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§1 Editorial

'The Reasoner' is the one who reasons—but about what? About its own reasoning! Many readers of *The Reasoner* will indeed share a self-reflective approach to science. Such an approach always starts afresh by questioning its own paradigms and principles and trying to uncover its hidden premises. Routine is the enemy of The (self-reflective) Reasoner; it tempts our lazy minds in several ways, works preferably through our sub-consciousness, and wants us to lose track of the purpose and meaning of our research.

The goal of understanding human beings and their behaviour is at the heart of the motivation of many of us as scientists and as curious men and women. Despite sharing this goal, scientists by no means agree on how to approach it. Different academic disciplines seem to follow entirely different paradigms, and even within a discipline consensus is rare. And when we cross the border of science and open a book of poems, we realise that poetry too claims to describe and explain the human, by yet other means. A poet once even claimed that poetry is the only precise language for talking about the human. Not having an obvious reply to this poet, and in order to feel safe again, let us quickly close the book of poems and restrict attention to science. The extent of these inter- and intradisciplinary differences when it comes to studying human beings is just as puzzling as it is fascinating. Are people actually talking of the same 'thing'? Are the discrepancies worrying, or are they rather required given the complexity of human nature? A fruitful way to critically question an approach is to contrast it with another. Interdisciplinarity is often said to help us combine approaches; but perhaps its more important role is to help us understand and challenge each paradigm in the light of the others.

Accordingly, this month's edition features an interview with a truly interdisciplinary scholar, Nick Baigent. Among social choice theorists and decision theorists, Nick is highly recognized as an intellectual who always asks the deeper questions and likes to go back to first principles. When I approached Nick about the interview, he said that many of his views about rationality, preference and utility "strictly follow Amartya

Sen and are not the views of a typical economist, despite my huge admiration for economics as a discipline." And he suggested that I alternatively interview Sen directly. Needless to say, this was Nick's usual modesty.

Franz Dietrich
Philosophy, London School of Economics

§2
Features

Interview with Nick Baigent

Nick Baigent is professor of economics at Graz University, Austria, and a visiting professor at the Department of Philosophy, Logic and Scientific Method at the London School of Economics. Franz Dietrich (interviewer) is Ludwig Lachmann Fellow at the same department of the London School of Economics.

Franz Dietrich. Welcome to a little interview, Nick! I'd like you to share some of your experiences and ideas with the audience of *The Reasoner*. Let us talk about different approaches to studying and modeling humans, and about the contrasting views on this matter across academic disciplines and schools of thought. But before jumping into the heart of the matter, I'm curious to learn more about your academic trajectory. You are someone with broad interdisciplinary interests, starting as a teenager already. Could you tell us something about your motivation? What made you study economics?

Nick Baigent. In my mid teens I wanted to be a politician and realized I needed to know some economics. So, I went to the local town library and, by chance, found Samuelson's famous textbook. From that moment, I was hooked, and I still am. I struggled with, rather than read, many economics books while still at High School (e.g. Hayeck's *Pure Theory of Capital* and Hick's magisterial *Value and Capital*). While still a teenager, I was blissfully ignorant of disciplinary boundaries, and so I also read John Stuart Mill's *Representative Government*. I still have my teenage attitude towards arbitrary disciplinary boundaries. Sorry, I think I have overrun your question.

FD. No, you haven't. Today you are commuting on a weekly basis between Graz University, where you hold a chair in economics, and the LSE, where you are an active member of the Choice Group at the Centre for Philosophy of Natural and Social Science. Your friend, Amartya Sen, once said of himself that he wouldn't like to be known as a 'philosophical economist', and even less as an 'economical philosopher', but preferably as an 'economist and philosopher'. As what should we see you? (Please forget your modesty for a moment.)

NB. Amartya Sen has been a huge intellectual role model and source of inspiration for me in very many different ways. However, I do not really think much about how I would like to be known, but more about how I would not like to be known. For example, I would not like to be known as a 'half baked philosopher', or a half baked anything else, and I am very happy if anyone finds anything I do interesting however they wish to classify me.

FD. Each of the disciplines in which you are in some sense involved—economics, philosophy, political science—has its own established paradigms of the human. I'd like to start with economics. How would you define the homo oeconomicus in a few words?

NB. Some common slang expressions give good partial insights into homo oeconomicus such as "all mouth and no trousers" and "empty barrels make most noise". The point is that, at least in mainstream economics, the concept of homo oeconomicus has structure (maximization of a complete and transitive preference) and no substance (no restrictions on what must be preferred to what). This has great merit for addressing some important, even foundational, issues in economics. For example: Is it possible that value (prices) could be determined only by resources, technology and preferences? Results on the existence of a general equilibrium originally by Arrow and Debrue and McKenzie in the early 1950 were important in addressing this issue, and it is difficult to see how such results would be improved by adding substance to the form of homo oeconomicus and later work showed that by no means all of the structure is required either. However, both the form and the lack of substance are open to criticism when addressing other sorts of issues such as the boundaries of rationality and the relationship between choice and wellbeing. What does amaze me is the use of homo oeconomicus in addressing so many issues for which it is ill suited.

FD. Is a rational agent necessarily selfish? Is utility maximisation 'evil'?

NB. "No" and "No". At least if 'rational' is taken in the sense of homo oeconomicus, and some other forms as well, since the substance of preferences is not specified.

FD. That's what I wanted to hear. What does 'utility' actually mean? (For various people and for yourself.)

NB. For Bentham, it meant something that can be measured and compared for different agents. If I ever see an actual case of this being done convincingly, I might be persuaded by Benthamite usage, though I doubt this will happen. But let me turn to its use in mainstream choice theory. Consider the following: "My utility of x is 10". It seems to me that this is not a well formed proposition, given the definition of utility,

it is neither true nor false. Now consider, "My utility of x is higher than that of y". This is equivalent to "I strictly prefer x to y" or "I rank x above y". All these are equivalent. So, utility statements are no more nor less than statements of preference. Note however, that further restrictions on preferences are required for the use of a utility function since, for example, preferences that are not transitive cannot be represented by a utility function.

FD. What are the main dangers and shortcomings of the economic perspective on the human?

NB. As Amartya Sen made clear in his famous "Rational Fools" paper (*Philosophy and Public Affairs*, 1977), preference does too many distinct jobs in mainstream economics including the following. It is taken to rank alternatives according to desire fulfilment, wellbeing and to describe choice. Since these are logically independent concepts, it is too much for a single preference relation to do.

FD. Turning to philosophy and sociology, what are for you the important insights there when it comes to modeling human agents?

NB. For 20 years or so, I have thought that a theory of Agent Identity is crucial in Political Philosophy and Economics, and both philosophy and sociology have interesting and important things to say about Identity. I don't see how questions such as 'What should an agent rationally do?' and 'What is an agent's wellbeing in some situation?', can be sensibly addressed without first saying something about the question, What is an Agent? I have found the views of philosophers including Harry Frankfurt and Charles Taylor very useful in thinking about this. As for sociology, I am intrigued by the attempt of George Akerlof and Rachele Kranton in the *Quarterly Journal of Economics*, 2000, to develop and apply rational choice models in which agents have identities in ways that owe much to sociology. Dzenana Pupic, a graduate student in Graz is doing interesting applied work on this and I am working on a rigorous foundations for Akerlof and Kranton's sociologically inspired economic model.

FD. So-called 'political economy' makes extensive use of rational choice theory to explain the behaviour of political players. How does the modelling practice in political economy differ from that in economics—if at all?

