The Reasoner

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Contents

Editorial

For this month's issue of *The Reasoner*, I'm happy to share an interview with my friend and former supervisor Kevin Zollman, a true interdisciplinarian who engages deeply with biology and economics while making valuable contributions to analytic philosophy. Kevin is an especially clear and engaging teacher and taking his game theory course in my first year of graduate school sparked my interest in an area that I might otherwise have overlooked entirely. We met in Bristol for the workshop *Formal Approaches in Social Epistemology* and I got Kevin's take on a range of topics, including how to do formal philosophy well, the new and important field of social epistemology, and the value of game theory for that field in particular. Along the way, Kevin shared lots of advice (especially for young philosophers) as well as an excellent sales pitch for game theory that may inspire others to see what it can offer them.

Patricia Rich
University of Bristol

Features

Interview with Kevin Zollman

PR: Kevin, thank you for agreeing to do this interview for us. Can you start by telling us who you are, what you do, what makes you tick?

KZ: Of course. I'm an associate professor of philosophy at Carnegie Mellon. What makes me tick? My philosophical interests started in game theory and I sort of branched out into the applications of game theory in a number of different fields, biology and the philosophy of biology, philosophy of language, and in particular social epistemology, which is what I've been working on most recently, in the social epistemology of science. So how it is that game theory might help us to learn things about how communities of scientists behave in strategic settings, settings where the outcomes interact with one another.

PR: Given your interest in game theory, why be a philosopher as opposed to an economist?

KZ: This is a hard question, especially since philosophers are paid so much worse. I got interested in questions where in a certain sense the utilities tend not to be characterized in economic ways. So of course scientists—like everybody—want money, but are oftentimes motivated by things that are not

exactly monetarily valued, like truth, or even if its a little bit less noble they might be motivated by credit. And similarly in biological cases: animals are not necessarily motivated by anything in particular but are subject to natural selection, which is in a certain sense motivated by fitness. There's of course close overlap between what I do and what goes on in economics or in theoretical biology and I think that's actually very productive. The other thing is that the questions I find myself asking tend to be more traditionally philosophical questions that I then use game theory to answer: what's the nature of meaning or deception or scientific progress, or how does scientific progress interrelate with the desires of scientists. These are questions that have long histories in philosophy, and are not really questions that get answered in other disciplines.

PR: On that note, one of the things that really impressed me as a graduate student was that you had work where you'd done a bunch of simulations to answer a question in social epistemology dealing with testimony, but it was motivated in terms of Kant, Hume and Descartes. So I was wondering if you had any tips for how you strike that balance between formalism, where you have tractable models, but also something philosophically interesting.

KZ: Yeah, and I think that that balance is a really difficult balance to strike precisely because it's very easy to err on one side or the other. It's very easy to find a philosophical problem, do some superficial formal work that doesn't really add to the philosophical discussion. Or alternatively do stuff that's mathematically really difficult but doesn't really go anywhere [*laughs*]. To avoid the first mistake I always try to think very carefully about when is the mathematics necessary; so while it may be that for my own internal perspective I use mathematics to demonstrate a point, if I thought it wasn't necessary I might still write a paper but I wouldn't write a paper with the mathematics in it. The other error: I think it's sometimes very easy for people, especially people who are very good at mathematics, to enjoy the puzzle-solving aspect of mathematics—and I find myself falling into that a lot. I think the mistake is to start with a problem, turn it into a mathematical problem, answer mathematical puzzles, without thinking about whether *those answers* really translate back, so that's the other thing. I try to be really careful about asking "why am I doing the math, what purpose is it serving for the philosophy"?

PR: Okay, that's very helpful. Given that you use simulations pretty often, for what sorts of purposes are those a better tool than trying to do things analytically?

