



PhilInBioMed

# THE MAGAZINE

- March 2020 -

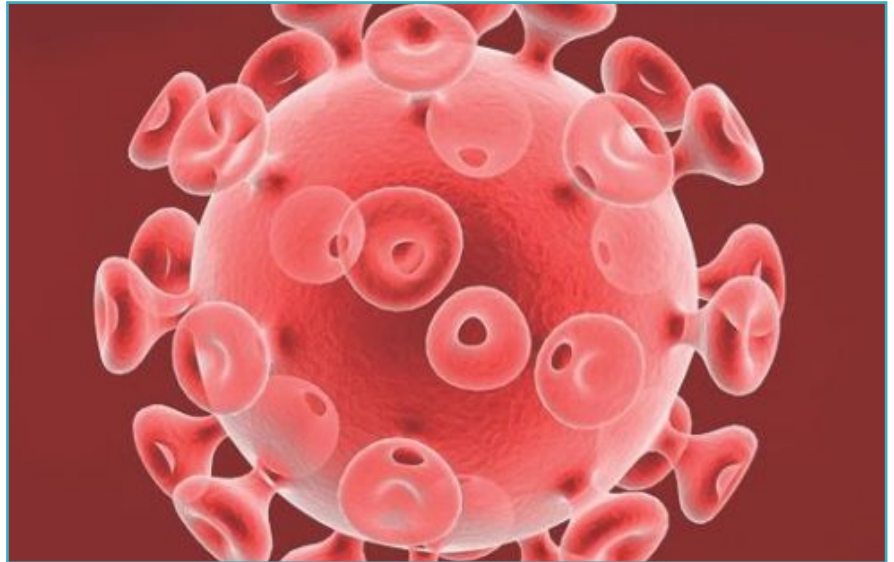
## Times like these

Dear PhilInBioMed members,

First of all we hope that you and your families are all well and safe.

At times like these we tend to get absorbed in the news vortex. We hope this issue of the PhilInBioMed magazine allows you to reconnect with Philosophy of Science and a more relaxed state of mind.

Cordially, your  
PhilInBioMedMagazine team



*For decades scientists have searched for a vaccin against the Human Immunodeficiency Virus (HIV). A special issue of the International Journal of Molecular Sciences is asking the question if the HIV vaccine by rational vaccine design is a realistic aim or a utopia?*

## Call for co-authors on HIV vaccine rational

Dear friends,

Would you be interested - or would you know someone who would be interested - in writing a theoretical/conceptual/philosophical paper on HIV vaccine for a special issue of International Journal of Molecular Sciences? The general topic is: "**Is the development of an HIV vaccine by rational vaccine design a realistic aim or a utopia?**" The deadline is July-August 2020.

The editor is Marc Van Regenmortel, who was a Professor of Virology at various Universities in South Africa (Stellenbosch and Cape Town) and France (Strasbourg), and was head of the Immunochemistry Laboratory at the CNRS Molecular Biology Institute in Strasbourg for 22 years.

Marc Van Regenmortel is also the author of the eBook [HIV /AIDS : Immunochemistry , Reductionism and Vaccine Design. A review of 20 years of research](#). The book gathers a series of pivotal papers on the development of an HIV/AIDS vaccine published in the last two decades. Accompanied by extensive comments putting the material into an up-to-date context, all three parts of the book offer a broad overview of the numerous unsuccessful attempts made in recent years to develop a preventive HIV vaccine.

Marc van Regenmortel says that publication fees should not apply to philosophers; you can contact him for details. If you are interested in contributing a paper, please send an email to Marc ([vanregen@unistra.fr](mailto:vanregen@unistra.fr)), with me ([thomas.pradeu@u-bordeaux.fr](mailto:thomas.pradeu@u-bordeaux.fr)) in Cc.

Best regards, Thomas Pradeu

## Workshop on Explanations in Science



The University of Tours (France) is organising a meeting of philosophers of science and scientists on explanation in science on May 5th and 6th. During three half-days, the organizers of this workshop intend to tackle the question of explanations in science through a multidisciplinary approach.

Philosophers, biologists, physicists, econometers will intervene from their field with this question: what constitutes a good explanation and how is the explanation (s) in their field characterized?

The objective of this workshop is to offer a transdisciplinary reflection on the explanations in the sciences by not limiting itself simply to what constitutes a "good explanation" in "his" field but by also trying to distinguish what makes consensus between the areas of what is specific to each area or approach being considered.

In other words, is the correct explanation only good in relation to an area, or even to a question asked, or is it good in general?

Several members of PhillnBioMed are participating, including Catherine Belzung, Philippe Huneman and Maël Lemoine. Information and registration: <https://explicascience.sciencesconf.org>.

## Deadline extension Summer School KLI

The application deadline for the EASPLS2020 summer school has been extended to March 27th, 2020.

The European Advanced School in the Philosophy of the Life Sciences (EASPLS) consortium will hold its sixth biennial summer school on "Dealing with Complexity in the Life Sciences" at the Konrad Lorenz institute for Evolution and Cognition Research (KLI) in Klosterneuburg near Vienna. Young scholars (PhD students and early post-doctoral researchers) in the history, philosophy and social studies of the biological, biomedical, and environmental sciences are invited to apply.

