

**Round-trip fallacy**: the confusion of absence of evidence of Black Swans (or something else) for evidence of absence of Black Swans (or

And as I've said, we can commit a *logical mistake in reality but not in the classroom*. This asymmetry is best visible in cancer detection. Take doctors examining a patient for signs of cancer; tests are typically done on patients who want to know if they are cured or if there is "recurrence." (In fact, recurrence is a misnomer; it simply means that the treatment did not kill all the cancerous cells and that these undetected malignant cells have started to multiply out of control.) It is not feasible, in the

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present state of technology, to examine every single one of the patient's cells to see if all of them are nonmalignant, so the doctor takes a sample by scanning the body with as much precision as possible. Then she makes an assumption about what she did not see. I was once taken aback when a doctor told me after a routine cancer checkup, "Stop worrying, we have evidence of cure." "Why?" I asked. "There is evidence of *no* cancer" was the reply. "How do you know?" I asked. He replied, "The scan is negative." Yet he went around calling himself doctor!