KZ: This is a really interesting thing and by itself I think a really interesting philosophical topic. As a kind of general rule I think that it's better to get analytic results when you can, but I think it's easy to overemphasize analytic results, that is, when you have a particular system you're trying to study and you realize you can't get analytic results because the system is irreducibly complex, then to abandon it or to make really inappropriate idealizing assumptions in order to get analytic results. So maybe it's a bit silly to use Einstein's quote, "make everything as simple as possible and no simpler," but you know there's something to that. What I try to do is design as simple a model as I can and then my abilities—but also just simple facts about what's known—answer the question about whether I'm going to approach it analytically or computationally.

PR: We're meeting on the occasion of a workshop on formal approaches in social epistemology; maybe you can explain what social epistemology is and why you think it's important.

KZ: There are various things that go under the name "social epistemology," but the idea is to take seriously the underlying fact that knowledge takes place in a social environment and so it's very rare especially in a modern society that you find knowledge which was entirely created by a single individual; people work in teams, people rely on one another, people get together and generate knowledge. And so I think that people have recognized that we have to think about that. There are various ways to think about it and Alvin Goldman has this distinction—which I'm going to not quite use but I think is useful—between what he calls "systems-oriented" social epistemology and other types of social epistemology. One type of question is, "how should I as an individual respond to social evidence"; so Patricia comes along, you tell me some fact, how should I respond to the fact that you tell me? These sorts of things. That remains somewhat individualistic because it's "how does the individual respond to the social." Systems-oriented social epistemology is to really think about the knowledge-generating system *as a system*, and ask about its system-level properties. That's what I tend to focus on, these group-level features. I'm not so worried about what *a* scientist should do, but rather what should the community of scientists do *as a community* in order to maximize the chance that the community generates knowledge.

PR: Can we then see something like argumentation as a bridge between the individual and the group case?

KZ: Certainly, and for some of the things people think about in argumentation you can ask both questions, for the individual and the group. So you can ask, "am I made more reliable by arguing or having people argue with me?" and that's a more individualistic focus, and you can also ask "is the group made more reliable when members argue?" And those questions don't have to have the same answer, right, it might be that an individual is made more reliable but somehow the group is not; I'm not saying that's the case, but it's certainly a conceptual possibility.

PR: One of the themes of the workshop yesterday was that game theory is a valuable tool for social epistemology. So do you want to elaborate on that...

KZ : Make a pitch? Yeah, I definitely think so and precisely the thing I just said about argumentation is an example. I've written a variety of papers—one especially with former grad-

uate student Conor Mayo-Wilson and David Danks—where the question we were asking was "do group and individual rationality coincide"; and the answer was that, they don't, so you might have rational groups that are made up of irrational individuals or (vice versa) you might have rational individuals that make irrational groups. So what that shows is that features of the individuals don't necessarily scale up to features of the group, and so you really have to worry about how individuals interact. And that's why I think game theory is a natural tool, because from the beginning it was developed to answer those sorts of questions. Recently I've been getting into an area of game theory called *mechanism design*, which is basically about these questions: how do you design features of a game that make the group do what you want them to do, and this is exactly what I think game theory can do for philosophy of science, but also for political philosophy. In science and in social epistemology, what we want to do is design a game such that people are epistemically reliable.

PR: Okay, let's switch gears—you've done a lot of writing for popular audiences, including a recent book, *The Game Theorist's Guide to Parenting*. Can you give your personal motivation?

KZ: I started thinking about this when I was in graduate school; when the last economic collapse happened, universities (as always is the case) were being squeezed for money, especially state universities. And there were a number of prominent cases where state universities were closing down their philosophy departments, and there was lots of discussion about not just philosophy but of the role of humanities in general in the academy. It sort of occurred to me that the problem was that philosophy was very bad at public relations. That most people who take a philosophy class take an intro to philosophy class where they learn about the canonical problems of philosophy, you know, they read Descartes, they talk about skepticism, they learn about utilitarianism...they leave philosophy thinking that it's about these problems that were applicable to rich thinkers of the early modern period, and they don't really think of philosophy as being something that has relevance to them today. And philosophers are pretty bad at finding ways to get things in front of the public. Scientists have got much better at that, you know evolution, climate science, and now vaccines have provided a motivation for scientists to really get in front of the public. And so I thought it was really important for philosophers to think about how can we make what we do applicable to people's everyday lives; it is, we know it is, but we just do a bad job of explaining that. The book sort of fell in my lap accidentally but when I was given the opportunity I seized on it precisely because I'd decided that this was a thing I wanted to do anyway.

