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§1 Editorial

There's a new guy in town, or I should say a new player in the field of mathematical philosophy: the Munich Center for Mathematical Philosophy, aka MCMP. You probably

heard rumors about it, saw some announcements for positions being sent around, or met some of its concrete instantiations (viz. its new members). Now it's time for a proper introduction.

The MCMP is first and foremost under the auspices of Hannes Leitgeb. His Alexander von Humboldt Professorship Grant created the Center. It was thus natural to give him the first words, resulting in the short interview below. The members of the MCMP's initial team also kindly accepted to fill in a short questionnaire to introduce themselves. This, overall, gives quite a good impression of the exciting social and scientific environment that is now being created in Munich.

Looking forward to seeing you there!

Olivier Roy
Munich Center for Mathematical Philosophy

§2
Features

Interview with the Munich Center for Mathematical Philosophy

Thanks to Barbara Pöhlmann for her help. For more information about the MCMP, including announcements of positions currently open at the Center, please have a look at the website.

Interview with Hannes Leitgeb

Olivier Roy: Thanks so much for giving us this interview for *The Reasoner*. Let us start with basic facts: what is the Munich Center of Mathematical Philosophy?

Hannes Leitgeb: It is a new Center based at LMU Munich which is funded primarily by the German Alexander von Humboldt Foundation and which is concerned with applications of logical and mathematical methods in philosophy. Obviously it is not in any sense about reducing philosophy to mathematics, just as it is not the case that physics gets reduced to mathematics if mathematical methods are applied in physics. It is just that, when you try to address philosophical questions and problems, sometimes it is very useful to involve logical and mathematical methods in order to solve the problems, or just to understand more properly what the problems are all about, to build, in the ideal case, a philosophical theory in which philosophical questions get answered. So in the Center we want to do research in philosophy in which we use methods that get used in sciences, namely mathematical methods.

OR: Could you describe the Center in terms of its people, orientation, field of research?

HL: I sort of come from a tradition that is very much related to logical empiricism, to the Vienna Circle, and of course you find this idea of applying especially logic, and to a lesser extent also mathematics, to philosophy already there. What is distinctive of the Center in Munich—and this is a difference compared to the Vienna Circle—is that none of traditional philosophical questions are being dismissed. Rather, in the Center, in principle we are interested in all classical questions of philosophy, in whatever area of philosophy, but these questions are being addressed using logical and mathematical methods. Accordingly, in the Center—already in the starting team that will be complete from April 2011—we cover more or less all areas of philosophy. So there are people here who actually do philosophical logic, of course, like epistemic logic, dynamic epistemic logic, conditional logic, deontic logic, and so on. We have people doing philosophy of mathematics, such as structuralism or nominalism about maths. But over and above these areas in which formal methods are naturally being applied or studied, we have fellows doing epistemology, that is then formal epistemology, and philosophy of science: so there are members of the Center who come from the Bayesian tradition and who thus apply probabilistic methods within their theories of confirmation or causality, but we also have people here who take up the more deductive or semantic conceptions of scientific theories and who try to develop them using formal means. Some members of the Center do philosophy of language with the help of logical, mathematical, and even experimental means. For example, some are interested in logical inferentialism, where the meaning of logic constants is constituted by logical rules, others analyze the acceptability of conditionals in terms of conditional probabilities. We have fellows in the Center doing formal theories of truth and semantic paradoxes, obviously, but there are also people who are working, amongst others, on formal aesthetics—e.g., recently there has been a talk given by Norbert Gratzl on an ontological theory for aesthetic objects for which abstraction principles which are formulated in the language of second order logic play a crucial role. So this pretty much shows that there is no particular philosophical area which we think can't be an area in which formal methods are used. But that doesn't mean that at this point of time we know for each and every philosophical problem how to use mathematical methods in order to solve that problem. And of course none of us thinks that logical and mathematical methods necessarily exhaust our philosophical methodology.

OR: This sounds like a very broad array of topics. What are your main goals and/or aims for the Center?

HL: First of all, the Center will simply host research. In particular, we are funding postdoctoral and doctoral fellows. The doctoral fellowships should be advertised very soon, and they are to be taken up by the successful applicants by September 2011. We have already hired six postdoctoral fellows, and further postdoctoral fellows are on their way who are supported by sources other than the Center itself. All of these fellows are based in the Center, they have their rooms and research facilities, they join all the activities, and they do research. We also have a visiting fellowship scheme that's going to start from April, so e.g. Steve Awodey from Carnegie Mellon, Branden Fitelson from Rutgers, Ed Zalta from Stanford, and other people will be visiting the Center, for a couple of weeks to a couple of months, and obviously there will be lectures held by the visitors, workshops about their work, and they will collaborate with people in the

Center. We will have a weekly colloquium in mathematical philosophy with speakers from elsewhere, an internal work-in-progress seminar, reading groups, tutorials given by fellows for fellows, and the like. And then we are going to host a lot of workshops and larger conferences, including the Formal Epistemology Workshop next year and the Formal Ethics Workshop the year after. In September of this year there will also be the big conference of the German Society for Philosophy and within that big conference we will have a two-day workshop on mathematical philosophy, which will we also use to introduce the Center to German philosophers.

OR: You mentioned the relation of the Center with the Vienna Circle, but how about more contemporary research centers? In recent years quite a few new research groups have been created that use mathematical methods to address philosophical problems. How does the Munich Center relate to them?

HL: Generally speaking, I don't think formal or mathematical philosophy is a new thing at all. A long time before the Vienna Circle, Aristotle invented logic, Leibniz was doing formal metaphysics, and so on. The Vienna Circle carried on with that tradition but using the new formal methods at the time, that is, mathematical logic. And now what young philosophers are currently fascinated by is doing philosophical work again by using formal methods that are even more recent to philosophy. So, e.g., there are new or relatively new formal methods like nonmonotonic reasoning, dynamic epistemic logic, probability theory, and game theory, and many young philosophers these days are attracted by them. Accordingly, there are centers dealing with aspects of this way of doing philosophy elsewhere, and obviously we want to relate to all of them. So in the U.S. there is the wonderful Formal Epistemology Workshop series, and I already said that we are getting the workshop here next year, and Branden Fitelson, who is one of its two originators, will be one of our visiting fellows. In the UK there are centers like ours, too: One of the hotspots of formal philosophy actually is Bristol, where I'm coming from, and there will be annual Bristol-Munich workshops in the future, the first one taking place in September in Munich. The Netherlands is very strong in that area, e.g., Amsterdam and Groningen, and both of them will be cooperation partners and with both of them we are planning to have joint events. There will definitely be joint activities with the excellent centers in Tilburg and Konstanz. The new Formal Epistemology Center at Carnegie Mellon is already one of our cooperation partners: I'll give two talks there in March, and then they will come over to Munich in the future and give talks here. We want to do something like that also with Stanford and with an excellent group of young logicians and philosophers in Paris including Paul Egré, Denis Bonnay and Brian Hill, and so on. If there is any difference at all between our Center and these cooperation partners it is that many of them are devoted to the application of mathematical methods in one particular area of philosophy, typically, epistemology. The Center here in Munich is slightly larger in its scope and maybe also in personnel and resources.

OR: A more general question. How do you see the relation between this formal work in philosophy and more traditional, non-formal approaches?

HL: I don't really believe in a substantial division into something like mainstream philosophy on the one hand and formal or mathematical philosophy on the other. Rather I would say that there are the traditional philosophical questions: "What is truth?",

"What kinds of objects are there?", "What is knowledge?", "How do we know about these objects?", "What should we do?", and so on. And then philosophers address these questions by putting forward theses and arguments for these theses. And, if it is good philosophy, they try to make the theses clear, and they take care that the arguments are logically valid or maybe strong in some weaker sense. The only thing that I'm claiming, and I think this is pretty uncontroversial, is that sometimes logical and mathematical methods can help to clarify theses—that's what in the tradition is called logical analysis, and there is no doubt that this is sometimes of big help—and secondly sometimes there might be arguments from philosophical assumptions to philosophical conclusions which get so complex that you actually need mathematics to bridge the gap between the premises and the conclusions. As far as that part is concerned, traditionally, philosophers have put forward arguments for which it was pretty easy to see that the premises logically entail, or inductively support, the conclusion. The only thing we are changing is that we want to build arguments with the help of mathematics where it is in fact the case that the conclusion is contained implicitly in the premises, but where it is not so easy to see that this is so. The role of logical and mathematical methods in philosophy will then very much be like the role of mathematical methods in the sciences.

OR: Many thanks. We'll keep an eye on the Center!

HL: Please do. Thanks very much.

Five Questions to the Center's Initial Team

Jeffrey Ketland

1. Who you are:

Dr Jeffrey Ketland (PhD from LSE (1999): logic, applicability of mathematics, truth). Assistant Professor in Mathematical Philosophy; Associate Director of the Munich Center for Mathematical Philosophy (and Senior Lecturer in Philosophy at Edinburgh).

2. Motivations:

First, the research areas associated with the Munich Center overlap considerably with my own research interests. Second, the methodological approach of the Director of the Center, Hannes Leitgeb, is one that I have long shared: formulate philosophical problems as *precisely* as possible and then utilize relevant *logical and mathematical methods* in attempting to understand these problems. Third, the academic staff already present in the Center are world-class researchers in the fields of logic, foundations of mathematics, formal epistemology, etc. It is therefore a wonderful opportunity to work in Munich with such a talented group of researchers.

