Alison Wylie, 'Making sense of contingency and constraint'

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Feminism in Analytic Philosophy (users.ox.ac.uk/~corp1468/Feminism.html)
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- Begins with a gesture at 'post-positivist' themes in philosophy of science — underdetermination of theory by evidence, theory-ladenness of observation, holism (166) — and observes that the philosophy of science is therefore fertile ground for the thought that theoretical views about gender, whether explicit or implicit, might be amongst the theoretical claims which can (and **must**, if the post-positivist arguments about the poverty of permissible positivist motivations for theoretical science are correct) influence the acceptance of scientific theories.
- Wylie mentions (167–8), only to largely set aside, the way in which attention to the unrepresentative population of scientists, and the even more unrepresentative population of senior influential scientists, has given motivation for significant changes in the institutional structures of science.
    - This is a pervasive problem, harder to change than merely offering equality of opportunity, because of things like stereotype threat (the idea that contingent facts about the population of male and female scientists can give rise to stereotypical ideas about who can be a scientist, and that these ideas can in turn influence performance of the underrepresented groups in passing hurdles to entry into the field).
- There is a first, obvious, way in which feminist attention to science can provide a genuinely epistemic influence on which theories are accepted: when the theories themselves make claims about women and the experience of women. Two ways in which this can happen:
    1. Women's experience systematically neglected in the evidence base for the theory, despite the theories entailing that such evidence is relevant. She cites 'recent studies which suggest that women may be routinely misdiagnosed when it is assumed that the suffer from the same (well-studied) forms of heart disease as afflict men' (168–9). Here, there is a practical consequence too, but the epistemic problem seems to be that doctors are using a theory about the distribution of heart conditions in the whole population which is at best partially correct for a subpopulation. This is a purely routine epistemic

problem, since it is a case of treating a non-random sample as if it were representative, and this is a problem we are familiar with. Of course it is depressing that assumptions about the representativeness of male experience are so close to the surface here. Another example is the case discussed by Lloyd [1], where despite the fact that attention was paid to their being differences between men's and women's biology and experience of orgasm, a certain assumption about the adaptiveness of orgasmic response, which does more or less hold true for male orgasm, held back the field by closing off very attractive candidate hypotheses from investigation. (Namely, the hypothesis that female orgasm is a byproduct of the adaptiveness of male orgasm and the way that human embryos develop sexual differentiation from the same sorts of tissues at a relatively late stage of development.)

2. 'Gender difference are taken seriously but are conceptualised in terms of stereotypes' (169). So, for example, we might look at theories of the very underrepresentation of women in science ('the long history of sex difference studies that have been dedicated to documenting gender differences in intelligence and other cognitive capacities'), which explain the relative lack of women in science in terms of stereotypes about women being less suited than men to rigour or objectivity. A lot of this is of course just bad science—displaying confirmation bias, for example, when the mere fact about frequencies of women leaving the field is interpreted as strong evidence for their unsuitedness *by nature* to the field, rather than for myriad other hypotheses which explain the data as well or better, but which are not supported by stereotypes. But some cases are more insidious, because even in attending to stereotypes, one is sometimes tempted by them: consider explicitly feminist theories that push back against masculinist interpretations of the historical record by proposing feminist interpretations of that record that play on the same stereotypes ('in refocusing attention of the activities and experiences distinctive of women, they had simply inverted dominant assumptions about gender difference', 169). And some cases involve the projective attribution of traits stereotypical of women to biological sex differences—e.g., the views that read stereotypes about the passivity of women (a stereotype that while false as a claim about nature, might be in part behaviourally true because self-fulfilling through the intentions of people to conform to what society judges 'normal') into views about the passivity of eggs in fertilisation (170).

- So far, this is not radical: the epistemic recommendations to avoid bias in the collection of evidence and the proposing of hypotheses doesn't require a new epistemology to justify, though in practice those, like women and minorities, who are the sharp end of such bad science might be more likely to notice it and point out the problematic implicit assumptions. So even a trenchant critic of feminist epistemology like Haack seems pretty happy with

this accepting that there has been sexism in science:

> In the social sciences and biology, theories which are not well-supported by the evidence do seem sometimes to have come to be accepted by scientists, most often male scientists, who have taken stereotypical ideas of masculine and feminine behavior uncritically for granted. Those who think that criticisms of sexism in scientific theorizing require a new, feminist epistemology insist that we are obliged, in the light of these criticisms, to acknowledge political considerations as legitimate ways to decide between theories. (Haack [2]: 34]

She even grants the assumption that 'women are a bit more likely than men to notice such sexism', her one concession to standpoint theory.

