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EDITORIAL

I am happy to be asked to guest edit the Reasoner again, having gone through some transitions, moving away from Kent to the University of Hertfordshire, and soon to move again to UCL. So thanks to the editorial team for the invitation.

This time I chose to interview a new colleague of mine at the University of Hertfordshire, as I have been promising myself time to really understand his work properly—promising myself for some months now! Daniel D. Hutto is a New Yorker, although he studied in the UK at St Andrews and York, before joining the University of Hertfordshire in 1993. He is now the Research Leader for Philosophy and Professor of Philosophical Psychology at the University of Hertfordshire. The first means that he's had to run around worrying about the REF [the latest UK research assessment]; and the second is something I'm going to ask him about.

Dan's recent projects have focused on consciousness, intentionality and everyday social understanding. He is a chief co-investigator for the Australian Research Council 'Embodied Virtues and Expertise' project (2010–2013) and collaborator in the Marie Curie Action 'Towards an Embodied Science of Intersubjectivity' initial training network (2011–2015), and the 'Agency, Normativity and Identity' project (2012–2015) funded by the Spanish Ministry of Innovation and Research. His most recent book is co-authored with Erik Myin (Antwerp) entitled *Radicalizing Enactivism: Basic Minds without Content* for MIT Press.

I chose to interview Dan because I am so interested, not only in the main theses he advocates, but in his reasons for working on the issues he does, and how he conceives of his philosophical picture impacting on the many disciplines with which he engages. These include clinical psychiatrists, educationalists, narratologists, neuroscientists and psychologists. I will now move on to let Dan tell you about his research himself.

PHYLLIS ILLARI
Science and Technology Studies, UCL

FEATURES

Interview with Dan Hutto

Phyllis Illari: Hello Dan, and thanks for agreeing to come and talk to *The Reasoner*.

Dan Hutto: Hello, and no problem, I'm happy to chat.

PI: So, you're a 'Professor of Philosophical Psychology'. What's a Professor of Philosophical Psychology? Are you the only one?

DH: Maybe! I'm not sure. I took the term from Wittgenstein's remarks on philosophical psychology. He says that there is conceptual confusion in psychology. Philosophical psychology is about investigating and clarifying conceptual issues, which are the business of philosophy, and understanding how they relate to psychology's empirical methods and findings. Psychology hasn't escaped from its philosophical roots, but is in continual interface with philosophy.

PI: My experience of talking to psychologists is that they are very aware of philosophical assumptions in their work—assumptions which they know are not empirically supported.

DH: Yes. Although the psychology department were concerned when I picked it as my job title, in case I was trying to claim an expertise I wasn't entitled to! But now I function as a kind of liaison. I see my task as conceptual clarification, examining what's possible, what might be true and what we can take as certain. For example, if we have mischaracterised basic minds, that's a problem for psychology.

PI: You do a lot of work with—I think psychotherapists, most recently?

DH: Yes. My main focus in recent years has been to defend an alternative to individualist and intellectualist mainstream cognitivist—e.g., 'theory of mind'—approaches, reconceiving the status and importance of these embodied and narrative practices in our capacity to relate to and understand others. That research has contributed to the development of diagnostic tools for the early detection and treatment of schizophrenia and new methodological guidelines for the clinical evaluation of Autism Spectrum Disorders (ASD).

PI: You have a book just out with Erik Myin called *Radicalizing Enactivism: Basic Minds without Content* for MIT Press. What's the main aim of the book? What's its thesis?

DH: It's that we over-intellectualise the mind, holding that certain views of the mind are impossible because we imagine that the mind is essentially intellectual. We argue that this is not so. There are ways of being intelligent that don't involve representing anything; there are intelligent ways of interacting with the world, without representing it. This is both a coherent possibility, and we have every reason to believe it is true.

PI: From the empirical evidence?

DH: The approach accommodates the empirical evidence, sometimes very neatly (as we discuss in the book)—but the reasons for believing the thesis are not primarily empirical.

PI: You think that higher functions, such as those requiring language, do involve content, so you are not interested in eliminating content entirely, have I got that right?

DH: Yes, exactly.

PI: So what's the intellectual payoff of 'basic minds without content'?

DH: The core idea is that over-intellectualising basic minds reverses the right explanatory order: we mistakenly read a more intellectual, representation-involving, model of the mind down into basic minds; when what we should do is appreciate how much we can achieve without representation, and read up to see how much that different model can explain—so much more than we realise.