3. Current research:

I am currently working on the nominalization of scientific theories; the "speed-up" of more powerful theories over weaker ones; some topics connected to space and time ("Leibniz equivalence" of spacetime models; Leibnizian "shift arguments"); the con-

cepts of identity and indiscerniblity. I have some work on some technical issues related to expressivism in meta-ethics (for example, using a 3-valued logic for the semantics). I am also working on two monographs, one on theories of truth and another on mathematical methods in philosophy.

4. Scientific network:

I interact with many philosophers and logicians working in logic, the foundations of mathematics, philosophy of language and philosophy of science, and have organised a conference (in 2006, on the work of Kurt Gödel) and workshop (in 2009, on realism in mathematics, modality and morality) in some of these areas. I've written a short paper with Panu Raatikainen, discussing arguments given by Lucas and Redhead about Gödel's theorems. The Center itself is now the heart of a network of researchers in the relevant areas and I look forward to working with the other members of the Center.

5. Future:

Aside from the specific topics mentioned above, my medium-term research aim is to complete a single piece of work bringing together the main body of mathematical methods in philosophy (basic set theory, arithmetic, abstract algebra, probability theory, geometry, model theory, non-classical logic, reduction methods, nominalization, etc.).

Vincenzo Crupi

1. Who you are:

Vincenzo Crupi, PhD Philosophy, University of Turin, 2004 MSc Philosophy and History of Science, LSE, 2002. Function at the Center: Post-doctoral Fellow.

2. Motivations:

MCMP is the perfect place to pursue the research interests in which I've been engaged recently: formal analyses of reasoning (especially probabilistic and inductive inference) in connection with empirical investigation of human rationality and its limitations.

3. Current research:

Formal explication of epistemological concepts within the Bayesian framework (especially confirmation) and its potential as a source of theorizing in the psychology of reasoning. I also cherish an interest in reasoning and decision-making in medicine.

4. Scientific Network:

Katya Tentori, experimental psychology, University of Trento, Roberto Festa, philosophy of science, University of Trieste. In the Center: The closest connection is probably with Niki (Pfeifer)'s research interests.

5. Future:

The underlying general issue of my ongoing projects is human rationality, with a particular interest in the relationships between formal theories of reasoning and the empirical study of human cognition. In the near future, I plan to exploit this approach in the analysis of information search behavior. In essence, how people should (and how they do) selectively look for evidence in view of future inference and action.

Paul Dicken

1. Who you are:

Paul Dicken, PhD in History and Philosophy of Science (2004–2007), from the Department of History and Philosophy of Science, University of Cambridge, UK. I am currently a Junior Research Fellow in Philosophy at Churchill College, University of Cambridge, and a Visiting Fellow (2010–2011) at the Center.

2. Motivations:

Beginning a new project on logical positivism/logical empiricism, with a particular interest in Ernst Mach (hence Munich, for the Deutsches Museum), and Carnap (hence Professor Leitgeb). Also interested in the application of new methods in formal philosophy with respect to these areas (hence the Center).

3. Current research:

I am currently working on questions of scientific ontology in the light of the logical structure of scientific theories—questions concerning the reduction, definition and elimination of certain fragments of our scientific vocabulary. I am attempting to resurrect the view that our scientific theories do not make propositional claims about the external world at all, and how this relates to the contemporary scientific realism debate. I also have some broader interests in the application of logical methods to traditional problems in the philosophy of science, and have been working on various non-classical (relevant and/or paraconsistent) logics of confirmation.

4. Scientific Network:

I have already worked with Florian Steinberger at Cambridge, and will continue to do so in Munich. I also collaborate with Nick Tosh (NUI Galway) and Axel Gelfert (National University of Singapore). I completed a large portion of my recent book in Singapore.

5. Future:

What are the absolutely minimum ontological and epistemology commitments of our most successful scientific practices? What does this show us about our place in nature?

Martin Fischer

1. Who you are:

Martin Fischer, PhD in Philosophy, Munich 2007; Function at the Center: Visiting Fellow.

2. Motivations:

The excellent research conditions and the new possibilities of collaboration.

3. Current research:

At the moment I am working on a philosophical motivation for weak axiomatic theories of truth.

4. Scientific Network:

Leon Horsten; Volker Halbach; Johannes Stern. Within the Center, I would like to work with Hannes Leitgeb, Jeffrey Ketland, Julien Murzi, Ole Hjortland.

5. Future:

The main theme of research will be the interaction of modalities treated as predicates. Although syntactical treatments of modalities are attractive because of its greater generality than the mainstream approach there are only few proposals. I want to focus on the question of interaction of two or more modalities exemplified by the knowability principle. The phenomenon of interaction has not been investigated systematically for the syntactical approach. A special focus will be on new paradoxes created by the interaction and possible solutions for them.

Norbert Gratzl

1. Who you are:

Norbert Gratzl. PhD.: Salzburg, 2002, Proof-theory of Free Logic. Function at the Center: Postdoctoral Fellow.

2. Motivations:

The MCMP is a great opportunity to carry out logical investigations in philosophy. The working environment is simply great: colleagues are highly trained in formal techniques and very open minded. . . . last but not least: Munich is quite a fine city.

3. Current research:

At the moment I do research on definite and indefinite descriptions.

4. Future:

I recently started working on the use of Hilbert's epsilon-calculus in analyzing theoretical terms;thereby I try to answer the question of whether a logical reconstruction of theoretical terms—as suggested by Carnap—allows for a structuralist interpretation of scientific theories. Furthermore, I am quite interested in the ontology of aesthetic objects.

Ole Thomassen Hjortland

1. Who you are:

Ole Thomassen Hjortland, PhD in Philosophy, Arché

Research Centre, University of St Andrews, 2009. Function at the Center: Postdoctoral Research Fellow.

2. Motivations:

I was attracted by the idea of a research center dedicated to mathematical methods in philosophy. Even better, the Munich center will offer a great framework for *collaborative* work between researchers with interests in formal methods, both locally and with the international community.

3. Current research:

I am currently working on the semantic paradoxes, and in particular solutions involving substructural logics. I'll give a paper on the topic at the 5^{th} Foundations of Logical Consequence workshop in St Andrews in early April. I'm also editing a volume on logical consequence with Colin Caret (Arché/St Andrews).

4. Scientific Network:

Up until now my closest collaborators have been my colleagues in my old research fellowship in the University of St Andrews. I've worked closely with Stephen Read and Colin Caret over the last few years. In Munich I already have a very good friend and colleague in my co-author Julien Murzi, but I hope to get the chance to work with many others in the near future.

5. Future:

I'm hoping to branch out to work more with formal epistemology, and especially connections to logical consequence. I've also started working on the connection between philosophy of logic and experimental data from the psychology of reasoning. In Munich I'll have the chance to learn from people with lots of experience from both fields.

Christopher Menzel

1. Who you are:

Christopher Menzel. PhD. 1984, University of Notre Dame, Philosophy (dissertation on the philosophy of set theory). Function at the Center: Visiting Fellow.

2. Motivations:

I will be on sabbatical leave from Texas A&M University for the 2011-12 academic year, so I began seeking a stimulating research environment set in an enjoyable location—preferably in Germany, as my wife and I have been spending large portions of our summers there in recent years. I learned of the Center through Edward Zalta, who had been collaborating with Prof Leitgeb. Given the Center's mission and location at LMU, I could hardly have designed a more ideal setting!

3. Current research:

At the moment I am working on a paper on mathematical structuralism and another on an extension of first-order logic with variably polyadic predicates, but the main focus

of my work is the logic and metaphysics of modality, particularly the implications of a strong form of actualism on the semantics of quantified modal logic.

4. Scientific Network:

I have just completed a paper with Dr Edward Zalta of Stanford University and I am working on the logic paper noted above with Dr Fabian Neuhaus (PhD Humboldt Universität) of the National Institutes for Standards and Technology. My interests overlap with those of both Prof Leitgeb and Prof Jeffrey Ketland at the Center, but at the moment I am simply anticipating the opportunity to meet all of the researchers there and learn about the work they are doing.

Julien Murzi

1. Who you are

Julien Murzi, First PhD in Philosophy, University of Rome "La Sapienza"; second PhD in Philosophy, University of Sheffield. The topic of my first PhD thesis was Fitch's Paradox of Knowability; the second thesis was on logical revision and the inferentialist approach to logic. Function at the Center: Post-doctoral Research Fellow.

2. Motivations:

MCMP, and the department at LMU, offer a wonderful research environment. Here in Munich I have the opportunity to work closely with outstanding researchers—both junior and senior—whose interests are very close to mine. I also have the chance to learn more about a host of issues and methodologies, and thus widen my research interests. I should also mention that Munich is a wonderful city, and that the Alps are very close.

3. Current research:

I am currently working on three main topics: (i) semantic paradoxes, in particular validity paradoxes, (ii) the inferentialist approach to logic, and (iii) some topics on the realism/anti-realism debate (e.g. whether Dummett's manifestability requirement is, or can be made, consistent with the existence of blindspots for knowability). I am convinced that validity paradoxes effectively restrict the range of admissible revisionary approaches to semantic paradox. In fact, they tell us that, if paradoxes are to be solved via logical revision, one should give up, or restrict, some of the *structural rules* of the logic. Revising the logic of *connectives* such as negation and the conditional doesn't get to the heart of the matter: paradoxes still loom. I also think that validity paradoxes can teach us a great deal about the nature of validity; in particular, they suggest that validity is an indefinitely extensible notion, or at least so I wish to argue in my future work. Concerning the inferentialist approach to logic, I am currently turning into papers some parts of my thesis. Among other things, I am working on a harmonious formalization of full classical logic—one that doesn't resort to proof-theoretic 'tricks', such as multiple conclusions or rules for denying complex statements. As I show, the formalization is not only harmonious, but also separable, i.e. the inferential role of any single logical operator is fully determined by its introduction and elimination rules. If

there are reasons to question the validity of some classical rules, we should not expect these reasons to be proof-theoretic, *pace* authors such as Dummett, Prawitz and Tennant.