NB. The problem is that even if "Political Economy" does not quite mean all things to all people, it does mean a lot of different things, sometimes to the same person. For example, it is used in "Public Choice Theory" an area founded mainly by Buchanan. This area applies rational choice theory not just to consumers but to voters, workers in government agencies and politicians. Political Economy as it has been taught in Graz University has little or nothing in common with Public Choice theory, since preference and utility play no substantial role at all. I think the most that can be said is that most usages of "Political Economy" involve some economics in some loose sense and something more or less Political and I don't think I can say anything more. By the way, when I studied economics at University College, London, it was in the Department of Political Economy, there being no Economics Department then. It was renamed as the "Department of Economics" a few years ago. Still, it is interesting that UCL was founded by Bentham, and Stanley Jevons, who certainly used utility maximization in his economics, held an appointment there.

FD. What role can philosophy play when it comes to understanding human beings?

NB. As I said already, the area of Personal Identity is very important, leading on to clarifying relevant concepts of rationality, wellbeing and also deontological concepts as well such as duty, not to mention responsibility and justice. One of the skills that many subjects can learn from philosophers is "conceptual clarification" and the need for a deeper and richer conceptual analysis.

FD. How closely should our models stick to strictly observable aspects of human beings?

NB. I hate to sound like a stereotypical economist, but: "It all depends". Some questions not only do not require observable aspects of human beings, but would be damaged by it. I have already given an example, namely the issue of the existence of a general equilibrium. But other issues do require observable aspects of human beings. I see no reason for extremism on this question and my attitude is thoroughly pragmatic: Use observable aspects if this is required for the issue at hand.

FD. I'm glad to hear you do not follow a narrowly behaviourist revealed-preference approach. Do you believe that future progress in understanding human beings will come through further specialization or through more holistic thinking?

NB. Let a thousand flowers bloom, hopefully with a great diversity of blossom. I am struck by the way that diversity cross stimulates research, especially in the long run. I have never wanted to be in a department in which there is too much uniformity. Surely highly specialized research and holistic research each creatively challenge the other, and that is to be welcomed rather than debated in terms of which is better. A very close friend and a major role model for me, Howie Petith, an economist at Autonoma University, Barcelona, likes what I call grand models, his attention having been directed towards general equilibrium theory, then to Rawls and eventually to Marx. We argue constantly and seldom agree since I usually criticize such grand theorizing. However, my thinking has benefited hugely from his challenges, and I hope some benefit has travelled in the other direction.

FD. Are there aspects of human beings that cannot or should not be modeled formally?

NB. Pragmatism again seems the most reasonable stance. The reason for the value I put on rigorous formal modeling is simple and arose from reading the English economist, Alfred Marshall. He simply thought mathematics in economics is useful in checking the correctness of reasoning. I think mathematics is good at that and when students ask about this, often resenting the burden they think it imposes on them, I argue that much, probably most, of what we do is deductive and, just like Italian is a good language for opera, mathematics is a good language for deductive reasoning. However, I also tell them to be aware of its dangers. I like what the Austrian economist, Fritz Machlup, said about this. It was something like: "Mathematics gives us a firm hand with which to do economics, and a firm hand is a wonderful thing as long as it is not gripping your throat".

FD. Who understands human beings best: the man on the street, the artist, or the scientist?

NB. I think understanding of humans, particularly their rationality, is highly context dependent. I did a number of tough jobs during the long vacations when I was a student, including laboring on construction sites, mowing the grass on Farnborough airfield during a heat wave, working night shifts in a bakery, and railway line maintenance. Indeed, my father was an unskilled manual worker. I certainly gained huge understanding from those with whom I worked in these jobs, most of it very different from the understanding I have encountered in academia. As for artists, I often work in the café of the National Gallery, where I learn much from the great painters. But I cannot rank these and I do not see any reason to try.

FD. Nick, thank you very much for sharing your time and giving us insights into your thinking. It was a pleasure. It would be nice to have you as a contributor to *The Reasoner* from time to time in the future. Let me also take the opportunity to thank Jon Williamson and his team for their work on the current issue.

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A short note on the relevance of Logic for Human Reasoning

In many of his related writings on logic and reasoning, Gilbert Harman (1986: *Change in View*. The MIT Press; 1999: *Reasoning, Meaning, and Mind*. Oxford: Clarendon Press; 2007: "Notes on Practical Reasoning." Paper presented at the Syracuse Philosophy Annual Workshop and Network) offers a thorough account of the philosophy of logic and human reasoning as well as the relationship between the two. One of his main remarks is that "logic is irrelevant to human reasoning." To prove this, he sets up an example: Tom believes that if he looks in the refrigerator, he will see a box of ice-cream. He comes to believe that he is looking in the refrigerator and that he does not see a box of ice-cream. At this point, Tom's beliefs are jointly inconsistent and therefore imply any proposition whatsoever. In the present case, however, we know that Tom will revise his former belief and conclude it is false: this is just what happens in human psychology. In other words, since in logic, if P, then Q; P, Q must be the case, Tom should accept the logical outcome; but the logical outcome is too absurd to be accepted. Then, it is preferable to think that logic is somehow irrelevant to human reasoning, with respect to the logical implication principle, which stated that one's view logically implying P can be a reason to accept P.

I oppose Harman's view because he seems to have overlooked two things that normally occur in human reasoning. Firstly, when there is any inconsistency in the antecedent proposition set, the set is undoubtedly false (in the sense that we humans find it hard to believe it is true) anyway. For example, *if this is a paper and this is not a paper, then this is a paper; this is a paper and this is not a paper, therefore this must be a paper [modus ponens, if p then q; p, therefore q]*. In this example, the premises logically imply the conclusion in spite of the self-contradictory nature of the premises. However, we humans will actually revise our existing belief in this case rather than simply accept the logically inferred conclusion. Therefore, I argue that logic is not irrelevant to human reasoning, it is rather that we humans are sometimes reluctant to accept the logically true but hard to believe conclusion in the real world.

Secondly, experimental evidence supporting the relevance of logic and human reasoning comes from the famous Wason Selection Task (Wason 1968: Reasoning about a rule. *Quarterly Journal of Experimental Psychology*, 20: 273-281). The Wason selection task is simply a game to evaluate people's logical capacity. In this task, there are four separate cards, each with a number on one side and a letter on the other side. Participants in the task are asked to choose the minimum number of required card(s) in order to logically verify a statement [If a card has a vowel on one side, there is an even number on the other side.] However, many participants failed to choose the correct cards in the experiment. After a thorough examination of the results, many of the participants committed the fallacy of affirming the consequent: if P, then Q; Q, therefore P. The main reason for the failure in this case is the confusion of the logical connective, *IF ... THEN*, with "*ONLY IF*". At this point, we can clearly see that logical inferences involving those premises depends the meaning of those premises, as evidenced in the Wason task. The failure of

the task shows that most of the people are not illogical in making inferences but rather are using incorrectly or confusing the rules of logic (specifically, people equated the meaning of conditional rule "if-then" to mean "only-if"). This is mainly due to the discrepancies between the logical connectives and the connectives in natural language. Someone, nonetheless, may argue that the nature of logic is fundamentally without content; therefore, these problems could not stand anyway. In spite of this, it is at least necessary to have an object/content to outline the rules of logic (or the matter called "logic") in human reasoning. Consequently, human reasoning ought to involve logic.

In sum, I argue that human reasoning and logic bear some kind of relevance at their core, and I suggest that logic is simply a path analysis of all the different mental processes that occur concurrently whenever we reason.

I would like to acknowledge comments from Gilbert Harman, Pascal Engel and three anonymous reviewers in refining this article.

Michael C. W. Yip
The Hong Kong Institute of Education

§3 News

Philosophy of Probability III, 25–26 June

On the 25^{th} and 26^{th} of June, the LSE hosted its third Philosophy of Probability Graduate Conference. As in previous years, the philosophy and foundations of probability proved to be a common concern for philosophy of physics, decision theory, epistemology, and philosophy of language.

