Anexo 7

Grupo de "Filosofia, História e Sociologia
da Ciência e da Tecnologia"
Instituto de Estudos Avançados - USP

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Projeto Multidisciplinar

Gênese e significado da tecnociência

Das relações entre ciência, tecnologia e sociedade

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Pesquisador Visitante
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Períodos:
01/03 a 30/06/2013
01/10 a 30/11/2013

Science, technoscience, values and society.

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Hugh Lacey
Science, technoscience, values and society.

Background

In VAC-1 (Lacey, 2008, second edition of book published in 1998) and Lacey (1999), I introduced a model of the roles that ethical/social/economic values actually play (and can legitimately play) in scientific practices – consistent with (i) maintaining the objectivity of scientific knowledge in the face of post-modernist arguments, and (ii) rejecting positivist-derived accounts of this objectivity. The model is summarized in the form of ten theses in VAC-2 (Lacey, 2010), Introdução. It also shows how value judgments may be influenced by (without being reduced to) outcomes of scientific knowledge (Lacey, forthcoming$_1$); it creates a space in which philosophy and sociology of science can constructively interact, while each one maintains its specificity and integrity; and it provides a framework for fruitfully investigating relations between modern scientific knowledge and traditional (indigenous) forms of knowledge (Lacey, 2012b).

During the past decade, the model has been frequently discussed within Scientiae Studia and in several 'international seminars' and postgraduate courses at USP, and presented in mini-courses at meetings of ANPOF and at several universities throughout Brazil and in numerous talks at conferences and universities in Brazil, Argentina, USA, Canada, France and Germany. This discussion has led to the elaboration and clarification of the model – especially with contributions of USP colleagues – Pablo Rubén Mariconda, Marcos Barbosa de Oliveira, Maurício de Carvalho Ramos, and Sylvia Gemignani Garcia – so much so that it has properly become regarded as "Scientiae Studia's model of the interaction of values and scientific activities".

This model, like any other proposal in the philosophy of science, needs to be tested for its capacity to illuminate important features of scientific practices, and to provide a framework for criticizing them and pointing positively to directions that could fruitfully be followed in research. It has been demonstrated to have this capacity in several areas of science – for example:

1. Showing how the emergence of contemporary technoscience has roots in tendencies that have always been present in the tradition of modern science – by pointing to dialectical relations between adopting the kinds of methodologies that have predominated in modern science and holding values connected with the control of natural objects (or values of technological progress).

A range of views on the nature of technoscience, ours (Lacey, Mariconda, Garcia, and two of our doctoral students) in interaction with those of some well known European philosophers, historians and sociologists of science, is about to be published in a special issue of Scientiae Studia, edited by Lacey & Mariconda.

2. Showing how the methodologies, needed to deal with risks of technoscientific innovations, must have features that are not present in the methodologies that lead to knowledge that informs the generation of innovations – hence, supporting 'methodological pluralism', in

which certain kinds of methodologies are dialectically linked with holding specific social values (Lacey, 2005, 2010).

3. The model has provided a context (i) for evaluating (and, to some extent, reinterpreting and defending) the fundamental values of the modern scientific tradition – impartiality (objectivity), neutrality and autonomy – in face of threats that they encounter from current scientific tendencies that have come to prioritize research that promises to lead to technoscientific innovations that serve economic growth (and related private and national objectives) – and (ii) for identifying the responsibilities that scientists incur in the light of these tendencies, especially with a view towards exploring the role of science in the strengthening of democracy. My USP colleagues have made important contributions in this area – these include: on objectivity: Mariconda (2006; 2010b); on neutrality: Oliveira (2003; 2008a); on autonomy: Oliveira (2012a); Mariconda & Lacey (2001); Lacey & Mariconda (2012); on technoscientific innovations/commercialization of science: Oliveira (2005; 2012b; forthcoming); on the responsibilities of scientists: Lacey (2008a; 2011b; 2012c); Mariconda (2010): Mariconda & Lacey (2010); Oliveira (2008a).