4. Scientific Network:

I am currently working on joint projects with JC Beall (University of Connecticut) and with my inferentialist colleagues here in Munich, Ole Hjortland and Florian Steinberger. I am also editing (and contributing to) a volume on logical consequence, together with Massimiliano Carrara (University of Padova). Here in Munich I would also be very happy to work with the truth-theorists of our research group, especially Hannes (Leitgeb), Jeff (Ketland) and Martin (Fischer).

5. Future:

I would like to work on absolute generality (or lack thereof)—so-called generality relativism, I think, is the price to pay (if it is a price at all!) for keeping classical logic and solving the semantic paradoxes without typing our language. In time, I would love to start doing research on Bayesianism, rationality, and causality.

Niki Pfeifer

1. Who you are:

I received my PhD in psychology from the University of Salzburg in 2006. Function at the Center: Postdoctoral Fellow.

2. Motivations:

I decided to take a position at the Center because it gives me the opportunity to ideally combine my philosophical and psychological research on reasoning, the rich intellectual environment, and full intellectual freedom. Last but not least, my wife—who is an outstanding intellectual—accepted a job offer by the Technical University of Munich.

3. Current research:

Currently, I am working on conditionals, Aristotle's thesis, foundations of experimental philosophy, argumentation under uncertainty, and on probability semantics of Aristotelian syllogisms.

4. Scientific Network:

My most recent collaborations include one with Igor Douven on conditionals and experimental philosophy, and another one with Angelo Gilio and Giuseppe Sanfilippo on probability semantics of Aristotelian syllogisms. Hannes Leitgeb and I are planning to collaborate on counterfactual conditionals. Moreover, I am looking forward to fruitful collaborations with other members of the Center.

5. Future:

The main goal of my research in the coming years will be the further development of a theory of reasoning under uncertainty. The construction of the theory will be guided by various rationality norms proposed in philosophy, AI and psychology. I will empirically evaluate it by a series of psychological experiments.

Roland Poellinger

I am in the final phase of writing my PhD thesis in logic/formal epistemology right now—my topic: causal modelling between determinism and probabilism, based on frame-relative and subjective principles of knowledge organization within Bayes net methods. Future work will centre around cognitive foundations of model evocation/revision and formal representations thereof.Currently, I am assistant at the LMU chair for logic and philosophy of language, and have as such been teaching at the institute (formerly: chair for philosophy, logic, and philosophy of science) since 2009, focusing on formal logic, computability, and algorithmic aspects of classical logic.

Olivier Roy

1. Who you are:

Olivier Roy, PhD (2008) at the Institute for Logic, Language and Computation in Amsterdam. For my thesis I worked on the interplay between philosophy of action, and especially theories of intentions, philosophical logic and game theory. At the center I am assistant professor in logic and philosophy of language.

2. Motivations:

Since my master degree in Québec, I somehow kept ending up using formal methods to work on philosophical questions: first in Amsterdam and then during the three years I spent as postdoc in Groningen (NL). The MCMP just seemed like the place to be for a guy like me. Plus the thought of being part of a brand new project, helping to set up things, was very attractive. Finally, this seemed like a great opportunity to broaden my horizon on what formal philosophy is, and can be. When I saw at the initial team of the MCMP, this impression surely got confirmed!

3. Current research:

In the last years I got more and more interested in so-called epistemic game theory—from my point of view a natural meeting point between game theory, logic, philosophy of action, meta-ethics and epistemology. I'm working on a monograph with Eric Pacuit (TiLPS, Tilburg, NL) on the topic. Not independently of that, I also started to look at theories of public deliberation, both from a formal and philosophical—even continental!—perspective.

4. Scientific Network:

Eric Pacuit has been my main *companion d'armes* in the last years. Recent collaborators also include Johan van Benthem, Cédric Dégremont, Patrick Girard, Vincent Hendricks, Fenrong Liu and Mathieu Marion. Obvious potential collaborators at and

around the MCMP: Hannes, Norbert, Martin (Rechenauer), Niki, Julien and Roman. But having met most of the initial team members already, I'm quite sure that interesting, and unexpected combinations will arise!

5. Future:

I think social interaction opens genuinely new philosophical perspectives, especially for action theory and epistemology, and that a lot of progress can be made there by using formal tools. That's definitely the line I want to keep exploring in the coming years. But, again, I'm quite convinced that the MCMP will be a hotbed for new, unorthodox directions for formal philosophy, and I'm very willing to jump in!

Florian Steinberger

1. Who you are:

Florian Steinberger, PhD. Cambridge University in 2009 in philosophy. Assistant professor in logic and philosophy of language.

2. Motivations:

When I heard that Hannes would be taking up a chair in Munich and setting up a research center around him, I knew he would create something truly terrific. For me going to Munich presented a unique opportunity to be part of a vibrant research community of very gifted people with similar research interests, and to contribute (however modestly) to shaping the Center from the ground on up—a very enticing prospect indeed!

3. Current research:

I am currently working on various projects related to logical inferentialism, including a monograph (with Julien Murzi) and an edited volume (with Neil Tennant). I am also wrestling with a number of different foundational questions concerning the normativity and the metaphysics of logic. Recently I have also begun working on a number of problems in the philosophy of language. In particular, I am trying to formulate an account of the speech act of supposition.

4. Scientific Network:

Closest research collaborators nowadays: Julien Murzi and Neil Tennant. Within the Center: I am already collaborating with Julien Murzi, but I am sure that further opportunities for fruitful collaboration will present themselves. Can't wait to get there (in April 2011)!

5. Future:

I aim to pursue my work on foundational issues in the philosophy of logic. Also, I plan to intensify my engagement with the philosophy of language. I hope especially to contribute to current debates on the nature of propositions, the semantics/pragmatics distinction and philosophical implications of generative grammar.

Liars, Divine Liars, and Semantics revisited

Divine Liar arguments aim to show that there's no omniscient being—that no one knows all that's true—in the following way. Suppose I say "No omniscient being knows that what I'm now saying is true." If (as I believe) no one is omniscient, then no omniscient being exists, to know anything. So in that case, what I said was true. What I said was therefore an assertion, whether it was true or not. And if it wasn't true—if it's not the case that no omniscient being knows that what I said was true—then some omniscient being knows that what I said was true, despite it not being true, which is impossible (knowledge being of truths). So I asserted a truth; and so either that was a truth that some omniscient being doesn't know, which is also impossible, or else there's no such being.

However, resolutions of the Liar Paradox might show that such arguments are invalid, e.g. according to Daniel J. Hill (2007: The Divine Liar Resurfaces, *The Reasoner* 1(5), 11–12) and my earlier article (2008: Liars, Divine Liars and Semantics, *The Reasoner* 2(12), 4–5). So, suppose I say "What I'm now saying isn't true." If what I said was true then, as I said, what I said wasn't true. Does it follow that what I said wasn't true? The paradox is that if so, then since that's what I seem to have said, I seem to have said something true. The resolution defended earlier by me (2008) takes my utterance to have been meaningless, so that I didn't really say anything. But we may then wonder how it was that it seemed so clear what my utterance would have meant had it been true; and my Divine Liar utterance was even more obviously meaningful. Another popular resolution would regard my Liar utterance as equivocal, with the word 'true' naming many different predicates in Hill's (2007) Tarskian hierarchy. But formal languages can only be defined via natural language; and my informal Divine Liar utterance wasn't obviously that equivocal.

Questions of truth are essentially questions of how well our words are describing the world. So insofar as my Liar utterance wasn't meaningless, it was asserting that it wasn't describing itself very well, not well enough for it to have been true. And since it was nothing if not self-contradictory, it certainly wasn't describing itself very well. But therefore, in view of what it was asserting, it seems to have been describing itself quite well after all. Was it describing itself well enough for it to count as true? I'm reluctant to call it 'true' as follows. If it was true because it wasn't, then it was true and not true, but surely something's only not some way if it's not the case that it is. Nor do I want to say that it was neither true nor not true, as that's just to say that it was not true and also true. Nevertheless, my utterance wasn't describing itself very well, and was therefore describing itself quite well; so perhaps it was only partially true. If so then calling it either 'true' or 'not true' would both be inaccurate, would both be only partially true.

We naturally focus upon whatever truth we can find in what people say, or upon an obvious untruth. And things are usually described accurately enough for some obvious purpose, or not accurately enough. But would it be unrealistic to think of truth (descriptive accuracy) as a matter of degree? The classic example is that of Vann McGee (1991: *Truth, Vagueness, and Paradox*, Hackett, 217): If "Harry is bald" is true insofar as Harry is bald, 'true' should be at least as vague as 'bald'. And quite generally, why should we believe that our words are much better defined than our purposes have required them to

be? Maybe natural language has a ubiquitous—since usually unobtrusive—vagueness. (That would explain why the discovery of a contradiction so naturally triggers an attempt to clarify our terminology.) And in particular, the Liar Paradox might be revealing this ordinarily obscure vagueness of 'true'. That's because if my Liar utterance was only partially true, then it would follow from what I said only that it was also partially not true, which clearly coheres with it being only partially true. There's no inconsistency—no more paradox—and it seems that much the same could be said of any Liar sentences.