Let me try to convey a sense of how radical our position is. Fodor has a clear model of content based on linguistic properties. Some reject it while sticking with the idea that there are other kinds of mental representation. So, for example, Churchland rejects the Fodorian vision of basic minds as being language-like in their syntax. But he misses

something. It is possible to a reject a linguistic model about the vehicles of content while retaining an essentially linguistic model of content. If so, we argue, there are still problems. It isn't enough just to move to a weaker notion of the vehicles of content in basic minds. Taking it further some philosophers and cognitive scientists have been trying to develop a non-linguistic notion of content in recent years. Thus they posit mental states with veridicality or accuracy conditions instead of truth conditions. But this position is still holding on to core idea of things that are picked out, and standards to assess them against real world. So although these theorists have explicitly moved away from a linguistic model of content they are convinced that they still need some notion of content. Thus they hang on to the idea that mental states must have conditions of satisfaction of some kind. We identify problems for even this, the weakest kind of intellectualism, in the book. A view that comes closest to ours is one that tries to imagine mental content as identical to the state of affairs that the organism responds to. But for various reasons we challenge the coherence or stability of such a position—which takes us to the idea that acts of basic cognition are intentionally directed and world-involving but not content-involving.

PI: But this sounds just like a causal coupling with the world?

DH: Talk of causal coupling embeds a potentially misleading metaphor. Radical enactivism claims basic minds are interactive—they are sensitive and responsive to aspects of the world. It claims that we don't need a notion of mental states with conditions of satisfaction of any kind in order to understand such minds. Indeed, that trying to do so leads to intractable problems; about how to naturalize such content and how to explain how it intelligibly interfaces with linguistic forms of content. Trying to defend a maximally minimal form of intellectualism that appeals to non-standard contents is the new trend, as seen in the work of Crane, Burge and Gauker for example. We want to get rid of this heavily occupied middle ground between those that believe in something like a language of thought and enactivism, arguing that even the new, softer proposals about contentful minds over-intellectualise basic minds. The right characterisation of basic minds is to regard them as interactive and non-representational.

PI: Great, thanks, I'm getting a much better sense of what you think needs to be got rid of. But why? Why does it matter?

DH: If the notion of content dissolves entirely, then that affects a lot of debates.

PI: Dissolves only in basic minds, right?

DH: Yes. But even so. For example, the debates about internalism about content and causal-constitutive arguments depend on assumptions about content.

They assume what's mental is representational, then resist arguments for the extended mind on that basis. If content goes then in basic minds the internalism externalism debate vanishes. The notion of the extended mind also collapses. There is no vehicle to extend if there is no content. Instead, basic minds are already *extensive*—they are interactive engagements involving the world.

The radical enactivist model also threatens computationalism. This is why it has been of real interest to computer scientists, engineers, psychotherapists, and educationalists. If there are no representations in basic minds, and basic minds make up most of what we do, then that alters huge numbers of discussions predicated on intellectualism. Consider debates about social cognition. We can't have a watered down theory of

mind—whether theory-based or simulative—without some kind of representation. So if basic minds lack content this is a game changer. Whether radical enactivism is true thus matters to primatology, developmental psychology, cognitive psychology and so on. Many in other fields are actively exploring these topics. For example, I just joined the Board of Goldsmith's Centre for Embodied, Embedded, Enactive and Ecological approaches to Cognitive Science that has this as its explicit mission statement. It is well known that there has been a backlash against intellectualist ways of thinking with the development of Dynamical Systems Theory and embodied approaches to AI. The new book provides a philosophical justification for the good work that is already underway in these fields. So my aim is backwards looking in providing that justification, but also forwards looking, encouraging the field to move forward. We've put strong arguments together and articulated more precisely what's at stake and what the issues are.

PI: Do you think the book will succeed?

DH: Yes! Will it succeed in my lifetime? Well, I don't know! One hopes.

PI: When it comes to language-based ways of understanding minds your work touches on the idea of narrative. Can you explain what that is, and how it is relevant to reasoning?

DH: My views on the role of narrative in understanding minds causes me a slight problem—the notion is too popular and people interpret it to mean what they want! And my views on narrative can look inconsistent with my other work, because narratives are representational artefacts! But once we have language, we do have representation, and narratives have special characteristics. I hold that through engaging in narrative practices we come by the norms and forms of folk psychology, allowing us to construct and understand reason-based explanations. For me, such explanations are neither theoretical nor theory-based. They go into the particular and idiosyncratic features of someone's history. Like historical explanation, they differ from the detached general explanations of theoretical science. In explaining our own and others' actions, we are not just interested in prediction or retrodiction. We want to know why someone acted on some occasion. These explanations must be understood against the background of certain norms and must be given by narratives.

PI: What do you take to be the main aim of your work?

DH: My various work is actually all aimed at building up a systematic vision, even my work on Wittgenstein. I've got a line of work on Wittgenstein, a line on narrative, and a line on enactivism. But they all cohere—and I see, better and better, how they do over time.

PI: Is this tied in with the account of basic minds you've just described?

DH: Yes. But it has been a long time evolving. There have been big changes, too. I once tried to make a notion of minimal content work and gradually came to realize it doesn't. Lots of trial-and-error.

PI: So you yourself thoroughly explored the middle ground you're now trying to clear?