4. In my own work, I have used the conceptual categories opened up by the model to provide a framework in which the views and attitudes of the opposing parties in the controversies about transgenics (and alternatives such as agroecology) can be put into perspicuous contrast that opens up the possibility of rational discussion, and that identifies the role of scientific research (and research conducted under what methodologies) in attempting to resolve points of dispute (Lacey, 2006a; 2010). In this context, I have paid particular attention to the strategies of research deployed in agroecology – and this opens up possibilities for discussion about urgent issues today of public agricultural policy.

In a much less developed way (mainly in journalistic pieces), I have made use of the model in discussing issues connected with global warming and stem-cell research.

It has also been useful in discussing questions about what worldviews (including religious ones) are compatible with scientific results and engaging in scientific practices (Lacey, 2011c).

5. (a) Nicolas Lechopier (French postdoctoral fellow during 2008-9, supervised by Pablo Mariconda; currently professor University of Lyon, France) applied the model (with modifications) to investigations in epidemiology and to public health issues in poor neighborhoods (Lechopier, 2011a; 2011b).

(b) Brena Fernandez (postdoctoral fellow during 2007-8, supervised by Marcos Barbosa de Oliveira; currently assistant professor of economics, UFSC) applied the model in connection with disputes among conflicting theories in economics (Fernandez 2003a; 2003b; 2006; 2009), and she has pursued affinities of the model with some ideas of feminist philosophy of science in USA (2008a; 2008b).

(c) Renato Dagnino, and other researchers in ‘tecnologia social’ at UNICAMP, have used the model, both in their criticisms of dominant ideas about the neutrality of technology, and in articulating the genuine scientific credentials of alternative approaches of science and technology that are focussed on addressing how to resolve problems connected with social exclusion of vast numbers of poor people (Dagnino, 2010). Linking agroecology with ‘tecnologia social’, two current doctoral students of Dagnino (Márcia Tait, Vanessa Brito) are conducting sociological studies of agroecological practices in several Brazilian states.

(d)Other Brazilian philosophers of science have interacted constructively with the model: e.g., Ivan Domingues (UFMG), Alberto Cupani (UFSC), Anna Carolina Regner (Unisinos).

6. Related issues have also been explored within Scientiae Studia, including: The Precautionary Principle (Lacey, 2006: 2012d); relevance of the model to science education; history of relations between science and values (Mariconda, 2006a; 2006b; 2008; 2011); ethics of scientific research; and science & democracy.

The proposal

(1) To offer a series of seminars – perhaps 10 – presenting Scientiae Studia's model of the interaction of values and scientific activities, its elaborations, its components still under development, and how it illuminates important features of scientific practices in many areas of research.

Hugh Lacey would organize and make presentations in most of the seminars (in Portuguese) – and, in several seminars, there would be presentations from others at USP who have made contributions to the model, and also from thoughtful critics. The seminars would aim to attract people from many areas of science throughout USP – so that the model could be subjected to vigorous testing from a wide array of points of view.

At the same time, drawing upon the contributions made in the seminars, a book (or an issue of Estudos Avançados) would be prepared – organized by Hugh Lacey and Pablo Mariconda – that would bring together, in a coherent unified volume, the 'current state of research' connected with the model, and anticipations of how it might continue to develop. It would include contributions by all the USP collaborators. (The list of publications below shows that there is a lot of material that has been produced on these themes in recent years - and it is waiting to be synthesized.)

(2) In addition, I propose to organize a number of seminars – perhaps 4 – on contemporary issues where matters of both science and values are fundamental. Provisionally the topics would be: (a) Global warming/climate change; (b) nuclear energy and other matters related to energy; (c) 'green technologies'; and (d) computer software developments.

These seminars, like those of (1), would aim to engage a diverse range of scientists and points of view – and speakers would be invited with this in mind. The goal would be to generate at USP (and hopefully among the broader public) vigorous discussion of contemporary matters of science and values that are important for the future of democracy.

(3) I would also use the occasion for organizing my recent articles into a volume to be published as VAC-3.

TIME FRAME:

Ideally I would like to be at USP for 6 months during 2013, divided into 2 periods: (i) March – June (4 months); (ii) October – November (2 months).

The first set of seminars would be planned for (i); the others for (ii) – and working on the proposed book could be completed during (ii).

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