

## RELATÓRIO ACTIVIDADES CFCUL – UI 678

### 2003-2007 e 2007-2010

#### Start page

Name of the Research Unit:	Centro de Filosofia das Ciências da Universidade de Lisboa <b>uID:678</b>   (L700678)
Coordinator:	Olga Maria Pombo Martins
Main Scientific Domain:	Philosophy
Other subdomains:	Philosophy of Science; General Epistemology; Unity of Science; Interdisciplinarity; Philosophy of Nature Sciences; Foundations of Quantum Mechanics; Philosophy of Life Sciences; Epistemology of Medicine; Bioethics; Philosophy of Human Sciences; Philosophy of Economics; Science, Ethics and Politics; Biopolitics; Science and Knowledge Society; Abduction and Scientific Discovery; Poincaré, Mathematical Reasoning and Intuition; Science and Art;
The Research Unit resulted from a merge of:	n/a

#### Host institutions

Leading Host Institution	Fundação da Faculdade de Ciências
Other Institutions	Faculdade de Ciências da Universidade de Lisboa

#### Objectives and Achievements

##### Unit Description

Since its creation in July 2003, the CFCUL counts with:

##### 1) SCIENTIFIC COORDINATOR (SC)

- Olga Pombo is the SC of the CFCUL since 2003. She has been re-elected for the period of 2006-2009.

##### 2) SCIENTIFIC BOARD (SB)

- constituted by all PhD eligible researchers, it has now 20 members (while in 2003 it had only 9)

- the SB meets several times per year in a regular basis and decides when to gather the whole team (57 integrated members - of whom 19 Phd and 9 master students; and 31 collaborators - of whom 18 international collaborators) or whether to meet with one specific group.

- the SB meets in an annual basis with its 3 consultants (Profs. Andrade e Silva, Franco Selleri and Daniel Andler).

##### 3) EXECUTIVE BOARD (EB)

- constituted by the eligible members responsible for the research groups and the research projects approved by the SB

- the EB executes the decisions taken in the SB in order to guarantee a both in time and accurate control of:

- 1) all the management and budgetary issues regarding each activity's implementation;
- 2) the evaluation of all the achieved (or not) goals, always trying to analyze what worked out well or what did not go as initially expected.

#### 4) RESEARCH GROUPS (RG)

- the CFCUL officially opened with 5 research lines. Through these last almost 4 years, these research lines have grown and been restructured to become the current 6 RG (see below).

- the 6 RGs are responsible for the development of the CFCUL research projects (currently 4 funded FCT/PTDC projects approved, 11 internal projects and 7 international projects (see below).

Besides the FCT funding of the CFCUL, we had a FCT funded Research Project (POCTI/FIL/48133/2002) which guaranteed a "BIC" researcher for 3 years (2004-07). In addition to the BICs's specific research work, the 3 successive grant holders (Dr. J. Cordovil, Dr. E. Fonseca and Dr. Marco Pina) had a pivotal role in the daily management and implementation of all the activities concerning not only the above mentioned Project but also the Research Unit - whenever those activities matched their research interests.

Since 2003, CFCUL has been located at Prof. Olga Pombo office (room 1.3.35) at the Faculty of Sciences University of Lisbon ( FCUL). More recently a second room (4.3.28) has been attributed to the CFCUL.

### **General Objectives**

The CFCUL was created in July 2003 as a result of the will and expertise of a group of reseachers from several Faculties of the University of Lisbon and other Universities whom, among their own research fields, had an important one in common: Philosophy of Science.

This was, at the time, in Portugal, a research area lacking a comprehensive and organized approach. Since then, the CFCUL is the only Research Unit exclusively dedicated to the Philosophy of Science in Portugal.

Our MAIN OBJECTIVES were and still are:

- to promote the development of the Philosophy of Sciences in Portugal
- to stimulate and support both specialized and interdisciplinary research
- to assure supervision of graduate and post-graduate students on Philosophy of Sciences
- to integrate research and post-graduate studies through Master and Doctoral programs (mainly "History and Philosophy of Science", FCUL and "Master on Bioethics", Lisbon Fac. of Medicine)
- to develop national and international research projects
- to establish national and international partnerships
- to organize colloquia, workshops and conferences
- to promote a "Philosophy of Sciences Permanent Seminar" for seniors reseachres and a "Gymnasium" for post-graduate students
- to edit a Scientific Journal ("Conceito")
- to edit a series of books on Philosophy of Sciences ("Philosophy of Science Notebooks")
- to reach the wider national and international scientific community nd the specific publics we thought might be interested or benefit from our research in Lisbon as well as in the rest of the country and

The CFCUL opened in 2003 with 5 Research Lines:

1. The "Two Cultures" and the Question of Unity of Science;
2. Epistemological Groundings of Nature Sciences;
3. Philosophy of Mathematics;
4. Social, Political and Ethical Impacts of the Life Sciences;
5. Articulations and Paradigmatic Contaminations between Human, Natural and Exact Sciences.

These lines have been restructured in parallel with the development of the research and the new members and students's interests.

Now, in 2007, the CFCUL has 6 RESEARCH GROUPS:

- 1) Unity of Science;
- 2) Phil. of Nature Sciences;
- 3) Phil. of Life Sciences;
- 4) Phi. of Human Sciences;
- 5) Scientific Discovery, Invention and Creation;
- 6) Science and Art.

CFCUL had, in 2003, one FCT funded project: "Scientific Culture. Conceptual migrations and Social Contaminations"

Afterwards, 11 internal projects were constituted.

Currently, the CFCUL has 3 FCT funded projects (see below) and participates in 7 international projects.

### **Main Achievements**

Over the past 3 years the CFCUL has grown significantly. With almost twice of its initial members and an ever growing national and international network, it was possible not only to achieve but to exceed most of the initially proposed objectives.

24 books, we highlight:

- J. Croca (2003), *Towards a Nonlinear Quantum Physics*, New Jersey / London: World Scientific, 215pp.
- O. Pombo (2006), *Unidade da Ciência. Programas, Figuras e Metáforas*, Lisboa: Duarte Reis, 324 pp.
- N. Nabais (2006), *Nietzsche & the Metaphysics of the Tragic*, London: Continuum Books
- O. Pombo, S. Rahman, J. Symon, M. Torres (eds.), *Unity of Science. Essays in honour of Otto Neurath*, Springer/Kluwer (in press).

45 chapters, we highlight

- R. Moreira (2004), *A Revolução Científica do Século XVII*, in E. Chitas e A.V. Serrão (org.), *Razão e Espírito Científico*, Lisboa: Duarte Reis, pp.63-74.
- J. M. Torres (2005), *Genetic and Society: a Different View*, in A. Fagot Largeto, S. Rahman e J. M. Torres (edr.) *The Influence of Genetics on the Contemporary Thinking*, Springer/Kluwer

36 articles peer review Journals (+ 23 in other journals), we highlight

- Croca, J. R. (2004), *De Broglie Tired Light Model and the Reality of the Quantum Waves in Foundations of Physics*, Vol. 34, 12, pp. 19-29.
- Davide Scarso (2004), *Linguaggio e Intersoggettività nel periodo Intermedio del Pensiero di Maurice Merleau-Ponty*, *Phainomenon* n° 9, pp. 191-207.
- J. M. Torres, (2005), *Genetic tools, Kuhnian theoretical shift and geneticization process in Medicine, Health Care and Philosophy*, pp. 1-10

8 international Colloquia (+4 national Colloquia, 9 workshops, 54 conferences), we highlight

- 1st Lisbon Colloquium for the Philosophy of Science - Unity of Science. Non-Traditional Approaches, Lisbon (25-28.10.2006)
- International Meeting - Abduction and the Process of Scientific Discovery, Lisbon, 4-6.05.2006
- 1º Colóquio Internacional de Filosofia das Ciências Humanas - "Lei, Segurança e Disciplina", Lisbon, 23-25.11.2005

4 FCT projects approved

- Cultura Científica. Migrações Conceptuais e Contaminações Sociais (POCTI/FIL/48133/2002) - excellent (27.550 EUR)
- A Imagem na Ciência e na Arte (PTDC/EAT/64201/2006) - very good (180.705EUR)
- Poincaré Filósofo da Ciência (PTDC/FIL/64748/2006) - excellent (30.000 EUR)
- Problemas Filosóficos da Física Quântica (PTDC/FIL/64748/2006) - excellent (47.000 Eur)

We developed an intense teaching activity at graduate and post-graduate level

- 8 Master, we highlight
- History and Philosophy of Science - FCUL
- Bioethics - Fac. Medicine UL
- Origin of Life - Univ. Minho

We gave scientific support to

- 12 Master + 4 PHD thesis completed (one in 2007)
- 9 Master + 19 PHD thesis in progress

Internationalization

- 2 Gulbenkian Professorships: M. Torres and M. Dascal (2003-04)
- 1 Visiting Professor Abroad (N. Nabais) at Warwick University, UK (2003-04)
- 5 post-doc: M. Torres (2004-06), V. Fabrini (2006), E. Pellejero (since 2006), D. Sardinha (since 2006), C. Pombo (since 2007)
- 7 international projects, we highlight
- La Science dans ses Contextes- Pragmatisme Dialogique (head - S. Rahman)
- Lógica Universal e Unidade da Ciência (Univ. Sevilha) - Acções integradas 2008-2010
- Abdução e Descoberta Científica (Univ. Complutense. Madrid) Acções integradas 2008-2010
- SIPS, Système d'Information en Philosophie des Sciences (head - T. Martin)
- various international partnerships, we highlight
- Univ. Michoacana de San Nicolás de Hidalgo, México
- Univ. Texas / El Paso, EUA
- Collège International de Philosophie, Paris, França
- Univ. Bari, Itália

#### Activities

#### **Integrative/multidisciplinary activities in the 2003-2006 period**

Given the nature of the CFCUL research field, a great number of our activities are necessarily integrative and multidisciplinary. Firstly, because Philosophy of Science is in itself an interdisciplinary area; secondly, because our team has members coming from a significant variety of institutions and disciplines (Philosophy, Physics, Medicine, Biology, Mathematics, Sociology, Logics). So,

1) some of our projects (if not all) are strongly interdisciplinary. See the following examples:

- the FCT Research Project "Scientific Culture. Conceptual Migrations and Social Contaminations" had, as one major explicit objective: "to intertwine disciplines, to cross boundaries and to allow for knowledge exchange from different research areas".

- the FCT Research Project "Poincaré. Philosopher of Science " includes researchers from Physics, Mathematics, Philosophy, Logics, History of Science and Mathematical Learning.

- the internal project on "Bachelard. Science and Poetics" includes researchers from Epistemology, Physics, Psychoanalysis, Philosophy, Chemistry, Literature.

2) the same can be said about the organization of colloquia. For instance:

- the "International Meeting Abduction and the Process of Scientific Discovery" brought together people from Logics, Mathematics, Semiotics, Medicine, History of Science, Artificial Intelligence and Computation.

- The "First Lisbon Colloquium for the Philosophy of Science - Unity of Science. Non-Traditional Approaches" was organized by the CFCUL in collaboration with the Depart. of Philosophy University of Texas, USA and the Research Centre UMR 8163 Savoirs, Textes, Langage, "La Science et ses Contextes", France, and with the support of the Lisbon Institut Franco Portugais, Calouste Gulbenkian Foundation, FCT/FACC, Springer/Kluwer Publishers and journal "Synthese". It was a four day meeting with more than fifty speakers from around the world and from many different areas (Philosophy, Estatistics, Biology, Physics, Mathematics, Computer Science, Literature, Cognitiva Science, Logics, Artificial Intelligence, Pragmatics, Sociology).

3) besides the internal interdisciplinary nature of the CFCUL, we pursued the objective of inviting speakers from different research areas to the conference cycles we organize - "Permanent Seminar on Philosophy of Sciences", "Gymnasium" and "Dispersions". Specially the latter is explicitly intended "to liberate the critical movement of Philosophy from the precise scientific subjects". And in fact, we received in it scholars coming from areas like Hermeneutics, Performative Arts, Politics, Psychology, Gender Studies, Classical Philology.

4) we should also mention that our teaching is manly done in the Faculty of Sciences and in the Faculty of Medicine, and that our post-graduate students are coming from a huge variety of research areas.

#### **Outreach activities in the 2003-2006 period**

One of our most important outreach activities was the creation and maintenance of a public WEB-PAGE . This is an heavy structure, hard to keep actualized, but which demonstrates and disseminates our activities to thousands of people who visit it everyday.

#### **BOOKS**

Of the 24 books published, we highlight 2 as being able of reach a wider number of people:

- Gonçalves-Maia, R., (2005) O Legado de Prometeu – Uma Viagem na História das Ciências, Escolar Editora, Lisboa

- Croca, J.R. e Moreira, R. (2007), Diálogos sobre Física Quântica. Dos Paradoxos à Não-Linearidade, Lisboa: Esfera do Caos, 352 pp

#### **BOOK DEBATES**

We organized 13 Book presentations and 10 Book debates not only at the FCUL premises but also on several bookshops both in Lisbon and Oporto (Bookshops "Ler Devagar", "Buchholz", "Eterno Retorno" and " Sem Mais nem Menos").

## INTERNATIONAL and NATIONAL COLLOQUIA

- Among the 12 organized colloquia (8 international and 4 national), we highlight the national colloquium "Darwinism versus Creationism - Where does a Scientific Theory Begin?" - organized by the CFCUL, Centro de Biologia Ambiental (CBA), Soc. Portug. de Ciências Naturais (SPCN), Biblioteca Central da FCUL and Livraria Escolar Editora, FCUL, Lisbon, 21.03.2007. It was certainly one of our most participated events, with an estimated public of around 500 people in a single day.

## WORKSHOPS

Of the 9 Workshops we organized, we highlight 2:

- "Science and Philosophy: between Rómulo de Carvalho and António Gedeão", 24.11.2006 - FCUL. This was an event included in the Program "National Scientific Culture Day, Rómulo de Carvalho's Centennial, Science and Technology week", promoted by the Agência Nacional para a Cultura Científica e Tecnológica - Ciência Viva.

- "Giordano Bruno died in the fire in February 1600", 14.02.2007, FCUL - this was the 1st session of a conference series entitled "Great Physicists" which we intend to develop in the future.

## ORGANIZED CONFERENCES

The CFCUL organized also a total of 54 other conferences, either with international or national speakers. These conferences were organized in 3 different cycles: the "Permanent Seminar on Philosophy of Sciences", the "Gymnasium" and "Dispersions". If in the first case, the conferences were aimed mainly at a specialized yet interdisciplinary public, in the two other cases, we succeeded to reach, not only researchers from different areas, but also a wide number of people. In the case of the "Gymnasium", we definitely succeeded in giving the word to post-graduate students or researchers who were giving their first steps in philosophy of science.

## ORGANIZED COURSES

We highlight the 5 following graduate courses given at FCUL

- Temas e Problemas de Epistemologia e Filosofia da Ciência, O. Pombo - 2003-04, 2005-06 ( 22h)

- O Legado de Prometeu – Uma Viagem pela História das Ciências, R. Gonçalves, 2004-05, 2005-06 (30 h)

- História das Ciências, R. Gonçalves, 2004-05-06-07 (30 h)

- Ciência na História, R. Gonçalves, 2004-05-06-07 (30 h)

Quantum Mechanics Groundings (15h), 2006 - opened to the general public.

## CONFERENCES GIVEN BY THE TEAM

- 52 conferences by invitation in secondary schools, other universities, other research centers, etc.

- 18 communications submitted to several colloquia in Portugal and abroad

## **Future vision of the Unit's activities for the period 2007-2010**

### RESEARCH

#### 1 Unity of Science

- major publication is foreseen to 2008 "Unity of Science. Essays in honour of Otto Neurath, by Springer/Kluwer

- proceedings 1st Lisbon Coll. for the Philosophy of Science will be published by the CFCUL 2008

- 2nd "Lisbon Colloquium for the Philosophy of Science - Leibniz in the XXI century" 2008

- foreseen sabbatical of Prof. Nepomuceno (Univ. Sevilla, Spain) (2008)
- "Universal Logic and the Unity of Science" - joint research project CFCUL / Univ. Seville
- CFCUL internal project "Plato's Protagoras"
- 2 Philosophy of Nature Sciences. We count with
  - FCT project: Problemas Filosóficos da Física Quântica (PTDC/FIL/64748/2006)
  - 4 consultants. M. Dascal (Tel-Aviv), G. Magalhães (S. Paulo). Maxwell (Londres), Ferrero (Ovierdo)
  - 2 partnership: Univ. Bari (Italy) and Madrid (Spain)
- 3 Philosophy of Life Sciences. We count with
  - foreseen sabbatical 2008-09 of Prof. R. Tore Slaattelid, Univ. Bergen, Norway
  - 2 relevant national partnerships on Bioethics and Evolutionism
- 4 Philosophy of Human Sciences. We count with
  - Post-doc E. Pellejero
  - 3 PHD for soon: N. Melim (delivered July 2007), V. Saragoça (2007), D. Scarso (2008)
  - foreseen sabbatical at CFCUL Pro. Salguero, Univ. Seville (2008)
  - partnerships with Univs. Lille III, Michoacana (Mexico), Nacional del Sur (Argentina), Collège Intern. de Philosophie, Paris
- 5 Scientific Discovery, Invention and Creation. We count with
  - FCT project "Poincaré Filósofo da Ciência" (PTDC/FIL/64748/2006)
  - partnership Univ. Nancy / Poincaré Archives, Univ. Lille III
  - Abduction and Scientific Discovery - joint research project CFCUL / Univ. Complutense, Madrid
  - joint research project "Pragmatisme Dialogique" (head: S. Rahman, Univ. Lille).
- 6 Science, Ethics and Politics
  - International Coll. "Living in Europe. Philosophy, Science and Politics" (CFCUL / Coll. Intern.Phil. / Institut Franco-Portugais, Lisbon, Oct. 2007)
  - 2 internal CFCUL projects: "The Citezenship Observatory" and "Social Contract and the Knowledge Society".
  - Science and Gender online forum
- 7 Science and Art- new strong line of research which will be put forward mostly on the basis of a FCT project "Image in Science and Art"- (PTDC/EAT/64201/2006), a project with a strong budget (180.705EUR) in witch we will pursue a series of precise ambitious objectives

SUPERVISION - we will continue to assure post-graduate supervision

- 2 Pos-doc - E. Pellejero (since 2006) and C. Pombo (since 2007). We will probably receive a PHD Hassan Tahiri (Univ. Lille III) who has applied for a FCT grant at the CFCUL. We count on him to the development of the research on Poincaré.
- 19 PHD thesis in progress
- 9 Master thesis in progress

TEACHING - we will continue to assure

- Graduate Courses Fac. of Sciences, UL
- Master in History and Philosophy of Science, Faculty of Sciences, UL
- Master in Bioethics, Faculty of Medicine, UL

DISSEMINATION - we will try to reach scientific community and specific publics we thought might be interested or benefit from our research by

- organizing national and international colloquia, workshops and conferences
  - promoting a "Philosophy of Sciences Permanent Seminar" for seniors and a "Gymnasium" for post-graduate students
  - editing the Scientific Journal "Conceito"
- the series "Philosophy of Science Notebooks"

2 new series: "Thesis" (where to publish PHD and master Thesis)

"Documenta" (Proceedings)

#### INTERNACIONALIZATION

- Foreseen to 2009-2010 - graduate training network involving CFCUL / UMR 8163/Lille III will include a MAITRISE CONJOINTE /Master course

#### **Future Networking activities in the 2007-2010**

The CFCUL intends to develop networking activity with other research units in Portugal:

- Faculty of Medicine
- a new chair, "Relational Ethics" will be introduced at graduate level
- teaching support from the CFCUL in the master on Bioethica
- RP Philosophy and Life Sciences
- Museum of the Faculty of Medicine (FCT project : Image in Science and Art)
- Art School of the University of Lisbon (FCT project : Image in Science and Art)
- Instituto de Ciências Sociais (ICS)
- RG Science, Ethics and Politics
- FCT Project "Filosofia, Medicina e Sociedade" (head: Adelino Cardoso) in the context of CFCUL internal RG

- RG Philosophy of Life Sciences

WE also count with the support of:

- Institut Franco- Portugais
- FCT project Poincaré. Filósofio da Ciência
- RG Philosophy of Human Sciences
- National Theater D. Maria II
- RG Science and Art
- University Theater Escola Politécnica
- RG Science and Art
- Sociedade nacional de Belas Artes
- (FCT project : Image in Science and Art)
- Câmara Municipal do Montijo
- RG Science, Ethics and Politics
- Publishers: Publidisa (Spain) and Esfera do Caos (Lisbon)

#### **General Indicators**

	2003	2004	2005	2006
Nº of Researchers (FTE)*	8	11	14	20
Masters Completed in the Period	1	2	5	4
PhDs Completed in the Period	0	1	1	1

#### **Research Groups**

	Group Title	Principal Investigator



1	(2003-2010)	Unity of Science	Olga Maria Pombo Martins
2	(2003-2010)	Philosophy of Nature Sciences	José Nunes Ramalho Croca
3	(2003-2010)	Philosophy of Life Sciences	António José Feliciano Barbosa
4	(2003-2010)	Philosophy of Human Sciences	Eduardo Anibal Pellejero
5	(2003-2010)	Science, Ethics and Politics	Nuno Gabriel de Castro Nabais dos Santos
6	(2003-2010)	Discovery, Invention and Creation	Isabel Maria Ferreira Martins Serra
7	(2007-2010)	Science and Art	Catarina Pombo Martins de Castro Nabais

<b>Group Description</b>	
Research Unit:	Centro de Filosofia das Ciências da Universidade de Lisboa <b>uID:678</b>   (L700678)
Group Name/Designation:	Unity of Science
Principal Investigador:	Olga Maria Pombo Martins
Time Interval:	(2003-2010)
Location of Group (Host Institution):	Fundação da Faculdade de Ciências
Keywords:	Philosophy of Science; General Epistemology; Scientific Culture; Interdisciplinarity
Funding, source, dates:	<ul style="list-style-type: none"> <li>- Funding by the CFCUL</li> <li>- 2 000 EUR - book edition, management (2003-2007)</li> <li>- 1 830 EUR - funding for the International Colloquium "Two Philosophers of Science" (2005)</li> <li>- 1 000 EUR - books funded by FCT/Project "Scientific Culture. Conceptual migrations and Social Contaminations" (2003-2206)</li> <li>- 25 600 EUR - Gulbenkian Professorship for the Master in History and Philosophy of Sciences - FCUL - Prof. Marcelo Dascal, Faculty of Humanities, Dep. Philosophy, Tel Aviv University, Israel (2003-4)</li> <li>- Sponsors of the "First International Colloquium for the Philosophy of Sciences - Unity of Science, Non Traditional Approaches", Lisbon, 25-28 October 2006: <ul style="list-style-type: none"> <li>- 2 500 EUR - Gulbenkian Foundation</li> <li>- 2 000 EUR - FCT - FACC</li> <li>- 600 EUR - Institut Franco-Portugais (Embassade de France)</li> <li>- 2 000 EUR - CFCUL</li> <li>- 2 200 EUR - Teatro da Trindade (Lisboa, Portugal)</li> <li>- 1 500 EUR - UMR 8163 Savoirs, Textes, Langage (Maison des Sciences de l'Homme, Nord-Pas de Calais, Lille, France)</li> </ul> </li> </ul>
<b>PI and Researchers</b>	
<b>Researchers in the Group (Ph.D. Only)</b>	
(CV)	João Manuel Gaspar Caraça
(CV)	José Nunes Ramalho Croca
(CV)	Maria Teresa Marcelino Levy Martins
(CV)	Olga Maria Pombo Martins

**Other Researchers in the Group (Ph.D. Only)**

(CV) João Manuel Pardana Constâncio

(CV) Jose Luis Toivola Câmara Leme

(CV) Marcelo Dascal

(CV) Nuno Gabriel de Castro Nabais dos Santos

(CV) RAQUEL MARIA DA CRUZ GONÇALVES MAIA

(CV) Shahid Rahman

**Other Researchers in the Group (non Ph.D.)**

(CV) Jorge Simões Carreira Maia

(CV) Luís Armando de Sousa Bastos

(CV) Manuel de Jesus Rodrigues

(CV) Patrícia Pombo Martins Tomé de Medeiros

(CV) Ricardo Gaspar André Lopes

(CV) Rute Maria Pinto Viegas Henriques Jesus

(CV) Sofia Isabel Candeias Raposo

**Objectives and Achievements****General Objectives**

This RG is the development of a previous research line (coming from the creation of the CFCUL in 2003) named "'The Two Cultures' and the question of Unity of Science" which was part of the FCT project "Scientific Culture. Conceptual Migrations and Social contaminations" (POCTI/FIL/48133/2002).