Our first keynote address was given by Professor Dorothy Edgington (Birkbeck) who talked on "Estimating conditional chances and evaluating counterfactuals". She offered a way to evaluate counterfactuals in terms of conditional probabilities which avoids various problems with problems these accounts typically face. The first of our graduate speakers was Isabel Guerra (Complutense/LSE) who gave us several reasons to doubt the claims made by "Quantum Bayesians". These revolved around the fact that the "Lüder's rule", while formally analogous to standard conditionalisation, cannot perform the conceptual role of conditionalisation. After lunch, Jonny Blamey (KCL) criticised a common assumption in decision theory, particularly in the discussion of Dutch book arguments: "Stake Size Invariance". Jonny's positive suggestion was that modelling agents as having a "bid-ask spread" was preferable to the standard point probabilies of standard treatments of degrees of belief. Richard Bradley, commenting on Jonny's paper, suggested that the contentious supposition might not be shared by all justifications of probability theory. The first day of the conference was rounded off by our second keynote speaker, Mauricio Suárez (Complutense). The topic of his talk was "Propensities and Pragmatism". Mauricio explained how a return to C.S. Peirce's conception of propensities was preferable to the current Popper-influenced paradigm. A minor modification to Peirce's view was offered: a move from "long-run" propensities to "single-case" propensities.

We started the second day of the conference with our final keynote address from Antony Eagle (Oxford). The topic under consideration was "The epistemic value of agreement". How should agreement and disagreement with one's epistemic peers affect one's degrees of belief? The suggestion offered here is that it shouldn't affect one's degrees of belief *directly*, but should change the stability or resilience of those beliefs. Our next graduate speaker was Sylvia Wenmackers (KU Leuven) talking on "Probability and epistemology of denumerable lotteries using non-standard analysis". Her claim was that extending analysis to include infinitesimals of a particular kind (numerosities) allows you to solve problems with infinite lotteries and countable addivity as well as blocking the preface paradox. Matt Parker suggested two worries for the non-standard analysis approach: first the inequalities are sensitive to choice of ultrafilter, and second that the results conflict with our intuition that sets of the same size can be put in one-to-one correspondence with each other. After lunch Julia Staffel (University of Southern California) showed how Dutch books can be used to measure degrees of incoherence. Her approach involved getting an agent to bet once on each event in the algebra, and Julia showed how this approach avoided the "double counting" problem that a similar attempt faced. Rory Smead commented that there was a possiblty unintuitive consequence to Julia's approach: that unrelated beliefs could lessen the extent of one's degree of incoherence. The final talk of the conference was by Chris Clarke (Bristol) who presented a more general representation theorem, motivated by a kind of pragmatism. The idea was to weaken parts of the standard theorem to allow a more general result to be proved. So instead of assuming that agents are necessarily utility maximisers one places weaker constraints on their decision theory. Luc Bovens presented some computer simulations that seem to agree with Chris' argument and situated Chris' argument within a general space with Savage's theorem as a special case.

The conference organisers would like to thank British Society for the Philosophy of Science, the Institute of Philosophy and the LSE philosophy department for financial support. Thanks also to all the speakers and

commentators!

Seamus Bradley
Department of Philosophy, LSE

Foad Dizadji-Bahmani
Department of Philosophy, LSE

Conrad Heilmann
Department of Philosophy, LSE

Paris-Amsterdam Logic Meetings of Young Researchers, 28–29 June

The Paris-Amsterdam Logic Meetings of Young Researchers (PALMYR) takes place yearly alternatively in Amsterdam and Paris. At each PALMYR, visitors' talks are commented by a fellow researcher from the host town. PALMYR IX was held at ILLC in Amsterdam between 28-29 June 2010, with the theme "Logic and the Use of Language". Ten participants from Paris, Geneva, and Leuven received comments from graduate students and staff affiliated with Amsterdam, Utrecht, and Tilburg. The keynote talks given by Fred Landman and Frank Veltman presented groundbreaking research on the semantics of mass nouns and defaults, respectively.

June 28. Julie Hunter presented a model for presuppositional character, an alternative to Kaplan's model for the reference-fixing content of indexicals which purports to mend the gap between indexicals and definite descriptions assumed by previous presuppositional accounts. Maria Aloni noted that this account still requires a Kaplan-style notion of context. She highlighted differences in projection between indexicals and standard presuppositions, and she inquired about the non-descriptiveness of indexical's reference-fixing meaning.

Isidora Stojanovic proposed a relativist definition of truth and validity to give a pragmatic account of entailments between utterances with indexical anchors and their non-indexicalised counterparts, and to explain the seeming tautologicity of certain self-referring utterances. Lucian Zagan challenged the need for a relativist approach, and he disputed as well the notion of logical validity underlying Stojanovic's proposal.

Michael Murez introduced an agentive propositional attitude, "control" in order to provide better accounts for situations of agentive feeling in which belief, desire, and intention are not entirely adequate. Inés Crespo praised this embodied perspective on agency. She also raised issues regarding the propositional character of this attitude, supported by Maria Aloni's suggestion to consider an ontology of actions for this attitude, as in the semantics for imperatives.

Alexandra Arapinis defined the class of terms referring to institutional entities, she showed its systematic polysemy, and accounted for this adapting Pustejovsky's (1995) notion of dot-types to define the structure of ontological counterparts for these terms via "dot-objects". Ana Aguilar Guevara referred to coordination of predicates applying to 'coerced' objects and to dot-objects as a possible difficult case for this approach, and she introduced weak definites and bare singulars as phenomena seemingly related to institutional terms.

Fabrice Correia defended a presentist stance with respect to eternalist discouse by providing adequate translations using non-proxy reductions, and put forward a metric method, different from available ones such as Peacock's, Vlach's and Fine's. Jonathan Shaheen challenged Correia's objection to the Peacockean and Vlachian methods. He also argued that modalists like Forbes can better account for expressions quantifying over time.

Fred Landman presented his "Prolegomena to a Theory of Mass Nouns". To analyse the fact that objects in a mass denotation cannot be counted in terms of the parts of the object that are minimal elements of the denotation, he proposed a theory based on overspecification: mass denotations have too many minimal elements. He provided supporting data from both English and Chinese, and he developed in some details the details to obtain the right kind of set underlying the quantification in mass counting.

June 29. David Ripley argued that to treat denial as a sort of speech act, parallel to assertion, we should accept an operator that embeds denial. This led to understand the assertion of a negation as a denial, and to defend a paracoherentist approach to disagreement. Catarina Dutilh Novaes explained why she considers embedding of speech-acts a category mistake. She also inquired about the suggested parallelism between assertion and denial, especially in view of the reduction of denial to the assertion of negation.

Henri Galinon investigated how the truth predicate helps us in obtaining knowledge otherwise inaccessible to us. With his idea of "reflexive consequence" he supported the crucial expressive role of truth, ultimately defending deflationism. Theodora Achourioti highlighted an apparent transcendental step in Galinon's argumentation, and she then contended the argument by pointing out that Peano's axioms can also be justified via a derivation of their second order version.

Johannes Stern argued for treating modalities such as truth, necessity, and knowledge as predicates and he constructed a possible world semantics for this syntactical modal logic. To avoid well-known paradoxes, he relied on quotation names. Stefan Wintein objected the exclusion of Kripke's minimal fixed point in the model theory for Stern's logic. More generally, he contended Stern's abidance by Gupta's adequacy con-

ditions for semantics, and he invited the author to reconsider Kripke's adequacy conditions.

David Etlin identified the problem of vagueness as a matter of vagueness of our intentions, and suggested finding a solution to the Sorites paradox by adapting Schick's explanation of the "money pump" puzzle. Raquel Fernández Rovira inquired about the essential differences between the adaptation of Schick's solution of the "money pump" puzzle, and Delia Graff Fara's approach to the Sorites, and she wondered about the substantial gain in this choice-theoretic stance on vagueness.