- This all seems to be something like *'spontaneous' feminist empiricism*, as initially defined on 174: keep the 'entrenched epistemic values' and argue for a 'more systematic, rigorous application of the existing methods of science'. The idea might be: once we sort out the political and institutional cultures of science to eliminate pervasive sexism (racism, classism, …), and pay attention to biases and blindspots that we unfortunately fall prey to (and are systematically prone to concerning topics of sex and gender; error on these subjects is not experimental noise but needs to be explicitly countered in good experimental design) we can use traditional epistemology to reliably generate true (or empirically successful) scientific theories. We should, that is, be *feminists* and *epistemologists* (i.e., 'feminist epistemology' is semantically compositional.)
- Is there something more to feminist epistemology than this minimal version which hopefully all but the most unreconstructed will recognise as a worthwhile project?
    - Maybe science is inherently masculinist, preoccupied with 'abstraction, control, and an idealised "culture of no culture"' (170); privileging 'cognitive styles' like 'detachment, objectivity, and a preoccupation with intervention and control of the objects of knowledge' that are developmental traits of males rather than females. This seems rather to undermine some of the earlier critique, as for example taking men's experience as normative seems to fail to be sufficiently objective and detached; Wylie notes the significant feminist responses to this sort of argument and doesn't seem particularly sympathetic to them herself.
- So how can attention to context open the way for claims about gender to play a more distinctive role in scientific theory choice?
    - Sophisticated feminist empiricism, e.g., Longino:

> Traits like simplicity and explanatory power have traditionally been treated as values internal to the sciences, constitutive rather than contextual. As such they are cognitive virtues. This essay contrasts a traditional set of such virtues with a set of alternative

> virtues drawn from feminist writings about the sciences. In certain theoretical contexts, the only reasons for preferring a traditional or an alternative virtue are socio-political. This undermines the notion that the traditional virtues can be considered purely cognitive. (Longino [3]: 383)

One way to read this is like this: empiricism tells us that the one objective virtue is *empirical adequacy* (van Fraassen [4]); beyond that, the acceptance of scientific theories is governed by non-empirical virtues. Feminist empiricism argues that not only are such virtues pragmatic, the assumption that there is single objectively best list of such virtues is problematic from the empiricist point of view. There are many virtues, some drawn from the feminist literature, and these perhaps especially important for feminist projects, though they are not themselves constitutively 'female' virtues. (Hence Longino may distance herself from thinking these virtues encode 'female ways of knowing'.) Ironically (?), those who take the empirical basis of science most seriously are those that can most easily open room for feminist values to influence theory choice.

- The idea could be: *qua* scientific enterprise, theories of all sorts can be acceptable provided they meet the ultimate scientific aim of empirical adequacy. If one is more than a scientist—if, that is, one has political or other projects alongside one's scientific interests—that might be a reason to choose an empirically adequate theory on the basis of particular politically useful theoretical norms, and using it to further those political goals. Meanwhile, since the theory chosen is empirically successful, its political value need not problematise or undermine its scientific value or acceptability.

- Feminist standpoint theory (tentative reading): accept that non-empirical virtues are truth-conducive (so disagree with sophisticated feminist empiricism), and argue that women occupy a privileged position with respect to various subject matters—e.g., to know 'how the social order is actually produced and maintained' (175). A problematic view for Wylie:

  > if standpoint theorists are committed to the claim that feminist's … standpoints are epistemically privileged, they often revert to justificatory arguments that invoke transcendent epistemic standards … of the sort associated with conventional [i.e., spontaneous rather than sophisticated] empiricism (176)

- Wylie's own positive view (maybe 176–8?) I found less obvious—let's talk about this.

- Worth mentioning: Elizabeth Anderson's [5] nuanced response to

Haack [2], neither standpoint theory nor empiricism. Her claim seems to be this:

> feminist values can have an important role in determining the space of theories which we are investigating, not by ruling out some theories a priori but by determining which distinctions we want to draw and what standards of 'unbiased-ness' we want our representation of the evidence to live up to. The thought, however, is that these considerations cut far too deeply into the everyday practice of science to be relegated to a separate 'context of discovery'. (Salow, [6]: 2)

- Final useful resource: Wylie *et al.*'s *SEP* entry, [7].

1. Elisabeth Lloyd, *The Case of the Female Orgasm: Bias in the Science of Evolution*, Cambridge, Mass.: Harvard UP, 2006.

2. Susan Haack, 'Epistemological Reflections of an Old Feminist', *Reason Papers* **18** (1993): 31–42, bit.ly/Tk2Tc9.

3. Helen E. Longino, 'Gender, Politics, and the Theoretical Virtues', *Synthese* **104** (1995): 383–397, www.jstor.org/stable/20117439.

4. Bas C. van Fraassen, *The Scientific Image*, Oxford: OUP, 1980.

5. Elizabeth Anderson, 'Knowledge, Human Interests, and Objectivity in Feminist Epistemology', *Philosophical Topics* **23** (1995): 27–58, bit.ly/ROXqrb.

6. Bernhard Salow, presentation on *Feminism and Scientific Knowledge*, Oxford, March 1, 2011, bit.ly/YrCEBJ.

7. Alison Wylie, Elizabeth Potter, and Wenda K. Bauchspies, 'Feminist Perspectives on Science', in Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Fall 2012 Edition), bit.ly/Tk2SVO.