**OBJECTIVES**

- to discover the categories involved in the Idea of Unity of Science and to point out its more important theorizations.
- to identify some of the exemplary programs on the relation between Philosophy and Unity of Science (Bacon, Leibniz, Diderot, Neurath) and to systematically discuss the diversity of ways of conceiving the realization of the Idea of Unity of Science which were proposed in each case.
- to draw up a balance of the materializations which Unity of Science has given rise to, of the institutional structures in which it has been displayed, of the mechanisms which have been put forward aiming at its promotion (1. Scientific Community, 2. School, 3. Museum, 4. Encyclopaedia, and 5. Library)
- to study these 5 configurations, to analyse their multiple articulations, to understand their connection with the communication and the construction of scientific knowledge
- to give a special attention to the simultaneous constitution of scientific community and invention of school in Ancient Greece by the study of one of the paradigmatic Plato's dialogues - "Protagoras"
- to question the interdisciplinary nature of Science in the XX Century, to understand its more eloquent manifestations, to study relevant cases of the actual scientific interdisciplinary activity, both in terms of practices, heuristic procedures and institutional structures.

Besides, we intended

- to fulfill the large, ambitious aims of the FCT Project (POCTI/FIL/48133/2002) "Scientific Culture. Conceptual Migrations and Social Contaminations"
- to provide teaching on General Epistemology and Philosophy of Science in the Master on "History and Philosophy of Sciences" of the Lisbon University

- to give scientific supervision and support to post-graduate students in the area of Philosophy of Science and General Epistemology
- to establish international scientific collaboration (international projects and international publications)
- to disseminate the outcomes of our research by organizing colloquia, by giving talks and conferences and by organizing presentations and debates around books published by the RG members

### **Main Achievements**

This RG achieved the following outcomes:

**PUBLICATIONS:** 7 Books (two of which, a translation), 11 Chapters, 6 articles ( see "Productivity").

- Another most relevant international publication is being organized since 2006: Olga Pombo, Shahid Rahman, John Symon and Manuel Torres (eds.), *Unity of Science. Essays in honour of Otto Neurath*, to be published by Springer/Kluwer in 2008 (see "Future Research").

- The proceedings of the First Lisbon Colloquium for the Philosophy of Science - Unity of Science. *Non-Traditional Approaches*, (2006) will be published by the CFCUL in 2008 (see "Future Research")

**ORGANIZATION OF CONFERENCES:**

4 international colloquia, 1 national colloquium, 1 workshop, 6 conferences (see "Productivity")

- One of this colloquia - First Lisbon Colloquium for the Philosophy of Science, 2006 - was dedicated to the analysis of the actual perspectives on Unity of Science and was able to put together most significant scholars on the issue

**PHD AND MASTER THESIS:** 2 master and 1 PHD thesis in progress (see "Productivity")

**TEACHING:** 11 graduate and post-graduate courses, in Portugal and abroad

1) Master Hist. and Phil. of Science at the FCUL

- *Filosofia do Conhecimento Científico*, by O. Pombo - 2003-04 and 2005-06 (1st semester).

- *Epistemologia e Filosofia das Ciências*, by O. Pombo- 2005-2006 (2nd semester).

2) Master Courses out of the FCUL and abroad

- *Filosofia Moderna e Contemporânea*, by Nuno Nabais - Univ. Estadual do Oeste do Paraná, Toledo, Brasil, 31.10 - 4.11. 2005 (20 h).

- *Interdisciplinaridade e Complexidade* - by O. Pombo, Master in Complexity Sciences, ISCTE, Lisbon, 7.11. 2006 (4h)

3) graduate courses at FCUL

- *Temas e Problemas de Epistemologia e Filosofia da Ciência*, by O. Pombo - 2003-04 and 2005-06 (optional, 2nd semester).

- *O Legado de Prometeu – Uma Viagem pela História das Ciências*”, by R. Gonçalves, 2004-05 and 2005-06 (30 h each)

- *História das Ciências*, by R. Gonçalves, 2004-05-06-07 (30 h each)

- *Ciência na História*, by R. Gonçalves, 2004-05-06-07 (30 h each)

**TALKS AND CONFERENCES**

- 4 talks (by invitation) at international conferences

- 8 talks (by invitation) at national conferences

- 3 accepted papers/communication to colloquia

- other talks: 13

ORGANIZATION of 2 BOOK DEBATES and 5 BOOK PRESENTATIONS

PARTICIPATION IN 1 POST-GRADUATE JURY

#### **Productivity**

#### **Publications in peer review Journals (3000 ca.)**

(Up to a max of 10. Always indicate at the end of the citation, impact factor of the journal (IF=) and number of citations (n° C=). Give title and full citation in original language. DO NOT translate)

- 1) Olga Pombo (2005), Interdisciplinaridade e Integração dos Saberes, in LIINC. Laboratório Interdisciplinar sobre Informação e Conhecimento, v.1, nº. 0 (Março), pp. 4-16.
- 2) Olga Pombo (2006), Práticas Interdisciplinares, in Sociologias, Revista do Instituto de Filosofia e Ciências Humanas, Universidade Federal do Rio Grande do Sul, Brasil, VIII, nº 15, pp. 208-249.
- 3) Olga Pombo (2006), Palabra, Pecado y Redención: el lugar del Padre en la Lengua Madre, in Devenires. Revista de Filosofia y Filosofia de la Cultura, VII, nº 14, Julho, pp. 101-129
- 4) Gonçalves-Maia, R., Divulgação e Ensino da Ciência – O papel do livro, in Revué, 6, 12, 2006
- 5) Olga Pombo (2007), A Escola como Memória do Futuro, in Revista Convergência Lusíada, Brasil, número Especial. Centenário de Agostinho da Silva (1906-2006), pp. 281-291.
- 6) Serhii Wakúlenko, Projecção da Filosofia Escolástica Portuguesa na Polónia Seiscentista, in Revista Filosófica de Coimbra (34 pp.) (in press).

#### **Other publications (3000 ca.)**

(Include only Books, chapters or full papers published in conference proceedings up to max of 10. Give title and full citation in original language)

#### **BOOKS**

- 1) Olga Pombo (2004), Interdisciplinaridade: Ambições e Limites, Lisboa: Relógio d'Água, 203 pp.
- 2) Gonçalves-Maia, R., O Legado de Prometeu – Uma Viagem na História das Ciências, Escolar Editora, Lisboa, 2005
- 3) Olga Pombo, Henrique Guimarães e Teresa Levy (orgs.), (2006), Interdisciplinaridade. Antologia, Porto: Campo das Letras, Col. Campo das Ciências 16, 303 pags.
- 4) Olga Pombo, António Guerreiro e António Franco Alexandre (orgs.) (2006) , Enciclopédia e Hipertexto, Lisboa: Duarte Reis, 556 pp.
- 5) Olga Pombo (2006), Unidade da Ciência. Programas, Figuras e Metáforas, Lisboa: Editora Duarte Reis, 324 pp.
- 6) Gonçalves-Maia, R. (2006), Translation of L. Gonick e C. Criddle, A Química em Banda Desenhada, Gradiva, Lisboa
- 7) Gonçalves-Maia, R., Translation of M.S. Bell, Lavoisier no Ano Um. O Nascimento de uma Nova Ciência numa Época de Revolução, Gradiva, Lisboa (in press)

#### **BOOK CHAPTERS / PROCEEDINGS**

- 1) Olga Pombo (2003), O Insuportável Brilho da Escola, in Alain Renaut et alii, Direitos e Responsabilidades na Sociedade Educativa, Lisboa: Fundação Calouste Gulbenkian, pp. 31-59.
- 2) Olga Pombo (2004), Epistemologia da Interdisciplinaridade, in Carlos Pimenta (coord.), Interdisciplinaridade, Humanismo Universidade, Porto: Campo das Letras, pp. 93-124.

- 3) Olga Pombo (2005), Clássicos: inevitáveis!, in Bloco de Nautas. XVI Encontro de Literatura para Crianças, Lisboa: Fundação Calouste Gulbenkian, 2005, pp.149-185.
- 4) Olga Pombo (2006), Enciclopédia e Hipertexto. O Projecto, in Enciclopédia e Hipertexto, co-editado com António Guerreiro e António Franco Alexandre, Lisboa: Editora Duarte Reis (2006), pp.180-193.
- 5) Olga Pombo (2006), Para uma História da Ideia de Enciclopédia, in Enciclopédia e Hipertexto, co-editado com António Guerreiro e António Franco Alexandre, Lisboa: Editora Duarte Reis (2006), pp.194-251.
- 6) Olga Pombo (2006), Leibniz and the encyclopaedic project, in Enciclopédia e Hipertexto, co-editado com António Guerreiro e António Franco Alexandre, Lisboa: Editora Duarte Reis (2006), pp.252-265.
- 7) Olga Pombo (2006), O Hipertexto como Limite da Ideia de Enciclopédia, in Enciclopédia e Hipertexto, co-editado com António Guerreiro e António Franco Alexandre, Lisboa: Editora Duarte Reis (2006), pp.266-301.
- 8) Serhii Wakúlenko (2006) Enclopedismo e Hipertextualidade nos Commentarii Collegii Conimbricensis e Societate Iesu in Universam Dialecticam Aristotelis Stagiritæ (Coimbra 1606) in O. Pombo et al. (eds.), Enciclopédia e Hipertexto, Lisboa, Edições Duarte Reis, (2006), pp. 168-179
- 9) Olga Pombo (2006) A Ciência e as Ciências, in Encontro de Saberes, Lisboa: Fundação Calouste Gulbenkian, pp. 515-532
- 10) João Lopes Alves (2006), Aqui houve Saber, Engenho e Arte, in Renato Epifânio, Romana Valente Pinho e Amon Pinho Davi (orgs.), Memoriam de Agostinho da Silva. Lisboa : Associação Agostinho da Silva, pp. 215-218
- 11) Olga Pombo (2006) Agostinho da Silva. Um Arquétipo Vivo do Professor, in Renato Epifânio, Romana Valente Pinho e Amon Pinho Davi (orgs.), In Memoriam de Agostinho da Silva. 100 Anos, 150 Nomes, Lisboa: Zéfiro / AAS, 2006, pp. 354-359.

#### **Master and Ph.D. thesis completed (3000 ca.)**

##### MASTER THESIS:

- There are no Master thesis completed in this period
- Master thesis in progress:
  - Ricardo André Lopes, As Figuras da Verdade na Epistemologia do Século XX (Master in History and Philosophy of Sciences, Lisbon Fac. of Sciences, supervisor: Olga Pombo)
  - Sofia Raposo, A relação entre a História e a Filosofia da ciência (Master in History and Philosophy of Sciences, Lisbon Fac. of Sciences, supervisor: Olga Pombo).

##### PHD THESIS:

- There are no PhD thesis completed in this period.
- PhD thesis in preparation:
  - Ricardo Lopes, Van Fraassen and the polemics on realism (PHD in History and Philosophy of Sciences, Lisbon Fac. of Sciences, supervisor: Olga Pombo and Shahid Rahman, Lille III, France)

#### **Organization of conferences (2000 ca.)**

##### INTERNATIONAL COLLOQUIA

- Two Philosophers of Science (8-9-06.2005), realized at the FCUL. Organization: CFCUL
- First Lisbon Colloquium for the Philosophy of Science - Unity of Science. Non-Traditional Approaches (25-28.10.2006). Organization: CFCUL in collaboration with the Department of Philosophy University of Texas, El Paso and the Research Centre

UMR 8163 Savoirs, Textes, Langage, "La Science et ses Contextes" (Maison des Sciences de l'Homme, Nord-Pas de Calais, France), and with the support of the Institut Franco Portugais, Calouste Gulbenkian Foundation, FCT/FACC, Springer - Epistemology Publishers and the journal "Synthese" (an International Journal for Epistemology, Methodology and Philosophy of Science). The Colloquium was realized at the Trindade Theatre, Lisbon

- Encontros Ibericos sobre Logica y Filosofia de las Ciencias I (19.03.2007) realized at the University of Seville, Spain. Organization: CFCUL with the collaboration of the University of Sevilha

- Encontros Ibericos sobre Logica y Filosofia de las Ciencias II (8.05.2007), realized at the FCUL, Portugal. Organization: CFCUL with the collaboration of the University of Sevilha

## 2) NATIONAL COLLOQUIA

- O Curso Conimbricense e a sua Tradição. Jornadas de Estudo (7.04.2006).

Organization: CFCUL with the collaboration of Centro de História das Ciências da Universidade de Lisboa, realized at the Lisbon Science Museum, Anfiteatro Manuel Valadares.

## 3) WORKSHOPS

- Como Pensar as Relações entre a História e a Filosofia das Ciências? (21.06.2006) realized at the FCUL, Lisbon, room 1.3.29. Organization: CFCUL.

## 4) PERMANENT SEMINAR OF PHILOSOPHY OF SCIENCES (Organization: CFCUL)

- A Forma Interna: Um Conceito Interdisciplinar, conference given by Prof. Serhii Wakulenko (Universidade de Kharkiv) (20.04.2005) FCUL, Lisbon, room 8. 2. 10

- Bases Conceptuais da Génese dos Museus de Ciência: Museologia do Objecto e Museologia das Ideias, conference given by Prof. Bragança Gil (Universidade de Lisboa), (14.12.2005), realized at the FCUL, room 8. 2. 38

- Leibniz X Locke: Uma Controvérsia Epistemológica Profunda sem Diálogo Aparente, conference given by Prof. Marcelo Dascal (Universidade de Tel Aviv),(08. 02. 2006), realized at the FCU, room 8.2.38

- Minimal Naturalism, conference given by Prof. Daniel Andler (9.06.2005), realized at the FCUL, room 8.2.38

## 5) GYMNASIUM (Organization: CFCUL)

- Debates Contemporâneos na Investigação Epistemológica, talk presented by Ricardo Lopes (6.06.2007), realized at the FCUL, room 4.3.28

- O Problema da Fundamentação do Conhecimento em Popper, talk presented by Rémi Schorn (Pontifícia Universidade Católica do Rio Grande do Sul (PUC-RS), Brasil, (20.06.2007) realised at the FCUL, room1.3.29

## **Internationalization (2000 ca.)**

(Collaborative publication, Research, Graduate Training Networks or other forms of participation of the Research Group at the international level)

### INTERNATIONAL PROJECTS

- "La Contextualization des Catégories de la Pensée Scientifique" - head: Shahid Rahman (Univ. Lille III, France)

- "Le Rôle de la Micro-Histoire" - head: Shahid Rahman (Univ. Lille III, France)

- "Universal Logic and the Unity of Science" , joint research project submitted by the CFCUL and the Grupo de Lógica, Lenguaje e Información, University of Sevilha, to the "Acciones Integradas", sponsored by the Portuguese "CRUP" - Rectorat Council of the Portuguese Universities.

- "Système d'Information en Philosophie des Sciences (SIPS)" - head - Thierry Martin (IHPST / CNRS, France). This project aims at building a comprehensive paneuropean database on all the issues, themes and publications concerning the immense field of research of the Philosophy of Sciences.

#### PARTNERSHIPS WITH INTERNATIONAL INSTITUTIONS:

1) University of Lille III, France:

- joint organization of the "First Lisbon Colloquium for the Philosophy of Sciences - Unity of Sciences, Non Traditional Approaches" (see "Organization of Conferences").
- co-edition of the Springer-Kluwer book "Unity of Science - Essays in Honour of Otto Neurath" (in press).

2) University of Texas/El Paso (Departamento de Filosofia), El Paso, USA:

- joint organization of the "First Lisbon Colloquium for the Philosophy of Sciences - Unity of Sciences, Non Traditional Approaches" (see "Organization of Conferences").
- co-edition of the Springer-Kluwer book "Unity of Science - Essays in Honour of Otto Neurath" (in press).

3) Universidad de Sevilla (Grupo de Lógica, Lenguaje e Información), Seville, Spain:

- "Encontros Ibericos sobre Logica y Filosofia de las Ciencias" I and II, 2007 (please, see "Organization of Conferences").

#### VISITS TO UNIVERSITIES ABROAD

- Olga Pombo (CFCUL/FCUL) - Guest Professor at the Zentrum für Literaturforschung, Berlin (sabbatic 2004-2005)

#### VISITING FELLOWS AT THE CFCUL

- Prof. Marcelo Dascal (Faculty of Humanities, Dep. Philosophy, Tel Aviv University, Israel) - Gulbenkian Professorship for the Master in History and Philosophy of Sciences - FCUL (2003-4)

- Prof. Gildo Magalhães (Universidade Estadual de S. Paulo), gave a course "As Ciências e a Filosofia da Natureza no Romantismo", FCUL/CFCUL, 27- 29 June 2006 (4h)

- Angel Nepomuceno (Universidad de Sevilla - Grupo de Lógica, Lenguaje e Información, Spain) (foreseen sabbatic at the FCUL, 2007-2008)

#### FOREIGN VISITING PHD STUDENTS AT THE CFCUL

- Remi Schorn (PUC-RS-Brasil) - (2007)

- Silvia Meirelles (UFGRGS - PA- Brasil) - (2007)

#### Future Research

##### Objectives

The RG will work on the following 3 lines:

1) UNITY OF SCIENCE (this line of reserach will be mostly pursued at international level)

- Prof. Olga Pombo will continue his research on Unity of Science by giving special attention to Leibniz and Neurath's conception of encyclopaedia as the "model" for Unity of Science. In this concern, she intends:

- to publish an international paper - "Leibnizian Roots of Neurath's Encyclopaedism and the Contemporary Significance of Neurath's Conception of Unity of Science"

- to deepen the research on the 5 configurations of Unity of Science by publishing a book - "os Círculos do Saber" (The Knowledge Circles)

- to edit (with Dr. Patricia Medeiros) an anthological volume with several important translated texts - "Entre Saberes"



- A most relevant international publication is being organized since 2006: Olga Pombo, Shahid Rahman, John Symon and Manuel Torres (eds.), *Unity of Science. Essays in honour of Otto Neurath*, to be published by Springer/Kluwer in 2008, a co-edition of the CFCUL with University of Texas/El Paso and the University of Lille III, France (in press).
- The proceedings of the First Lisbon Colloquium for the Philosophy of Science - Unity of Science. Non-Traditional Approaches (2006) will be published by the CFCUL in 2008
- The 2nd "Lisbon Colloquium for the Philosophy of Science. Leibniz in the XXI century" will be organized by the CFCUL at 2008 intending to stimulate and debate new approaches to Leibniz Studies.
- Prof. Angel Nepomuceno (Universidad de Sevilla, Spain) in his foreseen sabbatic at the CFCUL (2008), will do research and training on "Universal Logic and the Unity of Science" (the subject of the joint research project submitted by the CFCUL and the Grupo de Lógica, Lenguaje e Información, University of Sevilla, to the "Acciones Integradas", sponsored by the Portuguese "CRUP" - Rectorat Council of the Portuguese Universities).

## 2) PLATO'S PROTAGORAS

- a team of 6 members of this RG (Profs. Pombo, Constancio, Câmara Leme and Drs. M. Rodrigues, J. Maia and L. Bastos) will study the referred dialogue looking for the cognitive, communicative and political mechanisms which are at the basis of the invention of scientific community and school. The outcomes will be:
  - "Essays on Protagoras" ( a book of original studies with a complete and new translation from the greek )
  - "Hypertextual Protagoras" (CDROM)

## 3) GENERAL EPISTEMOLOGY

- Prof. Olga Pombo will give scientific support to the "Master on History and Philosophy of Science", FCUL, by lecturing two courses:
  - "Philosophy of Scientific Knowledge " (1st semester)
  - "Epistemology and Philosophy of Science in the XX century" (2nd semester)
- Prof. Raquel Gonçalves intends
  - to publish a book on "Profiles of Contemporary Science" (2008/09)
  - to give a training course on "Science in Contemporary History" (30h)
  - the RG will actively participate in 3 international projects
    1. "La Contextualization des Catégories de la Pensée Scientifique" (head: Prof. Shahid Rahman (Univ. Lille III, France)
      - the PHD thesis of Ricardo Lopes is intended to be mostly constructed within this partnership
    2. "Le Rôle de la Micro-Histoire" (head: Prof. Shahid Rahman (Univ. Lille III, France)
      - the Master thesis of Dr. Sofia Raposo is intended to be mostly constructed within this partnership
    3. "Système d'Information en Philosophie des Sciences (SIPS)" - head - Thierry Martin (IHPST / CNRS, France).

