

begin of quote on p.1 ^{character} on def'n of 'model', ^{ad character} ^{mode of} ^{reality} ^{science}

\Rightarrow remark on his Kantian distinction between our conceptions of things as based on our experience of them versus things in themselves; p.2: distinction between postulates for "images" and postulates for 'scientific rep' of images - a refinement of K's notion of 'judgment of experience', prefigured in K's treatment of props of Newt. phys as synthetic a priori

constraints on goodness of models

- 1) logical possibility
- 2) correctness
- 3) propriety (appropriateness)

possibility

logical consistency - Kantian, $\&$

correctness

- agreement w/ experience - Kantian

propriety

what is imposed by, encoded in, our modes of rep (symbols, defns, abbreviations) - all we can arbitrarily add or take away, ~~necessary~~ source of necessary ambiguity in our reps

\Rightarrow a generalization and refinement of some of K's ideas, but also going well beyond them in what Hertz recognized as being needed to evaluate knowledge claims: "relativity of a priori"

postulates of science

arbitrariness inherent in propriety, yields diff possible reps of some 'theories', classes of phenomena

analysis of uncertainty of notion of force - extra Kant

- start w/ quote about the characteristics of a good scientific rep. on p.1 of "Intro"

- his remarks on things-in-themselves, pp.1-2 - conformity of our reps can be judged only by experience - very Kantian

- but the inevitable ambiguity of arbitrariness of our reps (p.2) is his revolt against Kant -

The three postulates

• good scientific rep must satisfy

- 1) logical possibility (Kant's notion of a 'thought') but of top of p.3: possibility is given by nature of our mind (A)
- 2) correctness (Kant's 'judgment of experience') good in part has judgment of nat'l sci
- 3) appropriateness (Kant's notion of the constitutive a priori, the pure forms of intuition and the pure categories of the understanding)

⇒ it is the best that most clearly departs from a Kantian conception, after study w/ what roughly corresponds to one, in so far as it is a priori but arbitrary

- the principles of mechanics

⇒ no longer a privileged set of a priori props, of various starting points - like and unlike can of non-Eucl geom

- like, in that - I - principled architectonic
- unlike, in that all diff 'systems' of principles should in some sense lead to some 'theory' - whether one starts w/ forces or w/ energy, e.g.

= pp. 78 on idea of explanation (comp)