Fabio Del Prete presented linguistic evidence for truth value transitions for future contingents from true to false and from false to true, a richer view on truth value change than the relativist, and he presented a Branching Time model to account for this. Katrin Schulz made critical remarks on whether the empirical data indeed fits in the logical form that the theory then proposes to handle. She also proposed definitions to simplify the formal apparatus to deal with the data that Del Prete wanted to account for.

Frank Veltman's talk, based on a joint paper with Harald Bastiaanse, introduced a framework for dealing with conflicting default rules. The semantics is framed within circumscription theory, given in a language of monadic first order logic that translates a default rule such as "Ps are normally Qs" by including a clause that excludes all objects that behave abnormally with respect to the given rule. A class of models satisfying constraints of exemption and inheritance can accommodate defeasible arguments and other pieces of non-monotonic reasoning. Inheritance networks satisfying minimal and equivalence constraints are the right syntactic support for the information flow achieved via models in the circumscription theory, as they are sound and complete with respect to the semantics.

Inés Crespo
ILLC, Amsterdam

Lucian Zagan
ILLC, Amsterdam

What is HPS for? 28–29 June

'What is HPS for?', the Fifth Joint Workshop on integrated History and Philosophy of Science (HPS), held on the 28th and 29th of June 2010, organized and hosted by the ERSC Centre for Genomics in Society at the University of Exeter, brought together participants from University College London, the University of Leeds, the University of Durham, the University of Exeter, and the University of Cambridge. The opening talk was delivered by the newly appointed Hans Rausing Professor at the University of Cambridge, Hasok Chang, who discussed the potential role of HPS as 'complementary science'. This view attempts to reconcile the need for scientific specialization embodied in Kuhn's understanding of 'normal science' with the recognition of the importance of an open-minded attitude in scientific practice, as emphasized by Popper. In this way, complementary science constitutes what Chang calls "the continuation of science by other means". From this perspective, HPS has three major roles *within* science: the fostering of *critical awareness* among practicing scientists, the *recovery* of historically-neglected scientific knowledge, and the use of this knowledge in facilitating *new developments* in science. These ideas were examined by Gregory Radick (Leeds), Robin Hendry (Durham), and John Dupré (Exeter), who, despite their enthusiasm for their potential, expressed doubts concerning their implementation. This was due to the presumed skepticism of scientists to recognize the relevance of HPS to their research.

A major organizing theme at the workshop was pluralism. Different speakers examined the various pros and cons of adopting a pluralistic stance in a number of fields related to HPS. Katie Kendig (UCL) argued that the Buffonian conception of species was more nuanced and more pluralistic that what is usually assumed; Chiara Ambrosio (UCL) provided a pluralistic reading of C. S. Pierce's account of representation; and Ian Kidd (Durham) illustrated the deep connections between epistemic pluralism and intellectual virtuousness. On the other hand, both Maria Kon (Leeds) and Stephen John (Cambridge) suggested that pluralism had a limited applicability in metaethics and policy respectively.

In trying to flesh out what is HPS for, other speakers attempted to show how it bears on problems in the philosophy of mathematics (Josipa Petrunic, UCL), how it provides a useful perspective through which to examine controversies over intellectual property (Graeme Gooday and Gregory Radick, Leeds), and how it can be interestingly contrasted with alternative approaches like historical epistemology (Pierre-Olivier Méthot, Exeter and Sorbonne).

A final focus in the workshop was the question of how HPS should be taught. Peter Vickers (Leeds) illustrated how HPS could be profitably taught to high school children by means of accessible examples and active participation involving role play. Brendan Clarke (UCL) discussed his experiences of teaching causality using mechanisms to HPS students. Finally, Dan Nicholson (Exeter) explained how an awareness of the historical roots of the philosophy of biology can help broaden the philosophical engagement with biology in the classroom.

On the whole, this workshop confirmed that the HPS community in the UK is alive and well. We look forward to the next one! The financial support of

the British Society for the Philosophy of Science, the British Society for the History of Science, the Mind Association and the five participating institutions is gratefully acknowledged.

Pierre-Olivier Méthot
ESRC Centre for Genomics in Society, University of Exeter & IHPST, Paris1

Dan Nicholson
ESRC Centre for Genomics in Society, University of Exeter

British Society for the Philosophy of Science, 8–9 July

Following tradition, the 2010 annual conference of the British Society for the Philosophy of Science (BSPS) was organised right before the joint session of the Mind Association and the Aristotelian Society, and in the same venue. This year, the meeting took place on July 8-9 at UCD Dublin—it would be interesting to know whether this was the first time the BSPS conference was held outside of British territory.

Characterised by a by now usual quasi-ideal balance between size and quality, the conference alternated lively parallel sessions of contributed papers and high-quality plenary lectures. The first plenary session, on Thursday morning, was devoted to the philosophy of biology and of causation. James Woodward (Caltech, soon Pittsburgh) developed aspects of his well-known interventionist view of causation, discussing in detail the notions of stability and specificity. Marcel Weber (Konstanz) focused instead on talk about information in biology, questioning its connection with causal specificity, as well as the sufficiency of causal graphs for an exhaustive representation of the philosophically relevant aspects of what is studied by biologists.

In the evening's presidential address, John Worrall opened the way to what probably many will remember as the most remarkable moment of the conference: the live performance of the London School of Economics-based rock'n'roll band 'Critique of Pure Rhythm' (a well-assorted group of philosophers with the welcome addition of two younger female components—prima facie, probably not philosophers of science themselves...). In order to leave the audience bewildered even before switching on his amplifier, Worrall decided to do nothing less than questioning the relevance of what is customarily regarded as one of the central issues in philosophy of science: scientific explanation. According to Worrall, why-questions can and should be replaced with demands for accurate descriptions of facts—knowledge 'that' should be sought, not knowledge 'why'. In the process of lending support, in his characteristic ironic style, to this claim, Worrall argued in particular against theistic explanations and for the incompatibility of science and religion. Quite a lot to think about, for sure! However, doubts remain as to whether at least some accounts of scientific explanation (e.g., so-called structural explanation) aren't compatible with the central claims made by Worrall, which would clearly make his eliminativism uncalled for.

On Friday, another exciting parallel session took place, focusing on induction, probability and Bayesianism. In a very interesting lecture, John Norton (Pittsburgh) offered a few relatively simple paradoxical results based on cosmological data with a view to concluding that the traditional probabilistic logic of induction (with additive probabilities) cannot have universal application, essentially because it leaves no room for 'neutral' support. Norton then moved on to advertise his own 'piecemeal', 'material' approach to induction, according to which inductive inferences are always warranted only locally, by the facts prevailing in the relevant specific domain. After Norton, Stefan Hartmann (Tillburg) responded with a forceful defence of Bayesianism which, he suggested, can and should now experience a new boost by becoming 'naturalised'—i.e., by constructively mixing with experimental work, mainly in psychology. Although it is not entirely clear what this entails for the allegedly normative nature of Bayesian epistemology, Hartmann's proposal certainly makes for an extremely interesting research programme.

The five parallel sessions gave a good picture of the current status of philosophical research in Europe in a number of areas, including the philosophy of causation and mechanisms, the philosophy of biology and the philosophy of mathematics. The most represented sub-disciplines where, no doubt, the philosophy of physics and the philosophy of scientific realism vs. anti-realism, whose popularity has constantly increased in recent years. A detailed description of all the papers cannot be given here but, as mentioned, the average quality of the sessions was generally high.

If anything can be hoped for the future of the BSPS conferences, is that they will turn out to be an occasion for more exchange both between people studying different sub-disciplines within such an already specific branch of (analytic) philosophy, and between people with different educational and working backgrounds.

