

PRIMA FACIE EVIDENCE

Philosophers, scientists and scholars sometimes appeal to the notion of *prima facie* evidence in their writing. Thus in philosophical discussions of religion it is claimed that evil is *prima facie* evidence against the existence of God, in medical contexts it is said that red spots on the face are *prima facie* evidence for measles and in detective stories the detective maintains that someone's robust health is *prima facie* evidence that he has not been poisoned.

The question that arises is whether the notion of *prima facie* evidence can be given a clear meaning. I will argue that the notion of *prima facie* evidence lends itself to straightforward analysis whether it is found in religious, medical or other contexts.

I

According to the dictionary¹ "*prima facie* evidence" is a phrase used in law and refers to evidence that would, if uncontested, establish a fact or raise a presumption of a fact. The dictionary definition is wrong or at least misleading in some respects.

Prima facie evidence is not simply a legal term; although it may have been used originally as such it now has wider application. More important, the definition wrongly suggests that what may be contested is the evidence itself. but this is usually not the case. Consider the claim that evil is *prima facie* evidence for the non-existence of God. What is usually contested is not the existence of evil but the bearing of evil on the claim that God does not exist. This suggests that what may be contested is not the evidence itself; but other assumptions that must be made in order to show that the evidence has bearing on the hypothesis at issue. In the case of evil the assumptions that are usually made are that this is not the best of all possible worlds and that God does not have good moral reason for allowing evil.

But pointing out the importance of contextual assumptions for the analysis of *prima facie* evidence does not completely capture the concept. Suppose Inspector Parker claims that Jones' robust health is *prima facie* evidence for Jones not being poisoned since Jones' robust health is evidence for Jones not being poisoned

unless the assumptions that Jones had no antidote or that Jones did not have his stomach pumped are rebutted.

Parker's claim would be misleading if it were reasonable to accept that Jones could not have had an antidote and could not have had his stomach pumped. For if it were reasonable to accept these as facts, then Jones' health would have been evidence, not just *prima facie* evidence, for his not being poisoned. Conversely if it were reasonable to accept that Jones had his stomach pumped, Jones' robust health would be neither *prima facie* evidence nor evidence that he had not been poisoned.

The analysis of *prima facie* evidence must appeal to other assumptions made in the context and these other assumptions must have a certain epistemic status: it must not be reasonable to accept them. Further inquiry may show that these assumptions are reasonable to accept in which case the *prima facie* evidence becomes evidence. On the other hand it may be shown that the falsehood of the assumption is reasonable to accept in which case the claim of *prima facie* evidence must be dropped.

II

The next step in the analysis of *prima facie* evidence is to formalize some of the ideas sketched above. I will first define a "strict sense" of *prima facie* evidence against a hypothesis. Two basic concepts or primitive notions will be used: "inconsistency" and "reasonable to accept". Let *e* be the *prima facie* evidence, *h* the hypothesis, *a* the assumption made in the context.

Definition I

e is *prima facie* evidence against *h* relative to *a* \equiv

- (1) *e* and *h* are not inconsistent
- (2) *a* and *h* are not inconsistent
- (3) *e* and *a* and *h* are inconsistent
- (4) It is reasonable to accept *e*
- (5) It is not reasonable to accept *a*
- (6) It is not reasonable to accept $\sim a$

The analysis seems to apply well in certain cases; for example, in the claim that evil is *prima facie* evidence against the existence of God. The following seems to form an inconsistent set of premises:

- (i) God, an all good, all powerful being, exists.
- (ii) Evil exists.
- (iii) This is not the best of all possible worlds
- (iv) There are no good moral reasons for allowing evil.

Consequently condition (3) is fulfilled. However, (i) and (ii) is not an inconsistent conjunction and (i), (iii), and (iv) is not an inconsistent conjunction. Hence, conditions (1) and (2) are fulfilled. Furthermore, as the debate usually develops, it is reasonable to accept (ii). Consequently, condition (4) is fulfilled. Initially, (iii) and (iv) are not accepted assumptions in the discussion; subsequent discussion tries to refute and establish one or the other. Hence, conditions (5) and (6) are fulfilled.

Although Definition (1) works well in many cases it can not be a complete analysis of the notion of *prima facie* evidence. At best it applies to cases where the evidence, assumptions and hypothesis stand in some strict logical relation. But this is not always the case as one can see from the following example.

Suppose someone claimed that a sample of 1000 patients vaccinated with no dangerous side effects is *prima facie* evidence against the hypothesis *h* that the vaccine has dangerous side effects. Let us suppose that the contestable assumption *a* in the context is the representative nature of the sample and that at the present stage of inquiry it is not reasonable to suppose either that the sample is representative or that it is not representative. But it is clear that *e* and *a* and *h* are not an inconsistent set of premises. Consequently, Definition I, the strict sense of *prima facie* evidence, does not apply; the analysis needs to be broadened.

Let us assume that *e* is the *prima facie* evidence, *b* the background evidence and theories, *a* the contextual assumption and *h* the hypothesis. We will introduce the primitive notion $\text{Prob}(x, y)$. Thus $\text{Prob}(a, b)$ will be the probability of *a* given *b*; $\text{Prob}(h, e \& b)$ will be the probability of *h*, given *e* & *b* and so on. Thus we can define *prima facie* evidence.

Definition II

e is *prima facie* evidence against *h* relative to *a* and *b* \equiv

- (1) $\text{Prob}(h, e \& b) = \text{Prob}(h, b)$
- (2) $\text{Prob}(h, a \& b) = \text{Prob}(h, b)$

- (3) $\text{Prob}(h, e \ \& \ a \ \& \ b) < \text{Prob}(h, b)$
- (4) It is reasonable to accept e
- (5) It is not reasonable to accept a
- (6) It is not reasonable to accept $\sim a$

III

There may be one problem with the above analysis (I say "may" because I believe that people's pre-systematic judgements may vary over this point.)

In both Definition (I) and Definition (II) *prima facie* evidence e against h is compatible with the epistemic status of a and $\sim a$ being symmetrical and this may seem counter-intuitive to some people. For example, if there is no more reason to suppose that a is true than to suppose that $\sim a$ is true how can e be *prima facie* evidence against h relative to a ? Thus in the case of evil and the non-existence of God it might be said that evil would not be *prima facie* evidence against God unless there is some presumption that this was not the best of all possible worlds. Christian apologists need not refute (6) in the above definition; rather they must rebut this presumption.

I am not completely persuaded by this consideration but I am persuaded enough to recognize that an added condition may be needed to satisfy some people's intuitions. I would suggest then that for people persuaded by the last point the following condition be added to both definitions:

- (7) $\text{Prob}(a, b) < \text{Prob}(\sim a, b)$

It should be noted that adding this condition is not inconsistent with either condition (5) or (6) in Definition (I) or Definition (II). It may not be reasonable to accept a and yet it may still be the case that, relative to background information b , a is more reasonable or more highly confirmed supposition than $\sim a$.

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