

which is unjustified, and he acts so as to promote that end. Is his action rational?

What these cases, and cases like them, suggest is that actions can be instrumentally efficacious and yet irrational, and that the relationship between instrumental efficacy and rationality is more complex than Laudan acknowledges. If so, then we should be wary of Laudan's claim that belief in the instrumental efficacy of one's actions in achieving one's ends is a necessary condition of rational action. For even if we accept that claim, its contribution to an account of rational action will be minimal. Central to a fuller account will be two further conditions, highlighted by our two examples: for an action to be rational, the agent must not only believe that her action is instrumentally efficacious for the realization of her ends; in addition, (1) that belief must itself be justified, and (2) the ends to which actions putatively conduce must themselves be justified.

These two further conditions on rational action render an adequate account of such action less instrumental than it appears in Laudan's hands, for both conditions must themselves be met epistemically rather than instrumentally. When we ask whether the mother's belief in the instrumental efficacy of her action (in the first example) is justified, we are not asking about that belief's instrumental relationship to some aim she has; we are rather asking if the evidence warrants the conclusion that her action is instrumentally efficacious in realizing her end. Similarly, when we ask if the father's end (in the second example) is itself justified, we are not asking about the instrumental efficacy of that end with respect to other ends he might have; we are rather asking whether, all things considered, the end is one that the father ought to have. Here we are calling for reasons which bear on the justifiedness of the end under examination.⁶

Both these considerations suggest that the condition Laudan seizes upon is not so central to rationality as he supposes. With respect both to science and to action, rationality is not obviously solely an instrumental matter. We can question the rationality of instrumentally efficacious goal-directed action. I do not deny that 'rationality' is used as Laudan uses it, to denote instrumental efficacy. But the term is ambiguous: 'rationality' is also used non-instrumentally to denote an epistemic relation between claims and reasons which support

⁶This discussion suggests that Laudan's condition on rational action, even if necessary, is not central. Other kinds of cases suggest that it is not even necessary: such cases are ones in which one acts rationally not because it furthers one's ends, but because one has good reasons for doing so. Laudan's account presupposes that the only sort of good reason for acting there can be is one which instrumentally relates means and ends. But I can have good reasons for doing something even though doing it furthers no end of mine: e.g., for being kind. Laudan's account presupposes that instrumental rationality is the only sort of rationality there is; but this begs the question against theorists who argue for a more categorical, less instrumental conception of rationality. In the context of the rationality of science, the former conception is defended (for example) by Giere (1987, 1988), the latter by Siegel (1985).