Report on the Centre for Philosophy of Science of the University of Lisbon CFCUL Lisbon, 30 May 2012

International Visiting Committee Daniel Andler, Université Paris-Sorbonne, Institut universitaire de France María-José Frápolli, University of Granada

1. Our visit

The Visiting Committee arrived on the premises at 9:00 on 30 May, 2012.

The Centre's Director Olga Pombo provided a compact description of the Centre's history, structure and present standing. She also showed the Committee the premises in which the Centre is now housed, within a library which provides a peaceful and friendly atmosphere in a well-appointed building.

The first part of the visit was constituted by a series of separate meetings with the six research groups of the Centre, with the participation of Prof. Pombo. For each group, we have selected a small number of salient points, but have made no attempt to provide a full picture of its activities, as this picture is provided in the supporting documents.

Philosophy of Life Sciences

The head of the group, Antonio Barbosa, was unfortunately unable to attend, so the group's activities were presented by the assistant head, Ricardo Santos. He explained the three projects-: Bioethics, Philosophy of medicine, Epistemology and philosophy of biology. Some of the recent publications and the ongoing activities were presented, as well as the projects submitted to FCT.

The supervisory activity at both master's and PhD levels of the group is extremely impressive.

- The Bioethics project (Antonio Barbosa) is heavily invested in a master's degree in bioethics at the Faculty of Medicine, where a large number of master's dissertations are supervised, as well a 5 PhD theses. The topics include a majority of issues in clinical ethics (often related to palliative care and end-of-life processes), as well more theoretical issues in bioethics. The Committee suggested that these two branches of bioethics be more clearly distinguished.
- The Philosophy of medicine project (Antonio Barbosa) is in its exploratory stage.
- The Epistemology and philosophy of biology project is strong, with an emphasis on evolutionary biology and its extensions, on the one hand, beyond strictly Darwinian approaches, and on the other, beyond pure biology. Their editorial policy includes a 4-volume series on Darwinism and the origin of life and of man, published by a well-established commercial publisher, is a signal contribution to the diffusion of up-to-date knowledge on evolutionary biology and its applications to the sciences of Man, next to classical texts, in a highly useable form, in particular for secondary education teachers and for students.

Our impression of the group

It's a coherent, well-integrated, homogeneous, very professional, well-focused group with

a very clear idea of where they want to go and how to proceed.

Unity of Science

The head of the group is Olga Pombo, who stressed the historical role of the Unity of Science thematic during the constitutive stage of the Centre. Out of a crucial international conference on that theme which she organised in October 2006 many ideas, contacts and international collaborations were initiated; as well as two important volumes, published by Springer, which finally appeared.

There are four working projects, one of which (Comparative studies in Epistemology and philosophy of science) is barely beginning, the other three (Vienna papers of Delfim Santos and the philosophy of science in Portugal, Plato's Protagoras, and Bachelard Science and Poetics) are in full progress.

One more project has been submitted to FCT, on "Atomism of matter, atomism of time, after and beyond Bachelard".

With the help of an incoming postdoc and in cooperation of a group in Sevilla, this group Is aiming at setting up a team in logic, which could at a later date become autonomous.

Our impression of the group

This group occupies a special position within the Centre, as it is organised around the Centre's founder and director's philosophical inspiration. It can be thought of as a nursery of new projects and a place where, once completed, they can be assessed and renewed. To the extent that an important part of its initial mission has been fulfilled, the group's energy seems to go towards some of the other groups, in particular Science and Art, in relation to the theme of images in science. Within the group however, such themes as diagrammatic reasoning are both a source of renewal and the beginning of possible new groups.

Philosophy of natural science

The head of the group is J.R. Croca, who presented its work and projects.

There are two main research directions :

- Philosophical foundations of quantum physics (J.R. Croca), which carries out the ontological project of Louis de Broglie and exemplifies the goal of a closer integration of philosophy and physics.
- What is physical theory? (R.N. Moreira), which is oriented towards emergence, complex systems and non-fundamentalist metaphysics.

There is strong coherence in the group, which holds two weekly meeting on Wednesday, comprising students in the morning, and limited to senior researchers in the afternoon. Both subgroups have an important scientific output, most of it in English and in well-known international venues. Three important awards were recently bestowed on the group, two of them on Prof. Croca.