PR: Can you tell us what's the most surprising thing that you learned during the course of writing a popular book?

KZ : Yeah, and I guess it's surprising because it's exactly the opposite of what I would have expected. When I wrote the first couple draft chapters my editor basically told me that I had simplified it too much. I was really concerned that philosophy has so much technical language and so many subtle distinctions and these sorts of things that I would really have to make it simple for the everyday reader. And my editor Amanda Moon pointed out that people want to come away from reading your book feeling that they've really learned something new, and if you simplify it too much they can come away feeling that you're talking down to them, and also that you just told them stuff that kind of seemed obvious already. And so giving them a little more of a taste behind the screen (so to speak) of the technical details is valuable.

PR: You contribute to Wikipedia; does that tie in with a sentiment that we should be benefitting society?

KZ: Yeah, as I've been doing more for the popular press I've done a lot less Wikipedia because I view them as part of the same thing. Actually I started doing Wikipedia when I was a graduate student and I discovered that it was a really great way to learn. I was learning game theory along the way and so I started writing articles about game theory, about the Stag Hunt or Nash Equilibrium or something, and the thing that was useful was that—people say this about teaching too—that you don't really discover what you don't know until you try and teach something. So I would discover, oh, I don't know the answer to this question and so I would have to go look it up, or other people would say "well this is unclear" or they would ask a question because on Wikipedia people collaborate, so I found that really useful. I still think that it's a great way especially for interested graduate students to start both getting philosophy out in front of the public but also teach themselves the nuances of the things they're learning.

News

Agency and Causation, 27–29 October

The Agency and Causation Workshop took place from October 27th till 29th at the Royal Academy of Dutch Literature in Ghent (Belgium). The workshop was co-organised by the Centre for Logic and Philosophy of Science (Ghent University) and the Centre for Philosophy of Psychology (University of Antwerp). This was the first thematic workshop in the Logic, Reasoning, and Rationality (LRR) series to be funded by the Flemish Research Foundation (FWO) through the research network on Logical and Methodological Analysis of Scientific Reasoning Processes (LMASRP), which is an international network of 9 different research centres within Belgium, the Netherlands, Germany, Poland, and the UK. The network will organise two such workshops every year during the next five years—see here for more info on the workshop series, the network, and upcoming workshops.

The first keynote speaker, Agnes Moors (Catholic University of Leuven) presented a new view on the dual-process theory of actions. The starting point of her lecture was a common distinction between stimulus-driven processes on the one hand, and goal-directed processes on the other. On the standard view, the former usually take precedence over the latter (at least in emotional actions), which is in term explained and justified by reference to a number of alleged properties of the respective processes. Moors argued step by step against this standard view, thus making way for an alternative account on which intentional processes are the default. Moors's talk was in turn an excellent stimulus for further debates on the modelling and understanding of intentional agency that was a central theme of

the workshop.

With the second keynote speaker, Elisabeth Pacherie (Institut Jean Nicod, Paris), we entered the territory of philosophy of intentional action. Pacherie's target was the understanding of the interaction between motor representations and propositional attitudes (beliefs, desires, intentions). The "interface challenge" consists in explaining how these different types of representations can be coordinated in such a way as to deliver intentional action. The key to Pacherie's solution is the notion of a "motor schema" as developed by Richard Schmidt and others, which provides an intermediate level of representation.