Matteo Morganti
Department of Philosophy, University of Konstanz

Metaphysics and Epistemology in Chinese Philosophy, 10-11 July

The Conference on Metaphysics and Epistemology in Chinese Philosophy, held in Beijing, China, was jointly sponsored by the International Center for Chinese and Comparative Philosophy (ICCCP) of Renmin University of China, the School of Philosophy of Renmin University, and the Association of Chinese Philosophers in America (ACPA). The motivation behind this conference was that there have been numerous conferences on Chinese ethics, but not enough attention has been devoted to Chinese metaphysics and Chinese epistemology. The current conference aims to take a step toward a more systematic study of these two themes in Chinese philosophy.

The first keynote speaker Chung-ying Cheng opened the conference with an exposition of his long-held view that Chinese epistemology is distinct from Western epistemology in that the notion of "the ultimate being" is differently construed in the two metaphysical traditions. The Western tradition, beginning with Greek philosophy, conceives of the ultimate being primarily in passivity and fixation. The Chinese tradition, on the other hand, conceives of the ultimate being in process (becoming) and generation. This ultimate being is called 'benti' (literally, the original substance or the original state), while Cheng depicts it as 'onto-generative'. The discussion on 'benti' or the nature of Chinese metaphysics became one focus for this conference. Bo Wang (Peking U.) analyzed the notion of 'nothingness' in the Daoist tradition. Shiling Xiang (Renmin U.) traced the origins of the notion 'benti' in the Chinese philosophical tradition. Chenshan Tian (Beijing Foreign Studies U.) asked whether we should use the phrase 'Chinese metaphysics' when the basic structure of Chinese thinking is so different from those in the Western tradition. Ralph Weber (U. of Zurich) questioned whether we should use "Chinese" as the depiction of particularist metaphysics, since it is not clear what would count as "Chinese" in this context.

The second keynote speaker Guorong Yang (East China Normal U.) took a constructive approach to delineate a new form of metaphysics that is fundamentally of the Chinese tradition, but infused with contemporary Western ideas as well. He argued that metaphysics should not be detached from concrete human existence, and that we should construct a form of metaphysics that integrates dimensions of human history and human society, human morality and values, human languages and knowledge, etc. He further defined 'ultimate concern' as the inquiry of the origin of the meaning of our existence, and not the inquiry of some unknowable realm. In the same vein, JeeLoo Liu (Cal State Fullerton) constructed what she calls 'Neo-Confucian qi-naturalism' and suggested that under this theory, normative facts of value and normativity exist in the natural states of qi. Hence, the theory could provide an answer to Hume's 'is/ought' problem. She further argued that Confucian moral metaphysics, according to which values exist as fabric of the world, might provide the most robust form of moral realism.

There were other constructive attempts to various theories in Chinese epistemology. Weimin Sun (Cal State Northridge) reconstructed the epistemology of Zhu Xi, and examined the possibility of Zhu Xi's being interpreted as a reductionist. Based on the conviction that there is a long tradition of epistemological theories in the history of Chinese philosophy, Haiming Wen (Renmin U.) analyzed how the epistemology of Song-Ming Neo-Confucianism made a further breakthrough in the investigation of the relationship between mind and things.

Another notable theme of the conference was comparative studies done by various scholars on different sets of comparisons, such as Zhu Xi's and Aristotle's notions of the Supreme Good. The conference reflected pluralistic approaches to Chinese metaphysics and epistemology. The prevailing sense of participants is that such an international conference is a helpful venue to bring scholars working with different methodologies together to exchange ideas and to stimulate new thoughts.

JeeLoo Liu
Department of Philosophy, California State University at Fullerton

Calls for Papers

JOINT ACTION: WHAT IS SHARED?: special issue of the *Review of Philosophy and Psychology*, deadline 15 August.

PHILOSOPHICAL EXPLORATIONS ESSAY PRIZE: on all aspects of the philosophy of mind and action, deadline 30 August.

BIOLOGICAL AND ECONOMIC MODELLING: special issue of *Biology and Philosophy*, deadline 31 August.

LOGIC AND NATURAL LANGUAGE: special issue of *Studia Logica*, deadline 3 September.

THE EXTENDED MIND: special issue of *Teorema*, deadline 1 October.

RECURRENCE, PROVABILITY AND TRUTH: special issue of *Logos Architekton*, deadline 15 October.

AILACT ESSAY PRIZE: in Informal Logic / Critical Thinking / Argumentation Theory, with publication on *Informal Logic*, deadline 31 October.

PHILOSOPHICAL HISTORY OF SCIENCE: special issue of *The Monist*, deadline 31 October.

PHILOSOPHY & TECHNOLOGY BEST PAPER PRIZES: winning papers are published in *Philosophy & Technology*, deadline 1 November.

CATEGORICAL LOGIC: special issue of *Logica Universalis*, deadline 1 November.

CONCEPTS OF TRADITION IN PHENOMENOLOGY: special issue of *Studia Phaenomenologica*, deadline 15 November.

VISUAL REASONING WITH DIAGRAMS: special issue of *Logica Universalis*, deadline 15 December.

EXPERIMENTAL PHILOSOPHY: special issue of *The Monist*, deadline 30 April 2011.

FORMAL AND INTENTIONAL SEMANTICS: special issue of *The Monist*, deadline 30 April 2012.

WHAT'S HOT IN ...

We are looking for columnists willing to write pieces of 100-1000 words on what's hot in particular areas of research related to reasoning, inference or method, broadly construed (e.g., Bayesian statistical inference, legal reasoning, scientific methodology). Columns should alert readers to one or two topics in the particular area that are hot that month (featuring in blog discussion, new publications, conferences etc.). If you wish to write a "What's hot in ...?" column, either on a monthly or a one-off basis, just send an email to features@thereasoner.org with a sample first column.

§4
INTRODUCING ...

...Algebraic, abstract algebraic and behavioral approaches to logical systems. *Part I*

It is commonly believed that *algebraic logic* (*AL*) was born in the 19^{th} century with the paper of Boole, Peirce, De Morgan and Schröder devoted to classical logic. Their approach took *logical equivalence* rather than truth as the foundational logical predicate. Then they developed logical systems in which metalogical studies have an *algebraic character*. *AL* in the above sense was formed independently of the logical works of Frege, Russell and Whitehead in which *truth* and *logical truth* were considered as the primitive logical predicates. Consequently, this second trend in logic became centered on the formal concepts of *assertion* (i.e., *logical validity* and *theoremhood*) and *logical deduction* (i.e., *logical inference*). Therefore, it is claimed that we have—from the beginning of the modern era of logic—at our disposal two alternative and competing approaches to logic. It was not much later on that the Polish logician Alfred Tarski indicated the precise connection between Boolean algebra and the classical propositional logic (*CPL*). His investigations were based on Lindenbaum's idea of regarding the set of sentential formulas as a algebra with operations induced by the logical connectives. This algebra is now commonly termed the formula algebra. Then logical equivalence has its algebraic counterpart in the form of a *congruence relation* on the above-mentioned algebra. Recall that an equivalence relation θ on the algebra $\mathbf{A}$ is said to be a congruence on $\mathbf{A}$ if for every sentential formula $\varphi(x_0, ..., x_{n-1})$ it follows that

$$\left\langle \varphi^{\mathbf{A}}(a_0, ..., a_{n-1}), \varphi^{\mathbf{A}}(b_0, ..., b_{n-1}) \right\rangle \in \theta$$

whenever $\langle a_i, b_i \rangle \in \theta$ for a_i, b_i from the universe of $\mathbf{A}$ (for all $i < n$). In this notation $\varphi^{\mathbf{A}}$ is identified with the algebraic interpretation of φ. In its original form, the Lindenbaum-Tarski approach to *CPL* relies on the fact that *CPL* has a *biconditional* ($\leftrightarrow$) defining logical equivalence. Then the formula algebra is partitioned into logical equivalence classes and the ordinary algebraic process of creating the quotient algebra is applied. This process is now called the *Lindenbaum-Tarski method* and the resulting quotient algebra is termed the *Lindenbaum-Tarski algebra*. Therefore, in the case of *CPL* it turns out that the associated quotient algebra is a free Boolean algebra. Concluding, it can be affirmatively stated that *AL*—in its original form—is centered on the algebraic studies of particular classes of algebras naturally associated with different logical systems. Below there are summarized the most frequently studied logical systems with their algebraic counterpart.