Costs and travel grants: The registration fee is €350. The summer school will cover lunches and the opening dinner at the KLI. Participants will take care of their own accommodation and travel expenses but several travel grants are available. To apply for a travel grant, please send your submitted abstract, a short CV, and a letter of motivation why you want to participate in the event to [easpls2020@kli.ac.at](mailto:easpls2020@kli.ac.at) by APRIL 15th, 2020. We will notify the successful applicants by the end of MAY.

For updates and more details see: [https://www.kli.ac.at/en/events/event\\_calendar/view/550](https://www.kli.ac.at/en/events/event_calendar/view/550).

## Upcoming\*

\* coronavirus permitting

### March

**27<sup>th</sup>-28<sup>th</sup>** [The Problem of Cognitive Ontology](#), Pittsburgh, USA

### May

**5<sup>th</sup>-7<sup>th</sup>** [Final Conference of the ERC IDEM project](#), Bordeaux, France

**13<sup>th</sup>-15<sup>th</sup>** [Public Engagement with Science workshop](#), Cincinnati, USA

**25<sup>th</sup>-29<sup>th</sup>** [Summer School "Philosophy in Biology and Medicine"](#), Carcans, France

### June

**8<sup>th</sup>-12<sup>th</sup>** [Philosophy of Biology at the Mountains](#), Salt Lake City, USA

### September

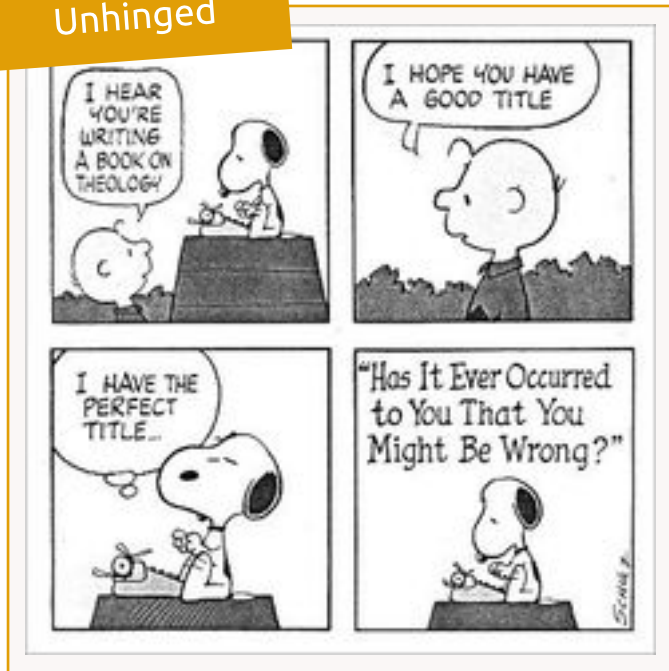
**7<sup>th</sup>-11<sup>th</sup>** [EASPLS Summer School "Dealing with complexity in the life sciences"](#), Klosterneuburg, Austria

Sixth European Advanced School in the Philosophy of the Life Sciences

KLI



Co-directors: Guido Campigla and Marcel Weber



3 positions in Paris opening soon

3 positions will be opening for the interdisciplinary project on stem cells: « **Philosophy, Phylogeny, and Biology of Stem Cells** », (PI: [Lucie Laplane](#)).

**24 months Postdoctoral position in Philosophy in Biology and/or Philosophy in Medicine and/or Conceptual/theoretical Biology** in Lucie Laplane's lab [From haematopoietic stem cell to myelomonocytic differentiation](#) (CNRS) at the University Paris I (IHPST) & Gustave Roussy Cancer Center.

**20 months Engineer position in Phylogenetics/Comparative Genomics and Bioinformatics** in Michel Vervoort's and Eve Gazave's lab: [Cellules souches, développement et évolution](#) at

the Institute Jacques Monod (CNRS).

**18 months Technician position in experimental biology** (cancer mice model) in the lab of Nina Fenouille and Raphael Itzykson, Inserm, Institute of Hematology at the Saint-Louis Hospital: [Mécanismes moléculaires du développement des leucémies aiguës myéloïdes](#).

Candidates interested in one of these position should contact Lucie Laplane at: [lucie.laplane@univ-paris1.fr](mailto:lucie.laplane@univ-paris1.fr)

Collaboration chronicle: Causality, sociology and public health

[Federica Russo](#) is an Assistant Professor at the Universiteit van Amstardam. Previous teaching and visiting positions include the University of Ferrara (IT) Free University of Brussels (BE), University of Kent (UK), Université catholique de Louvain (BE), University of Pittsburgh (UK), London School of Economics (UK), and the University of Padova (IT). She is interested in causality and probability in the social, biomedical and policy sciences, and in the relations between science and technology.



Professor [Mike Kelly](#) is a Senior Visiting Fellow in the Department of Public Health and Primary Care at the Institute of Public Health at the University of Cambridge and a member of St John's College, Cambridge. Between 2005 and 2014 he was the Director of the Centre for Public Health at the National Institute of Health and Care Excellence (NICE) where he led the teams producing public health guidelines.