And if that is how the Liar Paradox should be resolved, then my Divine Liar utterance would have been only partially true if there is an omniscient being. My Divine Liar argument was therefore fallacious, because arguments should have premises that are unequivocally true enough to count as true under all relevant hypotheses. But if you asked an omniscient being whether my Divine Liar utterance was true, she might say that it contained an element of truth. That might be a more informative—more true and less misleading—answer than a simple 'yes' or 'no'.

Similarly, the best answer to the question "Is this colour blue or not?" could be to say that it's vaguely bluish. Ordinary objects are almost always either blue or not, but colours don't really divide into those that are blue and those that aren't. On the two sides of any such line, between the blue and the other colours of some spectrum, would be colours that were indistinguishable. So there's no such division; and so there's some colour of which, rather than saying that it's blue, or that it isn't, we ought to say that it's bluish. Note that such a colour might look blue against a background of colours that weren't blue, or even if you just wondered whether it belonged to that class of colours, and so postulated it amongst them (cf. what we find paradoxical about the Liar Paradox). Incidentally, some formal work on 'true' as a vague predicate is well described by Petr Hajek (2010: Fuzzy Logic, *The Stanford Encyclopedia of Philosophy*).

MARTIN COOKE

Deduction and Novelty

The interesting interview with Alan Musgrave (*The Reasoner*, 5.1) contained much that is worthy of discussion. Here I want to comment only on Musgrave's claim that "the conclusion of a valid deductive argument is contained in its premises and says nothing new" (p. 2). The claim has been a commonplace in discussions of deduction for centuries. An alternative way of making the claim is to say that every deductively valid argument is a petitio principii. This is a formulation which Musgrave himself echoes when he says: "Non-circular valid deductive arguments for P simply beg the question in a less obvious way [than do blatantly circular ones]" (p. 2). However, notwithstanding its general acceptance, this hoary claim about deductive validity is false. Ironically, it was Musgrave's teacher, Karl Popper, who refuted it.

The hoary claim about deductive *validity* is associated with an equally hoary theory of deductive *reasoning*, which is found more or less explicitly in both empiricist and rationalist philosophers of the modern period and which is still popular today. The hoary theory says that a deductive reasoner arrives at a conclusion of an argument by

analysing the content of its premises. This content is supposed to be accessible to the reasoner, at least upon reflection; indeed, it is often supposed to be made up of ideas in his mind, or concepts grasped by him, so that the ideas or concepts contained in the conclusion are extracted from those that make up the premises. This hoary theory of deductive reasoning may seem to entail the hoary claim about deductive validity: for if the reasoner arrives at a valid conclusion by unfurling the content of a set of premises, it may seem that, in a valid argument, the conclusion must already be discoverable in the premises and thus say nothing new. But we will see that this apparent entailment does not hold.

Popper refuted the hoary claim about deductive validity in the following way (*Unended Quest*, Glasgow, Fontana, 1976, pp. 25-28). Let *N* stand for Newton's theory of gravitation and let *E* stand for Einstein's theory of gravitation. Since *N* is incompatible with *E*, the following argument is deductively valid:

N

Therefore, not-*E*.

But the conclusion of this argument would certainly have said something new in Newton's time. Newton could not foresee Einstein's theory; and none of his contemporaries could have arrived at a statement of the negation of Einstein's theory simply by unfurling the implicitly known content of Newton's theory.

Watkins offers a recipe for constructing somewhat similar examples. "Take some powerful new scientific theory which has recently led to a striking new prediction. Formulate all the premises used in the derivation of this prediction. Among these there will almost certainly be a truism known long before the new theory was invented. Call this *a*, call the theory together with all the other premises *b*, and call the prediction *c*. Then an impressive implication of the truism *a* is: if *b* then *c*" (Hobbes's *System of Ideas*, second edition, London, Hutchinson, 1973, p. 9). But if we go back to a time before the powerful new scientific theory had been invented, anyone announcing the deductively valid conclusion, if *b* then *c*, from the premise, *a*, would certainly have been saying something new.

Popper distinguishes between the objective content of a theory and the part of that content that is available to a particular reasoner in a particular situation. The objective content includes each of those propositions that would be a deductively valid conclusion from the theory as premise. A great deal of this content will be inaccessible to someone who has learned the theory: it can become available to him only piecemeal as new theories are discovered. For example, the negation of *E* is part of the objective content of *N*, even though it is not part of the content of *N* that was accessible to anyone before Einstein came up with *E*. Thus, Newton did not, and could not, know the complete objective content of his own theory. Popper says, ironically, "*we never know what we are talking about*" (op. cit., p. 27). This is a kind of incompleteness: at every time there are some deductively valid consequences of a theory that cannot be formulated, and thus cannot be formally derived from the theory, by reasoners at that time. We could call this 'Popper-incompleteness' (to coin a term).

Given this distinction between the objective content of a theory and the part of that content available to a particular thinker in a particular situation, we could consistently retain the hoary theory of deductive reasoning while rejecting the hoary claim about deductive validity. For we could maintain that:

(i) any deductively valid conclusion from a set of premises to which we can reason deductively must be contained in that part of the content of the premises that is already available to us;

(ii) there are many important deductively valid conclusions from those premises to which we are currently (and, in some cases, perhaps forever) unable to reason deductively.

On this view, every piece of deductively valid reasoning, but not every deductively valid argument, would merely unfurl things that we already know, explicitly or implicitly.

However, the falsity of the hoary claim about deductive validity casts doubt on the hoary theory of deductive reasoning. Indeed, I think that the hoary theory of deductive reasoning can also be shown to be false, and for Popperian reasons, though I cannot explain that here.

Danny Frederick

§3
News

9th Mexican International Conference on Artificial Intelligence, 8–13 November

One of the many possible definitions of Artificial Intelligence (AI) is that it is a branch of computer science that models human reasoning, usage of human language and organization of knowledge, solving problems and practically all other human intellectual abilities. Usually it is characterized by application of heuristic methods because in the majority of cases there is no exact solution to these kinds of problems.

The Mexican International Conference on Artificial Intelligence (MICAI), a yearly international conference series organized by the Mexican Society for Artificial Intelligence (SMIA), is a major international AI forum and the main event in the academic life of the country's growing AI community.

MICAI conferences traditionally publish high-quality papers in all areas of Artificial Intelligence and its applications. The proceedings of the MICAI events have been published by Springer in its Lecture Notes in Artificial Intelligence (LNAI) series since 2002. This year the general acceptance rate was 27.2%. We received 301 submissions from 34 countries, from which 82 papers were accepted.

Usually, the structure of a conference book allows understanding of the current tendencies of the research in the field. In our case, the conference book is structured into two volumes that contain 5 thematic areas each. The first volume is representative of the main current topics of interest for AI community and their applications:

- Natural language processing (10 papers);
- Robotics, planning and scheduling (12);
- Computer vision and image processing (7);
- Logic and distributed systems (5);
- AI-based medical applications (6).

The second volume contains the papers related to several areas of soft computing (i.e., the development of the algorithms when the exact computing solution does not exist):

- Machine learning and pattern recognition (12);
- Automatic learning for natural language processing (4);
- Evolutionary algorithms and other naturally-inspired algorithms (8);
- Hybrid intelligent systems and neural networks (9);
- Fuzzy logic (9).

The relative difference reflected in the distinction between volumes is that the first volume is centered on the tasks and applications, while the second one is centered on the typical AI methods.

The conference also had a Poster session where about 40 works were presented, and during which a real size three-wheel mobile robot was moving among the attendants of the conference successfully avoiding the persons, demonstrating the state of the art in mobile robotics.

Finally, the conference had six invited talks that we will present briefly.

Héctor García Molina (Stanford, USA) spoke about the interesting system "CourseRank: A Social Site for Academic Course Planning and Evaluation" that is in use in 40 universities in the USA. The system allows one to see the evaluations given by professors to students, and the opinion of students about the courses, and allows (also suggests) one to choose the course that is best for the particular student given a set of constraints.

Witold Pedrycz (Alberta, Canada) presented a talk where he discussed the main concepts of fuzzy modeling and specifically the problem of granularity in this modeling.

Raúl Monroy (Mexico City, Mexico) in his talk "Some Encounters on the Productive Use of a Failed Proof Attempt or a Counterexample" presented his encounters with the productive use of failure in the context of some theories, natural numbers and (higher-order) lists, and in the context of security protocols.

Boris Stilman (Denver, USA) delivered a talk "Discovering Role of Linguistic Geometry" where he spoke about the history of the development of linguistic geometry primarily related to the game of chess (in collaboration with the world chess champion M. Botvinnik) and its recent developments related to assistance in real world warfare (very successful cooperation with US government in real war situations). In fact, the term linguistic geometry is somewhat misleading; the described theory is about a no-search approach, i.e., the major theoretical result is showing that it generates optimal solutions for a class of Abstract Board Games.

Claudia Manfredi (Firenze, Italy) talked about the advances of the Interdisciplinary Laboratory of Biomedical Acoustics related to development of new voice analysis tools, for example, applicable to newborn infant crying, monitoring and detection of obstructive sleep apnea, etc.

De-Shuang Huang (China) presented a talk "Manifold Learning Based Feature Extraction Methods" where he described an efficient dimensionality reduction method for nonlinear distributing data, and spoke about its evaluation and applications.

