practice in the social world of fallible free-willed persons* then, God knows this proposition is false. Thus, $\neg h$, in this context states:

God knows that rule-consequentialism is NOT the best moral practice in the social world of fallible free-willed persons.

The evidence e is:

The three Abrahamic religions apply rule-consequentialism in their religious doctrines.

II.2 Equivalence

Assuming that God exists and is omniscient, if rule-consequentialism is the best moral theory in our world, then God will know that and, if it is not, He will know that instead. Thus, variation in a person's degree of belief that rule-consequentialism is the best moral theory in our world will match their prior degree of belief in the proposition that God knows it is the best moral theory in our world. Thus, $\Pr(r|k) = \Pr(h|k)$ where:

$\Pr(r|k)$ means a degree of belief that *rule-consequentialism is the best moral practice in the social world of fallible free-willed persons* and,

$\Pr(h|k)$ means a degree of belief that *God knows that rule-consequentialism is the best moral practice in the social world of fallible free-willed persons.*

This of course, presupposes God exists, for without this auxiliary assumption there would be no probabilistic equivalence. Indeed, an atheist would have a very low degree of belief that God knows anything.

For the following Bayesian analysis I adopt the auxiliary assumption *God exists*, which of course, would need justification. This is a widely discussed topic though beyond the scope of this paper.¹⁶

II.3 Belief in Rule-consequentialism

I have argued that rule-consequentialism is a sound moral theory in the human social context and as such, I hold a high degree of belief in the veracity of it. However, the ethics debate rages on, and not all would agree with my position. Given differences of opinion concerning rule-consequentialism, $\Pr(h|k)$ could be allocated 0.5 on the basis of the Principle of Indifference of logical probability. However, because of the paradoxes associated with the Principle, I turn to subjective probability; in this case intersubjective probability, albeit somewhat vicariously. Thus, I would still set $\Pr(h|k) = 0.5$. This is an *evens* betting position on the likely consensus of a group of moral theorists.¹⁷

II.4 The Likelihood Ratio

λ is the value of the likelihood ratio $\Pr(e|h \ \& \ k)/\Pr(e|\neg h \ \& \ k)$ and if it is greater than 1, then $\Pr(e|h \ \& \ k) > \Pr(e|\neg h \ \& \ k)$. Granted this, the evidence would probabilistically confirm h , and $\Pr(h|e \ \& \ k)$ [or $\Pr(h|k)^{NEW}$] $> \Pr(h|k)$; i.e. confirmation — the greater the value of λ over 1, the greater the confirmation. However, if $\lambda = 1$, then $\Pr(e|h \ \& \ k) = \Pr(e|\neg h \ \& \ k)$ and $\Pr(h|e \ \& \ k)$ [or $\Pr(h|k)^{NEW}$] $= \Pr(h|k)$ and there is neither confirmation nor disconfirmation. If, on the other hand, $\lambda < 1$, then $\Pr(e|h \ \& \ k) < \Pr(e|\neg h \ \& \ k)$

¹⁶ The doyen of the probabilistic approach to this topic being Richard Swinburne (2004).

¹⁷ Intersubjective probability involves a group reaching a consensus by discourse. Like subjective probability, it too is commensurable with the axioms of probability. I am making a vicarious subjective judgement upon a likely consensus with such a group. Gillies (2003), pp.169–175 for an introduction to intersubjective probability and Hunt W. (2017), pp.47–53 on vicarious probability.

and $\Pr(h|e \& k)$ [or $\Pr(h|k)^{NEW}$] $< \Pr(h|k)$; i.e. disconfirmation, and the evidence would probabilistically disconfirm h . The less the value of λ than 1, the greater the disconfirmation.

Subjectively, I would argue that $\Pr(e|h \& k) > \Pr(e|\neg h \& k)$ and as such λ would be greater than 1. The auxiliary assumption underpinning this assessment is that, if God exists and is a rule-consequentialist as so defined (h), then I believe we would see more evidence of rule-consequentialism in the scriptures of the Abrahamic religions than if God were not a rule-consequentialist as so defined ($\neg h$).

I select the Abrahamic religions — Judaism, Christianity and Islam — as opposed to world religions generally. This does limit the scope of the analysis, but with over 4000 religions in the world, an all-inclusive analysis would be a formidable task. Moreover, the omni-predicates of the Abrahamic religions, that are central to this analysis, do not apply to all religions; Hinduism is an example.