DH: Yes! To be completely honest I began my PhD hoping to make a theory of content work, earnestly trying to naturalise content. My hopes were dashed and I live with that! I used to be very anti-Wittgenstein and pro-Fodor. So I understand and sympathise with the motivations for these views. But it leads me to worry about preferences

masquerading as arguments in philosophy. They sometimes appear as what I call 'explanatory need' arguments, where the explanatory need has been self-generated.

PI: What do you think is the main aim of researchers working on reasoning?

DH: Very various! So I can only speak for myself. For me, the nature of reasoning or intelligence more generally, even our most sophisticated reasoning, is grounded in basic minds. We need to alter our usual perspective about what minds are.

PI: Well, thanks Dan, that's been great. Just to finish up, you, like so many, have been harassed writing REF statements. But I know you have some non-standard views about impact. Do you care to share what you think about the impact agenda? (In the UK, impact has just become 25% of the upcoming research assessment, the REF, and of course many funding bodies are now including impact as an assessment criterion for grant applications.)

DH: Philosophy should be relevant, is relevant, and can be demonstrated to be relevant. If someone's research has had impact, they should get credit for it, and they haven't up until now. Of course, there's valuable philosophical work that doesn't have impact, and assessing impact can be taken too far, that's right. But it's only a percentage of the REF, as it should be. It should be one way among others of measuring the value of research, and as that, it is useful.

PI: Actually, I never thought of it that way round, as giving people credit who haven't had credit before. Thanks, Dan!

DH: No problem, it's been fun. Thanks.

Intensional objects are extensional counterparts

A quite novel, but very natural and persuasive view of 'intensional objects' is obtainable using Hilbert's Epsilon Calculus. I show that here with respect to a well known distinction between transitive verbs.

The standard epsilon calculus contains referential terms of the form 'ϵxFx' for all predicates 'F' in the language; it also contains the axiom '$(\exists x)Fx \supset F\epsilon xFx$' from which one can naturally obtain the equivalence between the two sides (Leisenring, A.C. 1969: *Mathematical Logic and Hilbert's Epsilon Symbol*, Macdonald, London). Thus if $(\exists x)Fx$ then the referent of 'ϵxFx' is to be selected from amongst the Fs, while if $\neg(\exists x)Fx$ then it can be selected arbitrarily from the world at large. Quite commonly it is selected from amongst what counterparts there are to an F in the actual world, i.e., from amongst things that are 'nearly F'.

Unlike Russell's iota terms, epsilon terms are symbols for individuals, and so they formalise demonstratives, in line with Russell's identifying such as 'logically proper names', in his lectures on Logical Atomism. If there is no uniqueness clause requiring a reading in terms of 'the', then 'ϵxFx' is best read 'that F', as arises, for instance, when reading '$(\exists x)Fx.G\epsilon xFx$' as 'There is an F. That F is G'. Epsilon terms in these kinds of contexts replace pronouns in ordinary speech. Thus in this last case 'That F' could be replaced by 'It'. Such a pronoun works pragmatically to point to elements in the preceding discourse; here the F that was brought into the discourse by the preceding 'There is an F'. But reference to individuals can arise without any such explicit introduction. In Donnellan's historic case with the referential phrase 'the man with martini in his glass'

used referingly, for instance, the speakers are just selecting a referent for the epsilon expression '$\epsilon x(Mx.Gx)$' when $\neg(\exists x)(Mx.Gx)$, in line with the general semantics for epsilon terms. In this case the reference is to something like a man with martini in his glass, even if the description does not exactly fit.

This counterpart idea can be used to clarify the distinction between 'extensional' and 'intensional' transitive verbs, amongst other things. A central difference between 'find' and 'kiss' on the one hand, and 'seek' and 'wish for' on the other, for instance, is that, as it has been put, the latter verbs may take objects 'which do not exist'. Montague even would say that 'John seeks a unicorn' does not involve a relation to an extensional individual, since that individual would have to be a unicorn, he thought, implying that unicorns exist. Instead he took the relation to be to the property of being a property of a unicorn (Gamut, L.T.F. 1991: *Logic Language and Meaning* vol II, University of Chicago Press, Chicago, 168). But we can take it to be a relation to some counterpart of, or maybe even a real unicorn. For (following Quine's suggestion) we may analyse 'John seeks a unicorn' as 'John wants to locate a unicorn' i.e.,

$$Wj(\exists x)(Ux.Ljx),$$

with 'Wj' meaning 'John wants that' and 'Ljx', 'John locates x'. But this is

$$Wj(Ua.Lja)$$

where $a=\epsilon x(Ux.Ljx)$, i.e., that unicorn which John finds. In particular, therefore, 'John seeks a unicorn' implies that WjLja, and so that John seeks an individual. That individual, the 'unicorn' which John finds, of course, might just be a counterpart of the real thing, for example a rhinoceros, and so only through want of anything better be called 'a unicorn'. But such elasticity, indeed irony in the description in an unsuccessful case, is just part of what is involved when referring to 'fictions' in the now relevant sense. What 'John seeks a unicorn' also implies, though, is that WjUa, and so that John wants the individual found to be a unicorn, which is what it will be if the search is successful. He wants, in other words, whatever extensional object is found at the end of his search to be a unicorn, whether the search ends with a rhinoceros, a real unicorn, or whatever. So while 'John seeks a unicorn' certainly does not imply that unicorns exist, since it does not imply that Ua, importantly it still implies that some individual is wanted to be a unicorn, specifically WjUa.

