Epistemic integrity of the research process

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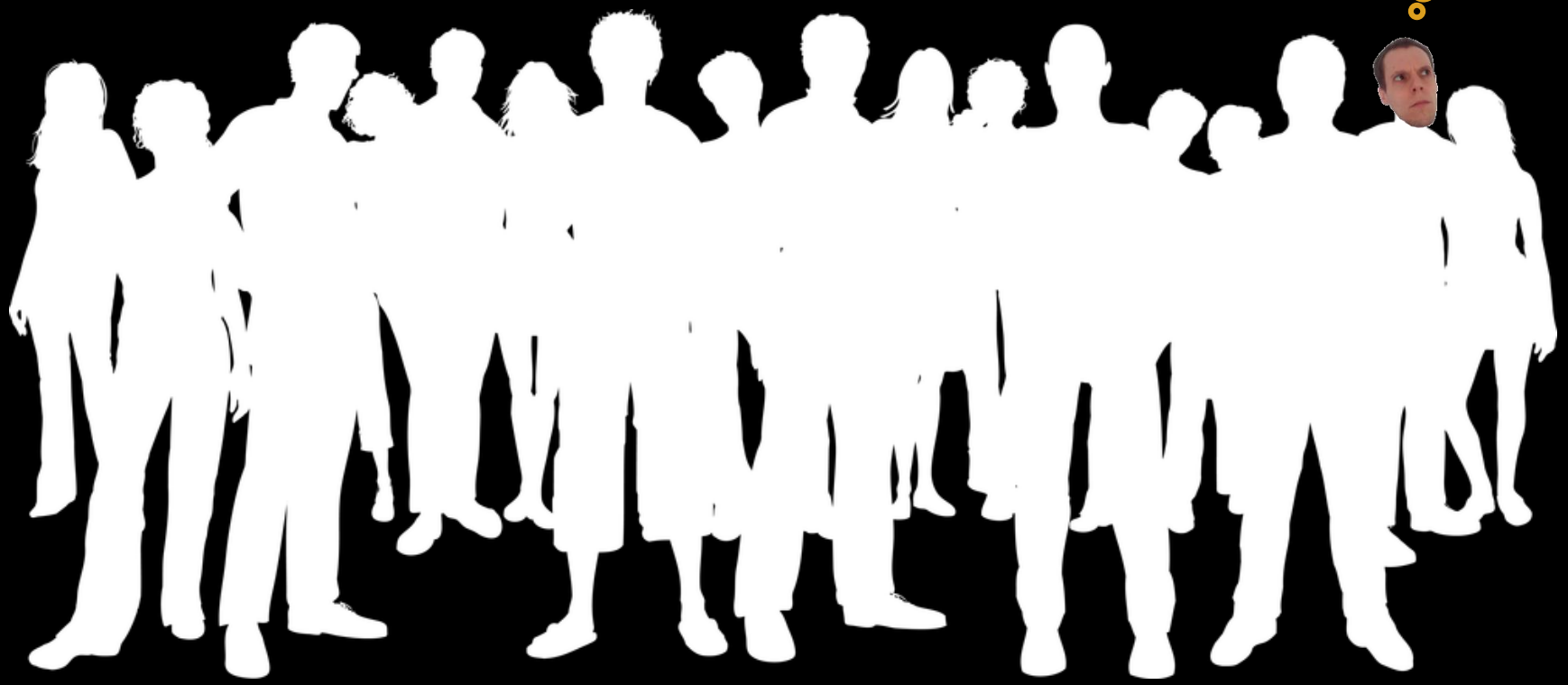
5th World Conference on Research Integrity

Scientific integrity is important!



FOUR KINDS OF SCIENTIFIC INTEGRITY

	Ethical	**Epistemological**
Agents	Moral integrity of scientists and their institutions	Epistemic integrity of scientists and their institutions
Behavior	Moral integrity of the research process	Epistemic integrity of the research process

DEFINITION

- Epistemic standards $=_{df}$ norms that are justified on the basis of the goal to obtain reliable knowledge.
- Non-epistemic standards $=_{df}$ norms that are *not* justified on the basis of the goal to obtain reliable knowledge, but only on other, non-epistemic grounds.

The degree of epistemic integrity of the research process $=_{df}$ the degree to which the research process lives up to the epistemic standards that the audience can legitimately assume to be met in the research process.