Logic	**Algebraic counterpart**
Classical propositional logic	Boolean algebras
Intuitionistic propositional logic	Heyting algebras
Łukasiewicz's many-valued logic	Wajsberg algebras
Predicate logic	Cylindric algebras
Belnap's four-valued logic	de Morgan lattices
Quantum logics	Ortho- & Orthomodular lattices
Modal logic $S4$	Topological Boolean algebras.

Traditionally this kind of investigation is focused on searching for the relationship between various *metalogical* properties of different logics and the algebraic properties of the associated class of algebras (which are obtained *via* the Lindenbaum-Tarski method). Consequently, algebraic logicians coined the notion of *bridge theorems* for such kind of results. Let $\mathcal{L}$ denotes a given logical system and $\mathbf{K}$ denotes a class of its algebraic counterparts. Then bridge theorems have the following general form:

$$\mathcal{L} \text{ has property } \mathbf{P} \leftrightarrow \mathbf{K} \text{ has property } \mathbf{P}^*$$

where usually $\mathbf{P}$ denotes a typical metalogical property and $\mathbf{P}^*$ is a typical algebraic property. For instance, it was established that there exists a natural connection between *Craig's interpolation theorem* of $\mathcal{L}$ and the *amalgamation* properties of $\mathbf{K}$. A similar relation was discovered between *Beth's definability theorem* of a given logic and the *surjectivity of epimorphisms* of classes of its algebraic counterparts.

Later on the main interest of *AL* shifted to the process by which a particular class of algebras is connected

with an arbitrary logical system and away from the specific algebraic properties of classes of algebras resulting from the application of the Lindenbaum-Tarski method. Thus, the theory of the algebraization of different logics is now commonly called *Abstract Algebraic Logic* (*AAL*). It was observed that there exist many different logical systems that do not possess a biconditional, and hence the ordinary Lindenbaum-Tarski process can not be applied to these systems directly. But in the context of *AAL* there is an abstract concept of logical equivalence which can be defined in every deductive system. This new metalogical tool is termed the *Leibniz congruence*. By using this congruence the Lindenbaum-Tarski process can be adequately generalized and applied to every logic. The Leibniz congruence, $\Omega(T)$, on the formula algebra over a theory T is defined in the subsequent manner: for any pair α, β of terms, $\alpha \equiv \beta$ (modulo $\Omega(T)$) if for every formula φ and any variable p which occur in φ, it follows that $\varphi(p/\alpha) \in T$ if and only if $\varphi(p/\beta) \in T$. Here $\varphi(p/\alpha)$ denotes the substitution of every occurrence of the variable p by the formula α.

Recently a further generalization of the Leibniz congruence was introduced in the branch of *AAL*. Namely it is possible to talk about the so-called *behavioral equivalence* which is regarded as some generalization of the Leibniz congruence. This kind of reasoning is particularly important in the context of *object oriented* programs. Intuitively speaking, two elements are considered *behaviorally equivalent* in a specific implementation $\mathcal{A}$ if they can not be distinguished in $\mathcal{A}$ by any visible (i.e., directly accessible) program taking them as input. Thus the data are split into two classes: *visible data* which can be directly accessed, and *hidden data* that can not be directly accessed. These second kind of data can be considered only by analyzing the meaning of programs with visible output, termed *experiments*. From the reason that it is not possible to access the hidden data one can not evaluate directly the equality of two hidden data. Consequently, ordinary *equational logic* must be superseded by *behavioral equational logic* (also termed *hidden equational logic*) which is based on the concept of behavioral equivalence. Then it is said that two values are behaviorally equivalent if they can not be distinguished by the set of available *experiments*. Consequently, it can be the case that these two values are behaviorally equivalent, even though they actually might *differ* (!). Hence, we can talk about *Behavioral Abstract Algebraic Logic* (*BAAL*).

In the subsequent parts of this article we will discuss *inter alia* such topics as the application of *AL*, *AAL* and *BAAL* in epistemology, ontology and even in quantum mechanics (e.g., we will develop the *BAAL* treatment of quantum measurements).

Piotr Wilczek
Institute of Mathematics, Poznań University of Technology, Poland

. . . Philosophy of epidemiology

Although "philosophy of epidemiology" is not an established philosophy of science subdiscipline on a par with philosophy of physics or biology, there are reasons to think that it's on its way to becoming one.

For one thing, certain famous works in the philosophy of science have drawn on the canons of epidemiology for case-studies. I'm thinking in particular of Carl Hempel's development of hypothetico-deductive model of confirmation and the deductive-nomological model of explanation using the work of Ignaz Semmelweis on childbed fever, and also of Peter Lipton's use of the same material in developing his contrastive account of causal explanation and inductive inference.

More recently, causal modelling in statistics has attracted the attention of philosophers, and the development of causal modelling is heavily influenced by the inferential needs of epidemiologists. In epidemiology, controlled experiments are often difficult or unethical, which pushes epidemiologists straight to the question of how a good inference—predictive or causal—may be distinguished from a poor one. Epidemiology is also stimulating for philosophers because it is concerned exclusively with general causal claims, yet which are also contingent and specific to a population, and hence not easily understood as laws of nature. This provides an interesting line of development from the metaphysical literature on causation, which has in recent years focused largely, though not exclusively, on singular causation.

Finally there is the fact that epidemiologists themselves are particularly methodologically acute among scientists. Although an epidemiologist will build up considerable knowledge about distribution of the diseases and exposures she studies, there is not really a domain of epidemiological knowledge in the way that there is a domain of biological or physical knowledge. An epidemiologists' expertise is primarily methodological rather than factual. This means that epidemiologists write and think about some of the same questions that philosophers do, concerning the nature of causation, how to make causal inferences, how to understand probability, how to understand and express facts about risk, and so on. Epidemiologists have something to teach philosophers, and they are also eager to learn.

During 2010 there is a series of four workshops on epidemiology being held in the History and Philosophy of Science Department in Cambridge, funded by the PHG Foundation, and called "Epidemiology, Risk and

Genomics". The first concerned social determinants of health, a movement which holds that even when biological needs are catered for, social factors are significant predictors of—and, the inference goes, determinants of—health. The inference in question is of course contested, and the discussion ranged from the details of the data to the nature of causal inference and causation itself. The second workshop concerned probability, risk, and harm, and focussed in particular on the significance—or otherwise—of statistical significance testing, or p-values. The group also discussed methods for communicating risk and interpretations of probability. The third workshop, to be held in September, concerns intervention and explanation, and the fourth in December is on causation in epidemiology. More information is available at http://www.hps.cam.ac.uk/epidemiology/.

Here is a selection of further reading on some of the topics mentioned in this piece:

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Broadbent, Alex. "Causation and models of disease in epidemiology." *Studies in History and Philosophy of Biological and Biomedical Sciences* 40 (2009): 302-311.

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Parascandola, M., and D. L Weed. "Causation in epidemiology." *Journal of Epidemiology and Community Health* 55 (2001): 905?912.

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Rothman, Kenneth J. "Causes." *American Journal of Epidemiology* 104, no. 6 (1976): 587?592.