Alexander Gelbukh
National Polytechnic Institute, Mexico
Grigori Sidorov
National Polytechnic Institute, Mexico

Causality, Inference and Science, 4–5 March

The international workshop "Causality, Inference and Science" took place at Complutense University of Madrid on the 4th and 5th of March. The workshop was organised by the *Methods of Causal Inference and Scientific Representation (MCISR)* research group, and brought together researchers working on different aspects of causality, from metaphysical to methodological issues. Causation is in itself a many-faced topic and the diversity of proposals in the workshop represented that well. Plurality was also one of the main features in discussions, and it allowed for an interesting interchange of opinions on interrelated issues about causation.

The workshop had three well differentiated sections. It opened with Stephen Mumford (University of Nottingham) and Rani Lill Anjum (Norwegian University of Life Sciences), who presented a jointly developed account of causation based on dispositions. In this view, causation is taken to be a primitive notion, grounded on our very perception of it, and is to be understood as a single process rather than as the usual two-event relation. In this account, dispositions also explain probabilistic causation, and they detach causation from determinism.

In a second block the workshop focused on general methodological issues of causation and causal inference. Federica Russo (University of Kent) discussed the issue of how to make sense (causally) of correlational data in causal modelling. This is a difficult task, specially in the special sciences, where one deals with large amounts of bulk data and no initial clues as to what the underlying causal relations might be. Russo suggested we should look at the issue from the point of view of the validity of the specific models, and argued that while a strategy based on modelling causal structures that can later be

tested can achieve the task, a strategy based on 'interventionist' accounts of causation will fail. The various difficulties as regards epistemic justification around the idea of 'intervention' came out as well in the paper presented by Isabelle Drouet (IHPST, Paris), which assessed the (causal) assumptions needed when both interventionist accounts of causation and Bayesian networks are put to work as tools of causal inference and causal discovery.

A paper by Joseph Berkovitz (University of Toronto) best represented the plural—eclectic, in his words—nature of the main topic of the workshop. Berkovitz suggested that, contrary to the spirit of the usual attempts to characterise causation with a single concept, recognising the eclectic nature of the notion is a much more productive an approach. The problem with eclecticism, though, is that it makes it difficult to identify genuine causal explanations in some cases.

Causal inference and explanation in physics was the main topic of the third block of the workshop. Adán Sus (University of Wuppertal) presented an account of how, and to what extent, 'inertial motion' is explained in General Relativity. In Sus' view it is the theory itself—its formal structure, in particular, which provides such an explanation. But this leaves us with new questions related, once more, to what can count as scientific, or causal, explanation.

The need to take into consideration metaphysical issues when applying some methods of causal inference came out as well in a paper presented by Iñaki San Pedro (Complutense University). San Pedro assessed the relation between free will and certain causal influences, in the context of the EPR correlations. Here free will is usually taken as warrant for certain conditions—'no-conspiracy' conditions—which help deriving Bell's theorem. But does free will really justify such conditions? There are several reasons to think this is not so.

In the closing lecture, Miklós Rédei (London School of Economics) discussed the idea of causal completeness of a theory. Casual completeness requires that all correlations in a theory have a causal explanation. In the particular case of Quantum Field Theory, where distant correlations are present, common cause completeness is to be achieved by means of common causes. And whether the theory can be taken to be causally complete or not depends crucially on the space-time structure of the postulated common causes, and in particular on where are they located.

Iñaki San Pedro
Department of Logic and Philosophy of Science, Complutense University Madrid

Southern Society for Philosophy and Psychology, 10–12 March

The Southern Society for Philosophy and Psychology held its annual meeting in New Orleans on March 10-12. Highlights of the Philosophy Program included invited talks by Jonathan Weinberg (Indiana University), Terry Horgan (University of Arizona), and Michael Lynch (University of Connecticut). Speakers for joint sessions included SSPP President Thomas Polger (University of Cincinnati) and Elliot Sober (University of Wisconsin-Madison). Topics of invited symposia and conference sessions included mental state attribution, neuroscience and the virtues, reasons and explanation, action

theory, extended cognition, natural kinds, free will and conscious experience.

Weinberg ("Out of the Armchair, and Beyond the Clipboard: Prospects for the Second Decade of Experimental Philosophy") assessed experimental philosophys ("X-Phi") first decade and its near-term future. In Weinberg's view, X-Phi is now an established subfield that has helped establish an empirically valid basis for the use of intuitions as data in philosophical debates, especially those regarding free will, knowledge attribution, and moral responsibility and judgment. X-Phi-ers now seek new methods for probing intuitions and have begun thinking about causal models to explain the patterns of intuitions. Weinberg recommended developing meaningful effect size measures and seeking more robust results by eliminating "noise".

Horgan ("Agentive Phenomenology to Cognitive Phenomenology: A Guide for the Perplexed") remained firmly in the armchair in his defense of the idea that cognitive states have a phenomenological aspect—a "what-it's-like" to believe that P or understand that Q. To this end, Horgan used the conceptual device of a series of "partial zombies" (Andy1, etc.) who by hypothesis are in all ways identical to a normal subject but intuitively have certain experiential deficits, in particular the experience of agency (of "self as source"). For example, Andy3 doesn't experience speech as speech but experiences spontaneous desires that cause him to behave appropriately when certain strings of sounds occur.

Polger ("Multiple Realization and Variability") defended the Identity Theory by arguing that there is no Heraclitean shortcut ("All is flux") to the truth of multiple realization. While individuals within and across taxonomies differ qualitatively, not every variation makes a difference for determining whether multiple realization is true. Polger proposed examining more closely the impact of idealization and abstraction in science on the debate.

Sober ("Parsimony and Theory of Mind") criticized Morgan's evolutionary argument against ascribing human characteristics to other species and De Waal's argument that explanatory parsimony favors anthropomorphism. He considered a non-evolutionary argument in which an explanation of non-human behavior that unifies the phenomena but posits a capacity to have mental states about conspecifics' mental states may be better than one that does not posit such second-order mental states but does not unify.

Lynch ("Three Questions About Truth") asked: How do we identify a property in virtue of which propositions are true? (Answer: by functional role.) Could there be more than one such property? (Answer: Sure.) What does any such property have to do with truth? (Answer: it is truth—even if there are more than one.)

Carrie Figdor
Department of Philosophy, University of Iowa

European Epistemology Network, 17–19 March

Unlike philosophy conferences that are broad in scope, the 2011 European Epistemology Network Meeting focused narrowly on issues in the study of knowledge. In addition to eight plenary talks, over three days, 27 presentations (selected from 52 submissions)

were given in three parallel sessions. Predominantly coming from Europe, the meeting included speakers from Canada, and the USA. Recurrent themes were the Gettier problem and transmission of warrant, amongst others.

Allan Hazlett (Edinburgh) argued for a Gricean approach to the *Gettier problem*, according to which subjects in Gettier cases have knowledge, although it would be misleading to attribute knowledge to them.

Annalisa Coliva (Modena & Reggio Emilia) rejected Martin Davies's alternative account to Crispin Wright's *failure of warrant transmission*, then defended a third ("moderatism") in relation to Moore's proof.

Building on Carnap's notion of *explication*, and comparing extant accounts on the problems of *generality*, *value*, *easy knowledge* and *Gettier*, Erik Olsson (Lund) defended the reliabilist's definition of knowledge as the most satisfying one.

Igor Douven (Groningen) reminded that we lack accounts which give meaning to the *probability of a conditional*. Hence, extant theories of acceptability, assertability, and belief change do not apply to conditionals.

Klemens Kappel (Copenhagen) suggested that, when trying to spell out the *Gettier condition*, one may not reach acceptable solutions, because the assumptions incurred may be incompatible with fallibilism.

Based on examples from classical and modern literature, Pascal Engel (Geneva) addressed *stupidity*—both in a naïve and a reflected version—as that which the proper, if currently neglected, account of *wisdom* will, and should, save us from.

Rene van Woudenberg (Amsterdam) inquired into the *metaphysics of degrees* (as in the "degrees of belief"), claiming that no such thing exists. Clearly, even a weakened version (e.g., "Degrees need not be assumed") won't sit well with everybody.

Finally, Stephan Hartman (Tilburg) presented a *Bayesian model of rational deliberation*. Under assumptions on, amongst others, the reliability of discussants, it demonstrates that deliberation is to be epistemologically preferred over voting procedures.

We refer to the abstract booklet for information on the sessions, available at the conference website. Generally, also in epistemology, specialization is key. Moreover, as the high standard of the Q&A, and the lively interaction during breaks evidenced, discussions benefit from shared background on a narrow focus, a competitive selection process, and—last but not least—one-page handouts. The location of the 2013 EEN Meeting remains to be announced.

Frank Zenker
Department of Philosophy, Lund University

Calls for Papers

Advanced Methodologies for Bayesian Networks: special issue of *New Generation Computing*, deadline 1 April.

Philosophical Issues in Medicine: special issue of the *Journal of Evaluation in Clinical Practice*, deadline 1 April.

Hilary Putnam International Young Scholars Contest: to the best two essays on any aspect of of Hilary Putnam's latest views, deadline 15 April.