**Could you explain in a few words the topic of your collaboration?**

**Federica:** Part of my research in philosophy of science is about causality and causal modelling. With Mike I collaborated to further support the thesis that social determinants are real causes (and note mere correlations) of health and disease.

**Mike:** I am a sociologist specializing in public health. Both sociology and epidemiology struggle with the concept of causation. I wanted to understand more about the way that philosophers of science deal with the problem.

**How did you meet?**

**Federica:** I have been studying the work of Mike Kelly in early post-doc times. Mike made contact with me when I was co-organising a conference on Evidence and Causality, as part of the CitS Series.

**Mike:** Yes, through the seminars organized through CitS.

**Could you each describe what your collaborator brings to this joint work?**

**Federica:** For me, the inside information Mike gives about the practice of public health, and of how sociology of health has developed is invaluable. Discussing with him helps me select philosophical questions that are relevant to the practice, and his reactions are an essential testbed for my work.

**Mike:** I find the philosophical approach refreshingly different to the social scientific and especially the epidemiological conceptualization of public health problems. The interchange between the disciplines has been very productive.

**What are the obstacles that you have met during your collaborative work?**

**Federica:** Busy diaries that rarely coincide. Different expectations in our jobs and roles, and especially the non-existent expectation that scientist and philosophers should spend time collaborating

**Mike:** Ditto. These difficulties are practical not intellectual.

**Do you have suggestions as to how to improve collaborations between scientists and philosophers?**

**Federica:** Yes! In research projects, for instance, to institutionalise the collaboration with philosophers, just as there is a compulsory Work Package on Management or on Communication and dissemination.

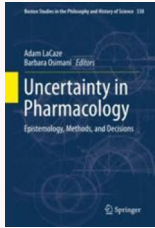
**Mike:** One very important lesson for me is to be able to acknowledge your own knowledge limitations and weaknesses. You have to be able to operate in an environment where you are both expert and novice simultaneously.

**What are the most exciting questions that you would like to address in your future collaborations?**

**Federica:** There is still a lot to be said about why and how social factors are real causes, along side biological ones. I hope to continue this conversation with Mike, as for me the relevance is philosophical, methodological, and also for policy purposes.

**Mike:** We have ended up working at the interface of biological science, sociology and philosophy. This is not only exciting in itself, but also it is of fundamental importance. The relationship between biological and social processes, while well known in associational and correlational terms, is still underexplored mechanistically. The work we have done together has helped to illustrate that and suggest new lines of enquiry.

## What can be extrapolated from a mouse?



PhillinBioMed members Catherine Belzung and Maël Lemoine together with Etienne Billette de Villemeur have published a chapter on [Mechanistic vs Statistical Extrapolation in Preclinical Research in Psychiatry](#) in [Uncertainty in Pharmacology](#). This chapter questions the received view that in medical research extrapolation from animal models mainly consists in establishing mechanisms of human pathological states in organisms, thanks to a step by step comparison of causal pathways.

### 3 questions for Ralph Adolphs

[Ralph Adolphs](#) is a Professor of Psychology, Neuroscience, and Biology at the California Institute of Technology. As the [Director of the Emotion and Social Cognition Lab](#), he studies the neural and psychological basis for human social behavior. His work has focused on examining how people recognize and process emotions and social cues in facial expressions. He is a member of the [PhillinBioMed Scientific Committee](#).



#### 1. What is your main research focus?

I'm a cognitive neuroscientist and so I ask questions about the human brain. The main research in my lab used to be on emotion and social cognition, with a focus on fear and faces, and on a brain structure called the amygdala that's important for processing both. That's still a core theme in my lab, but along the way we realized that to really understand any part of the mind (or brain), you need to understand all of it. So the current focus is something like, "how is psychology related to neuroscience," with examples that still include emotions, but also others like personality and intelligence.

I think the picture that's emerging is that psychological variables are really heterogeneous. Some, like attention and memory perhaps, are basically neurobiological already; some (I won't mention examples, but there are many) are junk and should be eliminated; and some are the proper domain of psychology. In the latter category I put emotions, intelligence, and personality. All of these are realized in the brain, although they require observation of behavior to individuate them.

#### 2. What place do conceptual questions take in your research?

The front row! I don't think cognitive neuroscience can work without conceptual questions; and I also

find them more interesting than other types of questions. They're also more challenging for somebody, like me, with no formal philosophy training.

So I often look to philosophers, or even try to collaborate with them, so that the conceptual questions that I think there are can actually be made precise enough to investigate. It is a bit disheartening though, because if you begin asking big conceptual questions, you realize that we basically don't know anything.

#### 3. What are (conceptual) questions that you would like to explore in the future?

I guess for cognitive neuroscience the two biggest questions are: What is the mind, and What is consciousness? I take these to be distinct questions: the first is just about psychological variables and their causal relations. In a box-and-arrow cognitive architecture, what goes into the boxes and which boxes have arrows to which other boxes.

All of that could take place without any conscious experience. The second question seems completely separate, and completely mysterious — but no less important. For now, I'll be working on the first, since the second seems too hard.

