

ENCONTRO NACIONAL DE PROFESSORES DE FILOSOFIA 2021 DA APF E DA SPF

Ética, ciência e epistemologia

DIA 16 DE OUTUBRO DE 2021 | VÍDEOCONFERÊNCIA

09h00 - Boas-vindas
 09h15 - *O que é e o que não é ciência*, por Carlos Fiolhais (Univ. de Coimbra)
 10h15 - *Após Kuhn, novas veredas da Filosofia da Ciência*, por Artur Galvão (Univ. Católica)
 11h15 - Intervalo
 11h30 - *A responsabilidade moral do professor no ensino da Filosofia da Ciência*, por João Carlos Silva (Escola Secundária Jorge Peixinho)
 12h15 - *Hume e a indução*, por Faustino Vaz (Escola Secundária Manuel Laranjeira)

DIA 23 DE OUTUBRO DE 2021 | VÍDEOCONFERÊNCIA

09h00 - *Título em definição*, por Fernando Ruas (Escola Secundária António Arroio)
 09h45 - *E se os termos vagos tivessem mesmo fronteiras exatas?*, por Ricardo Santos (Univ. de Lisboa)
 10h45 - Intervalo
 11h00 - *Realismo e anti-realismo em ciência e em matemática*, por Eduardo Castro (Univ. da Beira Interior)
 12h00 - *Conferência de encerramento (nome em confirmação)*
 12h45 - Conclusão dos trabalhos

Propósito para acreditação: 15h
 8h de congresso, 7h síncronas na plataforma Moodle
 4h de trabalho autónomo assíncrono

Com acreditação
 50€ associados APF ou SPF
 45€ não associados

Sem acreditação
 20€ associados APF ou SPF ou aposentados / estudantes
 35€ não associados

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Associação de Professores de FILOSOFIA

Sociedade Portuguesa de Filosofia

ÉTICA, CIÊNCIA E EPISTEMOLOGIA

Outubro de 2021

AC Grayling

The Challenges to Enquiry:

A Different Focus to Epistemology

A traditional approach to epistemology is to define its aim in terms of refuting sceptical challenges to the possibility of knowledge (e.g. Descartes, Russell, Ayer). This approach was premised on the idea that the objective of enquiry is *truth, objectivity, reality*.

The most successful epistemic practice ever devised by humankind, *science*, is aimed at *highly-supported (by evidence, experiment) theories*. Truth and objectivity might be ideals of enquiry, but in practice all science is recognised as *defeasible*, and we see this recognition in the statement by the journal *Physics Letters* that any result of Sigma-5 (a probability of 3×10^{-7} (a chance of being wrong 1 in 3.5 million) is a 'discovery'.

Because of the refocusing from *truth* to *high probability* – mirrored by the success of empirical approaches over rationalism – we have to address a range of challenges that empirical enquiry faces. As follows:

The Pinhole Problem: our starting point in all our enquiries is the very limited and highly circumscribed data available to us locally in space and time and from our finite point of view, allowing us a view of the universe and the past as if through a pinhole positioned at just our restricted scale. Do our methods successfully carry us through and beyond the pinhole?

The Metaphor Problem: what metaphors and analogies are invoked to make sense of what these enquiries are telling us, and might they mislead?

The Map Problem – what is the relation between theories and the realities they address, given the analogous differences between a map and a country of which it is a map? **The Criteria Problem** – what are the justifications and, where necessary, correctives for the application of criteria such as ‘simplicity’, ‘optimality’, even ‘beauty’ and ‘elegance’, in the formulation of research programmes and approval of results? Do appeals to these ‘extra-theoretical criteria’ help or distort enquiry?

The Truth Problem – given that empirical enquiry gives us defeasible probabilities, what are the standards (such as the sigma scale in science) which can be regarded as satisfactory short of certainty? Does this imply that we have to treat the concept of truth pragmatically, as a (possibly unattainable) goal of enquiry upon which, in the ideal, enquiry strategically converges? Where does this leave the concept of ‘truth’ itself?

The Ptolemy Problem – Ptolemy’s geocentric model of the universe ‘worked’ in a number of ways, permitting successful navigation of the oceans and prediction of eclipses, thus showing that a theory can be efficacious in some respects while being incorrect. How do we avoid being misled by pragmatic adequacy?

The Hammer Problem – summed up pithily as ‘If your only tool is a hammer, everything looks like a nail’, this reminds us that we tend only to see what our methods and equipment are capable of revealing to us.

The Lamplight Problem – one searches for one’s lost keys under the street lamp at night, because it is the only place where one can see. We enquire into what is accessible to enquiry, for the obvious reason that we cannot access what is inaccessible.

The Meddler Problem – investigating and observing can affect what is being investigated or observed. When one studies animals in the wild, is one studying them as they would be if unobserved, or is one studying behaviour influenced by their being observed? Can the effects of slicing and staining a specimen for microscopic examination be reliably excluded?

The Reading-In Problem, a problem mainly for history and the psychological sciences, in which interpretations of data are often made according to assumptions local in time and experience to the investigators. Can we guard against this as a source of distortion?

The Parmenides Problem, the danger implicit in reductionism: reducing everything to a single ultimate causal or explanatory principle, which on the face of it looks like the worst kind of elementary mistake, but which, remarkably, is a characteristic of hard science.

The Closure Problem, the desire to reach a conclusion, to have a completed explanation or story, to tidy up and sign off. It is a natural human impulse to have satisfying narrative explanations, ‘this because that’ where ‘that’ does the job of terminating the explanatory chain, closing down the need for a further ‘that’. Putative explanations of the ‘god of the gaps’ kind provide classic explanations. But so does what is implicit in the Parmenides

problem.