

The need for Bayesianism

“Epistemic pluralism”: “a persistent state of disagreement about empirical facts”

What is Bayesian reasoning?

"If there be two subsequent events, the probability of the second b/N and the probability of both together P/N , and it being first discovered that the second event has also happened, from hence I guess that the first event has also happened, the probability I am right is P/b ."

What is Bayesian reasoning?

$$P(B | A) = \frac{P(A \cap B)}{P(A)}, \text{ if } P(A) \neq 0,$$

$$\Rightarrow P(A | B) = \frac{P(B | A) P(A)}{P(B)}, \text{ if } P(B) \neq 0.$$

Newman on “facts” and the mind

- WE are in a world of facts, and we use them; for there is nothing else to use. We do not quarrel with them, but we take them as they are, and avail ourselves of what they can do for us. It would be out of place to demand of fire, water, earth, and air their credentials, so to say, for acting upon us, or ministering to us. We call them elements, and turn them to account, and make the most of them. We speculate on them at our leisure. But what we are still less able to doubt about or annul, at our leisure or not, is that which is at once their counterpart and their witness, I mean, ourselves. We are conscious of the objects of external nature, and we reflect and act upon them, and this consciousness, reflection, and action we call our rationality. And as we use the (so called) elements without first criticizing what we have no command over, so is it much more unmeaning in us to criticize or find fault with our own nature, which is nothing else than we ourselves, instead of using it according to the use of which it ordinarily admits. Our being, with its faculties, mind and body, is a fact not admitting of question, all things being of necessity referred to it, not it to other things. (“Grammar of Assent”, ch. 9)
- “facts are chiefls that winna ding and downa be disputed” (Burns)
- “Logic is loose at both ends”

Newman on the “psychology” of certainty

- Certitude is a mental state: certainty is a quality of propositions. Those propositions I call certain, which are such that I am certain of them. Certitude is not a passive impression made upon the mind from without, by argumentative compulsion, but in all concrete questions (nay, even in abstract, for though the reasoning is abstract, the mind which judges of it is concrete) it is an active recognition of propositions as true, such as it is the duty of each individual himself to exercise at the bidding of reason, and, when reason forbids, to withhold. And reason never bids us be certain except on an absolute proof; and such a proof can never be furnished to us by the logic of words, for as certitude is of the mind, so is the act of inference which leads to it. Every one who reasons, is his own centre; and no expedient for attaining a common measure of minds can reverse this truth;—but then the question follows, is there any *criterion* of the accuracy of an inference, such as may be our warrant that certitude is rightly elicited in favour of the proposition inferred, since our warrant cannot, as I have said, be scientific? I have already said that the sole and final judgment on the validity of an inference in concrete matter is committed to the personal action of the ratiocinative faculty, the perfection or virtue of which I have called the Illative Sense, a use of the word "sense" parallel to our use of it in "good sense," "common sense," a "sense of beauty," &c.;—and I own I do not see any way to go farther than this in answer to the question. (“Grammar of Assent”, ch. 9)