The third and last keynote lecture was given by Jan Broersen (University of Utrecht), who proposed a formal semantics for the (complex and rather elusive) concept of responsibility of an agent within the STIT framework. Whereas the lecture consisted mostly of a gentle introduction to STIT logic and its rich semantics, Broersen ended with an original and new take on responsibility, inspired by an interventionist notion of causation.

The 18 contributed talks covered a wide range of topics: from formal (modal) approaches to agency, intentions, and action verbs, over philosophical debates concerning mental causation and action individuation, to issues at the intersection of philosophy and (theoretical) psychology such as the notion of skilful action and dual action control. The participants clearly appreciated this diversity, as is clear from the fact that almost all the talks ended in lively discussions.

Frederik Van De Putte
Ghent University

Bert Leuridan
University of Antwerp

Philosophy of risk, 31 Oct–4 Nov

A recent OZSW/4TU.Ethics PhD-course on the philosophy of risk, which took place in Eindhoven during the first week of November, brought together a number of philosophers currently working on risk. It thereby provided an overview of some of the main themes philosophers and ethicists of risk are currently working on, as most of the presentations were based on work-in-progress, forthcoming papers, or recently published work.

The organizer, Sven Nyholm, opened the event with the basic question of what's bad about being exposed to risk (either natural or man-made risks), and noted that much recent work has focused on effects on well-being, fairness, or social justice, and on the impact risk-exposure can have on people's freedom or their basic capabilities. Following this introduction, Wybo Houkes highlighted various difficulties related to coming up with robust and precise risk-assessments (e.g., well-founded and reliable probability-assignments) in relation to different forms of engineering.

Three sessions focused on risks in relation to automated technologies. Michal Klincewicz argued that automated weapons systems, due to their high complexity, are likely to contain bugs, which makes them vulnerable to hacking. Sven Nyholm argued in one session that there is no straightforward way of applying traditional moral theories (utilitarianism, Kantian ethics, virtue-ethics, etc.) to the issue of how to program automated cars to respond to accident-scenarios. (Some have recently used the phrase "utilitarian cars" as if it is at least obvious what a utilitarian would recommend; but that assumption, Nyholm argued, depends on short-sighted ethical reasoning, which ignores what sorts of cars people would be willing to buy/use.) In another session, Nyholm argued that rather than using models of individual agency and responsibility as our starting-point when we discuss responsibility for crashes involving automated vehicles, we do better to draw on the philosophical literature on collaborative agency and responsibility. Most uses of automated technologies are best analysed as human-machine collaborations.

Philip Nickel, in turn, discussed consent to the use of biodata, specifically focusing on uncertainty about what uses biodata might be put to. According to Nickel, rather than information about outcomes, consent should be based on trust and good intentions developed within relations between patients and physicians or medical institutions.

Neelke Doorn discussed the distribution of risks posed by natural hazards. Doorn argued that justice requires that we treat irreversible losses as worse than reversible losses, meaning that we should typically prioritise protective measures against the former over protective measures against the latter. Behnam Taebi tackled the issue of how to bridge the gap between the social acceptance of certain risks (e.g., risks related to nuclear storage) and the ethical acceptability of those risks, given that the social acceptance and the ethical acceptability of risk don't always go hand-in-hand.

Sabine Roeser zoomed out to a more general level to ask what role emotions should play in private and public deliberation about the distribution and acceptability of risks. Roeser argued that emotions can play a much more central role in such deliberations than they are often allowed to do, and that art is an important means for eliciting and subsequently reflecting on such emotions.

Sven Nyholm
Eindhoven University of Technology

Calls for Papers

Modelling and Representation: How to Make World(s) with Symbols: special issue of *Synthese*, deadline 31 December.

Epistemic Dependence: special issue of *Synthese*, deadline 31 December.

The Scientific Turn: Studies in Materialism and Metaphysics: special issue of *Synthese*, deadline 31 December.