Experimental Philosophy: special issue of *The Monist*, deadline 30 April.
Types for Proofs and Programs: special issue of *Logical Methods in Computer Science*, deadline 2 May.
Quantum Correlations: Entanglement and Beyond: special issue of *International Journal of Quantum Information*, deadline 15 May.
Reasoning with Context in the Semantic Web: special issue of the *Journal of Web Semantics*, deadline 15 June.
C. L. Hamblin and Argumentation Theory: special issue of *Informal Logic*, deadline 30 June.
The Problem of the Criterion: special issue of *Philosophical Papers*, deadline 30 June.
Modalities: Semantics & Epistemology: special issue of *Philosophia Scientiae*, deadline 1 July.
Philosophy of Information: book symposium published by *Etica&Politica* on 'Philosophy of Information' by Luciano Floridi, deadline 1 July.
Composition, Counterfactuals and Causation: special issue of *Humana.Mente*, deadline 30 July.
Deontic Logic: special issue of *Journal of Logic and Computation*, deadline 1 September.
Extended Cognition and Epistemic Action: special issue of *Philosophical Exploration*, deadline 15 September.
The Alan Turing Year: special issue of *Philosophia Scientiæ*, deadline 1 November.
Between Two Images. The Manifest and the Scientific Understanding of Man, 50 Years On: special issue of *Humana.Mente*, deadline 30 November.
Formal and Intentional Semantics: special issue of *The Monist*, deadline 30 April 2012.

§4
What's Hot in ...

...Logic and Rational Interaction

The LORIweb site was particularly active this month; here's a sample of "what's hot": new entries on Social Norms and on Abduction were added to the Stanford Encyclopedia of Philosophy; also, a substantial revision of the entry on Turing Machines went online. The book Dynamic Formal Epistemology, edited by Patrick Girard, Olivier Roy and Mathieu Marion, has appeared, collecting a number of "original contributions from the key actors of a new trend in the contemporary theory of knowledge and belief", dubbed "dynamic epistemicology" by the editors. The Ohio-based Center for the Study of Mind and Nature (CSMN) has a number of new philosophy podcasts available for download, including, among others, audio recordings of recent talks by Robert Stalnaker, Richard Moran and Fred Dretske. Lorenz Demey and Jonas De Vuyst have attended the conference PhDs in Logic III in Brussels and report on the talks and tutorials given there. Finally, Rasmus Rendsvig conducted an interview with Vincent Hendricks looking back on how formal epistemology developed in the last decade—actually, as Hendricks argues, it came into being as a "proper field of interdisciplinary epistemological inquiry".

LORIWEB welcomes contributions on topics relevant to the area of Logic and Rational Interaction—including announcements about recent publications and upcoming events. Please submit your news items to Rasmus Rendsvig, our web manager, or to the loriweb address.

Ben Rodenhäuser
Philosophy, Groningen

. . . Argumentation Theory

Over the past few years, several research groups in the field of argumentation theory have started to refine and extend their theoretical frameworks in such a way that they can be applied to specific communicative contexts. The urge to do so is related to the fact that in the analytical and evaluative tools developed so far, the various institutional conventions that may apply to the different argumentative practices have not been accounted for.

A few examples of comprehensive research projects pertaining to argumentation in context are the following. In Switzerland, scholars working at the Università della Svizzera italiana focus on the development of tools for the analysis and evaluation of argumentation in the medical context and the financial context. Scholars from the Université de Neuchâtel concentrate on the analysis of argumentation in the educational context. In the Netherlands, scholars of the University of Amsterdam have developed a theoretical framework that enables the analysis and evaluation of "strategic maneuvering" in a number of contexts. In their research, they concentrate on argumentation in the legal, the political, the medical, and the academic context.

Following on these developments, a new journal called the *Journal of Argumentation in Context* will be launched later this year.

Jean H.M. Wagemans
University of Amsterdam

§5
Events

April

Epistemology of Modeling & Simulation: Building Research Bridges Between the Philosophical and Modeling Communities: University of Pittsburgh, 1–3 April.
Paradox and Logical Revision Workshop: Arché Research Centre, St Andrews, Scotland, 2–3 April.
AISB: UK Society for the Study of Artificial Intelligence and Simulation of Behaviour, University of York, York, 4–7 April.
Computing and Philosophy: University of York, UK, 4–7 April.

Research Student Conference in Probability and Statistics: Cambridge, 4–7 April.
SpringSim: Spring Simulation Multi-conference, Boston, MA, USA, 4–9 April.
Biology and Subjectivity: University of Navarra, Pamplona, Spain, 6–8 April.
Comparative Epistemology of Information & Communication in Scientific Disciplines: Jean Moulin University, Lyon, France, 8 April.
ICNCS: International Conference on Network and Computer Science, Kanyakumari, India, 8–10 April.
The Authority of Science: University of Sydney, Australia, 8–10 April.
AIML: ICGST International Conference on Artificial Intelligence and Machine Learning, Dubai United Arab Emirates, 11–14 April.
YSM: Young Statisticians Meeting, University of Southampton, 12–14 April.
ICANNGA: International Conference on Adaptive and Natural Computing Algorithms, Ljubljana, Slovenia, 14–16 April.
ICKD: International Conference on Knowledge Discovery, Chengdu, Sichuan, China, 15–17 April.
MAICS: 22nd Midwest Artificial Intelligence and Cognitive Science Conference, Cincinnati, Ohio, USA, 16–17 April.
Experimental philosophy and the Origins of Empiricism: University of Otago, Dunedin, New Zealand, 18–19 April.
NFM: 3rd NASA Formal Methods Symposium, Pasadena, California, USA, 18–20 April.
BCTCS: 27th British Colloquium for Theoretical Computer Science, University of Birmingham, 18–21 April.
ICI: 23nd International Conference on Informatics, Canakkale, Canakkale, Turkey, 27–29 April.
IGCC: 3rd annual Interdisciplinary Graduate Conference on Consciousness, Boston University, 29–30 April.

May

AAMAS: 10th International Conference on Autonomous Agents and Multiagent Systems, Taipei, Taiwan, 2–6 May.
ABC: Approximate Bayesian Computation, Imperial College, London, 5 May.
EBL: 16th Brazilian Logic Conference, Laboratório Nacional de Computação Científica, Petrópolis (RJ), Brazil, 9–13 May.
ICCS: 4th International Conference of Cognitive Science, Tehran, Iran, 10–12 May.
Metaphor and Communication: Faculty of Education Sciences Department of Pedagogical and Philosophical Sciences, University of Cagliari, 12–14 May.
PhiLang: 2nd International Conference on Philosophy of Language and Linguistics, University of Lodz, Poland, 12–14 May.
Metaphysics & the Philosophy of Science: University of Toronto, 13–15 May.
Philosophy of Mind, Language, and Cognitive Science: University of Western Ontario, Canada, 14–15 May.
LPNMR: 11th International Conference on Logic Programming and Nonmonotonic Reasoning, Vancouver, BC, Canada, 16–19 May.

Argumentation: Cognition & Community: Ontario Society for the Study of Argumentation (OSSA), University of Windsor, 18–21 May.
WoLLIC: 18th Workshop on Logic, Language, Information and Computation, University of Pennsylvania, Philadelphia, USA, 18–21 May.
Philosophy and Ordinary Language: Louvain, 19–20 May.
Recent Advances in Statistics and Probability: Hasselt University, Diepenbeek, Belgium, 19–20 May.
FEW: 8th annual Formal Epistemology Workshop, University of Southern California, 19–21 May.
Systematicity and the Post-connectionist Era: Taking Stock of the Architecture of Cognition: San Jose, Andalucia, Spain, 19–21 May.
PALMYR X: Logic and the Use of Language: Paris-Amsterdam Logic Meetings of Young Researchers, Paris, 20–21 May.
ICNCI: International Conference on Network and Computational Intelligence, Zhengzhou, China, 21–22 May.
European Conference on Cognitive Science: Sophia, Bulgaria, 21–24 May.
SLACRR: St. Louis Annual Conference on Reasons and Rationality, St. Louis, MO, 22–24 May.
TAMC: 8th Annual Conference on Theory and Applications of Models of Computation, Tokyo, Japan, 23–25 May.
PAKDD: 15th Pacific-Asia Conference on Knowledge Discovery and Data Mining, Shenzhen, China, 24–27 May.
AI: 24th Canadian Conference on Artificial Intelligence, Saint John's, Newfoundland and Labrador, Canada, 25–27 May.
Normativity of Meaning: Sellersian Perspectives: Department of Logic, Institute of Philosophy, Prague, Czech Republic, 25–27 May.
SEP: Society for Exact Philosophy, University of Manitoba, Winnipeg, Canada, 26–28 May.
Kant on Method as a Demarcation of the Sciences: Faculty of Philosophy, University of Groningen, The Netherlands, 30–31 May.
Agnotology: Ways of Producing, Preserving, and Dealing with Ignorance: ZiF, Bielefeld University, 30 May–1 June.
Greek Stochastics: Crete, Greece, 30 May–1 June.
LATA: 5th International Conference on Language and Automata Theory and Applications, Tarragona, Spain, 30 May–3 June.
Meaning, Context and Implicit Content: Château de Cerisy-la-Salle, Normandy, France, 31 May–7 June.

June

TICTTL: 3rd International Congress on Tools for Teaching Logic, Salamanca, Spain, 1–4 June.
Perception, Action, and Time: Department of Philosophy, Universitat Autònoma de Barcelona, 2–3 June.
XPRAG: Experimental Pragmatics, Barcelona, 2–4 June.