### **Funding, source, dates**

There is no funded projects in this RG. So, the CFCUL will continue to give financial support to this RG, mainly in what concerns book acquisition, informatics material, management and organization of some of the foreseen activities. We also count with

specific funding from University of Lille, Springer/Kluwer publisher, FCT/FACC, Goethe Institut and F. Gulbenkian for the following Colloquia and Publications:

#### COLLOQUIA

- 2nd "Lisbon Colloquium for the Philosophy of Science" (2008) - " Leibniz in the XXI century" (estimated budget: 10.000 EUR)

#### PUBLICATIONS

- Pombo, O. - "os Círculos do Saber" (2008) (commercial edition)
- Pombo, O., Medeiros, P. - "Entre Saberes" (2009) (estimated budget: 2.000 EUR)
- Pombo, O., Rahman, S., Symon, J., Torres, M., (eds), Unity of Science. Essays in honnour of Otto Neurath (2008)(to be published by Springer/Kluwer, estimated budget: 8.000 eur)
- Pombo, O. (edr), Unity of Science. Non-Traditional Approaches, proceedings of the First Lisbon Colloquium for the Philosophy of Science (2008)(estimated budget: 4.000 EUR)
- Essays on Protagoras (2009)(commercial edition)
- CDROM - Hypertextual Protagoras (2009)(commercial edition)
- R. Gonçalves - "Profiles of Contemporary Science" (2008) (commercial edition)

#### **Previous publications in the area**

- 1) Olga Pombo (2005), Interdisciplinaridade e Integração dos Saberes, in LIINC. Laboratório Interdisciplinar sobre Informação e Conhecimento, v.1, nº. 0 (Março), pp. 4-16.
- 2) Olga Pombo (2006), Práticas Interdisciplinares, in Sociologias, Revista do Instituto de Filosofia e Ciências Humanas, Universidade Federal do Rio Grande do Sul, Brasil, VIII, nº 15, pp. 208-249.
- 1) Olga Pombo (2004), Interdisciplinaridade: Ambições e Limites, Lisboa: Relógio d'Água, 203 pp.
- 2) Gonçalves-Maia, R., "O Legado de Prometeu – Uma Viagem na História das Ciências", Escolar Editora, Lisboa, 2005
- 4) Olga Pombo, António Guerreiro e António Franco Alexandre (orgs.) (2006) "Enciclopédia e Hipertexto", Lisboa: Duarte Reis, 556 pp.
- 5) Olga Pombo (2006), Unidade da Ciência. Programas, Figuras e Metáforas, Lisboa: Editora Duarte Reis, 324 pp.
- 6) Olga Pombo (2006), Leibniz and the encyclopaedic project (reprint), in Enciclopédia e Hipertexto, co-editado com António Guerreiro e António Franco Alexandre, Lisboa: Editora Duarte Reis (2006), pp.252-265.
- 7) Olga Pombo (2006), O Hipertexto como Limite da Ideia de Enciclopédia, in Enciclopédia e Hipertexto, co-editado com António Guerreiro e António Franco Alexandre, Lisboa: Editora Duarte Reis (2006), pp.266-301.
- 8) Serhii Wakúlenko (2006) Enclopedismo e Hipertextualidade nos Commentarii Collegii Conimbricensis e Societate Iesu in Universam Dialecticam Aristotelis Stagiritæ (Coimbra 1606) in O. Pombo et al. (eds.), Enciclopédia e Hipertexto, Lisboa, Edições Duarte Reis, (2006), pp. 168-179
- 9) Olga Pombo (2006) A Ciência e as Ciências, in Encontro de Saberes, Lisboa: Fundação Calouste Gulbenkian, pp. 515-532

#### **Special Requirements**

Equipment, facilities, staff - we are counting on the support of the CFCUL.

We also intend to ask for extra support (conference venues freely available) for the 2nd "Lisbon Colloquium for the Philosophy of Science" (2008) - " Leibniz in the XXI century"

For the publication of the foreseen volumes, we count with the collaboration and know-how of three editors: Spriger/Kluwer, Publidisa (Spain) and Esfera do Caos (Portugal).

<b>Group Description</b>	
Research Unit:	Centro de Filosofia das Ciências da Universidade de Lisboa <b>uID:</b> 678   (L700678)
Group Name/Designation:	Philosophy of Nature Sciences
Principal Investigator:	José Nunes Ramalho Croca
Time Interval:	(2003-2010)
Location of Group (Host Institution):	Fundação da Faculdade de Ciências
Keywords:	Philosophy of Quantum Physics; Foundation of Physics; Non-linear Physics; Complexity
Funding, source, dates:	<ul style="list-style-type: none"> <li>- 1 500 EUR - Grices - sponsor for the course "As Ciências e a Filosofia da Natureza no Romantismo" lectured by Prof. Gildo Magalhães (Universidade Estadual de S. Paulo) at CFCUL, from 27 to 29, June, 2006</li> <li>- 1 000 EUR - books funded by FCT (Project "Scientific Culture - Conceptual migrations and Social Contaminations"), 6/10/2003 - 5/10/2006</li> <li>- 6 000 EUR - books, Consultant trips, informatic equipment, book edition, management, funded by CFCUL (2003 - 2007)</li> <li>- 1 500 EUR- edition support and posters funded by Catedra "A Razão" of the Lisbon University, 2006</li> <li>- 25 600 EUR - Gulbenkian Professorship for the Master in History and Philosophy of Sciences - FCUL - Prof. Marcelo Dascal (Tel-Aviv, University,Israel) (2003-2004)</li> </ul>

#### **PI and Researchers**

##### **Researchers in the Group (Ph.D. Only)**

(CV)	José Nunes Ramalho Croca
(CV)	Mário Alexandre Pousão da Costa Gatta
(CV)	Nuno Gabriel de Castro Nabais dos Santos
(CV)	Olga Maria Pombo Martins
(CV)	Rui António Nobre Moreira

##### **Other Researchers in the Group (Ph.D. Only)**

(CV)	Amaro José Rica da Silva
(CV)	Gildo Magalhães dos Santos Filho
(CV)	Marcelo Dascal

##### **Other Researchers in the Group (non Ph.D.)**

(CV)	João Eduardo Farias de Araújo
(CV)	Joao Luis de Lemos e Silva Cordovil
(CV)	Nalliely Hernández Cornejo

#### **Objectives and Achievements**

##### **General Objectives**

This RG was directed to the study of the philosophical foundations of the quantum physics, and to the conceptual analysis of the different philosophical positions involved in the interpretations of quantum physics.

In this context, this RG had the aim of, not only to submit the philosophical foundations that support the quantum physics - according to Copenhagen's interpretation - to a new critic analysis, but are also, and mainly, develop a philosophical foundation and a formalization of the non linear quantum physics that is now emerging.

In order to achieve this aims we examined the connection of the mathematics with the reality and analyse the epistemic implications of a non linear quantum physics.

This program of investigation also aimed:

- To contribute for the development of the philosophy of science in Portugal.
- To create investigation and structural conditions that can captivated students from the masters degrees in history and the philosophy of sciences
- To foment and to stimulate the investigation in the area of the philosophy of science
- To establish an forum of debate between investigators of natural sciences and philosophy.

### **Main Achievements**

The year of 2003 began with the publication of the book "Towards a Nonlinear Quantum Physics" by Prof. Croca. In this book, in the sequence of de Broglie proposal, a modern version of the nonlinear quantum physics was developed in its fundamentals. As an extension of this book the nonlinear master equation was solved for the most significant cases. And, also, an whole range of new solutions are now under close study.

Furthermore, it was shown that the coefficient term of the nonlinear term of the master equation must be always be equal to one. It was shown that whenever the coefficient differs from one the nonlinear equation by rescaling transforms itself in the linear Schrödinger equation.

The way opened by de Broglie for the nonlinear complex interaction process between the theta wave, also named the guiding wave, and the singularity was extended from the quantum physics to all physics. The main goal of this research is the unity of all physics in the light of the Principle of Eurhythmy [see "The principle of eurhythmy a key to the unity of physics" Kluwer, in print]. It was already shown that one of the most unifying principles of physics. The philosophical and epistemological implications are being developed.

This RG also achieved the following outcomes:

**PUBLICATIONS:** 3 Books, 4 Chapters, 2 articles in peer review journals, 1 article in conference proceedings (please, see "Productivity" chapter)

**ORGANIZATION OF CONFERENCES:** 1 international workshop, 2 national workshops, 9 other conferences (see "Productivity" chapter):

**PHD AND MASTER THESIS:** 1 PhD completed thesis: 1 PhD thesis in progress; 1 Master thesis in progress; 2 Phd thesis in preparation (see "Productivity" chapter)

**TEACHING** (courses given in graduate and post-graduate courses, in Portugal and abroad)

- Rui Moreira, "Epistemologia e Filosofia das Ciências", course of the Master in "História e Filosofia da Ciência" Faculdade de Ciências, Universidade de Lisboa, May-June 2004 (20 h)

- José Croca, "Fundamentos de Mecânica Quântica", Faculdade de Ciências da Universidade de Lisboa, 2006 (20 h)
- Gildo Magalhães (Universidade Estadual de S. Paulo, Brasil), "As Ciências e a Filosofia da Natureza no Romantismo", FCUL, June 2006 (4h)

#### TALKS AND CONFERENCES (given in events not organised by CFCUL)

- 1 talks (by invitation) at national conferences
- 1 other talk

#### ORGANIZATION of 2 BOOK DEBATES and 3 BOOK PRESENTATIONS

#### PARTICIPATION IN 1 POST-GRADUATE JURY

#### Productivity

#### Publications in peer review Journals (3000 ca.)

(Up to a max of 10. Always indicate at the end of the citation, impact factor of the journal (IF=) and number of citations (n° C=). Give title and full citation in original language. DO NOT translate)

Croca, J. R. (2004), "De Broglie Tired Light Model and the Reality of the Quantum Waves" in Foundations of Physics, Vol. 34, Issue 12, pp. 19-29

(IF= 0.533 (2005));

Santos, Gildo (2006), "Remarks on a New Autograph Letter from Auguste Fresnel: Light Aberration and Wave Theory", Science in Context, Volume 19, Issue 02, Jun 2006, pp 295-307

(IF=0.357 (2005);

#### Other publications (3000 ca.)

(Include only Books, chapters or full papers published in conference proceedings up to max of 10. Give title and full citation in original language)

#### BOOKS

- Croca, JR (2003), Towards a Nonlinear Quantum Physics, New Jersey / London / Singapore / HongKong: World Scientific, 215pp.
- Pombo, Olga; Beirão, Manuel e Cordovil, João L (2006), As Cartas de Problemática de António Sérgio, 3º Caderno de Filosofia das Ciências, Lisboa: Centro de Filosofia das Ciências da Universidade de Lisboa, 217 pp.
- Croca, JR e Moreira, Rui (2007), Diálogos sobre Física Quântica. Dos Paradoxos à Não-Linearidade, Lisboa: Esfera do Caos, 352 pp

#### BOOK CHAPTERS

- Croca, J.R. (2003), O Espaço e Tempo na Física Quântica in A.P.de Sousa and T. Malafaia (eds.), Diálogos Disciplinares: As Ciências e as Artes na Viragem do Milénio, Lisboa: IST Press
- Croca, J. R. (2004), A Razão na Física Quântica in Eduardo Chitas e Adriana Veríssimo Serrão (coord.), Razão e Espírito Científico, Lisboa: Edições Duarte Reis, pp. 129-152.
- Croca, JR (2007), "The principle of eurhythmy a key to the unity of physics" Kluwer, in print
- Moreira, Rui (2004), Ciência e Irracionalidade, in Eduardo Chitas e Adriana V. Serrão (org.), Razão e Espírito Científico, Lisboa: Edições Duarte Reis, pp. 75-128.
- Moreira, Rui (2004), A Revolução Científica do Século XVII, in Eduardo Chitas e Adriana V. Serrão (org.), Razão e Espírito Científico, Lisboa: Edições Duarte Reis, pp.63-74.
- Moreira, Rui (2007), The XXth Century Physics and the Unity of Science, in Olga Pombo et al (eds.), Unity of Science. Non-Traditional Approaches Springer / Kluwer (in press)

#### CONFERENCE PROCEEDINGS

Cordovil, João L (2006), Are the Two Major Conceptual Moments of the (Orthodox) Quantum Mechanics Moments of Abduction? in Olga Pombo et al (ed), Abduction and the Process of Scientific Discovery Internacional Meeting, CFCUL publications (in press)

#### **Master and Ph.D. thesis completed (3000 ca.)**

##### PHD THESIS COMPLETED

João Marto, "Interferência Não-local de Trens de Ondas", completed in 2004.

##### PHD THESIS IN PROGRESS

- João Luís Cordovil "O que é uma Partícula Quântica? - Implicações Ontológicas e Epistemológicas do Conceito de Partícula Quântica nas Interpretações de Copenhaga e de De Broglie-Croca", under the supervision of Olga Pombo and José Croca.

- João Eduardo Farias Araújo, Mecânica Quântica. Formulações e Confabulações em torno da Causalidade

under the supervision of Rui Moreira and José Croca

- Nalliely Hernandez "O Princípio da Não-Complementaridade na perspectiva do Pragmatismo de Rorty", under supervision of Rui Moreira and Andrés Rivadulla

##### MASTER THESIS IN PROGRESS

- Bruno Helder Pacheco Couto, "Alguns Fenómenos Quânticos à Luz da Electrodinâmica Estocástica", under the supervision of Prof. Mário Gata

#### **Organization of conferences (2000 ca.)**

##### WORKSHOPS

- "Sobre o Indeterminismo" (9/3/2005), realized at the Science Museum of Lisbon, Manuel Valadares Amphitheatre, organization CFCUL

- "Ciência e Filosofia entre Rómulo de Carvalho e António Gedeão" (24/11/2006), Faculdade de Ciências da Universidade de Lisboa, room (8.2.30) - workshop integrated at the National Day of Scientific Culture promoted by the Agência Nacional para a Cultura Científica e Tecnológica - Ciência Viva).

- "Giordano Bruno morreu na fogueira em Fevereiro de 1600" (14/2/2007), FCUL, room (6.2.53) - This was the first session of the conference series entitled "Great Physicists" (which we intend to develop in the future).

##### PERMANENT SEMINAR OF PHILOSOPHY OF SCIENCES (Organization: CFCUL)

- "Problemas Filosóficos do Paradoxo EPR", conference given by Prof. Augusto Garuccio (University of Bari, Itália) (2/1/2004), Faculdade de Ciências da Universidade de Lisboa (FCUL), room 8.2.04

- "Epistemologia e Retórica II", conference given by Prof. Marcelo Dasgal (Tel-Aviv University, Israel) (05/05/2005), FCUL, room 1.3.29.

- "Epistemologia e Retórica II", conference given by Prof. Marcelo Dasgal (Tel-Aviv University, Israel) (02/06/2004), FCUL, room 1.3.29.

- "Entropia. Da Máquina a Vapor ao ADN", conference given by Prof. Sousa Ramos (Instituto Superior Técnico, IST) (03/11/2004), Faculdade de Ciências da Universidade de Lisboa, room 8.2.39

- "Complementariedade. Da Psicologia à Física através da Filosofia", conference given by Prof. Rui Moreira (FCUL) (23/2/2005), Faculdade de Ciências da Universidade de Lisboa, room 8. 2.10

##### GYMNASIUM (Organization: CFCUL)

- "O que é um objecto?", talk presented by João Luís Cordovil (18/1/2006) at FCUL, room 8.2.06

- “O que é um objecto quântico?”, talk presented by João Luís Cordovil (14/6/2006) at FCUL, room 8.2.06
- “Por que é que o Objecto Quântico não é um Objecto de Conhecimento em Kant?”, talk presented by João Luís Cordovil (21/2/2007) at FCUL, room 1.3.29
- “El principio de complementariedad en la perspectiva del pragmatismo de Richard Rort”, talk present by Nalliely Hernández (24/5/2007) at FCUL, room 1.3.29

### **Internationalization (2000 ca.)**

(Collaborative publication, Research, Graduate Training Networks or other forms of participation of the Research Group at the international level)

#### COLLABORATIVE PUBLICATION

##### BOOK:

With University of Bari, Italy

Selleri, Franco (2004) "Lições de Relatividade", translated by Croca, J.R. and Moreira, R. (2005)

##### ARTICLES:

With University of Bari, Italy

Croca, JR and Selleri, Franco, “Experimental Proposal for Determination of One-Way Velocity of Light with One Single Clock” to be published in Foundations of Physics, Kluwer

With University of São Paulo, Brasil

Croca, JR and Magalhães, Gildo, "The principle of eurhythmy a key to the unity of physics”, Foundations of Physics, Kluwer, in print

##### RESEARCH

With University of Bari, Italy

Prof. Garuccio came to the CFCUL in 2003. During his stay he gave a public conference and participated in several RG work sessions.

Prof. Selleri came to Lisbon, as scientific consultant of CFCUL, in 2005. During his stay he made a public conference and participated in several RG work sessions.

In the sequence of the collaboration with the university of Bari, an experimental methodology was developed to solve the so called “Poincaré’s curse”, that is, the so-said impossibility of measuring the one-way velocity of light. This difficulty is related with the problem of two clock calibration in relativity. It was shown [“Experimental Proposal for Determination of One-Way Velocity of Light with One Single Clock”, article to be published] that it is possible to measure the one-way velocity of light with one single clock. In this way the problem of two clock calibration procedure is avoided.

With University of S. Paulo, Brasil

Prof. Gildo Magalhães came to CFCUL in 2006. During his stay he gave a public conference and participated in several RG work sessions.

In the sequence of the collaboration with the university of S. Paulo a new fundamental principle - the Principle of Eurhythmy - was developed [see the book -“The principle of eurhythmy a key to the unity of physics”, Springer/Kluwer, in print]

With University of Tel-Aviv, Israel

During the stay of Prof. Marcelo Dascal as Gulbenkian Professor at the FCUL, he gave two public conferences and participated in several RG work sessions. In result of this collaboration a new epistemic approach to quantum physics has been developed

##### VISITING UNDERGRADUATE STUDENT:

Andrea Andrisani, of University of Bari, worked in the CFCUL from January to August 2005.



## PARTNERSHIPS WITH INTERNATIONAL INSTITUTIONS:

Universidad Complutense de Madrid, Spain

Universidade de S.Paulo, Brasil

University of Tel-Aviv, Israel

### Future Research

#### Objectives

##### RESEARCH

##### CONTINUATION OF THE DEVELOPMENT OF THE MATHEMATICAL APPARATUS OF CAUSAL NONLINEAR QUANTUM PHYSICS

In particular, we aim to:

- To proceed the study of the properties of the already found solutions of the nonlinear master equation and the new ones, namely in the non stationary case.
- To publish, in this period, a full work on the mathematical foundations of the nonlinear quantum physics, on the form of a book or in a series of articles.

##### DEVELOPMENT OF THE PHILOSOPHICAL IMPLICATIONS OF THE NONLINEAR CAUSAL QUANTUM PHYSICS

We aim to study the:

- Concept of particle in the indeterminist linear quantum physics and in the modern causal nonlinear quantum physics.
- Concept of causality and indeterminism, trajectory, localization and non-localization temporality and non-temporality in the light of the nonlinear theory.
- Philosophical implications of pragmatic approach to the Niels Bohr complementarity principle.

These tasks are to be carried by research students in the course of their PhD thesis, namely:

- João Luís Cordovil "O que é uma Partícula Quântica? - Implicações Ontológicas e Epistemológicas do Conceito de Partícula Quântica nas Interpretações de Copenhaga e de De Broglie-Croca", under the supervision of Olga Pombo and José Croca.[in progress]
- João Eduardo Farias Araújo, "Mecânica Quântica. Formulações e Confabulações em torno da Causalidade" under the supervision of Rui Moreira and José Croca [in preparation]
- Nalliely Hernandez "O Princípio da Não-Complementaridade na perspectiva do Pragmatismo de Rorty", under supervision of Rui Moreira and Andrés Rivadulla (Univ. Complutense, Spain) [in preparation]

We also aim to:

- to study the philosophical implications of Fourier and wavelets analysis.
- to organize one workshop on the concept of Theory in 2010
- to organize one workshop on the concept of Quantum object in 2009
- to publish 4-8 articles.

##### THE UNITY OF PHYSICS

The aim of this line of research is to continue the work in the unification of physics. In order to do that we intend to:

- to develop formally the unity of physics by using the principle of eurhythmy to nonlinearity systems, chaos and stochastic processes, stochastic equations and theory of probabilities
- to develop a gravitic attraction law in the light of the principle of eurhythmy.

- to develop a Coulomb law in the light of the principle of eurhythmy.
- to derivated the Maxwell equations from the principle of eurhythmy.
- to study the philosophical consequences of the principle of eurhythmy and his implications in the unity of science.
- to interpret, with the help of the principle of eurhythmy, the tunneling and superluminal velocities.
- to realized one workshop on the principle of eurhythmy in 2008.

#### TRAINING

We intend to organize four courses. Namely:

- on " Wavelets analysis" - 2008 (Prof. Rica da Silva)
- on "Foundations of quantum mechanics" - 2009 (Prof. Croca)
- on "Philosophy for Physicists" - 2008-2010 (Prof. Olga Pombo and Prof. Nuno Nabais)
- on "Physics for Philosophers" - 2008-2010 (Prof. Rui Moreira and Prof. Croca)

#### DISSEMINATIONS

We aim to:

- to continue the conference series entitle "Great Physicists" (foreseen conferences: Kepler, Newton, De Broglie)
- to organize four public conferences per year
- to publish three books
- to publish four articles in peer review international journals
- to organize one international meeting on foundations of quantum physics per year.

#### **Funding, source, dates**

##### PROJECTS

47.500 EUR, funded FCT project "Problemas Filosóficos da Física Quântica" (PTDC/FIL/64748/2006). The project will begin at 1/1/2008.

This project will be the major funding basis for the RG. However, as we received not all but circa 60% of the required funding, we will have to ask for extra-financial support in order to achieve all the intended activities:

- Coming and stay of Prof. G. Magalhães from S. Paulo (GRICES PROGRAM: 2.000 EUR; CFCUL: 500 EUR - estimated)
- Coming and stay of Prof. M. Dascal from Tel-Aviv (CFCUL: 2.000 EUR - est.)
- Coming and stay of Prof. Ferrero from Oviedo (CFCUL: 1.500 EUR- est.)
- Coming and stay of Prof. Maxwell from London (CFCUL: 1.500 EUR- est.)
- Mission of Prof. Croca to a congress in Turin, 2008 (FCT/FACC or CFCUL: 750 EUR- est.)
- Publication of 3 books (FCT/FACC: 3000 EUR; CFCUL: 1500 EUR - est.)
- Annual Internacional Meeting on Quantum Physics Foundations (to be funded by the FCT project "Problemas Filosóficos da Física Quântica")

The CFCUL will continue to give financial support to the activities of this RG, mainly in what concerns book acquisition, informatics material and common management, and organization of some activities, namely:

##### COURSES

- Wavelet Analysis - (Est. Budget 1000 €)
- Foundations of Quantum Mechanics - (Est. budget: 250 €)
- Philosophy for Physicists - (Est. budget: 250 €)
- Physics for Philosophers - (Est. budget: 250 €)

## MEETINGS

- Annual Internacional Meeting on Quantum Physics Foundations (Est. Budget: 3000 €/year)
- Conference series “Great Physicists” (Est.: 250 €/session)

## WORKSHOPS

- Concept of Scientific Theory (Est. budget: 350 €)
- Concept of Quantum Object (Est. : 350 €)
- Principle of Eurhythmy (Est.: 350 €)

## Previous publications in the area

- CROCA, J. R. (2004), De Broglie Tired Light Model and the Reality of the Quantum Waves in Foundations of Physics, Vol. 34 Issue 12, pp. 19-29, (IF= 0.533 (2005))
- CROCA, J. R. (2003), Towards a Nonlinear Quantum Physics, New Jersey / London / Singapore / HongKong: World Scientific, 215pp
- CROCA, J. R. (2003), O Espaço e Tempo na Física Quântica in A.P.de Sousa and T. Malafaia (eds.), Diálogos Disciplinares: As Ciências e as Artes na Viragem do Milénio, Lisboa: IST Press.
- CROCA, J. R. (2004), A Razão na Física Quântica in Eduardo Chitas e Adriana Veríssimo Serrão (coord.), Razão e Espírito Científico, Lisboa: Edições Duarte Reis, pp. 129-152.
- MOREIRA, R. (2004), Ciência e Irracionalidade, in Eduardo Chitas e Adriana V. Serrão (org.), Razão e Espírito Científico, Lisboa: Edições Duarte Reis, pp. 75-128.
- CORDOVIL, J. L. (2006), As 'nuvens negras' da Física Quântica à luz de António Sérgio, in J. L. Cordovil, M. Beirão e O. Pombo, As Cartas de Problemática de António Sérgio, 3º Caderno de Filosofia das Ciências, pp. 171-189.
- CROCA, J.R. and MOREIRA, R. (2007), Diálogos sobre Física Quântica. Dos Paradoxos à Não-Linearidade, Lisboa: Esfera do Caos, 352 pp.