II.5 Revelation

It could be argued that the instantiation of rule-consequentialism in scripture is due to factors other than divine revelation. However, assuming the theistic proposition *God exists*, it would be reasonable to assume divine connectivity with His created people through religious experience, prophets and incarnation. With such connectivity it would be fair to assume that the mind of God is reflected in different religious scripture. Therefore, rule-consequentialism is more likely to be evidenced in scripture if God is a rule-consequentialist as so defined (h) than if He is not ($\neg h$). Nevertheless, there could be other causal influences that result in the appearance of rule-consequentialism in scripture, but that influence would be the same for $\Pr(e|\neg h \& k)$ as for $\Pr(e|h \& k)$ with such possible influences represented in background knowledge k . Therefore, these probabilistic influences would cancel out in the ratio. Thus, it would be still reasonable to assume that $\Pr(e|h \& k) > \Pr(e|\neg h \& k)$ given the auxiliary assumption of divine connectivity.

II.6 Priors

Even if one's degree of belief rises on the basis of the evidence, if the prior degree of belief in the veracity of divine approbation towards rule-consequentialism [$\Pr(h|k)$] is low, then unless there is substantial confirmation, so will be the posterior degree of belief in God being a rule-consequentialist as so defined. Thus, any increase in one's degree of belief due to scriptural evidence (confirmation) may not be enough to make $\Pr(h|k)^{NEW} \geq 0.5$ in which case disbelief in proposition h will remain.

II.7 A Possible Valuation

Let:

$Pr(h|k) = 0.5$ (on the basis of a vicarious intersubjective *evens* bet referred to above)

$\lambda = 2$ (this would be a reasonable ratio value given the auxiliary assumption *God exists*)

From Bayes theorem:

$$Pr(h|e \& k) = \frac{\lambda \times Pr(h|k)}{[\lambda \times Pr(h|k)] + [1 - Pr(h|k)]} = Pr(h|k)^{NEW}$$

$$Pr(h|e \& k) = \frac{2 \times 0.5}{[2 \times 0.5] + [1 - 0.5]} = 0.67$$

Assuming Bayesian-conditionalization occurs then $Pr(h|k)^{NEW} = 0.67$, that is, confirmation of the proposition *h* on the evidence *e* and background knowledge *k*.

II.8 Conditionalization

Bayesian conditionalization, that is the actual adoption of the posterior degree of belief $Pr(h|k)^{NEW}$, commonly results upon discovery of the actual existence of the assumed evidence employed in the theorem.

II.9 The Evidence

I have selected eight modern fundamental societal rules and, according to the three Abrahamic religions, these rules appear in some form in scripture. Judaism (Torah) and Islam (Qur'an) have many rules; 613 in Judaism and 99 in Islam. Christian scripture (Bible) is less formally rule-based than Judaism and Islam, but nevertheless there are a fair number of 'do not's' and 'dos' and certainly there are references to all the eight rules selected. Moreover, there are many references to these rules spread throughout all three scriptures, but I have only referenced one for each rule. All three of the religions promote these rules as morally correct and supportive of their particular religious societies and their members:

Rule	Judaism	Christianity	Islam
Do not murder	Ex. 20:13	Matt.5:21	4.92/93
Do not steal	Lev. 19:11	Mark10:19	5:38
Support your family	Ex. 20:12	Matt.19:18	17.23/24
Foster freedom	Lev.25:55	2Cor.3:17	2:256
Help others in distress	Lev.19:16	Matt.9:29	4:36
Obey the law	Deut. 17:11	Rom.13:1-2	4:59
Do not lie	Ex. 20:16	Mark 10:19	2:42
Don't harm others	Ex. 21:19-27	Luke10:27	49:10

From the above, Bayesian conditionalization may well occur. However, much depends upon the comparative coherency of rule-consequentialism compared to alternative moral theories that may be more in line with God's moral standard. Nevertheless, scriptural evidence points to a rule-based ethic, and if scripture reflects God's will, then *inter alia*, it is to scripture we should turn. Indeed, scripture together with the divine attributes may reveal God's moral standard when attempting to compare rule-based ethical theories.

Granted the theistic proposition *God exists*, Tim Chappell (1993) rules out rule-utilitarianism on logical grounds, leaving rule-deontology as an alternative.

