

## **A objetividade científica e a responsabilidade dos cientistas**

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### **O significado da objetividade em epistemologia e sua necessidade para a ciência**

Esta exposição concentra-se em dois aspectos básicos da questão da objetividade. Por este motivo, divido a exposição em três partes, operando na primeira parte uma elucidação dos **significados filosóficos** do conceito **de objetividade** com o objetivo de mostrar a mudança semântica que esse conceito sofreu até chegar ao conteúdo que lhe é atualmente atribuído. Na segunda parte, com base nos resultados alcançados pela elucidação conceitual, formulo a **definição de objetividade científica**, discutindo as principais consequências dessa definição para a caracterização de ciência. Finalmente, na terceira parte apresento brevemente a necessidade da objetividade para a ciência no contexto da tese de neutralidade da ciência.

### **The ideal of objectivity, and the responsibilities that scientists should assume when evidence is not available to enable a hypothesis to be impartially accepted or rejected**

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I will discuss recent arguments (most clearly made by Heather Douglas in her recent book, *Science, Policy, and the Value-Free Ideal*, Pittsburgh University Press, 2009) that scientists have a moral responsibility to consider the consequences of error that may be involved in making the judgment to accept or to reject a hypothesis (or theory), and that it is unavoidable that social and ethical values have a role in the reasoning behind the judgment. This role is indirect, played principally in assessing the sufficiency of the evidence that supports the hypothesis; a direct role for values alongside or in place of the evidence is inadmissible. Douglas devotes most attention to empirically based risk analyses, and her use of the direct/indirect distinction to elucidate judgments made in them is compelling. Granted this, I will make four arguments. **(1)** The indirect role of values is avoidable in connection with judgments made in some other areas of research where ‘impartial’ judgments can be obtained, and their existence

is crucial for confidence in the ability of science to generate an expanding stock of reliable knowledge of phenomena and in the reliable efficacy of technological innovations. (Hypotheses about risks arise when we are considering, not the efficacy of innovations, but the legitimacy of their practical implementations – and usually the research that may impartially settle questions about efficacy lacks the methodological resources needed to deal with many empirical questions that arise when dealing with legitimacy.) **(2)** Among other things, scientists, qua members of scientific organizations, should be held responsible for making explicit all the hypotheses – including those about what the serious risks may be, regardless of whether their underlying mechanisms are physical/biological or socioeconomic – that are involved in making sound judgments about the legitimacy of technoscientific innovations, and for considering the evidence for endorsing or dismissing them. **(3)** Unless this responsibility is assumed, and the ‘precautionary principle’ adopted, it is difficult to ensure acting in compliance with the direct/indirect distinction – especially when lack of compliance may be implicit in methodological commitments – and preventing values from playing an inadmissible direct role in the acceptance of some important hypotheses. **(4)** Renewed commitment to the ideal of objectivity, and the acceptance of methodological pluralism, could serve to ensure compliance with Douglas’ direct/indirect distinction and the proper assumption of their moral responsibilities by scientists.