It is commonly appreciated that one might look for a straightforwardly extensional individual in the form of a named person, which backs up this 'extensional' analysis of 'look for' substantially. But what about 'Charles is seeking the murderer of a'? Does that involve being related to a second order property in the Montagovian sense? Not if 'the murderer of a' is a purely referential term, since then this case is exactly like the one with the named person. But if 'the murderer of a' is taken to be descriptive then, like the above, it again involves a relation to an extensional individual, referred to as 'the murderer of a which is found', with the added feature that what is also wanted is that that individual did in fact murder the a in question, i.e., that no counterpart is involved. But a want being just a want, of course, that still allows that some counterpart is actually involved. Likewise with 'Charles wants to become Mayor of Dunedin' as opposed to, say, 'Charles is talking to the Mayor of Dunedin'. The former is

WcF(∃x)(Mx.x=c),

with 'WcF' as 'Charles wants that it will be the case that', and 'Mx' 'x is Mayor'. And so it is

WcF(Mb.b=c),

where b=εx(Mx.x=c), i.e., that Mayor of Dunedin which is Charles. If Charles never gets to being Mayor of Dunedin the identity of this individual can only be speculated about. Perhaps the nearest Charles gets is seeing his son being a Deputy Mayor of Dunedin, for instance. But whatever transpires, Charles at least wants this object to be him, as well as being a proper Mayor, so his want is still directed at a straightforward extensional object.

HARTLEY SLATER
Philosophy, University of Western Australian

E does not equal K

As part of his radical knowledge-first epistemology Timothy Williamson (2000: *Knowledge and its Limits*, Oxford University Press) has argued that one's evidence is just what one knows. This is the infamous "$E = K$" component of his view. Where '$K_S p$' signifies that S knows that p and '$E_S p$' signifies that p is evidence for S, this thesis can be stated simply but more clearly as follows:

$$(W1) \ (\forall p)E_S p = K_S p.$$

Another important component of Williamson's view of knowledge is the view that knowledge is the most general factive mental state operator. Accordingly, if a proposition is known, then it is true. This familiar and orthodox sort of factivity condition for knowledge can be simply stated as follows:

$$(W2) \ (\forall S)(\forall p)K_S p \rightarrow p.$$

However, W1 and W2 directly entail the following, very interesting and not so familiar, claim:

$$(W3) \ (\forall S)(\forall p)E_S p \rightarrow p.$$

Essentially, W1 and W2 entail a *factivity condition for evidence*. The problem however is that W3 is clearly false.

The following utterly pedestrian example demonstrates this. Millikan's famous oil-drop experiments were conducted in order to determine the charge on an electron, e, empirically, and to determine that charge was quantized rather than continuous (Franklin, A. 1997 "Millikan's Oil-Drop Experiments," *The Chemical Educator* 2: 1–14). Let us then consider the manner in which this experiment was performed in order to confirm the claim that charge was quantized. First, the value of e is theoretically determined

as follows. Where N_A is Avogadro's constant and F is Faraday's constant, the value of e is given by the equation $e = F/N_A$. Millikan's experimental procedure to empirically determine the value of e was, however, quite complex and it involved spraying small electrically charged drops of oil in an electrical field produced in an ingenious apparatus that involved a parallel pair of horizontal metal plates across which a uniform electrical field was created. The drops were allowed to fall and then rise due to the effect of the electrical field. The droplets in the apparatus move at a rate determined by gravity, the viscosity of the air, and the electric force. The gravitational and viscous forces on the oil drops can be calculated based on the size and velocity of the oil drops. As a result, the electric force on the oil drops can be determined. Since this electric force is the product of the electric charge and the electric field involved, the electric charge of the oil drops can be determined. By measuring the electrical charges of many oil drops, Millikan determined both the value of e, and that the charges are all integer multiples of e. Determining a relatively exact value of e involved measuring the following parameters as accurately as possible: temperature, pressure, voltage, the coefficient of viscosity of air, the density of clock oil, the value of the gravitational constant and the times of rise and fall of the oil drops. The important point to note then is that all of Millikan's measurements were—and still are—taken to be evidence for the claim that electrical charge is quantized. But, the measured quantities used to determine the value of e were all approximations due to the measurement errors inherent in determining the values of the relevant parameters. Other, more accurate, contemporary experimental methods have determined that the value of e is $1.602176487(40) \times 10^{-19}C$. But, Millikan's experiment determined the value of e to be $1.5924(17) \times 10^{-19}C$. So, the evidence Millikan used to confirm the claim that electric charge is quantized is only approximately true, due to the inexactness of the various methods of measurement used in the experiment.