II.10 Rule-deontology

The scriptural rules above could be taken as deontological rather than teleological; that is, moral rules that command obedience as one's duty, and that are right in themselves irrespective of any good consequences.¹⁸ It could also be argued, that such rules are proclaimed as a divine command,¹⁹ although this may be incompatible with free will theodicies.²⁰

The divine attribute of omnibenevolence would favour a teleological rather than deontological moral perspective. That is, in circumstances where adherence to a rule would result in more evil than if the rule were ignored — counterfactual examples of this in moral philosophy are plentiful. Also, there are many examples in scripture where God breaches the scriptural rules, ostensibly for a greater good — a teleological objective.²¹ For example, drowning the pursuing Egyptians in the Red Sea, and there are many other examples: Joshua 11; Leviticus 26:14–39; Sûrah VIII:12; Sûrah V:33; Acts 5; Revelation 2:18–23. Moreover, deontological rules tend to be negative in nature; a set of *do-nots*, whereas many of the scriptural rules are positive in nature. For example, *foster freedom*, although this could take a negative genre — *do not restrict freedom*. However, slight changes in meaning from negative to positive can eliminate the intentionality of breaching deontological prohibition. For example, *do not restrict freedom* is not the same as *foster freedom*. A breach of the former would be intentional, whereas a breach of the latter may not be. Likewise, *tell the truth* is not the same as *do not lie*.²² Thus, placing a lens on moral theory, the deontologist employs a convex lens — focused, narrow and exclusionary, whereas the teleologist employs a concave lens — broad, encompassing and inclusionary.²³ Such broadness within rule-consequentialism is summed-up by Brad Hooker “[a] set of desires, dispositions, and rules which are such that everyone’s having them would bring about the best overall consequences as the *optimific* set.” [Hooker, 1990, 67] In fact, one only has to consider the parables of Jesus to appreciate the broad scope of Christian biblical morality. Likewise in Judaism and Islam; for example, Leviticus 19, Talmud: Gittin 59b, Sûrah III:110 and in particular the notion of *mašlahā* in *shari’ah*. Indeed, it could be argued that what makes the breach of deontological rules wrong is, in fact, a breach of commonly held societal rules.

Given this, I believe there is adequate evidence to Bayesian conditionalize in support of rule-consequentialism. Not all would agree, preferring a different ethic²⁴ — this is to be expected given the complexity of the ethics debate. Moreover, some philosophers have argued for a mixed ethic — a polyphony that I find appealing, but that is beyond the scope of this paper.²⁵

III. TOTAL PROBABILITY

The above analysis assumes the existence of God, but the atheist’s degree of belief in the divine rule-consequentialist proposition *h* would be very low because their degree of belief in the existence of God is low. With any variation in this theistic belief the analysis should account for this through a probabilistic network procedure. The most common network is a Bayesian network, which is an interrelated graphical model that describes how propositions are interrelated by probabilities. Judea Pearl (1985) championed Bayesian networking; however, with Bayesian networking the propositions must be probabilistically independent and the probability of the theistic proposition *God exists* $\Pr(G|k)$ and the probability of scriptural evidence $\Pr(e|k)$ are not. The alternative network engaging all functions (*G*, *e* and *h*) is a total probability network. This remedies the independence issue, but the prior probability of the existence of

18 Thomas Nagel provides a list of such rules: Nagel T. (1986), p.176.

19 Hare J. E. (2015).

20 Hunt. W. (2021), Chs.10 & 11 also Hare J. E. (2015), p.49ff, 56, 157–166, 203–212.

21 Indeed, defence against the problem of evil is primarily teleological: *Ibid*, Chs.4, 5 & 6.

22 Fried C. (1978), p.9f.

23 Nagel T. (1986), p.177.

24 See Harris M. J. (2008/9) for example.

25 For example, Derek Parfit’s Triple Theory: Parfit D. (2013), Vol.1, pp.411–417.

God first needs to be defined (low for the atheist and high for the theist) together with the confirming and disconfirming strength of the evidence. Total probability in this context can be expressed as:

$\Pr(h) = \Pr(h|e \& G)\Pr(e|G)\Pr(G) + \Pr(h|\neg e \& G)\Pr(\neg e|G)\Pr(G)$ with k left out for purposes of clarity only.