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Rothman, Kenneth J, and Sandler Greenland. "Causation and Causal Inference in Epidemiology." *American Journal of Public Health* (Supplement 1) 95, no. 1 (2005): S144?S150.

Russo, Federica, and Jon Williamson. "Interpreting Causality in the Health Sciences." *International Journal of the Philosophy of Science* 21, no. 2 (2007): 157-170.

Vandenbroucke, J.P. "Is 'The Causes of Cancer' a Miasma Theory for the End of the Twentieth Century?." *International Journal of Epidemiology* 17, no. 4 (1988): 708-709.

Alex Broadbent
Philosophy, Cambdrige

§5 Events

August

FLINS: 9th International FLINS Conference on Foundations and Applications of Computational Intelligence, Chengdu (Emei), China, 2–4 August.

Thought in Science and Fiction: 12th International Conference of the International Society for the Study of European Ideas, Ankara, 2–6 August.

Metaphysics of Science Conference: Kyung Hee University, Seoul, South Korea, 3–5 August.

MSN-DS: 2nd International Workshop on Mining Social Network for Decision Support, Odense, Denmark, 9–11 August.

ICNC-FSKD: the 6th International Conference on Natural Computation and the 7th International Conference on Fuzzy Systems and Knowledge Discovery, Yantai, China, 10–12 August.

Compositional Connectionism in Cognitive Science II: The Localist / Distributed Dimension: Portland, Oregon, USA, 11 August.

ICCP: 10th International Conference on Philosophical Practice, Leusden, Netherlands, 11–14 August.

Making Decisions: Singapore Multidisciplinary Decision Science Symposium, Nanyang Technological University, Singapore, 12–13 August.

Conference on Mathematical Logic and Set Theory: Chennai, India, 15–17 August.

ARCOE: Automated Reasoning about Context and Ontology Evolution, Lisbon, 16–17 August.

ECAI: 19th European Conference on Artificial Intelligence, Lisbon, Portugal, 16–20 August.

European Meeting of Statisticians: Department of Statistics and Insurance Science, University of Piraeus, Greece, 17–22 August.

Truth Matters: Toronto, 18–20 August.

ICDL: IEEE International Conference on Development and Learning, University of Michigan, Ann Arbor USA, 18–21 August.

Artificial Life: 12th International Conference on the Synthesis and Simulation of Living Systems, Odense, Denmark, 19–23 August.
COMPSTAT: 19th International Conference on Computational Statistics, Paris, France, 22–27 August.
CIPP: Collective Intentionality VII, Perspectives on Social Ontology, University of Basel, Switzerland, 23–26 August.
Federated MFCS & CSL Conference: 35th International Symposiums on Mathematical Foundations of Computer Science and 19th EACSL Annual Conferences on Computer Science Logic, Brno, Czech Republic, 23–27 August.
Concept Types and Frames: in Language, Cognition, and Science, Düsseldorf, Germany, 24–26 August.
ESPP: Meeting of the European Society for Philosophy and Psychology, Bochum and Essen, Germany, 25–28 August.
AiML: 8th International Conference on Advances in Modal Logic, Moscow, 25–29 August.
Response-dependent Concepts: University of Oslo, Norway, 26–28 August.
Symposium on Michael S. Moore's Causation and Responsibility: Rutgers University School of Law-Camden, 27 August.
ASAI: 11th Argentine Symposium on Artificial Intelligence, Ciudad Autónoma de Buenos Aires, 30–31 August.
Because II: Humboldt-Universität zu Berlin, Germany, 30 August - 1 September.
MALLOW: Multi-Agent Logics, Languages, and Organisations Federated Workshops, Lyon, France, 30 August - 2 September.

September

ICTAC: 7th International Colloquium on Theoretical Aspects of Computing, Natal, Brazil, 1–3 September.
KSEM: 4th International Conference on Knowledge Science, Engineering and Management, Belfast, Northern Ireland, UK, 1–3 September.
FEW: 7th Annual Formal Epistemology Workshop, Konstanz, 2–4 September.
CMM Graduate Conference: University of Leeds, 3 September.
The Cartesian Myth of t he Ego and the Analytic/Continental Divide: Faculty of Philosophy, Radboud University Nijmegen, 3–4 September.
TIME: 17th International Symposium on Temporal Representation and Reasoning, Paris, France, 6–8 September.
CP: Principles and Practice of Constraint Programming, St. Andrews, Scotland.6–10 September
Principles and Methods of Statistical Inference with Interval Probability: Durham, 6–10 September.
Causation and Disease in the Postgenomic Era: 1st European Advanced Seminar in the Philosophy of the Life Sciences, Geneva, Switzerland, 6–11 September.
Logic, Algebra and Truth Degrees: Prague, Czech Republic, 7–11 September.
Pluralism in the Foundations of Statistics: University of Kent, Canterbury, UK, 9–10 September.
Economics and Naturalism: Kazimierz Dolny, Poland, 11–15 September.
CNL: 2nd Workshop on Controlled Natural Languages, Marettimo Island, Sicily, Italy, 13–15 September.
PGM: 5th European Workshop on Probabilistic Graphical Models, Helsinki, Finland, 13–15 September.
Epistemic Aspects of Many-valued Logics: Prague, 13–16 September.
RSS: Royal Statistical Society International Conference, Brighton, United Kingdom, 13–17 September.
Vagueness and Metaphysics: Barcelona, 16–17 September.
Levels of Processing: Foundations of Social Cognition: University Club Bonn, 16–18 September.
AS: Applied Statistics, Ribno, Bled, Slovenia, 19–22 September.
GAMES: Annual Workshop of the ESF Networking Programme on Games for Design and Verification, St Anne's College, Oxford, UK, 19–23 September.
Words and Concepts: An Interdisciplinary Workshop on Philosophy, Psychology, and Linguistics: University of Granada, Spain, 20–21 September.
IVA: 10th International Conference on Intelligent Virtual Agents, Philadelphia, Pennsylvania, USA, 20–22 September.
LRR: Logic, Reason and Rationality, Centre for Logic and Philosophy of Science, Ghent University, Belgium, 20–22 September.
World Computer Congress: International Federation for Information Processing, Brisbane, Australia, 20–23 September.
ECML: European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Barcelona, Spain, 20–24 September.
MATES: 8th German Conference on Multi-Agent System Technologies, Karslruhe, Germany, 21–23 September.
Actual Causation: University of Konstanz, Germany, 23–24 September.
Truth, Knowledge and Science: 9th National Conference of the Italian Society for Analytic Philosophy, University of Padua, 23–25 September.
&HPS3: Integrated History and Philosophy of Science, Indiana University, Bloomington, 23–26 September.
Logic and Language Conference: Northern Institute of Philosophy, University of Aberdeen, 24–26 September.
SMPS: 5th International Conference on Soft Methods in Probability and Statistics, Mieres (Asturias), Spain, 28 September - 1 October.

Logic or Logics?: Workshop, Arché Research Centre, St Andrews, Scotland, 30 September - 1 October.
Truth, Meaning, and Normativity: Department of Philosophy, Institute for Logic, Language and Computation, Universiteit van Amsterdam, 30 September - 2 October.

October

AP-CAP: Asia-Pacific Computing and Philosophy Conference, Wellington Institute of Technology (WelTec), Petone, Wellington, New Zealand, 1–2 October .
E-CAP: 8th European Conference on Computing and Philosophy,Muenchen, Germany, 4–6 October.
Objectivity and the Practice of Science: Tilburg Center for Logic and Philosophy of Science, 5 October.
AIAI: 6th IFIP International Conference on Artificial Intelligence. Applications & Innovations, Ayia Napa, Cyprus, 5–7 October.
Calculation, Intuition, and A Priori Knowledge: Tilburg University, The Netherlands, 5–8 October.
Validation in Statistics and Machine Learning: Weierstrass Institute, Berlin, 6–7 October.

