Lecture: Kant & Phil Sci – Data & Phen, Bogen & Woodward, Stein, Massimi

19 Jan 2014 ①

Relationship between theory & experiment? Data and phenomena? explain "theory-ladenness of observation"
⇒ reminiscent of Kant's distinction between judgments of experience vs perception, and pure logical reasoning (based only on pure forms of intuition, no input from perceptual concepts at all)

Stein ("structure of knowledge of physics")
– 3 aspects of sci knowledge (achieved result, susceptible of justification (involving a "structure of evidence"), ongoing enterprise (moving 1st by means respecting constraints of 2nd)) and

– 2 diff't "kinds" of knowledge,
exp'al & theor'l — both have all 3 aspects, question is, how do they come together to form a unified whole?
⇒ shown by diff possible reps & formulations of them –
– theoretical can be written down and learned therefrom
– experimental comes only in practice
⇒ also shows clear "theoretical" vs "observational" distinction Carnap championed

⇒ how they come together: schematizing the observer
"to secure empirical content – content w/in experience – for an abstract structure"
~~a possibility~~ a possibility within the math'l fw.

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(2)

B & W ("Saving Pheno")

- data vs phenomena distinction – similar to Stein's theoretical vs exp'l
  - → different types of knowledge, both in form (what they are knowledge of, Stein's 1st aspect) and in their evidential roles (Stein's 2nd aspect)
  - and diff in relation to theory – theory explains latter, not former – cf. Stein on lack of "logical deduction" of observations from theory
- former in general are observable, latter in general not
- data idiosyncratic to particular exp'l setups, phenomena not, rather stable and detectable by variety of procedures
- data not dependent on "constitutive a priori"