This sort of example is absolutely commonplace in the sciences (and in everyday life) and it exemplifies the following crucial insight. In most, if not all, real cases the evidence used in the confirming and disconfirming of hypotheses (or beliefs) is not—strictly speaking—true. The kinds of measured values that serve as evidence in the sciences are typically only approximately true because they are inexact by their very nature. But, all approximately true claims are false (see Hilpinen, R. (1976 : "Approximate Truth and Truthlikeness," in *Formal Methods in the Methodology of the Empirical Sciences*, edited by Marian Przelecki, et al., 19–42. Dordrecht: Reidel), Kuipers, T. (1978: *What is Closer-to-the-truth?* Amsterdam: Rodopi), Oddie, G. (1986: *Likeness to Truth* Dordrecht: Reidel), and Oddie, G. (2008: "Truthlikeness," The Stanford Encyclopedia of Philosophy (Fall 2008 Edition), Edward N. Zalta (ed.))).

One might be tempted to respond that all such scientific measurements are understood to have implicit error bars representing their uncertainty as follows: $x \pm \delta$. Thus, they are not just approximately true. However, this does not undermine the fact that the claim that the value of e is $1.5924(17) \times 10^{-19}C \pm \delta_1$ is only approximately true relative to the more accurate value of $1.602176487(40) \times 10^{-19}C \pm \delta_2$. The ranges of such measures need not coincide at all. Moreover, this is not true of everyday measurements such as using a tape measure to see if a couch will fit through a door. No error bars are involved at all. Adopting Williamson's views would then appear to commit us to the totally implausible view that such measurements are not evidence, because they are not

true and thus cannot be knowledge. But this is clearly at odds with actual practice and such measurements are universally taken to function as evidence, often as compellingly good evidence. So, at least in practice, evidence is not factive. In other words, W3 appears to be false. As a result, W1, W2 or both W1 and W2 are false. So, either one or both of these cornerstones of Williamson's knowledge-first epistemology must be conceded if the facts of confirmational practice are respected. However, since factivity is such a deeply held and orthodox view, it is much more reasonable to suppose that W1 must be ceded. So, $E \neq K$.

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Michael Shaffer
Philosophy, St. Cloud State University

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News

Launch of the Society for the Philosophy of Information

Following a 10-year period of formal and informal collaboration between several researchers, the establishment of the Society for the Philosophy of Information (SPI) inaugurates the next phase in the development of the philosophy of information as an independent and self-sustained philosophical field.

The Society was founded during the fourth workshop on the philosophy of information held at the University of Hertfordshire in May 2012, and is now ready to open its membership to anyone interested in the philosophy of information while promoting its scientific and educational activities.

Prior collaborations, including part of the work done at the Oxford-based research-group, several editorial projects ([1], [2], [3], [4], [5], ...), and a highly successful workshop series, will find a new home in this society. In addition to this legacy, several new activities will be launched and led by some of the current members of the society.

Concretely, the SPI:

- brings together scholars in the area harnessing the multidisciplinary and international nature of the Philosophy of Information;

- organises workshops, seminars, conferences and other similar activities to explore the philosophical issues concerning the concept of information and its cognate notions;

- publishes teaching material for undergraduate and graduate courses on the Philosophy of Information;

- maintains a state-of-the-art collection of bibliographic resources;

- fosters editorial projects and funding proposals.

In this way, the SPI offers learning and research instruments to undergraduate and graduate students, while promoting the academic network and activities of junior and senior academics whose work focuses on the Philosophy of Information.

The [website of the SPI](#) is the main centre of activity where we present the aim and focus of the philosophy of information, the mission of its society, and, most importantly, provide information about the current and soon to be launched activities of the SPI. The current activities include:

- a regularly updated PI-related news feed;

- an overview of previous workshops in the philosophy of information, and an announcement of the fifth workshop;

- a brand new [textbook](#) on the philosophy of information that forms the cornerstone of our teaching resources;

While the soon to be launched activities include:

- a sustained presence of SPI-sponsored sessions at international conferences;

- a repository of teaching resources, including an overview of courses in the philosophy of information that are currently taught;

- bibliographic resources on the philosophy of information, including an annotated bibliography;

- an overview of the many edited volumes and monographs on the philosophy of information that were published during the last ten years;

- book-reviews and book-symposia on notable publications that fit within or are relevant to the philosophy of information.

Interested researchers and students are encouraged to support this enterprise by [becoming a member](#) and by taking part in the activities of the society.

PATRICK ALLO
Centre for Logic and Philosophy of Science, Brussels Free University
Oxford University & University of Hertfordshire

How much risk ought we to take? Workshop on Risk and Acceptability, December 8–9

To make moral theories fit for dealing with decisions under conditions of risk and uncertainty is a challenging task. At the workshop 'Risk and Acceptability', which was hosted by the URPP Ethics at the University of Zurich (Switzerland), several philosophers presented their ideas on how this task can be accomplished.