Causality in the Biomedical and Social Sciences

Erasmus University Rotterdam, 6–8 October

Integrating Complexity: Environment and History: University of Western Ontario in London, Ontario, Canada, 7–10 October.
LPAR: 17th International Conference on Logic for Programming, Artificial Intelligence and Reasoning, Yogyakarta, Indonesia, 10–15 October.
Philosophy of Mind, Reduction, Neuroscience: University of Lausanne, Switzerland, 12–16 October.
SEFA: 6th Conference of the Spanish Society for Analytic Philosophy, University of La Laguna, Tenerife.14–16 October
Philosophy of Scientific Experimentation: A Challenge to Philosophy of Science: Center for Philosophy of Science, University of Pittsburgh, 15–16 October.
The Nature of Belief: The Ontology of Doxastic Attitudes, University of Southern Denmark, Odense, 18–19 October.
FMCAD: International Conference on Formal Methods in Computer-Aided Design, Lugano, Switzerland, 20–23 October.
ADT: 1st International Conference on Algorithmic Decision Theory, Venice, Italy, 21–23 October.
Workshop on Bayesian Argumentation: Department of Philosophy & Cognitive Science, Lund University, Sweden, 22–23 October.
Field Science: 26th Boulder Conference on the History and Philosophy of Science, University of Colorado at Boulder, 22–24 October.
NonMon@30: Thirty Years of Nonmonotonic Reasoning, Lexington, KY, USA, 22–25 October.
MWPMW: 11th annual Midwest PhilMath Workshop, Philosophy Department, University of Notre Dame, 23–24 October.
IJCCI: 2nd International Joint Conference on Computational Intelligence, Valencia, Spain, 24–26 October.
BNAIC: 22nd Benelux Conference on Artificial Intelligence, Luxembourg, 25–26 October.
ICTAI: 22th International IEEE Conference on Tools with Artificial Intelligence, Arras, France, 27–29 October.

November

ICMSC: IEEE International Conference on Modeling, Simulation and Control, Cairo, Egypt, 2–4 November.
LogKCA: International Workshop on Logic and Philosophy of Knowledge, Communication and Action, Donostia, San Sebastiń, Spain, 3–5 November.
MindNetwork: 2nd meeting of the Mind Network, a network for Philosophy of Mind & Cognitive Science, King's College, Cambridge, 6 November.
MICAI: 9th Mexican International Conference on Artificial Intelligence, Pachuca (near Mexico City), Mexico, 8–12 November.
Causation, Coherence, and Concepts: Konstanz, 11–13 November.
P-NPMW: 2nd Paris-Nancy PhilMath Workshop, Paris, 17–19 November.
AMBN: 1st International Workshop on Advanced Methodologies for Bayesian Networks, Tokyo, Japan, 18–19 November.
LENLS: Logic and Engineering of Natural Language Semantics, Tokyo, 18–19 November.
TAAI: Conference on Technologies and Applications of Artificial Intelligence, Hsinchu, Taiwan, 18–20 November 18-20.
KICS: 5th International Conference on Knowledge, Information and Creativity Support Systems, Chiang Mai, Thailand, 25–27 November.
ISDA: International Conference on Intelligent Systems Design and Applications, Cairo, Egypt, 29 November - 1 December.

December

MINDGRAD: Warwick Graduate Conference in the Philosophy of Mind, University of Warwick, UK, 4–5 December.
CACS: International Congress on Computer Applications and Computational Science, Singapore, 4–6 December.
NIPS: 24th Annual Conference on Neural Information Processing Systems, Vancouver, B.C., Canada, 6–11 December.

From Cognitive Science and Psychology to an Empirically-informed Philosophy of Logic: Amsterdam, 7–8 December.
APMP: 1st International Meeting of the Association for the Philosophy of Mathematical Practice, Brussels, 9–11 December.
ICDM: International Conference on Data Mining, Sydney, Australia, 13–17 December.
SILFS: International Conference of the Italian Society for Logic and Philosophy of Sciences, University of Bergamo, Italy, 15–17 December.
Scepticism and Justification: COGITO Research Centre in Philosophy, Bologna, 17–18 December.
International Conference on Recent Advances in Cognitive Science: Varanasi, U P, India, 18–20 December.

§6 Courses and Programmes

Courses

ESSLLI: European Summer School in Logic, Language and Information, University of Copenhagen, Denmark, 9–20 August.
SIPTA: 4th school of the Society for Imprecise Probability: Theories and Applications, Durham, UK, 1–6 September.
Logic or Logics?: Mini-course, Arché Research Centre, St Andrews, Scotland, 27–29 September.
BLT: Bochum-Lausanne-Tilburg Graduate School: Philosophy of Language, Mind and Science on Calculation, Intuition, and A Priori Knowledge, Tilburg University, The Netherlands, 5–8 October; Philosophy of Mind, Reduction, Neuroscience, University of Lausanne, Switzerland, 12–16 October.
SELLC: Sino-European Winter School in Logic, Language and Computation, Guangzhou, China, 3–18 December.

Programmes

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 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 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 on logical, causal, probabilistic, scientific, mathematical and machine reasoning and further modules from Philosophy, 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 Mathematical Logic and the Theory of Computation: Mathematics, University of Manchester.
MSc in Philosophy of Science, Technology and Society: University of Twente, The Netherlands.
Master of Science: Logic, Amsterdam.

§7 Jobs and Studentships

Jobs

Post-doctoral Research Fellow: 'Influencing Collective Human Behavior Using Distributed Intelligent Systems', Masdar Institute (joint project with MIT), until filled.
Teaching Fellow: in Epistemology and Philosophical Logic, Department of Philosophy, University of York, deadline 4 August.
Research and Teaching Position: in Philosophy of Science, UNAM, Mexico City, deadline 6 August.
Assistant Professorship: in Adaptive Multi-Agent Systems, Department of Knowledge Engineering (DKE), Maastricht University, the Netherlands, deadline 30 August.

Bertrand Russell Professorship of Philosophy: Faculty of Philosophy, University of Cambridge, deadline 10 September.
Professorship: in Mathematical Logic, Department of Mathematics, Stockholm University, deadline 15 September.
Post-Doctoral Research Fellowships: in the Humanities, Social Sciences, and Theoretical Sciences, All Souls College, University of Oxford, deadline 24 September.
Visiting International Fellowship: in social research methods for visits in calendar year 2011, Department of Sociology, University of Surrey, Guildford, UK, deadline 30 September.
Wagner Risk Fellowship: Center for Philosophy of Science, University of Pittsburgh, deadline 15 November.

Studentships

10 PhD student positions: within the doctoral program "Mathematical Logic in Computer Science", Vienna University of Technology (TU Wien), until filled.
BSPS Doctoral Scholarship: in Philosophy of Science, deadline 1 August.
PhD Studentship: for research in 'Reasoning with Uncertain Evidence' or 'Adversarial Reasoning', Cranfield University at the Defence Academy of the UK, Shrivenham, deadline 2 August.
Visiting Graduate Fellowships: for visits within the periods 11 October to 13 December 2010 and 25 May to 11 July 2011, Northern Institute of Philosophy (NIP) at The University of Aberdeen, deadline 8 August.
PhD position: 'Modelling the evolution of theory of mind', Institute of Artificial Intelligence (ALICE), University of Groningen, deadline 1 September.
PhD position: 'A cognitive system supporting intelligent interaction', Institute of Artificial Intelligence (ALICE), University of Groningen, deadline 1 September.
PhD position: 'Logics for higher-order social cognition', Institute of Artificial Intelligence (ALICE), University of Groningen, deadline 1 September.