This can be demonstrated as follows :

1. Any conditional probability function of the form $\Pr(h|\neg G)$ and $\Pr(h|p \& \neg G)$ where p is any proposition, is zero. This is because proposition h includes *God knows...* and if God does not exist, then *God does not know...*
2. From the Theorem of Total Probability: $\Pr(h) = \Pr(h|G)\Pr(G) + \Pr(h|\neg G)\Pr(\neg G)$
3. From 1: $\Pr(h|\neg G)\Pr(\neg G) = 0$
4. From 2 & 3: $\Pr(h) = \Pr(h|G)\Pr(G)$
5. From the Theorem of Total Probability:
 $\Pr(h|G) = \Pr(h|e \& G)\Pr(e|G) + \Pr(h|\neg e \& G)\Pr(\neg e|G)$
6. From 4 & 5: $\Pr(h) = \Pr(h|e \& G)\Pr(e|G)\Pr(G) + \Pr(h|\neg e \& G)\Pr(\neg e|G)\Pr(G)$

Below is a possible subjective probability analysis using total probability from the hypothetical intersubjective perspective of a theist, an agnostic and an atheist.

III.1 Subjective Values

The following subjective values are the necessary ones for the calculation (k is left out for purposes of clarity only). They are what I believe to be expected values for what a theist, agnostic and atheist would ascribe to the functions. Nevertheless, it is a subjective assessment by the author, and the reader may prefer different values.

$\Pr(h|k)^{\text{PRIOR}} = 0.5$ [theist]; 0.3 [agnostic]; 0.1 [atheist]

Assumptions: These are the prior degree of beliefs in h of the hypothetical theist, agnostic and atheist.

To reiterate, in this scenario $\Pr(h|k) \neq \Pr(r|k)$ where r is the personal degree of belief in rule-consequentialism. This is because, in this function, God is not assumed to exist as an auxiliary assumption. The atheist is very low because there are two related beliefs involved with h — God's existence and His positive view towards rule-consequentialism. For the atheist this combination would drive down the prior degree of belief in h . Likewise, for the agnostic and theist but to a lesser extent.

$\Pr(h|e \& G \& k) = 0.8$

Assumptions: This is a high value as God is assumed to exist in this function and so is the rule-type scriptural evidence. Granted the omni-predicates, particularly omnibenevolence, it would be reasonable to assume a divine/human connectivity if God exists. Such connectivity can be through personal religious experience and prophetic divine communication. Indeed, scripture is often claimed to be the result of divine guidance. Thus, given the assumed existence of God and rule-type scripture in this function, the auxiliary assumption of divine connectivity is well-defined. I have also assumed, that given God's existence in the function and the scriptural evidence, an intersubjective consensus between the theist, agnostic and atheist would result in this evaluation.

$\Pr(e|G \& k) = 0.7$ and $\Pr(\neg e|G \& k) = 0.3$

Assumptions: $\Pr(e|G \ \& \ k)$ is high as we would quite likely see the scriptural evidence if God exists, which is assumed in this function, due to divine connectivity with His created people — an auxiliary assumption. Again the above intersubjective conjecture applies and $\Pr(\neg e|G \ \& \ k)$ follows from the axioms.

$$\Pr(G|k) = 0.75 \text{ [theist]}; 0.5 \text{ [agnostic]}; 0.25 \text{ [atheist]}$$

Assumption: These values result from dividing the probability continuum into four quarters: (0 — 0.25 — 0.5 — 0.75 — 1). However, these values are indicative approximations. Indeed, they are likely to be higher if all the evidence confirming and disconfirming G is accounted for. Notwithstanding, I have adopted the above modes for this analysis.

$$\Pr(h|\neg e \ \& \ G \ \& \ k) = 0.6$$

Assumptions: This value is high as rule-consequentialism operates in society yielding beneficial societal results and an omnibenevolent being, assumed to exist in this function, would want a moral society. Again, the above intersubjective assumption applies.