Our impression of the group

It is a very homogeneous group which has a strong communal life, with considerable interactions between its members. It rests to a large degree on the inspiration of its leader and his philosophical-scientific program in the ontology of quantum physics. However, the theme of emergence and complexity is gaining in importance and is a source of diversification.

Philosophy of mathematics

The head of the group is Augusto Oliveira, professor of mathematics and logic. He explained that the group took off with a very large project on Poincaré, which tried to be maximally inclusive, with philosophy of mathematics and philosophy of physics, as well as the issue of education in mathematics, topics which were all close to Poincaré's heart. Beyond advancing the scholarship on Poincaré, the group's aim in this project, which lasted from 2008 to 2011, was to make Poincaré's works accessible to a wider public in Portugal. There is an ongoing FCT-subsidized project on Poincaré, Mach & Hertz; a new project on "The dynamic relation between mathematical practice and philosophy of mathematics" has been submitted.

The group's common activities include monthly meetings and regular workshops. The enjoy fluent relations with other well-established groups abroad, such at Archives Henri Poincaré in Nancy (France).

Our impression of the group

The group has achieved its former constitutive goal, related to the thought and works of Poincaré. They are in the process of designing a new research strategy, but there already are a number of research topics carried individually by its numerous members.

Philosophy of human sciences, ethics and politics

The head of the group is Nuno Nabais. He presented the main areas of interest of the group:

- Science, ethics and politics whose main output is a course in the master's degree; two workshops are planned, dealing with philosophy and political rationality.
- The philosophy of difference, with a planned symposium on the ethics of difference.
- Jean-Jacques Rousseau and the sciences, a conference being prepared for the 3rd centenary
- Knowledge in intercultural situations, with projects under construction, one in the Atlantic, the other in the African areas, and ongoing activities involving Indian science.

Our impression of the group

Although the themes put forward by the members of the group who were present are interesting in their own right, it was hard for the Committee to grasp the main lines of research and the interconnections within the group. It also appeared to us that the title of the research group does not characterize a feasible research project, being far too wide for that purpose. The absence of regular meetings seems to confirm the impression that the group does not conceive of itself as constituted around a clearly defined research project. It might be better to rename the group so as to reflect its major concerns.

Science and art

The leader of the group, Catarina Nabais, presented the numerous and intensive activities of this fairly unconventional group, which comprises artists as well as scientists and philosophers.

The last three years were mostly occupied by a large-scale project, funded by FCT, on "Image in science and art", a theme which is now extremely active on the international

scene. The project produced a large series of books, yet to be completed; it produced an exhibition and a conference at the Gulbenkian Science Centre; and a web platform "Lisbon <u>Centre for Image in Science and Art</u>". The group has organized numerous workshops, conferences and seminars. The group also created a minor course on Science and Art which is open to all students in the university.

Our impression of the group

Even though the task of the group is huge, due to the tremendous scope of the areas of research and the high interest it has attracted in the last year, the group has a clear-headed and realistic conception of what it wants to achieve. The intense interactions within the group allow it to pursue in a fruitful way a wide spectrum of interests.

The **second part** of the visit consisted in an hour-long meeting with the students and postdocs. The general purpose of the meeting was to gather a candid opinion on how the Centre is serving the students' and postdocs' interests, on their scientific lives and on their prospects. We also used the opportunity to discuss some of their individual projects and to offer some advice.

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We divided the group (roughly 25 people) into two, one led by MJF, the other by DA. We went out of our way to elicit expressions of dissatisfaction, but were entirely unsuccessful: they were unanimous in praising the intellectual freedom and the support they are offered at the Centre, in sometimes sharp contrast with previous experiences in other settings.

However, some concerns was expressed regarding the senior personnel of the Centre: there are few senior members, on the one hand, and few permanent professors on the other. Also, some students (but the two subgroups did not seem to have the same view on this point) complained of insufficient access to journals, and an insufficiently provided library. Both points were clearly perceived as structural, and being beyond the control of the Centre.

On the whole however, the degree of satisfaction was quite high, and the students definitely enjoyed the interaction with the Committee.