Soft Methods in Probability and Statistics: special issue of *International Journal of Approximate Reasoning*, deadline 31 December.

Intelligent Machines and Human Beings: Challenges of a new Relationship: special issue of *Journal of Ethics and Information Technology*, deadline 15 January.

Evidence Amalgamation in the Sciences: special issue of *Synthese*, deadline 17 February 2017.

Probabilistic Logic Programming: special issue of *International Journal of Approximate Reasoning*, deadline 1 March.

Inferences and proofs: special issue of *TOPOI*, deadline 31 March.

Infinite Idealizations in Science: special issue of *Synthese*, deadline 15 April.

Formal and Traditional Epistemology: special issue of *MANUSCRITO*, deadline 1 July 2017.

Uncertain Reasoning

The International Journal of Approximate Reasoning is celebrating 40 years of Dempster-Shafer theory with a very interesting special issue.

The opening sentence of the Editorial, by Thierry Denoeux, sets the tone:

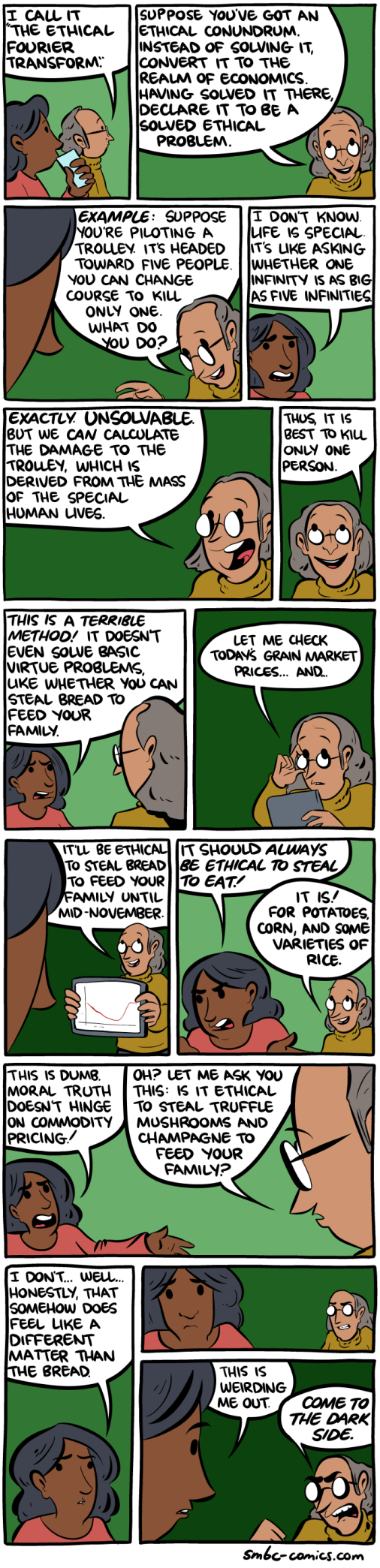
> Among the many books published each year, some are good and a few are very good, but only exceptionally does a book propose a radically different way of approaching a scientific question, and start a new research field. "A Mathematical Theory of Evidence" by Glenn Shafer, which appeared in 1976, is one of those.

This special issue includes three previously unpublished papers which Shafer wrote in the 80s: "Dempster's rule of combination", "The problem of dependent evidence" and "Constructive decision theory". In addition to an introduction to those, the editorial contains a list of 177 papers on Dempster-Shafer theory which appeared on IJAR only. This clearly gives a measure of the impact of Shafer's work on the AI-related uncertain reasoning community.