## Special Requirements

Equipment, facilities, support staff and management – we count with the support of the CFCUL.

Also we intend to get extra support (room availability and informatic) for the following activities:

Courses on:

- Wavelet analysis
- Foundations of quantum mechanics
- Philosophy for Physicists
- Physics for Philosophers

Annual Internacional meeting on Quantum Physics Foundations

Conference series “Great Physicists”

Workshops on the:

- Concept of theory
- Concept of quantum object
- Principle of eurhythmy

For the publication of the foreseen volumes, we count with the collaboration and know-how of two editors: Publidisa (Spain) and Esfera do Caos (Portugal).

<b>Group Description</b>	
Research Unit:	Centro de Filosofia das Ciências da Universidade de Lisboa <b>uID:</b> 678   (L700678)
Group Name/Designation:	Philosophy of Life Sciences
Principal Investigator:	António José Feliciano Barbosa
Time Interval:	(2003-2010)
Location of Group (Host Institution):	Fundação da Faculdade de Ciências
Keywords:	Philosophy of Medicine; Philosophy of Health; Philosophy of Biology; Evolution Theories
Funding, source, dates:	<ul style="list-style-type: none"> <li>- Funding by the CFCUL</li> <li>- 1 000 EUR - for book edition; for management (2003-2007)</li> <li>- 500 EUR - books funded by FCT/Project "Scientific Culture. Conceptual migrations and Social Contaminations" (2003-2006)</li> <li>- 25 600 EUR - Gulbenkian Professorship for the Master in History and Philosophy of Sciences - FCUL - Prof. Manuel Torres (Centro de Lógica y Filosofía de la Ciencia, Universidad Nacional de Sur, Bahía Blanca, Argentina) (2003-2004)</li> <li>- 36.880 EUR - FCT post-doc grant - Prof. Manuel Torres (CFCUL / Universidad Nacional del Sur, Bahia Blanca, Argentina), at the CFCUL, working in the area of Philosophy of Biology, 2004-05 and 2005-2006</li> <li>- 750 EUR - FACC/FCT support to book edition (Duarte Abreu, M.H., "A Teoria de Oparine sobre a Origem da Vida", in press)</li> <li>- 900 EUR - Private funding for purchasing books by João Sampaio MD (Navy Hospital, Lisbon)</li> </ul>

#### **PI and Researchers**

##### **Researchers in the Group (Ph.D. Only)**

(CV)	António José Feliciano Barbosa
(CV)	António Manuel Bracinha Vieira
(CV)	Fernando José Coelho Martins Vale
(CV)	Isabel Maria Ferreira Martins Serra
(CV)	José Pedro Quítalo Marvão
(CV)	Nuno Gabriel de Castro Nabais dos Santos

##### **Other Researchers in the Group (Ph.D. Only)**

(CV)	André Levy Martins Coelho
(CV)	Francisco José do Nascimento Carrapiço
(CV)	Juan Manuel Torres

##### **Other Researchers in the Group (non Ph.D.)**

(CV)	António José de Barros Veloso
(CV)	Dinora Maria Sequeira Xavier
(CV)	joão manuel costa casqueiro de sampaio
(CV)	Marco Alexandre Silva de Pina e Silva
(CV)	Maria Helena Duarte Abreu

#### Objectives and Achievements

##### General Objectives

This RG results from the reorganization of 2 previous Research Lines (RL): "Analysis of the political, ethical and social impacts of Life Sciences" and "Articulation and paradigmatic contamination between the human, natural and formal sciences".

Our objectives were:

- to study the social and ethical impacts of science and the politics of science and its models. More specifically, to study the technological mediation, the anthropological and ethical challenges of scientific and technological developments, as well as the - in a different theoretical and methodological frame - the public understanding of science.
- to study the of paradigmatic contaminations between human and natural sciences, analyze the human science's models in the study of the inner processes of the scientific knowledge and their social impact, and analyze the scope and limits of formalism in human sciences.

With an ever growing number of members, these two RL would eventually give birth to 3 Research Groups: the current "Philosophy of Life Sciences" RG (mainly aiming at studying Philosophy of Biology and Philosophy of Medicine ), the "Philosophy of Human Sciences" RG (please, see RG # 4), and the "Science, Ethics and Politics" RG (RG # 5).

As far as the "Life Sciences" is concerned, Prof. Antonio Barbosa and Prof. Nuno Nabais' team - in a partnership CFCUL/ Lisbon Faculty of Medicine - shaped one of this RG's main objectives: to do research on Bioethics, Philosophy of Medicine and Health and History of Madness in Portugal.

Philosophy of Life and Biology has always had an important role in the CFCUL, mainly due to the important work done by Prof. J. M. Torres, an international expert in Philosophy of Biology, both as a Gulbenkian Professor (2003-2004) and a Post-doc at the CFCUL (2004-06). Besides Prof. Torres research and training at the CFCUL, he also developed, together with Prof. R. Gonçalves, a relevant teaching work in the Master on "Origin of Life" (Minho University; see "Main Achievements" below).

Largely as a consequence of Prof. Torres work in our Unit, a growing team of CFCUL members and collaborators from FCUL Biology Department (Prof. Carrapiço) and ISPA (PHD A. Levy), have been developing research around the study of Evolutionary Theories (already materialized in a Master Thesis (Dr. H. Abreu) and in a Colloquium, "Darwinism vs Creationism - Where Does a Scientific Theory Begin?" - please see the "Productivity section").

##### Main Achievements

This RG achieved the following outcomes:

**PUBLICATIONS:** (5 Book chapters and 8 articles; please see the "Productivity" section)

**ORGANIZATION OF CONFERENCES:** 3 National colloquia, 1 course and 4 other conferences (see "Productivity" section)

**PhD AND MASTER THESIS :** 7 Master thesis completed. 2 PhD thesis under way (see "Productivity" section)

TEACHING (both graduate and post-graduate, in Portugal and abroad)

A. Philosophy of Medicine

- Master on Bioethics, Lisbon Faculty of Medicine

- coordination: Antonio Barbosa (since 2006)

- lecturing by António Barbosa (2003-2007)

Martins Vale (2003-2007)

Nuno Nabais (2003- 2007)-24h/year

Olga Pombo (2006)-4h

- Master on Palliative Care (Antonio Barbosa)

-Module “Comunicação e Aspectos Psicológicos” –2007, 5 h, Lisbon Fac.Medicine (FML)

-Module “Processo de Luto: Apoio Familiar e Profissional” 2007, 12h, FML

-Module “Educação e Formação em Cuidados Paliativos” 2007, 4h, FML

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- Master on Psicogerontology (Antonio Barbosa) : 2004-present.

- Master on Sciences of the Pain (Antonio Barbosa) : 2005-present; current coordinator.

- Master on Sexology (Antonio Barbosa) : 2004-present.

- Free Course on Relational Ethics (Antonio Barbosa) – Coordinator since 2003 –  
Medicine Graduation

B. Philosophy of Life and Biology

- Master "Evolution and Origin of Life", Univ. Minho (Portugal)

- lecturing by Raquel Gonçalves: “História das Ideias”, “Filosofia das Ciências”,  
"Temas Interdisciplinares" (2003-06)

- Master "Evolution and Origin of Life", Univ. Minho (Portugal)

- lecturing by Manuel Torres: "Filosofia de Biologia" (20h) (2004-06)

- Master "History and Philosophy of Science, FCUL, Lisbon

- lecturing by Manuel Torres: "Análisis sobre biotecnología, ética y sociedad" (8h)

RESEARCH PROJECTS COORDINATION (Antonio Barbosa) :

- “Morbilidade no Doente Oncológico”, Psychiatry Service/Hospital de Santa Maria,  
Lisbon

- “Estudo de Qualidade em Psiquiatria de Ligação”, Serviço de Psiquiatria/Hospital de  
Santa Maria, Lisbon

- “Confidencialidade de Dados”, Centro de Bioética/Faculdade de Medicina de Lisboa,  
Lisbon

TALKS & CONFERENCES

- 5 talks (by invitation) at international conferences

- 9 talks (by invitation) at national conferences

- 4 accepted papers/talks to colloquia

- 6 other talks

PARTICIPATION IN 10 POST-GRADUATE JURIES

**Productivity**

**Publications in peer review Journals (3000 ca.)**

(Up to a max of 10. Always indicate at the end of the citation, impact factor of the journal (IF=) and number of citations (n° C=). Give title and full citation in original language. DO NOT translate)

1) Juan Manuel Torres (2005), Genetic Tools, Kuhnean Theoretical shift and Geneticization Process in The Journal of Medicine, Health Care and Philosophy, Kluwer: Springer Publishers.

- 2) Juan Manuel Torres (2005), Genetic tools, Kuhnian theoretical shift and geneticization process in Medicine, Health Care and Philosophy, pp. 1-10
- 3) Isabel Martins Serra (2006), Egas Moniz e a Investigação Científica (with Elisa Maia) – in Estudos sobre a Ciência em Homenagem a Ruy E. Pinto, Vol III Opuscula Officinara, Coord. J.P. Sousa Dias, Shaker Verlag, IRC.
- 4) Carrapiço F. (2006), Is the Azolla-Anabaena symbiosis a co-evolution case?, in book of the International Conference “General Botany: Traditions and Perspectives”, dedicated to 200th anniversary of the Kazan Botanical School, January 23-27, , part I. Kazan, 2006, p. 193-195 (Edited by Andrew Sitnykov and published by the Kazan University, Russia).
- 5) Barbosa A, Telles-Correia D, Mega I, Barroso E, Monteiro E. (2007), Adesão nos doentes transplantados. Acta Med Port; 20: 73-85.
- 6) Barbosa A, Levy P, Bicho M, Pombo S, Ismail F, Neves Cardoso J. (2007), Alcoholism candidate gene polymorphisms and Alexithymia in alcoholic outpatients. European Journal of Human Genetics. 15:233.

### **Other publications (3000 ca.)**

(Include only Books, chapters or full papers published in conference proceedings up to max of 10. Give title and full citation in original language)

#### **BOOK CHAPTERS**

- 1) Juan Manuel Torres (2005), Genetic and Society: A Different View , in Anne Fagot Largot, Shahid Rahman e Juan Manuel Torres (edr.) The Influence of Genetics on the Contemporary Thinking, Kluwer: Springer Publishers.
- 2) Juan Manuel Torres (2005), Introduction, in Anne Fagot Largot, Shahid Rahman e Juan Manuel Torres (edr.) The Influence of Genetics on the Contemporary Thinking, Kluwer: Springer Publishers.
- 3) António Bracinha Vieira (2005), Modelos evolutivos e ideologia: o caso Teilhard de Chardin, in: Teilhard de Chardin. Evolução e Esperança. Antropologia e Filosofia (Universidade Nova de Lisboa), Dez., pp. 13-28
- 4) Bernardo A., F. Leal, A. Barbosa, “Ansiedade”, in A. Barbosa, I. Galriça Neto, (Eds) (2006) Manual de Cuidados Paliativos, Lisboa, Faculdade de Medicina de Lisboa/Centro de Bioética/Núcleo de Cuidados Paliativos, 231-239, .
- 5) Barbosa, A, (2006) Medicina Baseada na Relação, in M. Valente Alves, R. Ferreira, C. Perdigão (Eds), Carlos Ribeiro: A Vida Modo de Conhecer, Lisboa, 140-145.

#### **PROCEEDINGS**

Carrapiço, Francisco (2006), “The origins of life and the mechanisms of biological evolution”. SPIE Astrobiology Conference “Instruments, Methods, and Missions for Astrobiology IX, San Diego, 13-17-August, 2006. Proceedings of SPIE, 6309: 63090O-1 - 63090O-5 ) (ISBN 0-8194-5911-9).

#### **ONLINE PUBLICATIONS**

Barros Veloso, António (2004), Das ervilheiras de Mendel à dupla hélice de Watson e Crick ([http://cfcul.fc.ul.pt/equipa/nao\\_elegiveis/antonio%20veloso/genetica-versao-definitiva.doc](http://cfcul.fc.ul.pt/equipa/nao_elegiveis/antonio%20veloso/genetica-versao-definitiva.doc))

Barros Veloso, António (2005), Acerca da "Medicina Baseada na Evidência" ([http://cfcul.fc.ul.pt/equipa/nao\\_elegiveis/antonio%20veloso/medicina%20baseada%20na%20evidencia1.doc](http://cfcul.fc.ul.pt/equipa/nao_elegiveis/antonio%20veloso/medicina%20baseada%20na%20evidencia1.doc))

Barros Veloso (2006), A Investigação como Dimensão Constitutiva da Medicina Contemporânea ([http://cfcul.fc.ul.pt/equipa/nao\\_elegiveis/antonio%20veloso/a\\_investigacao\\_na\\_medici na\\_contemporanea.doc](http://cfcul.fc.ul.pt/equipa/nao_elegiveis/antonio%20veloso/a_investigacao_na_medici na_contemporanea.doc))

### **Master and Ph.D. thesis completed (3000 ca.)**

MASTER THESIS completed in this period:

- "A Teoria de Oparine sobre a Origem da Vida na perspectiva da História e da Filosofia das Ciências. Um contributo para o Ensino da Biologia", Maria Helena Duarte Abreu, Master in Science Teaching, Faculty of Sciences of the Lisbon University, supervisor: Olga Pombo, 14.07.2003.
- "A comunicação de diagnóstico em Psiquiatria um problema ético", Paula Alexandra Carvalhana Santos Hipólito Godinho, Master in Bioethics, Faculdade de Medicina da Universidade de Lisboa, 22.11.2004.
- "Ética da gestão de recursos em geriatria", Olívia Rego Tavares de Oliveira Gomes, Master in Bioethics, Faculdade de Medicina da Universidade de Lisboa, 4.10.2005.
- "Atitudes dos profissionais de saúde perante a problemática ética do fim da vida", Sandra Manuela Figueira Heleno Serrano, Master in Bioethics, Faculdade de Medicina da Universidade de Lisboa, 23.11.2005.
- "Atitudes éticas dos enfermeiros perante o doente em fase terminal", Paulo Emanuel Pereira Lopes, Master in Bioethics, Faculdade de Medicina da Universidade de Lisboa, 28.11.2005.
- "Acompanhar no fim de vida: a futilidade terapêutica", Cristina Maria Rato Ferreira Palmeira, Master in Bioethics, Faculdade de Medicina da Universidade de Lisboa, 14.07.2006.
- "Filosofia da Esperança", Alexandre Miguel Marques Júlio, Master in Philosophy, Faculdade de Letras da Universidade de Lisboa, 6.12.2006.

PhD THESIS:

There are no PhD thesis completed in this period. There are 2 thesis under way:

1. "Correlações psicossociais da somatização", Cristina Fabião, ICBAS/Universidade do Porto. (in progress)
2. "Um presente embrulhado em dor: o contacto com a morte nos profissionais de saúde", Teresa Alexandre Andrade, Faculdade de Psicologia e Ciências da Educação da Universidade de Lisboa. (in progress)

### **Organization of conferences (2000 ca.)**

NATIONAL COLLOQUIA

1. 2004 - Colóquio: Ainda não Doente - Contributos Multidisciplinares para uma Filosofia da Saúde - in collaboration with the Instituto de Ciências Sociais da Universidade de Lisboa, Centro de Bioética da Faculdade de Medicina da Universidade de Lisboa, Centro de Estudos de Filosofia da Medicina-IOP/FG, Centro de Filosofia da Universidade de Lisboa e Fundação Calouste Gulbenkian, Lisbon, Anfiteatro do Instituto de Ciências Sociais, Lisbon, 10.3.2004, 9h-18h.
2. 2007 - Darwinismo versus Criacionismo - Onde começa e onde acaba uma Teoria Científica? - organization: Centro de Filosofia das Ciências (CFCUL), Centro de Biologia Ambiental (CBA), Sociedade Portuguesa de Ciências Naturais (SPCN), Biblioteca Central da FCUL and Livraria Escolar Editora, Faculdade de Ciências da Universidade de Lisboa, Anfiteatro 36 (6.1.36), Lisbon, 21.03.2007, 14h-20h.
3. 2007 - Bioética: Conceitos Fundamentais (Liberdade, Dignidade, Responsabilidade, Racionalidade, Felicidade) - in collaboration with the Centro de Bioética da Faculdade de Medicina de Lisboa, Faculdade de Medicina de Lisboa, Anfiteatro Cid dos Santos, Lisbon, 12.04.2007, 10h-18h

COURSES



1. VI Curso de Formação para Membros de Comissões de Ética “Bioética e Religião”.  
Fac. Medicine, Univ. Lisbon, Lisbon, 13-14.04.2007.

#### PERMANENT SEMINAR OF PHILOSOPHY OF SCIENCES

1. A Fraude de Pildown. Migração e Contaminações Ideológicas de Modelos, Bracinha Vieira (Universidade Nova de Lisboa, UNL, Portugal), 16.03.2005 (18h), FCUL, Lisbon.

2. Ciências da Vida e Ciências Humanas: A Questão do Reduccionismo, José Luís Garcia (Instituto de Ciências Sociais, ICS, Portugal), 31. 05. 2005 (18h), FCUL, Lisbon.

3. Modelos Y Teorias en Biología Evolutiva, Juan Manuel Torres (Univ. Bahia Blanca, Argentina, CFCUL - Portugal), 19.04.2006, 18 h, FCUL, Lisbon.

4. Evidence-Based Medicine: A Reading of the Original Textbook, Rasmus Tore Slaattelid ( Univ. Bergen, Norway), 10.05.2007, 18h, FCUL, Lisbon.

#### **Internationalization (2000 ca.)**

(Collaborative publication, Research, Graduate Training Networks or other forms of participation of the Research Group at the international level)

#### INTERNATIONAL PROJECTS

SIPS, Système d'Information en Philosophie des Sciences (head - Thierry Martin) 3  
UMR de Philosophie des Sciences, IHPST / CNRS, França

#### PARTNERSHIPS WITH INTERNATIONAL INSTITUTIONS:

Centre for the Studies of the Sciences and the Humanities (SVT), Bergen, Norway.  
This partnership has just began this year, and gave already origin to a conference by Prof. Rasmus Tore Slaattelid, with the title "Evidence-Based Medicine: A Reading of the Original Textbook". This goes along with the about to start line in Philosophy of Medicine which will study the concepts of Health, Illness, Disease, Evidence-based Medicine and Diagnosis (please see chapter "5. Future Research")

#### FOREIGN VISITING FELLOWS:

1. Prof. Juan Manuel Torres (Centro de Lógica y Filosofía de la Ciencia, Universidad Nacional de Sur, Bahía Blanca, Argentina) - Gulbenkian Professorship for the Master in History and Philosophy of Sciences - FCUL - (2003-2004)

2. Prof. Juan Manuel Torres (Univ. Nacional del Sur, Argentina) - Post-Doc at the CFCUL, Portugal 2004-2005, 2005-2006.

2. Prof. Rasmus Tore Slaattelid (Univ. Bergen, Norway) - Sabatic period in Lisbon foreseen for 2008-2009.

#### **Future Research**

#### **Objectives**

The RG will work on the following 3 lines:

##### 1) EPISTEMOLOGY OF MEDICINE

- Prof. MD Antonio Barbosa will give special attention to the epistemological status and ethical dimension of the communicative relation between patient and physician. He intends to introduce a new chair, "Relational Ethics", at the Medicine graduation (FML, Univ. Lisbon), where he teaches, to organize an international congress on "Ethics, Communication and Epistemology of Medicine", to publish its proceedings and a book of its own authorship

- Prof. Nuno Nabais, MD João Sampaio and MD Barros Veloso will discuss the so called Evidence Based Medicine confronting it with the phenomenological concept of Evidence in medical diagnosis. Prof. Nuno Nabais will give special attention to the evidential experience of non-actual realities (protensions, probabilities, possibilities, risks, etc.) in medical knowledge. Dr. Sampaio and Dr. Barros Veloso will work out the

concept of Evidence Based Medicine and its implications for the diagnosis process. Dr. Sampaio will organize in 2008 a National Colloquium on "Philosophy of Medical Knowledge" intending to do the state of the art in this area in Portugal and will publish the proceedings. The RG will receive support from Prof. Rasmus Tore Slaattelid (Centre for the Study of the Sciences and the Humanities, Univ. Bergen, Norway) who will be working with the CFCUL in his sabatic in 2008.

- Dr. B. Veloso (in collaboration with Prof. A. Barbosa) intends to do research on the scientific relevance of the Lisbon School of Medicine in the 30ties and 40ties in Portugal. He will publish the second book of a series dedicated to the History of Medicine in Portugal.

## 2) BIOETHICS

- Prof. A. Barbosa (with the collaboration of Prof. M. Vale and Prof. Nabais) will continue the research on Bioethics which is beeing done at the Master on Bioethics in the Faculty of Medicine (coordinator: Prof. Barbosa) and the support to its post-graduate students

- in the line of two previous workshops organized by the CFCUL (in collaboration with the Faculty of Medicine and the Institute of Social Siences in 2004 ("Not yet ill. Multidisciplinary contributes towards a Philosophy of Medicine") and in 2007 ("Bioethics. Fundamental Concepts: Liberty, Dignity, Responsibility Rationality and Hapiness"), Profs. Barbosa and Nabais intend to organize 3 Workshops:

"Relational Ethics" (2007),

"Bioethics and Biopolitics" (2008),

"Bioethics and Epistemology" (2009)

## 3) EVOLUTIONISM AND EVOLUTION THEORIES

- Profs. B. Vieira, F. Carrapiço, Andre Levy and Master Helena Abreu will work on the publication of a series of 4 volumes dedicated to

1. Evolution. Arguments in favour

2. Evolution Mechanisms - from Lamarck to Margullis

3. Origin of Life

4. Origin and Evolution of Mankind

- They will organize an International Workshop in 2009: "150 Years of the Origin of Species from Charles Darwin"

- The RG will receive scientific support from Prof. M. Torres (former post-doc at the CFCUL and a reknowed specialist in Philosphy of Biology) who will be invited to come to the above mentioned Colloquium "150 Years after the 'Origin os Species'".

- Prof. R. Gonçalves has a new book underway, tentatively called "Perfis da Ciência Contemporânea" and a planned training session, "Ciência na História Contemporânea" (30 h).

- Furthermore this RG will give scientific support to a PHD dissertation (by Master Helena Abreu) and a Master dissertation (by Dr. Dinora Xavier).