Martin Peterson (Eindhoven) presented his multi-dimensional account of consequentialism as one possible answer. Peterson argued that consequentialists should settle for a range of incommensurable and incomparable moral dimensions (with risk being one of them) rather than a mono-dimensional value-pluralist scale for assessing the deontic status of different acts and policies. In order to do so, though, consequentialists

should adopt a non-binary conception of moral rightness. This means that the majority of acts are neither purely right nor wrong, but most often right to a certain degree.

A very different view was championed by Klaus Steigleder (Bochum) who argued that rights-based moral theories can accommodate risk-sensitivity by defining both a right against certain forms of risk-impositions as well as a right to risk-taking. In the process of doing so, rights-theorists would have to determine thresholds for acceptable risk-imposition and for unacceptable risks. Steigleder argued that certain forms of risk-taking are unavoidable and part of people's freedom to live their lives. A similar point was made by Sven Ove Hansson (Stockholm) who argued that many forms of risk-impositions can be justified because these risks are associated with maintaining a stable system of social cooperation for mutual advantage. Hansson argued for a system for fair exchanges of risk within a political community, defining certain requirements of justice and equality for such a system.

Matt Adler (Duke) took a very different route in his paper, offering a highly sophisticated analysis of three different types of social welfare functions in comparison with cost-benefit approaches to the value of mortality reduction. Adler distinguished between ex-ante and ex-post forms of prioritarian social welfare functions, highlighting their different implications for risk policymaking. Christian Seidel (Erlangen) also analysed how different theoretical frameworks deal with risk imposition. Seidel focused on pure risk imposition, trying to determine some basic features which a moral theory which fits our established moral convictions about different cases of pure risk imposition needs to have. Ultimately Seidel argued that such moral theories would likely be risk-aggregative and hybrid, i.e., non-externalist and non-internalist.

Gregor Betz (Karlsruhe) kicked off the workshop with a critique of the classic decision-theoretic framework for making decisions under conditions of risk (CDT). According to Betz, CDT struggles with risk-aversion as it ties levels of risk-aversion to the shape of the utility function. This means that we cannot assess risk-aversion separately. But how shall we conceptualize risk-aversion then?

Dominic Roser (Zurich) tried to argue via the idea of precaution, a line of argument also picked up by Matthew Rendall (Nottingham) in his call for strict aversion of catastrophic risk. Roser and Rendall both pointed out the need for defining benchmarks for assessing risk-aversion. Roser, however, argued for a rights-based version of precautionary decision-making while Rendall argued for a utilitarian imperative of responsibility.

Overall the workshop brought together a range of international experts on the ethics of risk and it offered a stimulating arena for discussions at the cutting-edge of philosophical risk research.

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FABIAN SCHUPPERT
URPP Ethics, University of Zurich
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Arctic Workshop on Measurement in Economics, 14–15 December

The Arctic Workshop on Measurement in Economics organized by Uskali Mäki and Alessandra Basso (Finnish Centre of Excellence in the Philosophy of the Social Sci-

ences) and funded by the Network for Higher Education and Innovation Research (HEINE) took place on 14–15 December, 2013, in Rovaniemi, Finland. The aim of the workshop was to explore the philosophical challenges that arise in the context of measuring social and behavioural properties in economics. We brought together scholars who share an interest in measurement but look at it from the viewpoints of different research fields: meteorology, philosophy of science, philosophy of economics, and economics. The talks were full of exciting ideas of which what follows will give a flavor.

On the first day Federica Russo (Vrije Universiteit Brussel & University of Kent) opened the meeting by questioning the assumption that better measurements lead to more realistic representations of scientific concepts. With the help of two examples (the measurement of age and of socio-economic status) Federica argued that better descriptions (obtained by both quantitative and qualitative information) are needed to improve the quality of measurements. Eran Tal (University of Bielefeld) examined the challenges of building a unified account of uncertainty for both models and measurements: if models and measurements display comparable uncertainties, it is unclear whether one should use measurement outcomes to test the predictions of models or vice versa. Eran proposed the notion of second-order uncertainty (uncertainty about uncertainty estimates) as a way of solving this problem.

Luca Mari (Universitá Cattaneo) dealt with the very foundations of measurement, namely its definition and its structure as presupposed by alternative models of measurement. Luca also examined the extent to which his preferred model (i.e., the "standard" model of measurement) also applies to non-physical properties. Alessandra Basso (University of Helsinki) focused instead on the pragmatic aspects of measurement: scientists are often obliged to make pragmatic assumptions that are not always or not fully justifiable from a theoretical point of view. Alessandra examined the question of whether the same strategies that scientists employ for testing their measurements also provide justification for those pragmatic assumptions. Conrad Heilmann (Erasmus University of Rotterdam) closed the first day of the workshop by advancing a defense of the often-criticized representational theory of measurement. Conrad argued that the representational theory of measurement provides sets of conditions that should be satisfied in order to represent concepts numerically and therefore that it is a helpful tool for the formalization of concepts.

