

Session 3. Science as a producer of ignorance?

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1 Clarifications/distinctions

We've seen a **common theme** in philosophy over the last couple of weeks.

The **terminology** in this field is a **mess**.

Carrier uses "agnotology" to refer to the **deliberate** generation of ignorance.

Let's settle on the following terminology:

Agnotology is the **general study of ignorance**.

Ignorance generation is the **production** of ignorance.

We should also distinguish (Carrier, p. 61)

Epistemic and non-epistemic values. *Epistemic values* appreciate knowledge and understanding, while *non-epistemic values* refer to sociopolitical interests and utility.

Epistemically generated ignorance. The generation of the ignorance is grounded in **epistemic values**. (e.g. I adopt a **new concept** that let's me formulate **new questions**).

Non-epistemically generated ignorance. The generation of the ignorance is grounded in **non-epistemic values** (e.g. industry-generated ignorance, scientific misconduct for personal gain)

(**Note:** I'm not sure how good this distinction is. To be discussed later.)

Non-epistemic further subdivides into:

Deliberate. The ignorance is generated as part of a **concerted attempt** to cause ignorance (agnotological ploys).

Unintentional. The ignorance is generated for non-epistemic reasons but **unintentionally** (e.g. consider a charismatic scientist with a lot of social clout, they have a favourite theory, and this results in the neglect of other theories).

Question. To what extent are these distinctions sharp? (e.g. Always some non-epistemic factors muddled in with the epistemic?)

Question. Does it matter?

2 The problem of pluralism

(Almost) everyone likes **methodological pluralism**: Multiple different (possibly mutually inconsistent) scientific endeavours should be tolerated.

This can further be divided into:

Field-based. We tolerate many different theories/fields of study.

Methodology-based. We tolerate different methodologies within fields (e.g. risk-averse vs. risk-taking, experimental vs. theoretical).

Puzzle. But how to assess whether some form **deliberate** ignorance generation has occurred?

(Especially difficult given that it may be difficult to disentangle epistemic and non-epistemic factors and the deliberate from the unintentional.)

Question. Does it matter if these factors can be disentangled? Does it affect the puzzle of pluralism?

Question. How far are we allowed to stretch our standards?

Question. How widespread is this phenomenon? (Are we **always** stuck within a conceptual viewpoint.)

Carrier suggests examining various kinds of practice-based virtues.

(e.g. transparency of study)

Question. Is the position self-undermining? (Pluralism about theoretical virtues, pluralism about transparency?)

Question. Should we allow scientific standards to be sensitive to sociopolitical context? (e.g. we allow **regulatory** variation, but not **credence-based** variation.)

3 The false advertising account

Carrier criticises the "impact-based" approach and instead suggests a "false-advertising-based" approach.

The impact-based approach. (Biddle and Leuschner)

1. Non-epistemic consequences of wrongly rejecting [hypothesis] H are likely to be severe
2. The dissenting research "violates established conventional standards"
3. "involves intolerance for producer risks at the expense of public risks" and
4. the two "risks fall largely upon different parties"

I think I agree with many of his criticisms (hard to ascertain risks, intuitive counterexamples e.g. German government and swine flu vaccines, established conventional standards, non-risky deliberately generated ignorance) so I want to focus on some further issues in articulating the view.

Carrier's claim. It is **false advertising** that characterises non-epistemically generated ignorance.

The corresponding methodological defect is that the pertinent studies actually avoid the issues they pretend to address. They do not tackle the questions they purport to answer. (p. 74)

Question. What about when good science results? e.g. Much of the cognitive science literature (for example remarks on split-brain patients).

Carrier considers cases where assumptions are relaxed but in such a way to address target question (e.g. Maxwell, Einstein).

Question. What about when I do so in a very **blameable** way?

e.g. I try to prove a theorem. I make a mistake in the "proof". But there is a weakening of the theorem that does hold.

For example, Kempe's flawed proof of the four-colour theorem can be used to show the five-colour theorem.

This could happen within the framework of being very **lazy**.

It's not **false advertising**, but I think it's fair to say that this is **non-epistemically generated** ignorance, and **I'm at fault**.

4 Further questions

Question. How to **practically** combat the issues? (e.g. unintentional factors, knowledge of false advertising, virtue pluralism)

Question. What would count as **progress**?

5 Housekeeping

Presentation for Thursday?