The three papers are put into perspective by Shafer's intellectual auto-biography, titled *A mathematical theory of evidence turns 40*, which opens the collection. Together with a number of anecdotes from his academic life Shafer recounts the origin and development of his contributions to the wider field of uncertain reasoning. With one particularly nice image, Shafer describes the statistical culture of the early 70s as a pendulum swinging back and forth between the strict subjectivist view of, among others, de Finetti, Savage, and Lindley, and the objectivist methods of the Neyman-Pearson philosophy. Neither of them satisfied Shafer entirely, for various reasons. In particular he was led to believe that the Kolmogorov axioms were adequate for frequencies and other objective notions of chance, not so for a subjective measure of uncertainty. For those latter he resolved not to use the very term probability. Building on work by A. Dempster, Shafer's doctoral dissertation provided an analysis of what properties were desirable for subjective measures of uncertainty, which he termed Belief Functions. That was the beginning of Dempster-Shafer theory.

In retrospect, Shafer makes it clear that he sees his theory as one of a number of potentially useful measures of uncertainty. In particular he pleads agnostic concerning the prescriptive role of the theory, a point discussed in the third paper. Commenting on this he says:

> Perhaps the belief-function calculus is like another tool in the toolbox or another medicine in the phar-



> macy. A decision analyst might prescribe it for a particular problem but it still might fail.

One very interesting aspect which emerges from Shafer's intellectual autobiography is the crucial influence of his early interest in the history and philosophy of probability. Uncertain as to wether he wanted, as a young student, to pursue philosophy or mathematics, Shafer describes himself several times as always having been interested in the very meaning of probability. As to the role of history he concludes by saying:

> After studying probability and partial belief for 45 years, my sturdiest belief about the enterprise is that the most enduring advances will draw on history.

Hykel Hosni
Philosophy, University of Milan

Evidence-Based Medicine

A number of interventions have been claimed to improve the chances of having a baby by supplementing standard in vitro fertilisation. But these interventions have been quite controversial, in part because they are expensive, with the costs often incurred by people desperate to become parents. It is important then, that these people are given the best possible information about the effectiveness of these interventions.

A study has recently been published in the BMJ on the topic of add-on interventions offered by fertility centres in the UK. The study was carried out by researchers at the Oxford Centre for Evidence-Based Medicine. They listed the add-on interventions that are currently being offered by fertility centres across the UK. These interventions include things like supplementary drugs, and genetic screening tests. They then searched the literature for evidence supporting the effectiveness of these interventions. In accordance with their Levels of evidence, they began looking for systematic reviews and randomised controlled trials, and if these were not available, they looked for observational studies. They concluded that the claims being made on behalf of these add-on interventions are generally not supported with reference to any evidence:

> 'In most cases, the claims are not quantified and evidence is not cited to support the claims. There is a need for more information on interventions to be made available by fertility centres, to support well-informed treatment decisions.'

An analysis piece sums up the findings and recommendations of the study. Among the key messages are that '[m]ost treatments offered by UK fertility treatment centres are not supported by good evidence'. It concludes with a call for higher quality evidence for add-on interventions in order to help people seeking fertility treatment make more informed decisions.

This issue will be covered in the BBC television programme Panorama. This is a current affairs programme which features investigative reports. A forthcoming episode is called Inside Britain's Fertility Business. After it is broadcast, it will be available for a limited time on the BBC iPlayer. There is also an article that gives some of the details of the programme.

Michael Wilde
Philosophy, Kent

Events

December

PT&ML: Proof Theory and Modal Logic, University of Turin, 2 December.
CIR: Creativity, Imagination, and Rationality, University of Bristol, 8–9 December.
FILM: Future of Interactive Learning Machines, Barcelona, 9 December.
L&M: Laws and Modality, Cologne, 9 December.
ML4HC: Workshop on Machine Learning for Health, Barcelona, 9 December.
OtO: Optimizing the Optimizers, Barcelona, (9–10 December.
IDM: Imperfect Decision Makers: Admitting Real-World Rationality, 9–10 December.
ASNM: Adaptive and Scalable Nonparametric Methods in Machine Learning, Barcelona, 10 December.
RiP: Reasoning in Physics, Munich Center for Mathematical Philosophy, 12–13 December.
PodFAS: Perspectives on Determinism From Across the Sciences, University of Sydney, 13 December.
L&P: Logic and Paradox, Munich Center for Mathematical Philosophy, 14–16 December.
Q&QMiSS: Quantitative and Qualitative Methods in Social Science, Erasmus University Rotterdam, 15–16 December.
AIiHc: Artificial Intelligence in Healthcare, Shirpur, India, 27–28 December.