The second day of the workshop was devoted to the topic of measurement of social and behavioural properties in economic experiments. Michiru Nagatsu (University of Helsinki & Tallinn University of Technology) tackled the methodological debate on social preferences: whether one-shot experimental games can be used to measure people's social preferences outside the laboratory. He suggested that in fact the problem may not be one of external validity but one of internal validity and that other ways of designing experiments would ensure a better elicitation of social preferences. Topi Miettinen (Hanken School of Economics) took us through an experimental study he and his collaborators carried out. The experiment investigates the effects on individual and team performance of the interaction between organizational culture (which either emphasises self-enhancement or self-transcendence) and individuals' social orientations (which can be either prosocial or proself). The short commentaries on the seven talks by Jaakko Kuorikoski, Aki Lehtinen, Uskali Mäki and Caterina Marchionni (all from the Univer-

sity of Helsinki) also contributed to the fruitful discussions.

No doubt the exotic atmosphere of Lapland also contributed to the success of the workshop.

ALESSANDRA BASSO
CATERINA MARCHIONNI
TINT, University of Helsinki

Paris-Munich Workshop in Formal Philosophy, 7–8 February

The first Paris-Munich workshop in formal philosophy gathered members of the Munich Center for Mathematical Philosophy (hosting the workshop) and of several research centers in Paris (Institut Jean Nicod, IHPST), all working either in logic or in philosophy of science.

The workshop started with a talk from Olivier Roy based on joint work with Martin Rechenauer, in which they use tools from modern fixed-point logic to study the logical properties of obligations and permissions in Scanlon's ethical contractualism. They argued that modal fixed-point logic is particularly well suited to capture the recursive character of Scanlon's proposal. In his comments Mikaël Cozic pointed out that their approach relies on a particular reading of Scanlon that is not necessarily the salient one.

Rogier De Langhe extended Weisberg and Muldoon's model of normal science on an epistemic landscape to revolutionary science. This allows him to generate paradigm changes faithful to Kuhn's analysis and to make novel empirical predictions about patterns in bibliometric data. Paul Egré took issue with the holistic approach and argued that standards for progress may be modelled through additional dimensions of the landscapes.

The second day started with a talk by Alexandre Billon, in which he proposed an assessment-sensitive solution to the paradoxes of semantic self-reference. Catrin Campbell-Moore, commenting on Alexandre's talk, queried the extent to which his solution differs from the well-known context-sensitive solutions à la Glanzberg.

Next Norbert Gratzl, presenting joint work with Olivier Roy, provided us with a glimpse of what "modularized" hypersequents for multi-modal deontic logic could look like. Hypersequents were partitioned in different modal parts, between which moves were achieved by so-called teleportation rules, thus representing interactions between modalities. In his comments Denis Bonnay remained skeptical as to whether these technical complications would pay off in terms of results.

Francesca Poggiolesi asked whether the validities of modal logic are analytic and adopted a strategy previously employed by Wittgenstein for propositional logic and Hintikka for first-order logic to the case of modal logic, which allowed her to answer the question in the positive. Johannes Stern asked whether the notion of "analyticity" employed by Francesca was still related to the intuitive notion as it is commonly understood within the philosophical community.

In the afternoon, Jean Baccelli tackled solutions to paradoxes of decision theory (e.g., intransitive preferences) based on redescriptions of the choice options, exemplified by Broome's work. He discussed the possible constraints for such redescriptions,

emphasising that they should be based on natural properties. Seamus Bradley pointed out that this natural constraint was not sufficient, and questioned whether redescribing options was better than abandoning norms of rationality such as independence.

Finally, Jérémy Zehr introduced a multi-valued logic system able to deal with vague expressions and presuppositions—a combination usually deemed too complex for a unified analysis—based on the addition of intermediate values to a TCS system. In her comment, Martha Sznajder suggested possible grounds for generalisation of Jérémy's approach and raised the question of the minimal number of truth values needed to satisfy his requirements.

CÉDRIC PATERNOTTE
JOHANNES STERN
MCMP, LMU Munich

Calls for Papers

HYPERINTENSIONALITY: special issue of *Synthese*, deadline 1 March.
THE SQUARE OF OPPOSITION: special issue of *History and Philosophy of Logic*, deadline 30 June.
INFINITE REGRESS: special issue of *Synthese*, deadline 1 July.

WHAT'S HOT IN . . .

