

WISSENSCHAFTLICHER REALISMUS

Zum „No miracle argument“ (I). Ein alternativer Erklärungsansatz?
(23.5.2006)

1 B. v. Fraassen: The Scientific Image

[...] I claim that the success of current scientific theories is no miracle. [...] For any scientific theory is born into a life of fierce competition, a jungle red in tooth and claw. Only the successful theories survive – the ones which *in fact* latched on to actual regularities in nature. [40]

2 P. Kitcher: The Advancement of Science

Darwinians want not only to claim that successful organisms are those that leave descendants, but also to investigate those characteristics that promote reproductive success, carrying out the inquiry at whatever level of generality is possible. Thus we can distinguish (i) current species and those that have endured for significant periods in the past; (ii) the possession of high Darwinian fitness, borne by those organisms that have characteristics that dispose them to survive and to reproduce most successfully; (iii) the generic characteristics that endow organisms with high Darwinian fitness (e.g., ability to avoid predators); and, finally, (iv) the particular ways in which organisms belonging to particular species achieve these generic characteristics. Van Fraassen suggests that the presence of certain species is to be explained by noting that the organisms belonging to them have high fitness in the relevant environments – and this is indeed a relatively shallow level of Darwinian explanation, corresponding to the understanding of (i) in terms of (ii). By analogy, we could explain the endurance and current presence of theories which appear successful by remarking that those which did not have high explanatory and predictive power tended to be discarded – a relatively shallow level of explanation that again explains (i) in terms of (ii).

This should not be the end of the story. Darwinians want to know, at whatever level of generality possible, what kinds of organism-environment relationships confer reproductive success – they want to explain (i) and (ii) by moving on to (iii). Similarly, Putnam's demand is to ask what it is about those theories that are explanatorily and predictively successful and that posit unobservables that makes for their explanatory and predictive success. The answer given by the realist is that such theories succeed in this way because they fasten on aspects of reality. If they did not, it would be “a miracle” that they were so successful. [...] [zitiert nach Klee, 335 f.]