## **Funding, source, dates**

There is no funded projects in this RG. So, we intend to ask for specific funding (internal, Faculty of Medicine, FCT/FACC; Gulbenkian, Pharmacological Industry and other private fundings) for the organization of the following Colloquia and publications

### COLLOQUIA

- International congress on "Ethics, Communication and Epistemology of Medicine", 2007 (estimated budget: 5.000 EUR)

- National Colloquium on "Philosophy of Medical Knowledge" to take place at the Geography Society of Lisbon, 2008 (estimated budget: 1.000 EUR)
- International Workshop "150 Years of the Origin of Species from Charles Darwin", 2009 (estimated budget: 5.000 EUR)
- Workshop on "Relational Ethics", 2007 (organized by Profs. Antonio Barbosa and Nuno Nabais) (estimated budget: 500 EUR)
- Workshop on "Bioethics and Biopolitics", 2008 (organized by Profs. Antonio Barbosa and Nuno Nabais) (estimated budget: 500 EUR)
- Workshop on "Bioethics and Epistemology", 2009 (organized by Profs. Antonio Barbosa and Nuno Nabais) (estimated budget: 500 EUR)

#### PUBLICATIONS

- Proceedings of the colloquium "Ethics, Communication and Epistemology of Medicine" (estimated budget: 2.000EUR)
- Book by António Barbosa - "Relational Ethics" (commercial edition)
- Proceedings of the colloquium "Philosophy of Medical Knowledge" (estimated budget: 2.000EUR)
- Book by Dr. Barros Veloso - "Lisbon School of Medicine in the 30ties and 40ties in Portugal" (commercial edition)
- Series of 4 volumes on "Evolutionism and Evolution Theories" (estimated budget: 5.000EUR)

#### **Previous publications in the area**

- ABREU, Helena (2007), *Oparine e a Origem da Vida*, Lisboa: CFCUL
- BARBOSA, António (2006), *Medicina Baseada na Relação*, in M. Valente Alves, R. Ferreira, C. Perdigão (Eds), *Carlos Ribeiro: A Vida Modo de Conhecer*, Lisboa, 140-145
- BRACINHA VIEIRA, António (2005), *Modelos evolutivos e ideologia: o caso Teilhard de Chardin*, in: Teilhard de Chardin. *Evolução e Esperança*. Antropologia e Filosofia, Lisboa: Universidade Nova de Lisboa, pp. 13-28
- BARROS VELOSO, António (2005), *Acerca da "Medicina Baseada na Evidência"* ([http://cful.fc.ul.pt/equipa/nao\\_elegiveis/antonio%20veloso/medicina%20baseada%20na%20evidencia1.doc](http://cful.fc.ul.pt/equipa/nao_elegiveis/antonio%20veloso/medicina%20baseada%20na%20evidencia1.doc))
- CARRAPIÇO, Francisco (2006), "The origins of life and the mechanisms of biological evolution". SPIE Astrobiology Conference "Instruments, Methods, and Missions for Astrobiology IX, San Diego, 13-17-August, 2006. Proceedings of SPIE, 6309: 630900-1 - 630900-5 ) (ISBN 0-8194-5911-9).
- TORRES, Juan Manuel (2005), *Genetic Tools, Kuhnian Theoretical shift and Geneticization Process in The Journal of Medicine, Health Care and Philosophy*, Kluwer: Springer Publishers
- NABAIS, N.. (2005), *Loucura e Desrazão: Apresentação*, in *Conceito*. Revista de Filosofia e Ciências do Homem, n.º 1, pp.13-16

#### **Special Requirements**

Equipment, facilities, staff - we are counting on the support of the CFCUL. We also intend to ask for the collaboration of the Faculty of Medicine of the University of Lisbon, the Center of Bioethics of this Faculty, the FCUL Centro de Biologia Ambiental (CBA), the Sociedade Portuguesa de Ciências Naturais (SPCN), with whom we have already organized previous activities.

We also count with the collaboration of the FCT Project "Philosophy, Medicine and Society" coordinated by PHD Adelino Cardoso (CFUL/FLUL) and the "Medicine and

History of Ideas Section" of the Scientific Society of Geography with whom we have recently established a partnership agreement.

Also, we intend to get extra support (conference venues freely available) for the following activities:

- International congress on "Ethics, Communication and Epistemology of Medicine", 2007 - Faculty of Medicine of UL
- National Colloquium on "Philosophy of Medical Knowledge", 2008 - Scientific Society of Geography of Lisbon
- International Workshop "150 Years of the Origin os Species from Charles Darwin" , 2009 - Science Museum of Lisbon University
- Workshop on " Relational Ethics", 2007 - Faculty of Medicine of UL.
- Workshop on "Bioethics and Biopolitics", 2008 - Faculty of Medicine of UL.
- Workshop on "Bioethics and Epistemology", 2009 - Faculty of Medicine of UL.

For the publication of the foreseen volumes, we count with the collaboration and know-how of two editors: Publidisa and Esfera do Caos.

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<b>Group Description</b>	
Research Unit:	Centro de Filosofia das Ciências da Universidade de Lisboa <b>uID:</b> 678   (L700678)
Group Name/Designation:	Philosophy of Human Sciences
Principal Investigador:	Eduardo Anibal Pellejero
Time Interval:	(2003-2010)
Location of Group (Host Institution):	Fundação da Faculdade de Ciências
Keywords:	Epistemology of Human Sciences; Philosophy of Linguistics; Philosophy of Economics; Fiction
Funding, source, dates:	<ul style="list-style-type: none"> <li>- 36.880 EUR - FCT post-doc grant - PHD. Eduardo Pellejero (Univ. del Salvador, B. Aires, Argentina), CFCUL. Philosophy of Human Sciences, 2006-07, 2007-08</li> <li>- I Colóquio Internacional de Filosofia e Ciências do Homem - "Lei, Segurança e Disciplina. Trinta anos depois de Vigiar e Punir de Michel Foucault" (2005)</li> <li>- 1 500 EUR funded by CFCUL,</li> <li>- 1 000 EUR funded by FCT/FACC</li> <li>- 1 500 EUR funded by Faculdade de Ciência e Tecnologia da Universidade Nova de Lisboa</li> <li>- 1 500 EUR funded by Centro de Comunicação e Linguagens da Faculdade de Ciências Sociais e Humanas of the Universidade Nova de Lisboa</li> <li>- 2 500 EUR funded by Institut Franco-Portugais</li> <li>- II Colóquio Internacional de Filosofia e Ciências do Homem - Deleuze. A Arte entre Crítica e Clínica (2006)</li> <li>- 1 500 EUR funded by Institut Franco-Portugais</li> <li>- 1 000 EUR funded by CFCUL</li> <li>- 500 EUR - Magazine "Conceito", funded by CFCUL</li> <li>- 500 EUR - Magazine "Conceito", funded by CHFC-FCT-UNL</li> <li>- 1 000 EUR - books funded by FCT/Project "Scientific Culture. Conceptual migrations and Social Contaminations" 6/10/2003 - 5/10/2006</li> <li>- 650 EUR - book edition, management, funded by CFCUL</li> </ul>
<b>PI and Researchers</b>	
<b>Researchers in the Group (Ph.D. Only)</b>	
(CV)	António Manuel Bracinha Vieira
(CV)	Catarina Pombo Martins de Castro Nabais
(CV)	Diogo Sardinha Marques da Silva

(CV)	Eduardo Anibal Pellejero
(CV)	Jean-Yves Mercury
(CV)	Nuno Gabriel de Castro Nabais dos Santos
<b>Other Researchers in the Group (Ph.D. Only)</b>	
(CV)	EDUARDO GONZÁLEZ DI PIERRO
(CV)	Jose Luis Toivola Câmara Leme
(CV)	Mario Teodoro Ramirez Cobián
(CV)	patricia maria leal soares martins sanpayo
(CV)	Serhii Wakúlenko
(CV)	Vítor Manuel Leite Neves
<b>Other Researchers in the Group (non Ph.D.)</b>	
(CV)	Ana Maria Mendes Gaspar
(CV)	Davide Scarso
(CV)	Dominique Jean-François Mortiaux
(CV)	Golgonia Luminita Anghel
(CV)	Ignacio Quepons Ramírez
(CV)	João António Lopes Alves
(CV)	Nuno José Ferreira de Melim
(CV)	Paula María Shaer
(CV)	Sofia Isabel Candeias Raposo

#### Objectives and Achievements

##### General Objectives

This RG gains total independence in 2006. However, a strong activity around the Philosophy of Human Sciences had been taking place in the CFCUL since 2004 in the context of a research line called "Articulation and paradigmatic contamination between the human, natural and formal sciences" which was part of the FCT project "Cultura Científica. Migrações Conceptuais e Contaminações Sociais (POCTI/FIL/48133/2002). This project's main objectives were to study the paradigmatic contaminations between human and natural sciences, the analysis of the human science's models in the study of the inner processes of the scientific knowledge and their social impact, and the analysis of the scope and limits of formalism in human sciences.

Yet, in 2006, with the growing up of the CFCUL and the arriving of new researchers, the RG on Philosophy of Human Sciences became consolidated. Two important projects were worked out and presented for funding to the FCT: «Philosophy of Economy» and «Sciences in French Contemporary Philosophy». They were not funded but they are being worked out for resubmission later this year. Meanwhile, they are taken as internal projects (see "Future Research").

Our objectives have been:

- to create an international research network on Philosophy of Human Sciences
- to analyse the main philosophical questions around Human Sciences
- to analyse the main philosophical questions on Economics
- to elaborate a set of concepts for a better understanding of the methods and theories of Human Sciences
- to give a permanent training and philosophical support to scientists and philosophers on this area

- to edit a periodical publication where the research done could reach the scientific community in particular and the public in general
- to organize scientific meetings for the dissemination of the questions raised and its possible answers.

### **Main Achievements**

This RG achieved the following outcomes:

**CREATION OF A PERIODICAL JOURNAL:** Conceito - Revista de Filosofia e Ciências do Homem (2005)

Nº 1 – 2005 "Loucura e Desrazão", Lisbon: CFCUL.

Nº 2 – 2007 "Deleuze: Literatura e cinema", Lisboa CFCUL (in press)

**PUBLICATIONS:** 5 Books, 11 Chapters, 9 articles in peer review journals, 15 other articles (please, see "Productivity" chapter)

**ORGANIZATION OF CONFERENCES:** 2 International colloquia, 1 international workshop, 11 other conferences (see "Productivity" chapter):

**PHD AND MASTER THESIS:** 3 PHD completed thesis (2 before 2007 and one in 2007) and 2 Master thesis completed (see "Productivity" chapter)

**TEACHING** (courses given in graduate and post-graduate courses, in Portugal and abroad)

- Nuno Nabais. Epistemology of Social Sciences. Faculdade de Letras da Universidade de Lisboa. 2003-2005 (52h per year).

- Nuno Nabais. Introdução à problemática das Ciências Humanas, Faculdade de Letras da Universidade de Lisboa. 2005-2007 (52h per year).

- Eduardo Pellejero. La realidad de la ficción. Regular course of post-graduation. Facultad de Filosofia de la Universidad Michoacana de San Nicolás de Hidalgo, Morelia, México, 2006 (48h).

- Vitor Neves. Filosofia e Metodologia da Economia, module integrated at the research seminar of the doctoral program in "Governação, Conhecimento e Inovação", Faculdade de Economia da Universidade de Coimbra (21 h), Coimbra, 2006-2007.

- Vitor Neves. Metodologia da Economia, optional course of the Master in Economics of the Faculdade de Economia, Universidade de Coimbra, (15 h), MaY-June 2007.

**TALKS AND CONFERENCES** (given in events not organised by CFCUL)

- 15 talks (by invitation) at international conferences

- 6 talks (by invitation) at national conferences

- 7 accepted papers / communications to colloquia

- 21 other talks

**ORGANIZATION** of 3 BOOK DEBATES and 1 BOOK PRESENTATION

**PARTICIPATION** IN 8 POST-GRADUATE JURY

### **Productivity**

#### **Publications in peer review Journals (3000 ca.)**

(Up to a max of 10. Always indicate at the end of the citation, impact factor of the journal (IF=) and number of citations (n° C=). Give title and full citation in original language. DO NOT translate)

1) Patrícia San-Payo, (2003), Maria Gabriela Llansol e a escrita fragmentária. Leitura de Onde vais, drama-poesia? in Românica 12, pp. 121-136

2) Serhii Wakúlenko (2003), Les « théories dépassées » dans le domaine de l'étude du langage selon Aleksandr Potebnja in Slavica occitania 17, pp. 139-154.

3) Davide Scarso (2004), Linguaggio e Intersoggettività nel periodo Intermedio del Pensiero di Maurice Merleau-Ponty, Phainomenon nº 9, (Outono), pp. 191-207.

- 4) San Payo, P., (2005), Um Ensaio sobre a Escrita: Húmus, de Raul Brandão in Conceito. Revista de Filosofia e Ciências do Homem, n.º 1, pp. 141-164.
- 5) Serhii Wakúlenko (2005), Wäre Alexander Potebnja ein Kantianer in der Sprachphilosophie gewesen?, in: Studia Slavica Hungarica, 50/3–4, pp. 211–233
- 6) Serhii Wakúlenko (2005), As Fontes dos Commentarii Collegii Conimbricensis e Societate Iesu in Universam Dialecticam Aristotelis Stagiritæ (Coimbra 1606) in: Philosophica 26 (2005), pp. 229–262
- 7) Eduardo Pellejero (2005), «Deleuze y el teatro de la filosofía: dramatización, minorización y perspectivismo», in: Devenires, nº12, Morelia
- 8) Eduardo Pellejero (2006), “La realidad de la ficción como proyecto de investigación filosófica”, in: Filos. Revista de filosofía, Facultad de Filosofía Samuel Ramos, Universidad Michoacana de San Nicolás de Hidalgo, Mexico, November.
- 9) Eduardo Pellejero (2007), «¿Qué es la literatura? Del compromiso sartreano a la fábula deleuziana», in: Devenires, nº15.

#### **Other publications (3000 ca.)**

(Include only Books, chapters or full papers published in conference proceedings up to max of 10. Give title and full citation in original language)

#### **BOOKS:**

- 1) António Bracinha Vieira (2005), Improvisações sobre a Ideia de Deus, Lisboa: & etc, 139 pp.
- 2) Nuno Nabais (2006), Nietzsche & the Metaphysics of the Tragic, London: Continuum International Publishing Group (Athlone Contemporary European Thinkers) (recensão)
- 3) Eduardo Pellejero (2007), Deleuze y la Redefinición de la Filosofía, Jitanjáfora: Morelia Editorial
- 4) Golgona Anghel (2006), EIS-ME ACORDADO MUITO TEMPO DEPOIS DE MIM, Uma Biografia de Al Berto, prefácio de Agustina Bessa-Luís, Vila Nova de Famalicão, Quasi Edições, 176 pág..
- 5) Eduardo Pellejero, Jacques Rancière, El odio a la democracia (tradução do francês, introdução e notas), Mexico, Jitanjanfora (in press).

#### **CHAPTERS**

- 1) Serhii Wakúlenko (2003), Lockean Motifs in Potebnia in Auroux S. (ed.), History of Linguistics 1999. Selected Papers from the Eighth International Conference on the History of the Language Sciences, 14–19 September 1999, Fontenay-St. Cloud, Amsterdam & Philadelphia: Benjamins, pp. 319–332.
- 2) Eduardo Pellejero (2003), «Política de autores y muerte del hombre: Notas para una genealogía de la crítica cinematográfica», en Vamos lá outra vez, Lisboa.
- 3) Eduardo Pellejero (2003), «Horacio Ferrer, poeta de la redención» (ensayo), en Oscar Conde (org.), Poéticas del tango, Buenos Aires, Dunken.
- 4) Serhii Wakúlenko (2004), Der Begriff des semasiologischen Rythmus bei Dmitro Owsjaniko-Kulikowskij: eine Fortentwicklung der Lehre Alexander Potebnjas von den inneren Form des Wortes in G. Haßler & G. Volkmann (eds.), History of Linguistics in Texts and Concepts – Geschichte der Sprachwissenschaft in Texten und Begriffen 1, Münster: Nodus Publikationen, pp. 267–276.
- 5) Serhii Wakúlenko (2004), Slavizzazione della terminologia scolastica nella Filosofia Aristotelica all’avviso dei Peripatetici di Manujlo Kozačyns’kyj in: G. Siedina (ed.), Mazepa e il suo tempo. Storia, cultura, società – Mazepa and his time. History, culture, society, Alessandria: Edizioni dell’Orso, pp. 541–563.



6) Ana Gaspar, com Carvalho, M. Matos (2005), Representação da Delinquência em Adolescentes, in Margarida Gaspar de Matos (ed), Comunicação, Gestão de Conflitos e Saúde na Escola, Cruz Quebrada: Faculdade de Motricidade Humana, Universidade Técnica de Lisboa.

7) Eduardo Pellejero (2005), «Borges y Kafka: La alegría de la influencia», en Gabriela Citadini (org.), Borges y los otros, Caracas, El mismo / El otro.

8) Eduardo Pellejero (2005), «La transvaloración deleuziana de la relación con el pueblo. Por una política de la expresión», en Erik Ávalos (org.), Filosofía Crítica de la Cultura, Morelia, Jitanjáfora.

9) Nuno Nabais (2007), The individual and individuality in Nietzsche, in K. Ansell Pearson (ed.), A Companion to Nietzsche, Oxford /Malden /Victoria: Blackwell Publishing, 2006, pp. 76-94.

10) Eduardo Pellejero, “Entre dispositivos e agenciamentos: O duplo deleuziano de Foucault”, in Actas do Colóquio: Lei, Segurança, Disciplina, 30 anos de Vigiar e Punir, Lisboa (no prelo).

11) Neves, Vítor, “Sciences as Open Systems: the Case of Economics”, in Olga Pombo et al (eds.), Unity of Science. Non-Traditional Approaches Springer / Kluwer (in press) PAPERS

1. Patrícia San-Payo, (2004), Silvina Rodrigues Lopes, A inocência do Devir, Lisboa: Edições Vendaval, 2003 in Românica 14, pp. 255-258 (Recensão)

2. Davide Scarso (2005), Materiali di Estetica su Guido Davide Neri (recensão), in Spazio-mondo n° 10 (Maggio), pp. 183-156.

3. Nabais, N. e Câmara Leme, J. L. (2005), Editorial, in Conceito. Revista de Filosofia e Ciências do Homem, n.º 1, pp. 5-6

4. Nabais, N. (2005), Loucura e Desrazão: Apresentação, in Conceito. Revista de Filosofia e Ciências do Homem, n.º 1, pp.13-16

5. Câmara Leme, J. L., (2005), A Desrazão, O Cristianismo e o Homem Europeu. Um programa esquecido na filosofia de Michel Foucault, in Conceito. Revista de Filosofia e Ciências do Homem, n.º 1, pp. 17-50.

6. Melim, N., (2005), Fulgurações do Teatro em Histoire de la Folie, in Conceito. Revista de Filosofia e Ciências do Homem, n.º 1, pp. 111-124.

7. Serhii Wakúlenko (2005), The Notion of Sememe in the Work of Adolf Noreen in: The Henry Sweet Society for the History of Linguistic Ideas Bulletin 44 (2005), pp. 19–35.

8. Davide Scarso, (2005), Mauro Carbone, Una Deformazione Senza Precedenti (recensão), in Conceito. Revista de Filosofia e Ciências do Homem, n.º 1, pp. 257-260

9. Golgona Anghel (2006), “Biografia à maneira de Diógenes”, in REVISTA SÍTIO, Lisboa, n° 2, Janeiro, pp. 40-42.

10. Golgona Anghel (2006), “Pintor do Não”, in REVISTA MAGAZINE ARTES, n° 44, mensal, Outubro, pp. 118-125.

11. José Luís Câmara Leme (2006), «Foucault, Weber e a Vivência da Ciência», in Revista de Comunicação e Linguagens n° 38, Mediação dos saberes, CECLUN, Relógio D'Água, Lisboa.

12. José Luís Câmara Leme (2007), «A Confissão e a Verdade do Sexo segundo Michel Foucault», in Românica: revista de literatura / Departamento de Literaturas Românicas da Faculdade de Letras da Universidade de Lisboa, n° 16.

13. Catarina Pombo Nabais, «A Literatura Impossível: Bene, Melville e Beckett», in Conceito n°2, Lisboa (in press).

14. Eduardo Pellejero, «A realidade política da expressão», in *Conceito*, nº2, Lisboa, ER, (in press).

15. Eduardo Pellejero, «Jacques, Rancière, La fable cinematographique», in *Conceito*, nº2, Lisboa, ER (in press).

#### **Master and Ph.D. thesis completed (3000 ca.)**

##### PHD THESIS COMPLETED:

1. Diogo Sardinha, "Ordre et temps dans la philosophie de Michel Foucault" (Doutoramento em filosofia, Universidade de Paris X– Nanterre, sob orientação de Étienne Balibar, defendida em 2 de Dezembro de 2005)
2. Eduardo Pellejero, "Deleuze e a Redefinição da Filosofia. Apontamentos desde a Perspectiva da Inactualidade" (Doutoramento em Filosofia, Universidade de Lisboa, sobre a orientação de Nuno Nabais, defendida em 27 de Janeiro de 2006)
3. Catarina Pombo Nabais, "L'Esthétique en tant que Philosophie Naturelle. Le Concept de Vie chez Gilles Deleuze. Pour une Théorie Naturelle de l'Expression. Regards sur la Litterature" (Doutoramento em Filosofia e Estética, Université de Paris VIII, sob a orientação de Jacques Rancière, defendida em 11 de Janeiro de 2007).

Besides these 3 thesis, there are currently 5 other PhD thesis in progress (Please see "Future Research")

##### MASTER THESIS COMPLETED:

1. Victor Gonçalves, "Nietzsche e Dionysus. The Early Writings" (Mestrado em Filosofia, Faculdade de Letras da Universidade de Lisboa, sob orientação de Nuno Nabais. Defendida em 2004)
2. Rosalina de Castro, "Os Tempos da Cor em Mark Rothko" (Mestrado em Filosofia, Faculdade de Letras da Universidade de Lisboa, sob orientação de Nuno Nabais. Defendida em 3 de Maio 2006)

#### **Organization of conferences (2000 ca.)**

##### INTERNATIONAL COLLOQUIA:

1) 2005 - I Colóquio Internacional de Filosofia e Ciências do Homem - "Lei, Segurança e Disciplina. Trinta anos depois de Vigiar e Punir de Michel Foucault", joint organization of CFCUL with the Centro de História e Filosofia da Ciência e da Tecnologia da Faculdade de Ciência e Tecnologia da Universidade Nova de Lisboa, the Centro de Comunicação e Linguagens da Faculdade de Ciências Sociais e Humanas of the Universidade Nova de Lisboa and the Institut Franco-Portugais, realized at the Institut Franco-Portugais, Lisbon, 23-25.11.2005

2) 2006 - II Colóquio Internacional de Filosofia e Ciências do Homem - Deleuze. A Arte entre Crítica e Clínica - with the collaboration of the Institut Franco-Portugais, realized at the Institut Franco-Portugais, Lisbon, 24.01.2006.

- This Colloquia will continue in 2008 with the III International Colloquium on Philosophy and Human Sciences, "Merleau Ponty and Levy-Strauss", to be held in Lisbon, 20-22 November 2008.

##### WORKSHOPS

1) 2007 - «Fora» da Filosofia. As Formas de um conceito em Sartre, Blanchot, Foucault et Deleuze, organized by the CFCUL with the collaboration of the FCT/UNL, realized at the FCUL, Lisbon (6.07.2007, 16h-20h)

##### PERMANENT SEMINAR OF PHILOSOPHY OF SCIENCES:

1) Foucault e a Filosofia das Ciências no Século XX, conference given by Roberto Machado (Universidade Federal do Rio de Janeiro), 22.04.2004 (16h), FCUL, Lisbon.

