

THE BURDEN OF PROOF, THE PARADOX OF THE RAVENS, AND THE SEVERITY OF TESTS

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Some logical relationships between the argument based on the burden of proof, the Paradox of the Ravens, the concept of relevant evidence, negative induction, severity of tests, refutation and corroboration shall be explicated.

Chuang Tzu (IV century B.C.) seems to use the argument from the burden of proof. To justify his thesis **T**, he invited his interlocutor to justify the contrary thesis not-**T**. If not-**T** remained unjustified, he regarded **T** as justified.

It is evident that such a challenge to justify the contrary cannot be generally used. Otherwise, in the case of equipollence concerning some proposition p , we would have to admit that p and not- p both were justified. In any particular case, an explanation is required of why the challenge to prove the contrary can be legitimately thrown.

Moreover, the reversed burden of proof tends to encourage epistemic laziness and render irrelevant evidence as relevant evidence — a situation quite similar to the Paradox of the Ravens.

As a solution, one might suggest that any proposition p is justified (or it is rational to hold that p), if, despite severe attempts, the contrary proposition not- p has remained unjustified. However, the notion of “severity” has to be made precise, and the Paradox of the Ravens remains to be solved.

The generalizations “All A s are B ” shall be handled not as material implications, but as conditionals: “For every x , IF Ax , THEN Bx ,” — not saying anything about those x that are not A . Correspondingly, the instance $\sim Aa \ \& \ Ba$ is regarded as evidentially irrelevant. Only observing A s or observing not- B s can be regarded as serious attempts to refute the generalization.

Such background knowledge K is logically possible, which is natural and sufficiently strong to make the instances like $\sim Aa \ \& \ \sim Ba$ irrelevant, while K still does not amount to the solution of the problem of induction.

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