The Committee sees the students and postdocs as the most central part of the Centre's life and raison d'être. We were impressed by their maturity, their intellectual achievements, their ability to navigate a difficult situation, as well as their "21st century skills", including their mastery of the English language, both written and oral. Every effort should be made to protect this precious resource, the students and postdocs, by improving their professional prospects and helping them fulfil their potential, whether in the academic world or outside.

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The final part of the Committee's visit included a quick tour of the offices for graduate students and postdocs, which, together with the offices of permanent members and secretaries, and the meeting room on the 2nd floor in which most of the visit took place, offer the group far better material conditions than those enjoyed by similar centres elsewhere in Europe (e.g. in Paris). The spatial connectedness afforded by the workspace is an essential component, and the University is to be praised for having taken to heart this requirement.

A final meeting was held with the heads of the groups, the Director of the Centre and the Committee. The following topics were mainly discussed:

- The funding situation is a cause for concern. Many FCT projects are nearing their term. The Centre has no recurring funding, and relies entirely on grants. A dozen new projects have been submitted, but concern has been voiced about the possibility that few will be accepted.
- The renewal of permanent members. There has been *no* hiring by the University over the last 10 years. As a result, funded PhDs and postdocs cannot, and do not count on staying. This is a matter of major concern.
- The difficulty, which has a bearing on the previous point, of getting the major scientific disciplines sufficiently interested in the activities and welfare of the Centre. In this respect, the Committee suggested that every year, one of the major conferences organized by the Centre would be shared by one of the scientific departments of the University; it would not be a matter of merely inviting some scientists to give talks, but of actually fully sharing the responsibility for the scientific goals and the organization of the conference.
- The governance of the Centre. The present system relies on an Executive Committee of 5 members, and on an assembly of 'electibles' which is held twice a year. The Committee ventured to suggest that an intermediate structure, a Steering Committee, comprising the principal investigators should have regular meetings and assist the Director in defining the scientific policy of the Centre.
- As an essential part of this concern is the matter of providing Prof. Pombo some relief in the final years of her tenure, so that she can have more research time to herself and be under less duress, and also of initiating a search for her successor. It would be a tragedy, both scientific and academic for Portugal and for Europe, and personal for Olga Pombo and all those around her who worked so hard at creating this unique institution, if it were to decline after she retires.

After the visit, the Committee met to write the present report.

2. Conclusions

The Centre has made very impressive progress on all fronts since the Committee's last extensive visit, following to an appreciable degree its recommendations. In particular, the groups are more focused and the major lines of development are more clearly delineated. The average level of publications has risen, and the output is very considerable, including books published by commercial publishers.

The Centre's integration in the University has notably increased, in particular due to the courses it teaches in both the History and Philosophy of Science sector and in other curricula. The international connections have also grown and deepened, and the role of several distinguished scholars, both senior and junior, from various countries in Europe, North America and South America, is quite evident.

The Centre seems quite aware of its strong points and its unique role on the academic scene in Portugal, but also of its weaker points and the need to strengthen its visibility and institutional roots.

The Center also publishes an online, open source journal (4 issues over the 2 years of the duration), *Kairos*, which is also available in print format.

The Committee concludes that CFCUL has fulfilled with flying colors its assigned missions. It is undisputedly an fully interdisciplinary centre in history and philosophy of science, with a wide scope, a willingness to include a large variety of concerns, and an ability to attract, train and give hope and energy to many students and young scholars, all of which make it quite unique. It has established itself as the main interlocutor in Portugal for the international community.

The CFCUL is an essential piece in the national academic structure and should be encouraged, strengthened and preserved as a top priority.

In this perspective, the Committee wishes to strongly emphasize the following points:

- The Centre should consider reducing slightly its editorial production. The effort and cost of producing so many books and brochures, while commendable as it makes the Centre's activities known outside, and provides a venue for the publication of its members, especially the younger ones, is thought to take up a lot of energy; merely reducing the production by, say, 15 or 20%, would make life easier and allow some time to be devoted to publishing in international journals or exploring new forms of activity.
- 2. The Centre should seek to integrate the policy and expectations of its various groups more consistently throughout the year, by holding regular meetings with the principal investigators or group leaders, functioning as a Steering Committee.
- 3. The University should make a decisive effort to open permanent positions for the Centre. A minimal goal would be to provide one senior position and two junior or intermediate positions in the next three years.

Lisbon, 30-31 May 2012.

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Daniel Andler

María José Frápolli