2) Carnalidad y Ciencia. Merleau Ponty y la Ciencia Contemporánea, conference given by Mario Teodoro Ramirez Cobian (Univ. Michoacana, Mexico), 2.11.2005, 18 h, FCUL, Lisbon.

3) Sistemas Abertos e as Conexões Sociais da Economia, conference given by Vítor Neves (Univ. Coimbra, Portugal), 25.01. 2006, 18 h, FCUL, Lisbon.

**OTHER TALKS GIVEN IN TWO PARALLEL AND INDEPENDENT CFCUL CYCLES, CALLED " DISPERSIONS" AND "GYMNASIUM"**

1) O Trabalho do Actor segundo Gilles Deleuze - conference given by Fernanda Bond (Univ. Federal Rio de Janeiro, Brazil), FCUL, Lisbon, 18h, 31.01.2006.

2) A dimensão discursiva e a construção da identidade - conference given by Marci Dória Passos (UFRJ, Rio de Janeiro, Brazil ), FCUL, Lisbon, 12.07.2006, 17h.

3) As Línguas Pré-Clássicas - conference given by José Félix Costa (IST, Lisbon), FCUL, Lisbon, 9.02.2007, 16h.

4) Levi-Strauss e a Ciência, conference given by Davide Scarso (CFCUL), FCUL, Lisbon, 15.02.2006, 18h.

5) Deleuze e a Ciência, conference given by Eduardo Pellejero (CFCUL), FCUL, Lisbon, 15.03.2006, 18h.

6) O Texto como Objecto Científico, conference given by Golgona Anghel (CFCUL-FLUL), FCUL, Lisbon, 12 04.2006, 18h.

7) Ricoeur e as Ciências Sociais, conference given by Erik Ávalos (Univ. Michoacana, Mexico), FCUL, Lisbon, 31.05.2006, 18h.

8) Interrogações sobre a Pós-Modernidade, conference given by António Barros Veloso (CFCUL), FCUL, Lisbon, 9.05.2007, 18h.

**Internationalization (2000 ca.)**

(Collaborative publication, Research, Graduate Training Networks or other forms of participation of the Research Group at the international level)

**INTERNATIONAL PROJECTS**

1. SIPS, Système d'Information en Philosophie des Sciences (head - Thierry Martin) 3 UMR de Philosophie des Sciences, IHPST / CNRS, França

2. Logiques de la Ficción, Univ. Lille III, France (head - Shahid Rahman)

**PARTNERSHIPS WITH INTERNATIONAL INSTITUTIONS:**

1. Zentrum für Literaturforschung, Berlin, Germany

2. Universidad Michoacana de San Nicolás de Hidalgo (Fac. de Filosofía), Mexico

3. Universidad Nacional del Sur, Bahia Blanca, Argentina

4. Collège International de Philosophie, Paris, France

**POS-DOCTORAL FOREIGN SCHOLARS:**

1. Eduardo Pellejero (Univ. del Salvador, Buenos Aires, Argentina, FCT Post-doc grant in the CFCUL for the period 2006-2009).

**VISITING FELLOWS (foreseen):**

1. Francisco J. Salguero Lamillar, Universidad de Sevilla, Spain - Grupo de Lógica, Lenguaje e Información (October- December 2007

2. Angel Nepomuceno, Universidad de Sevilla - Grupo de Lógica, Lenguaje e Información, Spain (January - April 2008).

**FOREIGN STUDENTS WITH PhD THESIS IN PROGRESS IN PORTUGAL**

1. Davide Scarso, Merleau-Ponty e Lévi-Strauss. As Ciências Sociais entre Fenomenologia e Estruturalismo

(supervisor: Nuno Nabais)

2. Golgona Anghel, A Metafísica do Medo. Leituras da obra de Al Berto

(supervisor: Nuno Nabais and Fernando Pinto do Amaral)

3. Kieran James Cunningham, *The Possibility of the 'Yawp'; the Search for Truth in American Transcendentalism*

(supervisor: Nuno Nabais)

4. Dominique Jean-François Mortiaux, *Terror e Nihilismo nas obras de G. Bataille e M. Heidegger*

(supervisor: Nuno Nabais)

**PORTUGUESE STUDENTS DEVELOPING PHD THESIS ABROAD:**

1. Vasco Saragoça, *La Duperie de Soi et le problème de l'Irrationalité*

(Université de Paris IV, Sorbonne, supervisor: Pascal Engel).

#### **Future Research**

#### **Objectives**

The RG will work on the following 3 lines:

1) **PHILOSOPHICAL PROBLEMS OF HUMAN SCIENCES** - To constitute a research group on problems of philosophy of human science (differences natural and human sciences, conditions of scientificity, methodological problems, etc). To confront this problems with concepts raised by contemporary philosophy.

- Post-doc E. Pellejero will give especial attention to the critical questions raised by the use of philosophical concepts in human sciences. He will organize a collective volume on "Sciences in Contemporary Philosophy"

- Master Scarso will work the difference natural / human sciences from the perspective of Levi-Strauss and Merleau-Ponty. He will organize (with PHD J.Y. Mercury) an international colloquium 2008 and publish the proceedings

- Prof. Nabais: 3 workshop on "Epistemology of Psychoanalysis" (2007- 08- 09)

- The whole group will write periodical reviews on human sciences in the context of the International project SIPS (France)

- PHDs Pombo and Pellejero: a series of translations of contemporary studies on philosophy of human sciences, starting with an anthology of texts of Rancière (2008)

2) **PHILOSOPHY OF LITERATURE AND LINGUISTICS**: To raise the main philosophical questions of literary studies and linguistics (methods of interpretation, implicit assumptions about the textual and/or the linguistic object, etc).

- Dr. Anghel : 2 vols of interviews on literary creation (2009).

- PHD Pellejero and Dr. Anghel: 3 workshops and proceedings

- *Fora da filosofia* (2007)

- *Fora da literatura* (2008)

- *Poetics* (2009)

- PHD Pellejero: volume «The reality of Fiction» as an outcome of his post-doc (2009)

- PHD Pombo will edit her 2006 PHD thesis on "Deleuze and literature" (2008)

- Prof. T. Reichmann and Dr. Lopes Alves: workshop on "Scientific translation" (2008)

- Prof. Wakulenko: a volume on "Potebnia Linguistics"

- Dr. Melim: workshop + 1 book "Foucault's concept of language" (2008)

- The all RG will receive scientific support from Prof. Salguero (Univ. Sevilla - Grupo de Lógica, Lenguaje e Información): a series of seminars during his sabatic in the CFCUL 2007

3) **PHILOSOPHY OF ECONOMY**: to bring together a group of Portuguese researchers keen on the study of philosophical issues in economics. This pioneer work aims at the

development of the philosophy of economics in Portugal (a non-existent field of study in the country).

- Prof. Neves intends:

- to edit an anthology of classical works on «The quality/quantity issue in the History and Methodology of Economics» and on «Logic and Judgment in Economics»;

- to edit 2 papers:

Modes of thought and inference in Economics

Classical vs. human logic and the qualitative/quantitative dimensions in Economics

- to publish a selection of 4 significant papers on «Logic and knowledge in Economics»

- to organize an international colloquium and proceedings

- to establish the conditions for a future partnership with the Sterling Centre for Economics Methodology.

**SCIENTIFIC SUPPORT TO PHD DISSERTATIONS:**

supervision Prof. Nabais (UL)

- Nuno Melim, Foucault e a Linguagem. Entre o Discurso e a Fala

- Davide Scarso, Merleau-Ponty e Lévi-Strauss. As Ciências Sociais entre Fenomenologia e Estruturalismo

- Golgona Anghel, A Metafísica do Medo. Leituras da obra de Al Berto

- Kieran James Cunningham, The Possibility of the 'Yawp'; the Search for Truth in American Transcendentalism

Supervision Prof. Pascal Engel (Paris IV)

- Vasco Saragoça, La Duperie de Soi et le problème de l'Irrationalité

### **Funding, source, dates**

There is no funded project in this RG. So, besides internal funding by the CFCUL, we will ask for specific funding (FCT/FACC, Gulbenkian, Coimbra University, Lisbon Goethe Institut, Collège Intern. de Philosophie) for the following publication and colloquia. We also count with the support of Institut Franco-Portugais / Embassade de France with which we have previous collaboration

### **PUBLICATIONS**

- As ciências na filosofia francesa contemporânea (2008) - Est. budget: 2000 €

- Anthology of texts of Jacques Rancière (2008) - (commercial edition)

- On literary creation (2009) - (commercial edition)

- The reality of fiction (2009) - Est. budget: 2000 €

- On Foucault's concept of language (2008) - (commercial edition)

- PHD tesis: On Deleuze and literature (2008) - Est. budget: 2000 €

- CFCUL Notebook: Potebnia Linguistics (2009) - Est. budget: 800 €

- Proceedings: On philosophy of economy (2010) - Est. budget: 2000 €

- Proceedings: Claude Levi-Strauss and Merleau-Ponty's International Colloquium (2009) - Est. budget: 2500 €

### **INTERNATIONAL COLLOQUIA**

- Claude Levi-Strauss and Merleau-Ponty (2008) - Est. budget: 5.000 € (to be funded by Institut Franco-Portugais)

- On philosophy of economy (2009) - Est. budget: 3000 € (we count with financial support of Univ. Coimbra).

### **WORKSHOPS**

- Foucault's concept of language (2008) - Est. budget: 250 € (funded by CFCUL)

- Epistemology of psicoanalysis (2009) - Est. budget: 250 € (funded by CFCUL)

- On the concept of dehors I and II (2007-2008) - Est. budget: 500 € (funded by CFCUL)
- On the concept of poetics (2008) - Est. budget: 250 € (funded by CFCUL)
- On scientific translation (2008) - Est. budget: 600 € (with the financial support of Lisbon Goethe Institut)

#### **Previous publications in the area**

- Diogo Sardinha, «Justiça e produção de verdade. Foucault e a psiquiatria 343-358 criminal», *Philosophica*, n.º 19/20, 2002, Universidade de Lisboa, p.
- Vítor Neves, "Situational analysis beyond 'single-exit' modelling", *Cambridge Journal of Economics*, vol. 28, n. 6, 2004, pp. 921-936.
- Serhii Wakúlenko (2004), *Der Begriff des semasiologischen Rythmus bei Dmitro Owsjaniko-Kulikowskij: eine Fortentwicklung der Lehre Alexander Potebnjas von den inneren Form des Wortes in G. Haßler & G. Volkmann (eds.), History of Linguistics in Texts and Concepts – Geschichte der Sprachwissenschaft in Texten und Begriffen 1*, Münster: Nodus Publikationen, pp. 267–276.
- Scarso, “Merleau-Ponty, Lévi-Strauss e la percezione sociale”, *Chiasmi International* n.7, Vrin - Mimesis - Univ. of Memphis, Milano - Paris - Memphis, Novembro 2005.
- Pellejero, *Deleuze y la redefinición de la filosofía*, Morelia, Jitanjáfora, 2007.

#### **Special Requirements**

Equipment, facilities, staff – we count with the support of the CFCUL.

Also we intend to get extra support (room freely available) for the following activities:

- Claude Levi-Strauss and Merleau-Ponty, international colloquium in 2008 (Institut Franco-Portugais)
  - International colloquium on economy's philosophy, 2009 (Universidade de Coimbra)
- For the publication of the foreseen volumes, we count with the collaboration and know-how of two editors: Publidisa (Spain) and Esfera do Caos (Portugal).

<b>Group Description</b>	
Research Unit:	Centro de Filosofia das Ciências da Universidade de Lisboa <b>uID:678</b>   (L700678)
Group Name/Designation:	Science, Ethics and Politics
Principal Investigador:	Nuno Gabriel de Castro Nabais dos Santos
Time Interval:	(2003-2010)
Location of Group (Host Institution):	Fundação da Faculdade de Ciências
Keywords:	Biopolitics; Bioethics; Science and Gender; Science Policy
Funding, source, dates:	- 2 000 EUR - book edition and book purchase by FCT/Project "Scientific Culture. Conceptual migrations and Social Contaminations" 6/10/2003 - 5/10/2006 - 2 000 EUR - book purchase, management, funded by CFCUL - 36.880 EUR - FCT post-doc grant - PHD. Diogo Sardinha (CFCUL), University of Paris 1 – Panthéon-Sorbonne, supervisor: Jean-François Kervégan (2006-07, 2007-08)

#### **PI and Researchers**

##### **Researchers in the Group (Ph.D. Only)**

(CV)	Diogo Sardinha Marques da Silva
(CV)	Eduardo Anibal Pellejero
(CV)	Maria Adelaide Alves Dias Ramalho Croca
(CV)	Maria Alfreda Cordeiro da Cruz Ribeiro Viana
(CV)	Maria Clara de Almeida de Barros Queiroz
(CV)	Mário Alexandre Pousão da Costa Gatta
(CV)	Nuno Gabriel de Castro Nabais dos Santos

##### **Other Researchers in the Group (Ph.D. Only)**

n/a

##### **Other Researchers in the Group (non Ph.D.)**

(CV)	Dominique Jean-François Mortiaux
(CV)	João António Lopes Alves
(CV)	João Lopes Barbosa
(CV)	Marco Alexandre Silva de Pina e Silva
(CV)	Maria Adelaide Marques Neves
(CV)	Marina López López
(CV)	Stella Lorenz

#### **Objectives and Achievements**

##### **General Objectives**

This RG results from the restructuration of two previous research lines (coming from the creation of the CFCUL in 2003) called "Analysis of the political, ethical and social impacts of Life Sciences" and "Articulation and paradigmatic contamination between the human, natural and formal sciences".

Their objectives in 2003 were the analysis of the political, ethical and social impacts of Life Science, more specifically, the technological mediation, the anthropological and ethical challenges of scientific and technological developments, as well as the - in a different theoretical and methodological frame - the public understanding and the social impact of science.

Now, after the constitution of this RG, objectives are focoused in thinking out the ethical and political groundings of scientific rationality face to the political and ethical implications of science.

#### 1) RESEARCH:

- Ethic and political foundations of scientific rationality
- The plurality of reason's interest. Practical reason, aesthetic reason and theoretical reason
- Scientific domains and power dispositives
- The republicanism of science. Reason and Democracy
- The search for the ethical and political neutrality of scientific knowledge
- Ethical and political implications of science
- World secularization as the consequence of the enlargement of scientific rationality
- The idea of a deontology of scientific knowledge and the return to the Kantian model in ethics
- Ethics of responsibility in face of the rationality of incertitude

#### 2) TEACHING

Prof. Nuno Nabais provided teaching on Science, Ethics and Politics

- in the Master on "History and Philosophy of Sciences" of the Lisbon University (together with Prof. T. Levy)
- in the Graduate Course at the FLUL ("Power - from Ontology to Politics ", 2004-05, 2005-06, 2006-07 (50h per year)

#### 3) SCIENTIFIC SUPERVISION

Prof. Nabais: 2 PhD thesis (in progress)

Prof. Teresa Levy: 1PHD thesis (in preparation)

Beside, the RG also aimed

- to establish international scientific collaboration
- to disseminate the outcomes of our research by organizing colloquia, by giving talks and conferences and by organizing presentations and debates around books published by the RG members

### **Main Achievements**

This RG achieved the following outcomes:

#### PUBLICATIONS:

4 Books, 13 Book Chapters, 13 articles ( please see "Productivity" chapter)

#### ORGANIZATION OF CONFERENCES:

1 International colloquium, 1 international workshop, 10 other conferences (please see "Productivity" section)

#### PHD AND MASTER THESIS:

-2 Master thesis completed



-4 PhD thesis in progress (please see "Productivity" chapter)

**TALKS AND CONFERENCES:**

- 2 talks (by invitation) at international conferences

- 1 talk (by invitation) at national conferences

- 1 accepted papers/talks to colloquia

- other talks: 6

**TEACHING:** 3 graduate and post-graduate courses, in Portugal and abroad:

- Graduate Course at the FLUL ("Power - from Ontology to Politics"): Nuno Nabais (2005-2007)

- Post-graduate course at the Master on History and Philosophy of Sciences of the FCUL: Nuno Nabais and Teresa Levy (2005-2006)

- Seminário Permanente de Filosofia e Direito da Sociedade Portuguesa de Filosofia (2006-07) (Lopes Alves - Coordinator).

**ORGANIZATION of 2 BOOK DEBATES and 3 BOOK PRESENTATIONS**

**PARTICIPATION IN 1 POST-GRADUATE JURY**

**Productivity**

**Publications in peer review Journals (3000 ca.)**

(Up to a max of 10. Always indicate at the end of the citation, impact factor of the journal (IF=) and number of citations (n° C=). Give title and full citation in original language. DO NOT translate)

1. Maria Alfreda Cruz (2003), O Mercado Interno Europeu do Conhecimento e a Perspectiva da Cidadania Activa e Inclusiva, in: Galileu, Revista de Economia e Direito, Vol. VIII, n.º 1, pp. 31-65
2. Teresa Levy (2004), O Corpo à Superfície, Número Especial da Revista Comunicação e Linguagens: Corpo, Técnica, Subjectividades, pp.83-104.
3. Teresa Levy, (2005), Das diferenças sexuais às diferenças cognitivas, in: Labrys. Estudos Feministas / Études Feminists, n.º 7.
4. Diogo Sardinha (2006), Foucault et les dangers du libéralisme, in: Les Études philosophiques, Paris, Janvier, p. 121-125
5. Marina López (2006), El carácter político de la banalidad del mal, in : Revista Devenires, 7, n. 13, January.
6. Clara Queiroz (2006). Transformar o Mundo Segundo Emma Goldman. in: Ex Aequo, 13, pp: 197-206.
7. Stella Lorenz (2007), ...und gäbe es mehr Welt, wir führen hin (em colaboração com Nikolai Brandes), iz3w, Freiburg, n° 2, pp.16-21.
8. Lopes Alves (2007), "Da Guerra e Paz como questão filosófica (Rousseau, Kant Hegel)" (2007), first published at Revista Eletrônica de Estudos Hegelianos- Revista Semestral da Sociedade Hegel Brasileira, Ano 3º n°05- ISSN- 1980- 8372-/ Latindex n°15804, Recife, pp.1-26, 2007. To be republished at Revista PHILOSOPHICA, Centro de Filosofia da Universidade de Lisboa, Faculdade de Letras da Universidade de Lisboa, Lisboa (in press).

**Other publications (3000 ca.)**

(Include only Books, chapters or full papers published in conference proceedings up to max of 10. Give title and full citation in original language)

**BOOKS**

1. João Lopes Alves (2005), O Estado da Razão: da Ideia Hegeliana de Estado ao Estado segundo a Ideia Hegeliana, Lisboa: Colibri, 204 pp.
2. Teresa Levy e Clara Queiroz (Seleção, tradução e prefácio) (2005). Ciência e Género. Quatro Textos de Quatro Mulheres, 2º Caderno de Filosofia das Ciências, Lisboa: Centro de Filosofia das Ciências da Universidade de Lisboa, 134 pp.

3. João Lopes Alves (2005), *Ética & Contrato Social*, Lisboa: Edições Colibri, 185 pp.
4. Maria Alfreda Cruz (2005), *A Cidadania na Estratégia de Desenvolvimento do Capital Social*, Lisboa: Instituto Nacional de Administração, 87 pp.

#### CHAPTERS

1. Clara Queiroz (2003), *Mulheres nas Ciências*, in Anne Cova, Natália Ramos e Teresa Joaquim (orgs.), *Desafios da Comparação*, Oeiras: Celta Editora, pp. 33-42.
2. João Lopes Alves (2003), *Auditoria e Códigos de Conduta*, in *Cadernos de Auditoria Interna*, Ano 6, nº1. Lisboa :Banco de Portugal
3. João Lopes Alves (2003), *Justiça e Democracia. Algumas notas sobre o caso Rawls*, in *Metacrítica. Revista de Filosofia da Unidade de Investigação em Ciência, Tecnologia e Sociedade da Universidade Lusófona*, Ano I, nº1. Lisboa : Edições Universitárias Lusófonas.
4. Teresa Levy (2004), *Crueldade e Cruza do Binarismo*, in F. Cascais (edr.), *Indisciplinar a Teoria*, Lisboa: Fenda CLN, pp. 183-214
5. Teresa Levy e Clara Queiroz (2005), *Prefácio* in *Ciência e Género. Quatro Textos de Quatro Mulheres*, 2º Caderno de Filosofia das Ciências, Lisboa: Centro de Filosofia das Ciências da Universidade de Lisboa, pp. 5-12
6. Diogo Sardinha (2006), *Reinventando o sujeito e a crítica. Os Antigos, Kant e Baudelaire*, in: J. Gondra et W. Kohan (org.), *Foucault 80 anos*, Belo Horizonte, Autêntica, p. 247-263
7. Clara Queiroz (2007), *Um Caminho que Seja Seu. As Mulheres na Ciência*, in Lúcia Amâncio, Manuela Tavares e Teresa Joaquim (Coords.), *O Longo Caminho das Mulheres. Feminismos, 80 Anos Depois*. Lisboa: Publicações Dom Quixote. pp. 217-228.
8. João Lopes Alves, *Introdução*, in J. J. Rousseau, *Contrato Social (1ª versão)*. Lisboa : Circulo de Leitores, dir. de colecção Diogo Pires Aurélio. (in press)
9. João Lopes Alves, *Sinopse Biográfica*, in J. J. Rousseau, *Contrato Social (1ª versão)*. Lisboa : Circulo de Leitores, dir. de colecção Diogo Pires Aurélio. (in press)
10. João Lopes Alves, *Vontade Geral*, in António Marques & Diogo Pires Aurélio (coord.), *Dicionário de Moral e Política*. Lisboa : Instituto de Filosofia da Linguagem da Universidade Nova de Lisboa. (in press)
11. João Lopes Alves, *Legal Controversy facing Scientific and Philosophical Controversies*, in Han-liang Chang and Marcelo Dascal (eds.), *Traditions of Controversy (Serie "Controversies", vol. 5)*. Amsterdam : John Benjamins. (in press)
12. João Lopes Alves, *A Controvérsia Jurídica perante as Controvérsias Científicas e Filosóficas*, in AA VV, *Livro de Homenagem ao Professor Doutor António de Sousa Franco*. Lisboa: Faculdade de Direito da Universidade de Lisboa. (in press)
13. João Lopes Alves, *Direitos Humanos*, in António Marques & Diogo Pires Aurélio (coord.), *Dicionário de Moral e Política*. Lisboa : Instituto de Filosofia da Linguagem da Universidade Nova de Lisboa. (in press)

#### ARTICLES

1. Maria Alfreda Cruz (2003), *Ciência, Educação e Cultura. Para a Leitura Sociológica da Sociedade do Conhecimento*, in: *Anais. Série Sociologia III*, pp.29-62.
2. Stella Lorenz (2005), *Widerstand in Afrika - Panel auf der Anticolonial Africa Conference* in *ZAG (Zeitung antirassistischer Gruppen)*, n.º46, Abril, pp.8-9.
3. Stella Lorenz (2006), *Baracken ohne Alternativen* in *ZAG (Zeitung antirassistischer Gruppen)*, n.º48, Maio, n.º48, pp. 10-12

4. Marina López (2006), Hannah Arendt, a cien años, in: Revista Devenires, año 7, no 14, julio de 2006.

5. Stella Lorenz (2007), Das Ende der Welt wird abgerissen, iz3w, Freiburg, n° 1, pp. 10-11

#### **Master and Ph.D. thesis completed (3000 ca.)**

##### MASTER THESIS COMPLETED

- Fátima Pina Martins, O Conceito de Identidade Pessoal em Paul Ricoeur (Master in Bioethics, Faculdade de Medicina, Universidade de Lisboa, supervisor: Prof. Nuno Nabais (2005)

- Rui Pereira, A Ética como Des-interesse e Comunicação. Da Crise do Ser ao Direito do Ser: Des-interesse e Comunicação no Pensamento de Emanuel Lévinas (Master in Philosophy, Faculdade de Letras da Universidade de Lisboa, supervisor: Prof. Nuno Nabais) (2006)

##### PHD THESIS COMPLETED

- There are no PhD thesis completed in this period.