Inserting the values above into the total probability formula the value for $\Pr(h)^{NEW}$ for the theist, agnostic and atheist would be as follows:

Theist

$$\Pr(h)^{NEW} = (0.80 \cdot 0.70 \cdot 0.75) + (0.60 \cdot 0.30 \cdot 0.75) = 0.56$$

Agnostic

$$\Pr(h)^{NEW} = (0.80 \cdot 0.70 \cdot 0.50) + (0.60 \cdot 0.30 \cdot 0.50) = 0.37$$

Atheist

$$\Pr(h)^{NEW} = (0.80 \cdot 0.70 \cdot 0.25) + (0.60 \cdot 0.30 \cdot 0.25) = 0.19$$

Comparing the three $\Pr(h)^{NEW}$ values with the three $\Pr(h)^{PRIOR}$ values, it can be seen that in all three cases confirmation occurs. However, it is only in the case of the theist that their new or posterior degree of belief in h is greater than 0.5 — more likely than not.

IV. A SECULAR ARGUMENT FROM SCRIPTURE

It could be argued that the Abrahamic religions have, to some extent, provided moral rules through scripture which have proved their worth over time in terms of the positive consequences for different societies. This could be because they were divinely inspired as I argue above, or, taking a secular perspective, it could be that the rules were formulated by the prophets and religious leaders of the time and adopted by society because they proved their worth in practice.

Taking a Bayesian approach to this possibility, the evidential proposition from above is:

A: The three Abrahamic religions apply rule-consequentialism in their religious doctrines.

Likewise, the secular rule-consequentialist proposition is:

r: rule-consequentialism is the best moral practice in the social world of fallible free-willed persons.

From a subjective probability approach, I would argue the following:

$$\lambda = \frac{\Pr(A|r \ \& \ k)}{\Pr(A|\neg r \ \& \ k)} > 1$$

Given that the likelihood ratio is greater than 1, then $\Pr(r|A \& k) > \Pr(r|k)$; i.e. confirmation. The reason for this evaluation is that if a rule-based moral system did not prove effective in terms of positive consequences for society as whole, then the prophets and religious leaders would have been less likely to have promoted it. It could be argued that moral rules were promoted by leaders and prophets for reasons of public control and self-grandiosity. However, although these factors, contained within background knowledge k , could well be contributory, they are the same for the nominator and denominator of the ratio and therefore cancel out. Nevertheless, if a moral system is effective in terms of positive consequences for society as a whole, then that system is more likely to be promoted than another. Consequently, I would set $\lambda = 2$ and, as above, $\Pr(r|k) = 0.5$; i.e. just as likely as not. Therefore, from Bayes theorem:

$$\Pr(r|A \& k) = \frac{\lambda \times \Pr(r|k)}{[\lambda \times \Pr(r|k)] + [1 - \Pr(r|k)]} = \Pr(r|k)^{\text{NEW}}$$

$$\Pr(r|A \& k) = \frac{2 \times 0.5}{[2 \times 0.5] + [1 - 0.5]} = 0.67$$

This is a substantial confirmation, and with regard to Bayesian conditionalization, it could be argued that inter alia, the leaders and prophets of the time appreciated the explanatory force of rule-consequentialism, and were partly responsible for societal rules appearing in scripture. This is the evidence A which is corroborated in the scripture references above. Thus Bayesian conditionalization on $\Pr(r|k)^{\text{NEW}}$ is expected, and the veracity of rule-consequentialism from scripture vindicated to a degree.

V. CONCLUSION

In this paper I presented three probabilistic analyses. The first, a Bayesian argument where the theistic proposition *God exists* was assumed to be true. The second, a total probability argument where three different degrees of belief in the theistic proposition were considered. The third was a Bayesian secular argument where the theistic proposition was not involved.

In the case of the two Bayesian arguments, probabilistic confirmation resulted, with the posterior degree of belief in rule-consequentialism being > 0.5 (more likely than not). The first argument concerned a subjective view of God's knowledge about the veracity of rule-consequentialism and the second concerned a secular subjective view of the veracity of rule-consequentialism, with both arguments based upon the evidence of Abrahamic scripture.

More interesting, was the total probability argument from the perspectives of a hypothetical theist, atheist and agnostic. With all three levels of conviction, confirmation occurred, but only in the case of the theist did the posterior value reach a level greater than 0.5 (more likely than not). Both the atheist and agnostic reached a posterior value less than 0.5 (unlikely).

Based upon these results, I conclude that when the theistic proposition is injected into the argument, scriptural evidence only supports rule-consequentialism when either the theistic proposition is assumed true or believed to be true to a high degree. When the theistic proposition is removed from the argument, then scriptural evidence supports the veracity of rule-consequentialism, as would all societal moral-rule-based evidence, religious or secular.

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