- "The study population should be randomly divided into a group taking drug d_1 and a group taking drug d_2."
- "One should include enough subjects in the research process that the difference between the two groups is statistically significant ($p<.05$)."
- …

- "One should get informed consent from research subjects."
- "One should not kill animals in research."
- …

DEFINITION

The assumption that research process *p* meets standard *s* is legitimate for audience *a* if and only if:

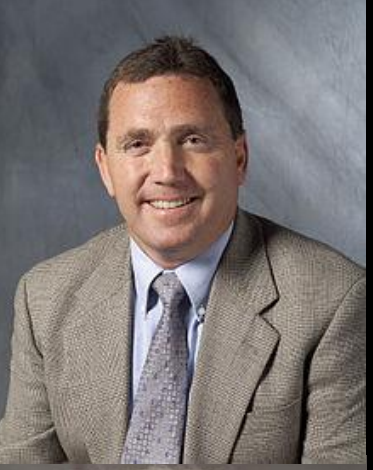
(1) those involved in the research process report or imply to *a* that *p* meets *s*, or

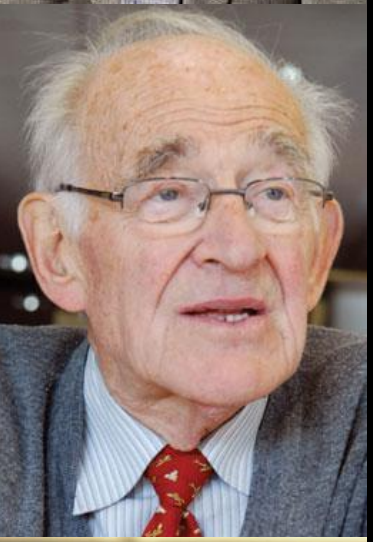
(2) there is a common standard that the relevant legitimate audience and those involved in the research process do not (clearly) report to *a* that *p* does not meet *s*.

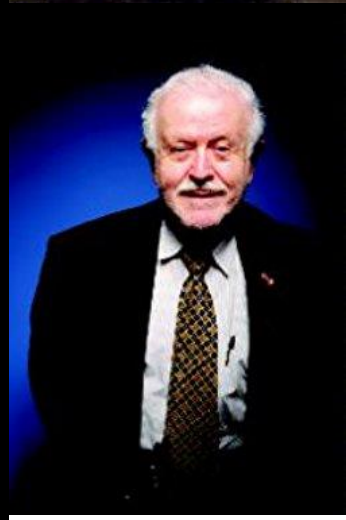
The degree of epistemic integrity of the research process

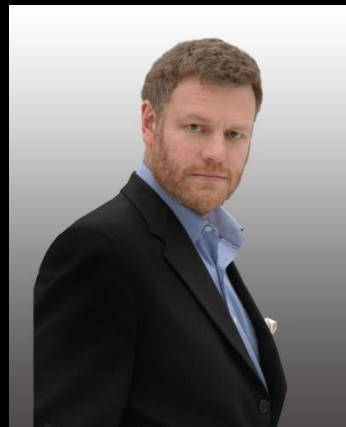
$=_{df}$ the degree to which the research process lives up to the epistemic standards that the relevant legitimately assumed to be met in the research process.

Note: different assumptions can be legitimate for different audiences.









Global warming is caused by humans.

You are lying!

No, we're not lying!

Yes, you are.

No, we're not.

My dad can kick your dad's ass.

ATE DEBATE

vs. ske

What happened?

- Santer removed certain passages as a response to reviewers' comments.

Criticism on the IPCC's Second Assessment Report: Benjamin Santer removed hints of climate skepticism from the final report.

This did not involve a violation of IPCC standards.

- The remaining uncertainties concerning human-induced climate change were included in the final report.

The common epistemic standard that remaining uncertainties should not be covered up, was not violated.

No epistemic standards which the audience could legitimately assume to be met in the IPCC process, were violated.

→ The epistemic integrity of the IPCC process was not compromised.

Passage in the IPCC's Fourth Assessment Report:

"Glaciers in the Himalaya are receding faster than in any other part of the world (see Table 10.9) and, if the present rate continues, the likelihood of them disappearing by the year 2035 and perhaps sooner is very high if the Earth keeps warming at the current rate. Its total area will likely shrink from the present 500,000 to 100,000 km² by the year 2035 (WWF, 2005)."

- The IPCC did not critically assess the following source: WWF (2005).

- The IPCC explicitly stated that the IPCC process met the following epistemic standard: the sources included in the IPCC report should be critically assessed.

- The comments of the reviewers involved in the IPCC process were not taken into account by the IPCC authors.

  The standard that the reviewers' comments should be taken into account is a common epistemic standard in the relevant field.

Two epistemic standards which the audience could legitimately assume to be met in the IPCC process, were violated.

→ The epistemic integrity of the IPCC process was compromised.

Important remarks:

- This does not imply that the IPCC process had zero epistemic integrity.

- Epistemic integrity was restored after a while.

Two epistemic standards which the audience could legitimately assume to be met in the IPCC process, were violated.

→ The epistemic integrity of the IPCC process was compromised.

For more information:

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