##### PHD THESIS IN PROGRESS

- Rui Manuel da Veiga Pereira, Desconstrução e Força Diferencial: suas Implicações Ético-Políticas (supervisor: Prof. Nuno Nabais )

- Dominique Jean-François Mortiaux, Terror e Nihilismo nas obras de G. Bataille e M. Heidegger (supervisor: Prof. Nuno Nabais)

- Marina Lopez, O Vão do Espírito. Hannah Arendt e a Ciência do Renascimento (supervisor: Prof. Olga Pombo and Prof. Agustín Serrano de Haro)

- Raúl Buño, Acerca da Construção para a Paz. Reconhecer a Verdade da Paz através da Diversidade Cultural e Patrimonial do Sartório (supervisor: Prof. Teresa Levy)

#### **Organization of conferences (2000 ca.)**

##### INTERNATIONAL COLLOQUIA

1) The 2005 International Colloquium on the work and legacy of Michel Foucault (the first of a series called "International Colloquia on Philosophy and Human Sciences"), already mentioned in the "Productivity" of the RG "Philosophy of Human Sciences" was organized by this "Human Sciences" RG. Nevertheless, the Colloquium's many activities and talks sometimes entered the domain of the "Science, Ethics and Politics" research field. This is the reason why this Colloquium is also referred to in the present section.

##### INTERNATIONAL WORKSHOPS

1) Technoscience: Epistemological and Sociological Approaches, joint-organization of the CFCUL and the ICS (Social Sciences Institute), held at the ICS, Univ. of Lisbon, 21.05.2007 (first of a series to be implemented by CFCUL/ICS).

##### PERMANENT SEMINAR OF PHILOSOPHY OF SCIENCES

1) A Controvérsia Jurídica em Confronto com a Controvérsia Científica, by João Lopes Alves (CFCUL), 02.07.2004, 17h, FCUL, Lisbon.

2) Ciência ou Tecnociência?, by João Caraça (ISEG/CFCUL, Lisbon), 15.12.2004, 18 h, FCUL.

3) Promover o Diálogo entre a Ciência e a Sociedade: Novos Desafios, by Eduarda Gonçalves (ISCTE, Lisbon), 25.05.2006, 18 h, FCUL.

4) De Foucault a Agamben - Trajectória do Conceito de Biopolítica, by André Duarte (Univ. Fed. Paraná, Brazil), 20.11.2006, 18h, FCUL

OTHER CONFERENCES (in two CFCUL conference cycles, called " Dispersions" and "Gymnasium")

- 1) O Corpo à Superfície, by Teresa Levy (CFCUL, Lisbon), 26.04.2006, 18h, FCUL.
- 2) Ciencia y Totalitarismo, by Marina López (Univ. Michoacana de San Nicolás de Hidalgo, Mexico), 28.11.2006, 18h, FCUL
- 3) A Ética como Desinteresse e Comunicação, by Rui Pereira (FLUL, Lisbon) ,12.07.2006, 18h, FCUL
- 4) Expertise e Risco Científico, by Helena Jerónimo (ISEG, Lisbon), 31.01.2007, 18h, FCUL
- 5) Michel Foucault: o Discurso das Ciências e a Genealogia do Poder, by José Caselas (FLUL, Lisbon), 29.06.2007, 18 h, FCUL.
- 6) Pensar a Violência, by Ester Heuser (UFRGS, Brazil), 4.07.2007, 18h, FCUL.

### **Internationalization (2000 ca.)**

(Collaborative publication, Research, Graduate Training Networks or other forms of participation of the Research Group at the international level)

#### INTERNATIONAL PROJECTS

1. SIPS, Système d'Information en Philosophie des Sciences (head - Thierry Martin) 3 UMR de Philosophie des Sciences, IHPST / CNRS, França

#### VISITING TEACHERS FROM CFCUL ABROAD

1. Prof. Nuno Nabais has been Visiting Teacher at the University of Warwick, UK, during 2003-2004 (teaching a PHD course on " The reception of Nietzsche in the XX Century")

#### PARTNERSHIPS WITH INTERNATIONAL INSTITUTIONS

- 1) Universidad Michoacana of San Nicolás de Hidalgo, Mexico. This partnership includes the co-production of two books. The first volume will be published in portuguese with mexican articles and will be edited by Prof. Eduardo Di Piero "Filosofia da Ciência como Filosofia da Cultura" . The second volume will be published in mexican with texts from portuguese researchers under the title "Filosofia da Ciência e Política" and will be edited by Eduardo Pellejero.
- 2) Collège International de Philosophie, Paris, France. This partnership includes the joint organization of the International Colloquium "Living in Europe. Philosophy, Science and Politics - Yesterday and Today" as well as the Post-doc studies of one of our team members, Diogo Sardinha.

#### VISITING FELLOWS (foreseen)

- Prof. Christian Möckel (Univ. Humboldt, Berlin) - one month as visting fellow at the CFCUL during 2008

#### POS-DOCTORAL STUDIES ABROAD

- PhD Diogo Sardinha (CFCUL Member) - Post-doc studies at the Univ. Paris X, with a FCT grant (2006-2009)

#### FOREIGN PhD STUDENTS AT THE CFCUL, PORTUGAL

- Dominique Mortiaux, Terror e Nihilismo nas obras de G. Bataille e M. Heidegger (supervisor: Nuno Nabais)
- Marina López (Univ. Michoacana of San Nicolás de Hidalgo, Mexico) PhD thesis "O Vôo do Espírito. Hannah Arendt e a Ciência do Renascimento" (supervisors: Olga Pombo and Agustín Serrano de Haro).
- Roseli Hickmann (UFRGS, Brazil): visiting PhD student at the CFCUL May-Aug 2007 (supervisor: Olga Pombo).
- Ester Heuser (UFRGS, Brazil): visiting PhD student at the CFCUL Mar-Jul 2007 (supervisor: Nuno Nabais).

## Objectives

The RG will work on the following 3 lines:

### 1) SCIENCE AND POLITICS

International Seminar on Science and Politics

- a group led by Prof. Nuno Nabais will organize an interdisciplinary seminar with Portuguese and foreign scholars aiming to bring clarification to this issue. Prof. Roberto Machado (Rio de Janeiro, Brazil) and Prof. João Caraça (ISEG) will open the seminar in November 2007

International Conferences

- International Colloquia " Living in Europe. Philosophy, Science and Politics - Yesterday and Today", org: CFCUL / Collège International de Philosophie, Paris / Institut Franco-Portugais, Lisbon, Oct 2007

- International Workshop "The University Reform", CFCUL, by Christian Moeckel

- Epistemological and Sociological Approaches to Technoscience - a series of international workshops to be done in partnership with the ICS (Social Sciences Institute, Lisbon).

Graduate and Post-Graduate lecturing

- Graduate Course at the FLUL ("Power - from Ontology to Politics "): Nuno Nabais

- Science, Ethics and Politics, Post-graduate course Master on History and Philosophy of Sciences, FCUL: Nuno Nabais

- Module of the Master on History and Philosophy of Sciences, FCUL: Christian Moeckel (Humboldt Univ, Berlin)

PhD thesis (in progress)

- Rui Pereira, Desconstrução e Força Diferencial: suas Implicações Ético-Políticas (supervisor: Nuno Nabais)

- Dominique Mortiaux, Terror e Nihilismo nas obras de G. Bataille e M. Heidegger (superv.: Nuno Nabais)

- Marina Lopez, O Vôo do Espírito. Hannah Arendt e a Ciência do Renascimento (superv.: Olga Pombo and Agustín Serrano de Haro)

- Raúl Buíno, Acerca da Construção para a Paz. Reconhecer a Verdade da Paz através da Diversidade Cultural e Patrimonial do Sertão (superv.: Teresa Levy)

- Marco Pina MD: in preparation

- Stella Lorenz: in preparation

### 2) SCIENCE AND KNOWLEDGE SOCIETY

- "The Citizenship Observatory" - (head: Alfreda Cruz) . The project aims at collecting and studying all the relevant data concerning all the questions around the concept of human capital in the knowledge society. After a first theoretical approach (including a Dictionary of Concepts) and the recollection of data, the group plans to draw up their conclusions in a publication (at the CFCUL Philosophy of Sciences Notebooks collection). In order to build up, test and implement this project, CFCUL established a partnership with the Municipality of Montijo, which will provide the facilities and informatic equipment.

- A group led by Dr. Lopes Alves intends to develop a project named "Social Contract and the Knowledge Society". The aim is to study the socio-economical and political kinds of power (from the most institutionalized to the more subtle ones) developing at the Western Societies mainly as a result of all the transformations

occurring at the Knowledge Society we live in. These researchers intend to edit a CFCUL Philosophy of Sciences Notebook and plan to organize 2 workshops .

- The researchers of this "Knowledge Society" group also intend to submit 1 research project application to the FCT call in 2007 - "Citizenship and Knowledge Society" (head: Alfreda Cruz)

### 3) SCIENCE AND TECHNOLOGY OF GENDER

- the aim is to study the social image of an healthy female body - head T. Levy (with the collaboration of F. Cascais, A. Neves and H. Azevedo) will give special attention to the mediatic circulation of this kind of image and will study its effect on the female population. An online forum will be created and two workshops will take place (2008 and 2009).

#### **Funding, source, dates**

- International Colloquium " Living in Europe. Philosophy, Science and Politics - Yesterday and Today" Lisbon, Oct 2007

- CFCUL: 1.000 EUR

- Collège International de Philosophie de Paris: 2.500 EUR

- Institut Franco-Portugais: 2.000 EUR

- FCT/FACC: 1.000 EUR

- International Workshop "The University Reform", CFCUL, by Christian Moeckel (Univ. Humboldt, Berlin) - 2008

- CFCUL: 600 EUR

- Goethe Institut: 600 EUR (estimated)

- Series of International Workshops on "Epistemological and Sociological Approaches to Technoscience"

- The funding will likely come from our partnership with ICS. Estimated budget: 700 EUR per workshop

- "The Citizenship Observatory" (2007-10):

- CFCUL: 1.000 EUR

- Municipality of Montijo: facilities and informatic support

- FCT/FACC: 1.000 EUR (estimated)

- "Social Contract and the Knowledge Society" (2007-10):

- CFCUL: 600 EUR

- FCT/FACC: 750 EUR (estimated)

- "Science and Technology of Gender" (2008-09)

- Online forum - CFCUL: 1.000 EUR

- Workshop - CFCUL: 350 EUR

#### **Previous publications in the area**

1. João Lopes Alves (2005), "Ética & Contrato Social", Lisboa: Edições Colibri, 185 pp.

2. João Lopes Alves (2005), "O Estado da Razão: da Ideia Hegeliana de Estado ao Estado segundo a Ideia Hegeliana", Lisboa: Colibri, 204 pp.

3. Maria Alfreda Cruz (2005), "A Cidadania na Estratégia de Desenvolvimento do Capital Social", Lisboa: Instituto Nacional de Administração, 87 pp.

4. Teresa Levy e Clara Queiroz (Seleção, tradução e prefácio) (2005). "Ciência e Género. Quatro Textos de Quatro Mulheres", 2º Caderno de Filosofia das Ciências, Lisboa: Centro de Filosofia das Ciências da Universidade de Lisboa, 134 pp.

5. Diogo Sardinha (2006), Foucault et les dangers du libéralisme, in: Les Études philosophiques, Paris, Janvier, p. 121-125

### **Special Requirements**

Equipment, facilities, support staff and management – we count with the general support of the CFCUL for all the foreseen activities.

Also, we intend to get extra support (facilities and/or informatic equipment) for the following activities:

- International Colloquium " Living in Europe. Philosophy, Science and Politics - Yesterday and Today" Lisbon, Oct 2007:
- Institut Franco-Portugais
- International Workshop "The University Reform", CFCUL, by Christian Moeckel (Univ. Humboldt, Berlin) - 2008:
- Goethe Institut
- 2nd International Workshop on "Epistemological and Socological Approaches to Technoscience" - 2008:
- ICS (likely to take place, as the 1st edition, at the ICS premises)
- "The Citezenship Observatory" (2007-10):
- this is a special case, because the premises will be conceded by the Municipality of Montijo

Finally, for the publication of the above mentioned foreseen volumes, we count with the collaboration and expertise of two publishing houses: Publidisa (Spain) and Esfera do Caos (Portugal).

<b>Group Description</b>	
Research Unit:	Centro de Filosofia das Ciências da Universidade de Lisboa <b>uID:678</b>   (L700678)
Group Name/Designation:	Discovery, Invention and Creation
Principal Investigador:	Isabel Maria Ferreira Martins Serra
Time Interval:	(2003-2010)
Location of Group (Host Institution):	Fundação da Faculdade de Ciências
Keywords:	Scientific Discovery; Peirce and Abduction; Poincaré and Intuition; Mathematical Reasoning
Funding, source, dates:	<ul style="list-style-type: none"> <li>- International Meeting - Abduction and the Process of Scientific Discovery, Lisbon, 2006, sponsored with:</li> <li>- 1 100 EUR by FACC/FCT</li> <li>- 2 500 EUR by FLAD (Fundação Luso-Americana para o Desenvolvimento)</li> <li>- 1 000 EUR by CFCUL</li> <li>- 700 EUR - member trip to the "First Nordic Workshop on Abduction and Model-Based Reasoning", Univ. of Jyväskylä, Finland, 2005, sponsored by FCT/FACC</li> <li>- 700 EUR - member trip to "Applying Place - International Conference on Peirce's Thought and Its Applications", Finland, 2007, sponsored by FCT/BD</li> <li>- 1 000 EUR - book purchase funded by CFCUL</li> <li>- 800 EUR - book edition; management funded by FCT/Project "Scientific Culture. Conceptual migrations and Social Contaminations" 6/10/2003 - 5/10/2006</li> </ul>
<b>PI and Researchers</b>	
<b>Researchers in the Group (Ph.D. Only)</b>	
(CV)	Catarina Pombo Martins de Castro Nabais
(CV)	Eduardo Anibal Pellejero
(CV)	Isabel Maria Ferreira Martins Serra
(CV)	Olga Maria Pombo Martins
<b>Other Researchers in the Group (Ph.D. Only)</b>	
(CV)	Augusto Jose Franco de Oliveira
(CV)	Francisco Miguel Alves campos de Sousa Dionisio
(CV)	Henrique Manuel Alonso da Costa Guimarães
(CV)	Jose Felix Gomes da Costa
(CV)	TAHIRI Hassan
(CV)	veronica fabrini machado de almeida
<b>Other Researchers in the Group (non Ph.D.)</b>	



(CV)	Alexander Matthias Gerner
(CV)	Ana Paula Rocha Coelho de Figueiredo Silva
(CV)	Celina Isabel Reduto
(CV)	Cláudia Sofia Afonso Alves Martinho
(CV)	Golgonia Luminita Anghel
(CV)	joão manuel costa casqueiro de sampaio
(CV)	Manuel Beirão dos Reis
(CV)	MARÍA DE PAZ AMÉRIGO
(CV)	Maria do Rosário Domingos Laureano

#### Objectives and Achievements

##### General Objectives

This RG is the developemnt of a previous research line (coming from the creation of CFCUL in 2003) named "Philosophy of Mathematics" which was part of the FCT Project "Scientific Culture. Conceptual Migrations and Social Contaminations" (POCTI/FIL/48133/2002).

This line of research pursued one main goal: to study the problem of the relations between Mathematics and Natural and Human Sciences, namely the question of the description of the physical, biological and psycho-social reality.

As the time went by, we realized that we had not enough critical mass to go on with a line of research on "Philosophy of Mathematics" in its all. However, several students and international contacts in 2006 made possible to restructure it, giving birth to the current RG "Discovery, Invention and Creation". The group redefined their objectives around two concrete internal projects:

1. Abduction and Scientific Discovery: this group was created around Dr. Ana Paula Silva master thesis on Peirce under the supervision of Prof. Olga Pombo (a thesis now almost finished ). Two main goals were put forward:

1) to organize an international meeting in Lisbon on Peirce, Abduction and the Process of Scientific Discovery, which indeed happened in 2006 with great success (a 2nd edition is already underway);

2) to establish significant and resourceful international partnerships on these subjects  
 2. Poincaré and Intuition: this internal international group (with members from Univ. Complutense, Spain and Univ. Lille III, France) has now more than 10 members, and meets at the CFCUL premises on a regular/monthly basis. Its members achieved an important goal: the approval of the 2007 FCT Project called "Poincaré, Philosopher of Science" - PTDC/FIL/64748/2006 (Head: Franco Oliveira) - please see "Main Achievements" below. Also, they have 3 ongoing Master thesis (please see "Future Research"). This group intended to study the mathematical and philosophical work of Poincaré, mostly his theories on Dinamic Systems, Relativity, Mathematical Reasoning, Logics and Intuitioun.

##### Main Achievements

This RG achieved the following outcomes:

##### APPROVED PROJECTS:

- FCT Project "Poincaré, Philosopher of Science" - PTDC/FIL/64748/2006 (Head: Franco Oliveira) - rating "Excellent" (period: 2007 - 2010)

PUBLICATIONS: 4 books, 1 book chapter, 6 articles (please see "Productivity" chapter)

ORGANIZATION OF CONFERENCES:

- 1 International Colloquia, 2 international workshops, 3 Conferences of the Permanent Seminar and 11 other Conferences (in two different cycles called "Gymnasium" and "Dispersions") - please see the "Productivity" chapter.

#### PHD AND MASTER THESIS:

- there has been 1 Master thesis completed. There are 3 Master thesis and a PHD thesis under way (Please see the "Productivity" section).

#### TALKS AND CONFERENCES

- 2 talks (by invitation) at international conferences

- 3 accepted papers/communications to colloquia

- other talks: 7

#### ORGANIZATION OF 1 BOOK DEBATE and 1 BOOK PRESENTATION

#### PARTICIPATION IN 1 POST-GRADUATE JURY

#### Productivity

#### Publications in peer review Journals (3000 ca.)

(Up to a max of 10. Always indicate at the end of the citation, impact factor of the journal (IF=) and number of citations (n° C=). Give title and full citation in original language. DO NOT translate)

1. Shahid Rahman (2006), «The Beetle in the Box: Exploring IF-Dialogues» (avec Cedric Degremont), in: A. T. Pietarinen, A. Veikho, "Truth and Games. Essays in Honour of Gabriel Sandu", Helsinki: Societas Philosophica Fennica, 91-122.
2. José Félix Costa, Jerzy Mycka, (2006) "Undecidability over continuous-time", Logic Journal of the IGPL, 14(5):649-658, Oxford University Press.
3. Augusto Franco Oliveira (2006), «Kurt Gödel, Viena», in Boletim da Sociedade Portuguesa de Matemática 55, 25-38.
4. Oliveira, P.M.; Silva, Ana Paula (2006) : "Às voltas com o tempo!", Revista Educação e Matemática, tema Matemática e Tempo, APM.
5. Silva, Ana Paula (2006) : "Materiais para a aula de Matemática – Qual o astro mais distante da Terra: O Sol ou a Lua?", Revista Educação e Matemática, nº 90 – Novembro e Dezembro, APM.

#### Other publications (3000 ca.)

(Include only Books, chapters or full papers published in conference proceedings up to max of 10. Give title and full citation in original language)

#### BOOKS

1. Augusto Franco Oliveira (Prefácio e organização)(2005), Cartas de Edmundo Curvelo a Joaquim de Carvalho (1947-1953) e outros Inéditos, 1º Caderno de Filosofia das Ciências, Lisboa: Centro de Filosofia das Ciências da Universidade de Lisboa, 198 pp.
2. Shahid Rahman (2006), Volume 3 de la série LEUS chez Kluwer-Springer édité par Shahid Rahman and J. Symons: The Age of Alternative Logics. J. van Benthem, G. Heinzmann et alia (éditeur). Avec contributions entre autres de S. Awodey, J. van Benthem, G. Hellman ; J. Hintikka, K. Lorenz, S. Rahman, S. Shapiro.
3. Shahid Rahman (2006), Volume 5 de la série LEUS chez Kluwer-Springer édité par Shahid Rahman and J. Symons: Perspectives on Mathematical Practices. J.P. van Bendegem (éd.). Avec contributions entre autres de : .O. Bueno, M. Muntersbjorn, B. Larvor, A. Aberdein, J. Adler: A. Meskens, R. Hersh.
4. Laureano R., Mendes, Diana A., Ferreira Manuel A. M., (in press), Sincronização com ligação unidireccional de sistemas dinâmicos caóticos, TMQ6 – Temas em Métodos Quantitativos, Edições Sílabo, Editores, Diana Mendes, Fátima Salgueiro, Luís Martins.

#### CHAPTERS

1. Shahid Rahman (2006), «A non normal logic for a wonderful world and more», in J. van Benthem et alia *The Age of Alternative Logics*; chez Dordrecht: Kluwer-Springer, 311-334.

#### PAPERS

1. Silva, Ana Paula (2006): “O Conceito de Abdução em Peirce. O exemplo de Kepler” – Actas do ProfMat2006 , CD-Rom, Associação de Professores de Matemática, Lisboa, Novembro

#### **Master and Ph.D. thesis completed (3000 ca.)**

##### MASTER THESIS COMPLETED:

- Paulo Cardoso, *A Consciência Irrealizante - O Conceito de Imaginação em Sartre* (Master in Philosophy, FLUL, Lisbon, supervisor: Nuno Nabais. (Concluded in 2005).

##### MASTER THESIS IN PROGRESS:

- Ana Paula Silva, *Transformations of the Concept of Abduction in Peirce. The Kepler Example* (Master in History and Philosophy of Sciences, FCUL, supervisor: Olga Pombo)

- Celina Reduto on "The Nature of Mathematical Reasoning" supervised by Prof. Olga Pombo and Prof. Gerhard Heinzmann.

- Claudia Martinho under the tentative title "Poincaré and the Mathematics Teaching" will be presented (supervision Prof. Olga Pombo and Prof. Henrique Guimarães).

##### PHD THESIS COMPLETED:

There are no PhD thesis completed during this period.

##### PHD THESIS IN PROGRESS

- Alexander Gerner, *Philosophical Research of Attention* (PhD in History and Philosophy of Sciences, FCUL, supervisors: Olga Pombo and Nuno Nabais).