January

MT: Model Theory: Philosophy, Mathematics and Language, Munich Center for Mathematical Philosophy, 9–12 January.
RRRoDSN: Risk, Resilience and Robustness of Dynamic Supply Networks; Bridging Mathematical Models and Practice, International Centre for Mathematical Sciences, Edinburgh, January 11–13.
IB&SE: Inferentialism, Bayesianism, and Scientific Explanation, Munich Center for Mathematical Philosophy, 25–26 January 2017.
SC: Scientific Contents: Fictions or Abstract Objects? University of Santiago de Compostela, Spain, 26–27 January.
DSProbC&ES: Drug Safety, Probabilistic Causal Assessment, and Evidence Synthesis, Munich Center for Mathematical Philosophy, 27–28 January.
AM&CS: Applied Mathematics and Computer Science, Rome, 27–29 January.

February

SI&O: Symbolic Inference and Optimization, San Francisco, California, 4–5 February.
ERiS: Explanatory Reasoning in the Sciences, Munich Center for Mathematical Philosophy, 23–24 February.

March

EIPE: Erasmus Institute for Philosophy and Economics 20th anniversary conference, Erasmus University Rotterdam, 22–24 March.

Courses and Programmes

Programmes

APhil: MA/PhD in Analytic Philosophy, University of Barcelona.
Master Programme: MA in Pure and Applied Logic, 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: in Statistics, University College Dublin.
LoPhiSC: Master in Logic, Philosophy of Science and Epistemology, Pantheon-Sorbonne University (Paris 1) and Paris-Sorbonne University (Paris 4).
Master Programme: in Artificial Intelligence, Radboud University Nijmegen, the Netherlands.
Master Programme: Philosophy and Economics, Institute of Philosophy, University of Bayreuth.
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 Programmes: in Philosophy of Science, University of Leeds.
MA in Logic and Philosophy of Science: Faculty of Philosophy, Philosophy of Science and Study of Religion, LMU Munich.
MA in Logic and Theory of Science: Department of Logic of the Eotvos Lorand University, Budapest, Hungary.
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, Science and Society: TiLPS, 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 Methods and Practices of Philosophical Research: Northern Institute of Philosophy, University of Aberdeen.
MSc in Applied Statistics: Department of Economics, Mathematics and Statistics, Birkbeck, University of London.
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.

MSc in Cognitive & Decision Sciences: Psychology, University College London.
MSc in Cognitive Systems: Language, Learning, and Reasoning, University of Potsdam.
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 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 Sebastián).
Open Mind: International School of Advanced Studies in Cognitive Sciences, University of Bucharest.

Jobs and Studentships

Jobs

Associate Professor: in Philosophy of Science, Nazarbayev University, Kazakhstan, 3 December.
Post doc: in Causal Inference, University of Copenhagen, deadline 4 December.
Director: in Integrative Thinking Program, Shantou University, deadline 11 December.
Lecturer: in Metaphysics, University of Western Australia, deadline 12 December.
Research Associate: in Artificial Intelligence and Philosophy, Imperial College London, deadline 13 December.
Professorship: in in Statistical Approaches to Big Data, University of California, Riverside, deadline 6 January.
Professor: in Statistics, University of Bath, deadline 9 January.
Lecturer: in Statistics, University of York, deadline 16 January.

Studentships

PhD position: in Knowledge Representation for Learning and Uncertainty, University of Edinburgh, deadline 9 December.
PhD position: in Causal Inference, University of Copenhagen, deadline 11 December.