Philosophy and Model Theory: Paris, 2–5 June.
Church's Thesis: Logic, Mind and Nature: Krakow, Poland, 3–5 June.
ICFCC: 3rd International Conference on Future Computer and Communication, Iasi, Romania, 3–5 June.
UC: 10th International Conference on Unconventional Computation, Turku, Finland, 6–10 June.
Contexts, Perspectives, and Relative Truth: University of Bonn, 9–11 June.
ASSC: Association for the Scientific Study of Consciousness, Kyoto, Japan, 9–12 June.
Neuroscience and Pragmatism: Potomac Institute for Policy Studies, Arlington, VA, 10 June.
ICCSIT: 4th IEEE International Conference on Computer Science and Information Technology, Chengdu, China, 10–12 June.
WSOM: 8th Workshop on Self-organizing Maps, Espoo, Finland, 13–15 June.
The Epistemology of Philosophy: University of Cologne, 13–17 June.
BW7: 7th Barcelona Workshop on Issues in the Theory of Reference, Special Topic: Paradoxes of Truth and Denotation, 14–16 June.
ICANN: International Conference on Artificial Neural Networks, Espoo, Finland, 14–17 June.
Logicism Today: Besse-en-Chandesse, France, 14–17 June.
CSR: 6th International Computer Science Symposium in Russia, St. Petersburg, 14–18 June.
Another World is Possible: Conference on David Lewis, University of Urbino, Italy, 16–18 June.
Knowing and Understanding Through Computer Simulations: IHPST, Paris, 16–18 June.
Conceptual Analysis and 2-D Semantics: University of Cologne, 18–19 June.
PNSE: International Workshop on Petri Nets and Software Engineering, Kanazawa, Japan, 20–21 June.
EEIC: International Conference on Electric and Electronics, Nanchang, China, 20–22 June.
Defending Realism: Ontological and Epistemological Investigations: University of Urbino, Italy, 20–23 June.
Emergence and Panpsychism: International Conference on the Metaphysics of Consciousness, Munich, Germany, 20–24 June.
LOGICA: Institute of Philosophy, Academy of Sciences of the Czech Republic, Hejnice, Northern Bohemia, 20–24 June.
LICS: Logic in Computer Science, Toronto, Canada, 21–24 June.
ASC: 14th International Conference on Artificial Intelligence and Soft Computing, Crete, Greece, 22–24 June.
George Berkeley: Mind, Perception and Knowledge: University of Zürich, Switzerland, 22-24 June.
SPSP: Society for Philosophy of Science in Practice, University of Exeter, Exeter, UK, 22–24 June.
Ordinary Language, Linguistics, and Philosophy: Arché Research Centre, University of St Andrews, 23–25 June.

Metaphysics of Mind: Centre for the Study of Perceptual Experience, University of Glasgow, 24–25 June.
EPISTEME: Social Epistemology Meets Formal Epistemology: Recent Developments and New Trends, Center for Formal Epistemology, Department of Philosophy, Carnegie Mellon University, 24–26 June.
CMMSE: Computational and Mathematical Methods in Science and Engineering, Benidorm, Alicante, Spain.26–30 June
Extended cognition: Amsterdam, 27–28 June.
Evolution, Cooperation and Rationality: Philosophical Perspectives: University of Bristol, 27–29 June.
QI: 5th International Symposium on Quantum Interaction, Aberdeen, UK, 27–29 June.
Ershov Informatics Conference: Novosibirsk, Akademgorodok, Russia, 27 June–1 July.
Journées Arithmétiques: Vilnius, Lithuania, 27 June–1 July.
Models of Computation in Context: Sofia, Bulgaria, 27 June–2 July.
ICML: 28th International Conference on Machine Learning, Bellevue, WA, USA, 28 June–2 July.
Models and Mechanisms in Cognitive Science: School of Philosophy, Psychology, and Language Sciences, University of Edinburgh, 29 June.
ECSQARU: 11th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty, Belfast, Northern Ireland, UK, 29 June–1 July.

July

AAHPSSS: Australasian Association for the History, Philosophy and Social Studies of Science, Christchurch, New Zealand, 1–3 July.
Perceiving Others' Minds: University of Manchester, 1 July.
Cognitio. Nonhuman Minds: Animal, Artificial or Other Minds: Montreal, Qc., Canada, 3–5 July.
Bayesian Capture-Recapture: Centre for Research into Ecological and Environmental Modelling (CREEM), University of St Andrews, 4–6 July.
ICMC: 2nd International Choice Modelling Conference, Leeds, UK, 4–6 July.
The Computational Turn: Past, Presents, Futures?: International Association for Computing and Philosophy, Aarhus University, 4–6 July.
Panhellenic Logic Symposium: Ioannina, Greece, 4–8 July.
TABLEAUX: Automated Reasoning with Analytic Tableaux and Related Methods, Bern, Switzerland, 4–8 July.
LGS7: 7th International Conference on "Logic, Games Theory and Social Choice", National School of Political Studies and Administration, Bucharest, Romania, 6–9 July.
ICLP: 27th International Conference on Logic Programming, Lexington, Kentucky, USA, 6–10 July.
Society for Philosophy and Psychology: Université du Québec à Montréal, Montreal, Canada, 6–10 July.
DGL: 5th Workshop in Decisions, Games & Logic, Maastricht University, The Netherlands, 7–9 July.

IWSM: 26th International Workshop on Statistical Modelling, Valencia, 11–15 July.
TARK: Theoretical Aspects of Rationality and Knowledge, Groningen, the Netherlands, 11–15 July.
Logic Colloquium: Barcelona, Catalonia, Spain, 11–16 July.
Australasian Applied Statistics Conference: Palm Cove, Tropical North Queensland, Australia, 12–15 July.
UAI: 27th Conference on Uncertainty in Artificial Intelligence, Barcelona, Spain, 14–17 July.
ARCOE: Automated Reasoning about Context and Ontology Evolution, Barcelona, Spain, 17–18 July.
CLIMA: 12th International Workshop on Computational Logic in Multi-Agent Systems, Barcelona, Spain, 17–18 July.
SING: 7th Spain-Italy-Netherlands Meeting on Game Theory, Paris, 18–20 July.
David Lewis on Language and Mind: 3rd Graduate International Summer School in Cognitive Sciences and Semantics, University of Latvia, Riga, 18–21 July.
WORLDCOMP: World Congress in Computer Science, Computer Engineering, and Applied Computing, Las Vegas, Nevada, USA, 18–21 July.
ICIAM: 7th International Congress on Industrial and Applied Mathematics, Vancouver, British Columbia, Canada, 18–22 July.
IJCAI: 22nd International Joint Conference on Artificial Intelligence, Barcelona, Spain, 19–22 July.
CLMPS: 14th Congress of Logic, Methodology, and Philosophy of Science, Nancy, France, 19–26 July.
ICMSA: 7th IMT-GT International Conference on Mathematics, Statistics and its Applications, Bangkok, Thailand, 21–23 July.
IADIS: International Conference Intelligent Systems and Agents, Rome, Italy, 24–26 July.
ISIPTA: 7th International Symposium on Imprecise Probability: Theories and Applications, University of Innsbruck, Austria, 25–28 July.
ICCS: 19th International Conference on Conceptual Structures, Derby, England, UK, 25–29 July.
ICBO: International Conference on Biomedical Ontology, University at Buffalo, NY, 26–30 July.
Beyond the Possible: in Memoriam of Richard Sylvan: The University of Melbourne, 27–29 July.
IJCNN: International joint Conference on Neural Networks, San Jose, California, 31 July 31–5 August.
CADE: 23nd International Conference on Automated Deduction, Wroclaw, Poland, 31 July–5 August.

August

The Classical Model of Science II: The Axiomatic Method, the Order of Concepts and the Hierarchy of Sciences from Leibniz to Tarski, Vrije Universiteit Amsterdam, The Netherlands, 2–5 August.

ICFOCS: International Conference on Frontiers of Computer Science, Bangalore, Karnataka, India, 7–9 August.
ECAL: European Conference on Artificial Life, Paris, France, 8–12 August.
Logical Constants: Ljubljana, Slovenia, 8–12 August.
Epistemic Inclusiveness and Trust: 3rd Copenhagen Conference in Epistemology, University of Copenhagen, 15–17 August.
ECAI: 19th European Conference on Artificial Intelligence, Lisbon, Portugal, 16–20 August.
Conventional Principles in Science: Department of Philosophy, University of Bristol, 18–19 August.
YSI: Young Statisticians Meeting, Dublin, Ireland, 19–21 August.
ISI: 58th Congress of the International Statistical Institute, Dublin, Ireland, 21–26 August.
KDD: 17th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, San Diego, CA, 21–24 August.
FCT: 18th International Symposium on Fundamentals of Computer Theory, Oslo, Norway, 22–25 August.
AiML: 8th International Conference on Advances in Modal Logic, Moscow, 24–27 August.
ICDL-EPIROB: IEEE Conference on Development and Learning, and Epigenetic Robotics, Frankfurt am Main, Germany, 24–27 August.
Philosophy of the Social Sciences: University of Copenhagen, 25–26 August.
Uncertainty Modeling in Knowledge Engineering and Decision Making: Istanbul, Turkey, 27–29 August.

September

BISP: 7th workshop in Bayesian Inference for Stochastic Processes, Getafe, Spain, 1–3 September.
ECAP: 7th European Conference in Analytic Philosophy, Milan, Italy, 1–6 September.
DOMAINS: Swansea University, Wales, UK, 5–7 September.
ECML PKDD: European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Athens, Greece, 5–9 September.
WPMSIIP: Workshop on Principles and Methods of Statistical Inference, University of Ljubljana, Slovenia, 5–10 September.
Perceptual Memory and Perceptual Imagination: University of Glasgow, 6–9 September.

