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### On Severity, the Weight of Evidence, and the Relationship Between the Two

According to the severe tester, one is justified in declaring to have evidence in support of a hypothesis just in case the hypothesis in question has passed a severe test, one that it would be very unlikely to pass so well if the hypothesis were false. Deborah Mayo (2018) calls this the *strong severity principle*. The Bayesian, however, *can* declare to have evidence for a hypothesis despite not having done anything to test it severely. The core reason for this has to do with the (infamous) *likelihood principle*, whose violation is not an option for anyone who subscribes to the Bayesian paradigm. Although the Bayesian is largely unmoved by the incompatibility between the *strong severity principle* and the *likelihood principle*, I will argue that the Bayesian's never-ending quest to account for yet *an other* notion, one that is often attributed to Keynes (1921) and that is usually referred to as the *weight of evidence*, betrays the Bayesian's confidence in the likelihood principle after all. Indeed, I will argue that the *weight of evidence* and *severity* may be thought of as two (very different) sides of the same coin: they are two unrelated notions, but what brings them together is the fact that they both make trouble for the likelihood principle, a principle at the core of Bayesian inference. I will relate this conclusion to current debates on how to best conceptualise uncertainty by the IPCC in particular. I will argue that failure to *fully* grasp the limitations of an epistemology that envisions the role of probability to be that of quantifying the degree of belief to assign to a hypothesis given the available evidence can be (and has been) detrimental to an adequate communication of uncertainty.