- Maria de Paz, “Space and Time in Einstein and Poincaré” (supervision Prof. Isabel Serra) .

#### **Organization of conferences (2000 ca.)**

##### INTERNATIONAL COLLOQUIA

1) International Meeting - Abduction and the Process of Scientific Discovery, Science Museum, Lisbon, 4-6.05.2006

##### INTERNATIONAL WORKSHOPS

1) *Arte e Ciência como Criação. Em torno de Gaston Bachelard.* FCUL, Lisbon. 26.01.2007. With Verónica Fabrini (Univ. of Campinas, Brazil), Ana Gaspar (CFCUL, Lisbon) and Felix Costa (IST, UTL / CFCUL, Lisbon).

2) *O que é o Diálogo? Introdução à Lógica Dialógica*, with Juan Redmond (UMR 8163 Savoirs, Textes, Langage, "La Science et ses Contextes", Univ. Lille III, France) 27.04.2007, FCUL.

##### PERMANENT SEMINAR ON PHILOSOPHY OF SCIENCES (organization: CFCUL)

1) *O que é um Conceito?*, by Nuno Nabais (FLUL/CFCUL, Lisbon), 19.01.2005, FCUL.

2) *A Lógica de Edmundo Curvelo*, by Franco Oliveira (Univ. of Évora, Portugal), 19.10.2005, FCUL.

3) *Cognitive and Semiotic Conditions of Abductive Creativity*, by Michael Hoffmann (Georgia Institute of Technology, USA), 8.05.2006, FCUL.

OTHER CONFERENCES (in two parallel and independent CFCUL cycles, called "Dispersions" and "Gymnasium")

- 1) A Hermenêutica e a Função da Metáfora na Ciência, by Erik Aválos (Univ. Michoacana, Mexico), 9.11.2005, FCUL, Lisbon.
- 2) Diálogos Possíveis entre Estrutura e Acontecimento, by Verónica Fabrini (Univ. Campinas, Brazil), FCUL, 22.03.2006.
- 3) Lógica da Ficção, by Juan Redmond (Univ. Lille III, France), 18.04.2007, FCUL, Lisbon.
- 4) Porque é que Peirce considera Kepler como "o Exemplo Eterno" do Raciocínio Científico?, by Ana Paula Silva (CFCUL, Lisbon), FCUL, 16.09.2005.
- 5) O que é o Logicismo?, by Augusto Franco de Oliveira and Olga Pombo (CFCUL/FCUL, Lisbon), FCUL, 9.11.2005.
- 6) O problema da Percepção, by Nuno Nabais (CFCUL/FLUL, Lisbon), FCUL, 17.05.2006.
- 7) O problema da Atenção, by Alexander Gerner (CFCUL, Lisbon), FCUL, 28.06.2006.
- 8) Bayesian Epistemology, by Gregory Wheeler (CENTRIA/FCT, Lisbon), FCUL, 26.02.2007.
- 9) Transformações do Conceito de Abdução em Peirce, by Ana Paula Silva (CFCUL, Lisbon), FCUL, 16.05.2007.
- 10) A Matemática nas Civilizações Pré-Clássicas, by Teresa Matos (IST, Lisbon), 31.05.2007.
- 11) Convencionalismo e Relatividade em Poincaré, by María de Paz (Univ. Complutense Madrid, Spain), FCUL, 19.09.2007.

### **Internationalization (2000 ca.)**

(Collaborative publication, Research, Graduate Training Networks or other forms of participation of the Research Group at the international level)

#### **PARTNERSHIPS WITH INTERNATIONAL INSTITUTIONS**

1. UMR 8163 Savoirs, Textes, Langage, "La Science et ses Contextes", Univ. Lille III, France. This partnership includes:

- A joint research Project, called "Pragmatisme Dialogique" ( head: Shahid Rahman, Univ. Lille).
- A joint research program on the question of Abduction (which gave birth to an International Meeting on Abduction and the Process of Scientific Discovery, held in Lisbon, in 2006, please see the chapter "Organization of Conferences")
- An impending graduate training network involving both the CFCUL and the UMR 8163/Lille III that will include:
  - a future "maitrise conjointe"/Master course (foreseen to 2009-2010).
  - Hassan Tahiri (Univ. LilleIII, France, impending process for a Post-doc grant in the CFCUL).

2. Universidad Complutense de Madrid - Departamento de Lógica Y Filosofía de la Ciencia, Madrid, Spain. This partnership includes 2 projects:

- A PhD thesis (Maria de Paz - Univ. Complutense, Madrid - please see "Future Research" )
- Abduction and scientific discovery- joint research project submitted by the CFCUL and the Universidad Complutense de Madrid - Departamento de Lógica Y Filosofía de la Ciencia, to the "Acciones Integradas", sponsored by the Portuguese "CRUP" - Rectorat Council of the Portuguese Universities.

POST-GRADUATE STUDIES (foreign visiting fellows or students in Portugal and/or our research team members visits to universities abroad):

1) Veronica Fabrini (Art Institute, Unicamp, Brazil): Post-doc studies completed in the CFCUL in 2006.

2) Hassan Tahiri (Univ. Lille III, France): impending Post-doc thesis (foreseen for 2008)

#### **Future Research**

#### **Objectives**

The RG will work on the following 3 lines:

##### 1) ABDUCTION AND SCIENTIFIC DISCOVERY

- Publication of the proceedings of the "2006 International Meeting - Abduction and the Process of Scientific Discovery" (in press)

- Organization of the "2nd International Meeting - Abduction and the Process of Scientific Discovery" - 2008

##### 2) POINCARÉ AND INTUITION

- In the just recently approved FCT Project "Poincaré, Philosopher of Science" - PTDC/FIL/64748/2006 (rating: "Excellent") we'll study several aspects of Poincaré's work on philosophy of science, in order to understand how he dealt with the problems concerning the mathematical knowledge and the place of philosophy in the scientific development.

The project involves an intense international collaboration. Prof. Heinzmann, Director of the "Archives Henri Poincaré" and Prof. Shahid Rahman (Univ. Lille), 2 of the most distinguished scholars on Poincaré, will come to Lisbon.

- task 1, Mathematical Reasoning - to discuss the question induction versus deduction both on historical terms (the Goblots-Poincaré controversy), and on analytical terms by researching how this problem is actually considered.

- task 2, Henri Poincaré and the Mathematical learning - to understand the failure of mathematical teaching in light of Poincaré's work.

- task 3, Dynamical Systems - to analyze this Poincaré's scientific work and to determine the assimilation of Poincaré's ideas in dynamical systems in Portugal.

- the task 4 - to study Poincaré's Conventionalism in the period between 1905 until his death in 1912 ( a crucial time to understand Poincaré's mature scientific attitude, knowledge and self-perception).

In the development of this project, we count with very relevant international support (Prof. Heinzemann, Univ. of Nancy and director of the Poincaré Archives, and Prof. Shahid Rahman, Univ. Lille III).

Prof. Shahid will be visiting professor at CFCUL several times. The first coming will be next 23 to 28 October 2007 in order to give:

- 1 seminar with pos-graduated students (3 master and 2 PHD thesis) - 24.10.07, morning

- 2 lectures with Poincaré team - 24.10.07 and 26.10.07 - afternoon

- 1 lecture at Mestrado in History and Philosophy of Science - 25.10.07 - 3-5pm

- 1 public conference at Institut Franco-Portugais 25.10.07, 6pm

In this context, and with the support of the Institut Franco-Portugais, we hope to be able to create a graduate training network involving both the CFCUL and the UMR 8163/Lille III that will include a future "MAITRISE CONJOINTE" (foreseen to 2009-2010).

##### 3) ON THE CONCEPT OF CREATION

- to publish 3 books:

"The creation of the impossible" (Catarina Pombo)

"The creation at the edges" (Golgona Anghel)

"The reality of Fiction" (E. pellejero)

- to organize 2 workshops

- "The Idea of Creation (2007)

- "Cognition and Creation" (2008)

#### THIS RG WILL SUPPORT THE FOLLOWING POST-GRADUATE STUDIES

- 1 foreseen Post-doc at CFCUL: Hassan Tahiri (Univ. Lille III) - 2008

- 2 ongoing PhD thesis:

- Alexander Gerner, Philosophical Research of Attention (supervisors: Olga Pombo and Nuno Nabais).

- Maria de Paz - "Space and Time in Einstein and Poincaré" (supervision Prof. Isabel Serra) .

- 3 ongoing Master thesis :

- Ana Paula Silva, Transformations of the Concept of Abduction in Peirce. The Kepler Example, supervisor: Prof. Olga Pombo

- Celina Reduto - "The Nature of Mathematical Reasoning", supervisor: Profs. Olga Pombo and Gerhard Heinzmann.

- Claudia Martinho - "Poincaré and the Mathematics Teaching", supervision Profs. Olga Pombo and Henrique Guimarães

#### **Funding, source, dates**

##### ABDUCTION AND SCIENTIFIC DISCOVERY

- Proceedings of the "2006 International Meeting - Abduction and the Process of Scientific Discovery"

- 800 EUR - FLAD

- 1.000 - FCT/FACC

- 1200 - CFCUL

- "2nd International Meeting - Abduction and the Process of Scientific Discovery" (2008). For this event we expect to get the necessary funding from the following institutions:

- 2 000 EUR by FLAD (Fundação Luso-Americana para o Desenvolvimento)

- 2 000 EUR Gulbenkian

- 1 500 EUR by CFCUL

- 1 000 EUR by FACC/FCT

##### POINCARÉ

- 30.000 EUR FCT Project "Poincaré, Philosopher of Science" - this will be the major funding for the various activities foreseen within this project (missions, consultants, publications, etc )

- that is also the case of the Post-doc CFCUL: Hassan Tahiri (Univ. Lille III): 17.940 EUR

- We count also with the support of Institut Franco-Portugais which has been an important sponsor of some CFCUL past and impending activities. For instance, it will support the next coming and stay in Portugal of Prof. Shahid Rahman who will come before the beginning of the Poincaré's project (est. budget: 1.500 EUR)

##### CREATION

- publication of 3 books

- The creation of the impossible (commercial edition)

- The creation at the edges (commercial edition)

- The reality of Fiction (to be published by a mexican publisher)
- workshops
- The Idea of Creation (2007) - est. budget: 350 EUR
- Cognition and Creation (2008) - est. budget: 350 EUR

#### **Previous publications in the area**

1. Augusto Franco Oliveira - Prefácio e organização (2005), Cartas de Edmundo Curvelo a Joaquim de Carvalho (1947-1953) e outros Inéditos, 1º Caderno de Filosofia das Ciências, Lisboa: Centro de Filosofia das Ciências da Universidade de Lisboa, 198 pp.
2. Shahid Rahman (2006), Volume 3 de la série LEUS chez Kluwer-Springer édité par Shahid Rahman and J. Symons: The Age of Alternative Logics. J. van Benthem, G. Heinzmann et alia (éditeur). Avec contributions entre autres de S. Awodey, J. van Benthem, G. Hellman ; J. Hintikka, K. Lorenz, S. Rahman, S. Shapiro.
3. Shahid Rahman (2006), Volume 5 de la série LEUS chez Kluwer-Springer édité par Shahid Rahman and J. Symons: Perspectives on Mathematical Practices. J.P. van Bendegem (éd.). Avec contributions entre autres de : .O. Bueno, M. Muntersbjorn, B. Larvor, A. Aberdein, J. Adler: A. Meskens, R. Hersh.
4. Shahid Rahman (2006), «The Beetle in the Box: Exploring IF-Dialogues» (avec Cedric Degremont), in: A. T. Pietarinen, A. Veikho, "Truth and Games. Essays in Honour of Gabriel Sandu", Helsinki: Societas Philosophica Fennica, 91-122.
5. Augusto Franco Oliveira (2006), «Kurt Gödel, Viena», in Boletim da Sociedade Portuguesa de Matemática 55, 25-38.

#### **Special Requirements**

Equipment, facilities, support staff and management - we count with the support of CFCUL.

Also, we intend to get extra support (mostly room availability and technical support from the FLAD (in what concerns Peirce) and from The Institut Franco- Portugais (in what concerns Poincaré).

For the publication of the foreseen volumes, we count with the collaboration and know-how of two editors: Publidisa (Spain) and Esfera do Caos (Portugal)

<b>Group Description</b>	
Research Unit:	Centro de Filosofia das Ciências da Universidade de Lisboa <b>uID:678</b>   (L700678)
Group Name/Designation:	Science and Art
Principal Investigator:	Catarina Pombo Martins de Castro Nabais
Time Interval:	(2007-2010)
Location of Group (Host Institution):	Fundação da Faculdade de Ciências
Keywords:	Image in Art and Science; Scientific Illustration; Diagrammatic Thinking; Science and Theatre
Funding, source, dates:	- 180. 705 EUR - funded FCT Project "Image in Art and Science" (PTDC/EAT/64201/2006). Head: Olga Pombo. The project has begun officially on 1.05.2007. - 17.940 EUR - FCT post-doc grant - PHD. Catarina Pombo at CFCUL, supervisor: Prof. Bracinha Vieira (2007-09)

#### **PI and Researchers**

##### **Researchers in the Group (Ph.D. Only)**

(CV)	António Manuel Bracinha Vieira
(CV)	Carlos Manuel Branco Nogueira Fragateiro
(CV)	Catarina Pombo Martins de Castro Nabais
(CV)	Cristina de Sousa Azevedo Tavares
(CV)	Eduardo Anibal Pellejero
(CV)	José Nunes Ramalho Croca
(CV)	Nuno Gabriel de Castro Nabais dos Santos
(CV)	Olga Maria Pombo Martins

##### **Other Researchers in the Group (Ph.D. Only)**

(CV)	Joaquim Jose Azevedo Moura Ramos
(CV)	Jose Felix Gomes da Costa
(CV)	Maria Filomena Guerreiro Vieira Molder
(CV)	veronica fabrini machado de almeida

##### **Other Researchers in the Group (non Ph.D.)**

(CV)	Alexander Matthias Gerner
(CV)	Ana Maria Mendes Gaspar
(CV)	Ana Maria Rodrigues de Figueiredo
(CV)	Ana Paula Rocha Coelho de Figueiredo Silva
(CV)	Cláudia Sofia Luis Gonçalves
(CV)	Davide Scarso
(CV)	Golgonia Luminita Anghel
(CV)	João Eduardo Farias de Araújo
(CV)	Joao Luis de Lemos e Silva Cordovil



(CV)	Manuel Luís Valente Alves
(CV)	Nuno Miguel Santos Gomes de Carvalho
(CV)	Patrícia Pombo Martins Tomé de Medeiros

#### Objectives and Achievements

##### General Objectives

"Science and Art" is our Unit's newest Research Group. It has been constituted recently, in 2007, as the result of the research interests of several members and collaborators of the CFCUL who had been approaching the area (Prof. O. Pombo was the coordinator of a FCT project "Encyclopaedia and Hypertext" (1999-2002) which, among other issues, crossed the questions of science and art; Prof. V. Fabrini (University of São Paulo, Brasil), during her pos-doc at the CFCL (2006) has worked out the relation between Science and Poetics in Bachelard; Dr. Alexander Gerner has proposed a PhD project at the CFCUL on cognitive, phenomenological and artistic dimension of attention, etc, etc).

From these convergent interests and around Prof. Olga Pombo's ancient study on Leibniz philosophy of language and diagrammatic thinking, a large in scope as well as ambitious FCT project has been shaped in order to work out the relationships between "Image in Art and in Science". This project (PTDC/EAT/64201/2006) which was evaluated as excellent and received a very significant funding (see "Funding", in the "Group Description" section). It includes a wide team of national (CFCUL, Faculty of Medicine, Faculty of Arts and other institutions) and international researchers and has a huge and ambitious number of specific, well determined objectives.

With the impulse given by the above mentioned FCT project, a strong and new RG was then born. The head is the Pos-Doc Catarina Nabais who has finished her PhD in January 2007 at the University of Paris VIII (supervisor: Jacques Rancière) on "Esthétique en tant que Philosophie Naturelle" and who has focused her pos-doc research at the CFCUL on the concept of Image in Science and Art.

The RG "Science and Art" integrates also a research line on the relationship between Science and Theater. A new and innovative area of research that intends, not only to theoretically analyse the concept of representation in theater and its influence on the constitution of science, but also to disseminate Science to a wider public. The impulse was given by the recent entrance in the CFCUL of Prof. Carlos Fragateiro, who has a long research experience on Science and Theater, mainly as Director of the Teatro Trindade, of the Teatro D. Marisa and more recently, of the Teatro da Escola Politécnica of the University of Lisbon.

##### Main Achievements

###### ENCYCLOPAEDIA AND HYPERTEXTY

- FCT project (POCTI/FIL/36357/99-02)
- O. Pombo, A. Guerreiro and A. F. Alexandre (eds.), Enciclopédia e Hipertexto, Lisboa: Editora Duarte Reis (2006), 556 pags.

###### BACHELARD. SCIENCE AND POETICS

- one Master thesis in progress (Dr. Ana Maria Mendes Gaspar, O Lugar da Psicanálise na Epistemologia de Gaston Bachelard, supervisors: Olga Pombo and José Luís Pio Abreu)
- 1 Workshop - Arte e Ciência como Criação. Em torno de Gaston Bachelard, with the participation of Prof. Verónica Fabrini (Paulo, Brasil), Prof. Felix Costa (IST) and Dr. Ana Garcia (CFCUL), 26.01. 2007, FCUL (room 1. 3. 29).
- a second workshop on Bachelard is foreseen for December 2007

- 2 papers will be produced on "The palace of Poetics in G. Bachelard's epistemology" and "Bachelard's concept of Image"

#### Productivity

n/a

#### Future Research

#### Objectives

This is our newest RG. As explained before, it results of the increasing CFCUL number of researchers interested on the problem of theoretical crossings and boundaries between science and art. We'll try to establish in what way philosophy may help to think the differences between Science and Art. We'll also try to understand the complex group of questions related to the problem of Science and Art. Is Science a specific kind of thinking? In which sense does Science goes in parallel with Art? Do scientific inventions resemble the artistic ones?

The RG will work on the basis of 3 Projects:

«Image in Science and Art» (PTDC/EAT/64201/2006) - recently approved with «Excellent» by an international FCT jury. In this largely funded and ambitious project, we'll try to establish the significance of «making an Image» in both Science and Art. Is it always the same image that is functioning in science and in art? Is there a difference between scientific and artistic drawings? Do scientists think the same way as artists? Is there an internal connection between image and thought or is thought independent of images?

In the «Bachelard» Project (a pre-existing CFCUL internal Project), we'll study the thought of Bachelard either in his Philosophy of Science and in his Poetics. We'll try to understand in what way these 2 directions of Bachelard's work, although sharing the same idea of truth, do establish a quite complex relationship as they intertwine and differentiate themselves.

The 3rd project, «Science and Theatre», results from a partnership with the National Theatre D. Maria II / Escola da Politecnica Theatre of the Univ. Lisbon. The project intends to, from the Philosophy of Theatre point of view, construct an assemblage of function - concepts both to aesthetics and to science. Can we think scientific experiment as a creation in the same way as the creation process in experimental theatre? Is scientific divulgation comparable to spectacle, to a mise-en-scène? This project has also has an innovative and important aim: to disseminate Science to a wider public through theater. 2 plays are foreseen in a near future and will be worked out with the collaboration of the CFCUL team : "Feynman" - by P. Parnell and "After Darwin", by T. Wertendaker.

Besides the fulfillment of the ambitious research activities and accomplishments of the Project "Image in Science and Art", the RG as a whole aims:

- to study the concepts of Image and Creation as well as their esthetics and epistemological articulations and implications
- to make the balance of the most important classical and contemporary contributions for a theory of Image in Science and in Art
- to reconstruct the basis of an Ontology of Image that could match the problems and the challenges of contemporary Philosophy, Arts and Sciences
- to present the results of the team research in specialized journals both in Portugal and abroad and in the publication of several books
- to present a regular series of communications showing the evolution oh the work of the team at the CFCUL as well as other national and international research centres

- to publish two anthologies: one about the concept of Image and another about the concept of Creation, in order to establish an accessible corpus to other researchers
- to translate to Portuguese the most relevant works in both areas of Image
- to create a Webpage on the main themes and problems of Image in science and arts
- to give scientific support to 1 Post-doc (Catarina Pombo), to 2 PHDs (Ana Figueiredo and Cristina Branco) and 3 Master dissertations (Nuno Carvalho, Claudia Rodrigues and Ana Gaspar) which are now under way.

#### **Funding, source, dates**

- 180. 705 EUR - funding of the FCT Project "Image in Art and Science" (PTDC/EAT/64201/2006) - head: Olga Pombo. The project has begun officially on 1.05.2007 and has a 3 year scope (2007-2010)
- For the whole implementation of the above mentioned project - and in particular for the execution of the planned final exhibition - we will search support from the Medicine Museum of the Lisbon University (already a CFCUL partner in the Project), as well as the Pharmacological Industry and a private exhibition's Center (FCGulbenkian) - (2009-2010)
- For the completion of many of the objectives mentioned above, we'll also find financial support from CFCUL as well as from FCT/FACC.
- The "Image and Art and Science "project will be the major funding basis for this RG. The RG, however, also includes a research line on "Science and Theater". For that matter, we will have the support of the Escola Polytechnica Theater of the University of Lisbon and of the D. Maria II Theater (2007-2010).

#### **Previous publications in the area**

- F. Molder (1995), *O Pensamento Morfológico de Goethe*, Lisboa: Imprensa Nacional - Casa da Moeda
- O. Pombo (1997), *Leibniz and the Problem of a Universal Language*, Münster: Nodus Publikationen, 321 pp.
- 1998
- O. Pombo (1998), *La Théorie Leibnizienne de la Pensée Aveugle en tant que Perspective sur quelques-unes des Apories Linguistiques de la Modernité*, Cahiers Ferdinand Saussure, n° 51, pp. 63-75.
- M. Valente Alves (2005), *Passagens. 100 Peças para o Museu de Medicina*, Lisboa: Museu de Medicina (FM/UL) e Museu Nacional de Arte Antiga, 304 pp.
- D. Scarso (2006), *Fórmulas e Arquétipos, Aby Warburg e Carl G. Jung*, in O.Pombo, A. Guerreiro e A.F. Alexandre (eds) *Enciclopédia e Hipertexto*, Lisboa: Duarte Reis, pp. 537-553

#### **Special Requirements**

- Project "Image in Art and Science" (PTDC/EAT/64201/2006): the large amount of this Projects funding includes the expenses with 2 BICs (Research Grants), 1 BTI (Technical Grant) and the informatic equipment for image processing (because one of the Project's main aims is to process and organize, not only bur also from a museological perspective, the large collection of anatomical drawings from the Medicine Museum of the Lisbon University as well as the drawings from the Fine Arts School of the Lisbon University). Contacts are already being planned for the arrangements concerning the Project final exhibition facilities, but they should most probably include the collaboration of the Lisbon Science Museum and the FCGulbenkian.

- The CFCUL will continue to fully support the Bachelrad internal project, as far as either facilities and staff/management are concerned.
- Finally, the "Science and Theatre Project" will have the support of the already mentioned well known Lisbon institutions: the National Theatre D. Maria II and the Escola da Politecnica Theatre.