Progic
The fifth workshop on Combining Probability and Logic, Columbia University, New York, 10–11 September

CSL: 20th Annual Conference of the European Association for Computer Science Logic, Bergen, Norway, 12–15 September.
CP: 17th International Conference on Principles and Practice of Constraint Programming, Perugia, Italy, 12–16 September.

EANN/AIAI: Engineering Applications of Neural Networks and Artificial Intelligence Applications and Innovations, Corfu, Greece, 15–18 September.
PLM: Philosophy of Language and Mind, Stockholm University, 16–18 September.
ICSC: International Conference on Semantic Computing, Palo Alto, California, United States, 18–21 September.

Causality and Explanation in the Sciences
Faculty of Arts and Philosophy, Ghent University, 19–21 September

FedCSIS: Federated Conference on Computer Science and Information Systems, Szczecin, Poland, 19–21 September.
Statistical Computational & Complex Systems: University of Padua, 19–21 September.
Computer Simulations and the Changing Face of Scientific Experimentation: Stuttgart, Germany, 21–23 September.
Social Ontology: Metaphysical and Empirical Perspectives: Workshop of the European Network on Social Ontology (ENSO), Luiss Guido Carli, University, Rome, Italy, 21–23 September.
SYNASC: 13th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, Timisoara, Timis, Romania, 26–29 September.
Formal Epistemology Meets Experimental Philosophy: Tilburg Center for Logic and Philosophy of Science, 29–30 September.

§6
Courses and Programmes

Courses

Psychophysical, Computational and Neuroscience Models of Time Perception: Groningen, 4–8 April.
Spring School on Belief Functions Theory and Applications: Autrans, France, 4–8 April.
COST-ADT: Doctoral School on Computational Social Choice, Estoril, Portugal, 9–14 April.
Logic School: Instituto de Matemática/UFF, Niterói (RJ), Brazil, 7–8 May.
Reasoning and Argument: Computer and Cognitive Science Perspectives: 2nd Summer Institute on Argumentation, Centre for Research on Reasoning, Argumentation and Rhetoric, University of Windsor, Ontario, Canada, 9–27 May.
Carnegie Mellon Summer School in Logic and Formal Epistemology: Department of Philosophy, Carnegie Mellon University, Pittsburgh, 6–23 June.
MLSS Singapore: Machine Learning Summer School, Biopolis, Singapore, 13–17 June.
MLSS @ Purdue: Machine Learning Summer School, Departments of Statistics and Computer Science, Purdue University, 13–24 June.
Relativism and Disagreement, Fallibilism and Infallibiism, Truth and Paradox: Northern Institute of Philosophy Summer School, University of Aberdeen, 28 June–30 June.

EASSS: 13th European Agent Systems Summer School, Girona, Catalonia, Spain, 11–15 July.
David Lewis on Language and Mind: University of Latvia, Riga, 18–28 July.
LxMLS: Lisbon Machine Learning Summer School, Instituto Superior Técnico (IST), Lisbon, Portugal, 20–25 July.
Experiments in Economics, Experiments in Philosophy: Summer school on Economics and Philosophy, San Sebastian, 27–29 July.
Interactivist Summer Institute: University of the Aegean, Syros, Greece, 29 July 29–1 August.
Set Theory and Higher-Order Logic: Foundational Issues and Mathematical Developments: Institute of Philosophy, London, 1–6 August.
ESSLLI: European Summer School in Logic, Language and Information, Ljubljana, Slovenia, 1–12 August.
Network Dynamics: Groningen, the Netherlands, 29 August–6 September.
Analysis Methods for Cross-national Comparisons: Leuven, Belgium, 28 August–4 September.
MLSS France: Machine Learning Summer School, Bordeaux, France, 4–17 September.
Relying on Others. New Perspectives in Social Epistemology: University of Cologne, 7–10 September.

Programmes

APhil: MA/PhD in Analytic Philosophy, University of Barcelona.
Doctoral Programme in Philosophy: Language, Mind and Practice, Department of Philosophy, University of Zurich, Switzerland.
HPSM: MA in the History and Philosophy of Science and Medicine, Durham University.
Master Programme: Philosophy and Economics, Institute of Philosophy, University of Bayreuth.
Master Programme: Philosophy of Science, Technology and Society, Enschede, the Netherlands.
MA in Cognitive Science: School of Politics, International Studies and Philosophy, Queen's University Belfast.
MA in Logic and the Philosophy of Mathematics: Department of Philosophy, University of Bristol.
MA in Metaphysics, Language, and Mind: Department of Philosophy, University of Liverpool.
MA in Mind, Brain and Learning: Westminster Institute of Education, Oxford Brookes University.
MA in Philosophy: by research, Tilburg University.
MA in Philosophy of Biological and Cognitive Sciences: Department of Philosophy, University of Bristol.
MA in Rhetoric: School of Journalism, Media and Communication, University of Central Lancashire.

MA programmes: in Philosophy of Language and Linguistics, and Philosophy of Mind and Psychology, University of Birmingham.
MRes in Cognitive Science and Humanities: Language, Communication and Organization: Institute for Logic, Cognition, Language, and Information, University of the Basque Country, Donostia, San Sebastian.
MRes in Methods and Practices of Philosophical Research: Northern Institute of Philosophy, University of Aberdeen.
MSc in Applied Statistics and Datamining: School of Mathematics and Statistics, University of St Andrews.
MSc in Artificial Intelligence: Faculty of Engineering, University of Leeds.

MA in Reasoning

An interdisciplinary programme at the
University of Kent, Canterbury, UK.
Core modules provided by Philosophy and further modules from Psychology, Computing, Statistics, Social Policy, Law, Biosciences and History.

MSc in Cognitive & Decision Sciences: Psychology, University College London.
MSc in Cognitive Science: University of Osnabrück, Germany.
MSc in Cognitive Psychology/Neuropsychology: School of Psychology, University of Kent.
MSc in Logic: Institute for Logic, Language and Computation, University of Amsterdam.
MSc in Mathematical Logic and the Theory of Computation: Mathematics, University of Manchester.
MSc in Mind, Language & Embodied Cognition: School of Philosophy, Psychology and Language Sciences, University of Edinburgh.
MSc in Philosophy of Science, Technology and Society: University of Twente, The Netherlands.
MRes in Cognitive Science and Humanities: Language, Communication and Organization: Institute for Logic, Cognition, Language, and Information, University of the Basque Country (Donostia San Sebastian).

§7
Jobs and Studentships

Jobs

Assistant Professor: AOS: possibly one among History of Philosophy, Metaphysics, Philosophy of Mind, Philosophy of Science, and Philosophy of Language, Department of Philosophy, Western Michigan University, Kalamazoo, MI, until filled.
Post-doc position: in the area of developmental robotics and robot learning, INRIA, Bordeaux, until filled.
Two Post-doc positions: in Machine Learning, in the project "Composing Learning for Artificial Cognitive Systems", INRIA Lille, until filled.

One-year Lectureship: AOS: Metaphysics or Epistemology or Philosophy of Language or Metaethics; AOC: Logic; Department of Philosophy, Brandeis Univerisity, Waltham, MA, deadline 1 April.
Research Associate: in Machine Learning, Gatsby Computational Neuroscience Unit, UCL, deadline 8 April.
One-year Postdoctoral Fellowship: AOS: logic or philosophy of science, Department of Philosophy, University of Calgary, Alberta, Canada, deadline 15 April or until filled.
Lectureship: in Statistical Inference and Machine Learning, School of Computing Science, University of Glasgow, deadline 15 April.
Post-doc position: in Natural Logic and Natural Reasoning, Tilburg Center for Logic and Philosophy of Science (TiLPS), deadline 15 April.
Four-year Post-doc Research Fellowship: in philosophy of neuroscience, Werner Reichardt Centre for Integrative Neuroscience, Tubingen, Germany, deadline 17 April.
One-year Lectureship: in the History of Science, AOS: history of biology or physics or both, University of Pennsylvania, deadline 18 April.

Studentships

PhD Scholarship: "Rating and ranking sports players and teams using Minimum Message Length", Clayton School of Information Technology, Monash University, to be filled asap.
PhD position: in the area of developmental robotics and robot learning, INRIA, Bordeaux, until filled.
PhD Studentship: "Hyper-heuristics for Grouping Problems", School of Computer Science, University of Nottingham, until filled.
Two PhD positions: in a research project on the notion of chance and its connection to statistical method, Faculty of Philosophy, University of Groningen, deadline 1 April.
PhD Scholarship: in the History of Modality, Department of Philosophy, Victoria University of Wellington, New Zealand, deadline 4 April.
Postgraduate Studentships: under the Research Project Award "The Emergence of a Scientific Culture", History and Philosophy of Science, Technology and Medicine, University of Aberdeen, UK, deadline 8 April.
Analysis Studentship: to a candidate with or very close to completion of a PhD, pursuing research on a subject which falls under the traditional concerns of *Analysis*, deadline 15 April.
ESRC-funded PhD studentships: Statistics, University of Warwick, deadline 15 April.
PhD position: in Natural Logic and Linguistic Semantics, Tilburg Center for Logic and Philosophy of Science (TiLPS), deadline 15 April.
PhD position: in Computational Logic and Natural Reasoning, Tilburg Center for Logic and Philosophy of Science (TiLPS), deadline 15 April.
PhD Scholarship: in the project "Normativity and the Mind", Philosophy, University of Southampton, UK, deadline 20 April.


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