Uncertain Reasoning

Whilst the field of uncertain reasoning is readily associated with the quantification of uncertainty, the importance of some *qualitative* approaches to the problem should not be underestimated. Artificial intelligence is perhaps the field where the qualitative *vs* quantitative contrast is most familiar, as witnessed the hugely successful ECSQARU conference series. Qualitative counterparts of rational degrees of belief are well-investigated also in the foundations of probability and statistical decision making. In his seminal "Dutch-book theorem" paper, de Finetti (1931: "Sul significato soggettivo della probabilità," *Fundamenta Mathematicae*, 17, 289–329) explicitly mentions the intuitive appeal of the qualitative notion "no less probable than" $(\cdot \succeq_P \cdot)$, on which—he claims—the whole foundations of probability can rest. In later work de Finetti went so far as to conjecture that the standard axiomatisation of $(\cdot \succeq_P \cdot)$ would be sufficient to define a (quantitative) probability measure representing $(\cdot \succeq_P \cdot)$. Such a conjecture was proved false by C. Kraft, J. Pratt, and A. Seidenerg (1959: "Intuitive Probability On Finite Sets," *The Annals of Mathematical Statistics*, 30(2), 408–419). However, this didn't prevent the qualitative approach to rational degrees of belief from playing a major role in the subjectivist reaction to the sort of choice problem made famous by D. Ellsberg. See, for instance P. Fishburn (1983: "Ellsberg revisited: A new look at comparative probability,"

The Annals of Statistics, 11(4), 1047–1059) which also provides an excellent access point to the fascinating literature on qualitative probability. With many pressing problems (from finance to climate) apparently resisting a robust probabilistic quantification of uncertainty, the concept of a qualitative measure of uncertainty is no less appealing today than it was at the beginning of the 1930s, when de Finetti regarded it as nothing but the intuitive notion of logical consistency formalised.

Against this background, I find it extremely interesting that A.C. Paseau articulates a *quantitative* measure of paradoxes in his (2013: "An exact measure of paradox," *Analysis*, 73 (1)).

Paseau assumes that a paradox amounts to a set of individually plausible premises which jointly lead to an implausible, yet not necessarily (logically) inconsistent, conclusion. Thus a paradox is taken, in strict adherence with the origin of the word, to be the object of people's wonder to the extent that it goes *beyond* their beliefs. Since belief is best characterised as coming in degrees, Paseau offers a quantitative characterisation of what it means for a set of propositions (or assertions, or principles, etc.) to be paradoxical. The formal definition is based on the idea that a paradox arises when the "collective degree of belief" in a set of propositions is in some sense lower than the aggregate of the individual degrees of belief. Further elements enter in the *exact measure* of paradox, for which I refer to the paper.

One thing which I find very intriguing is how Paseau's measure relates with the subjective approach to the quantification of uncertainty. His framework does not require degrees of belief to be probabilities. But an interesting consequence follows from the assumption that they are, namely that probabilistic consistency is more fundamental, from a logical point of view, than logical consistency. This, in turn, suggests some sort of reversal of de Finetti's grounding of the consistency of subjective degrees of belief in the notion of logical consistency. To some, this may sound counterintuitive—after all, it is very reassuring to think of uncertain reasoning as a proper generalisation of *classical* logic. Yet this reversal certainly poses an interesting challenge to the basic assumptions

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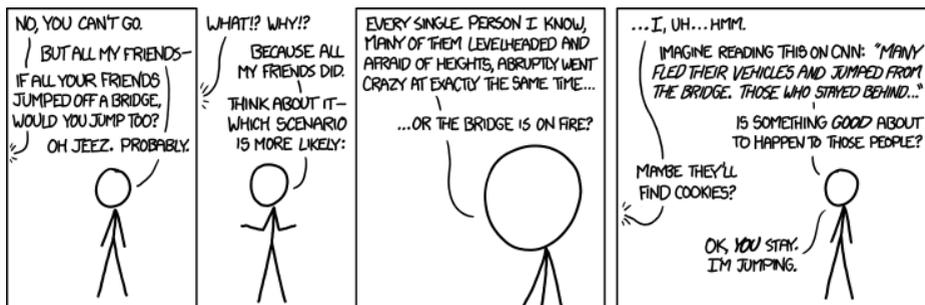
underlying the ongoing work on qualitative probability mentioned above.

Hykel Hosni
Scuola Normale Superiore, Pisa
CPNSS, LSE

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Events

March

Theoretical Agency: Auburn, Alabama, 1–2 March.
PTS: 2nd Conference on Proof-Theoretic Semantics, Tübingen, Germany, 8–10 March.
Truth: Amsterdam Workshop on Truth, ILLC, University of Amsterdam, 13–15 March.

LKL: Logic, Knowledge, and Language, Paul Gochet Memorial Conference, Brussels, Belgium, 14–15 March.

PHILOSTEM: 5th Midwest Workshop in Philosophy of Science, Technology, Engineering, and Mathematics, Fort Wayne, IN, 14–16 March.

METAPHYSICAL VIRTUES: Western Michigan University, Kalamazoo, Michigan, 15–17 March.

SIMRIDE: 1st workshop on Uncertainty Quantification and Data Assimilation in Numerical Simulation of Physical Systems for Risk-Informed Decision Making, Durham, 18–21 March.

REFERENCE: Ohio State University, 21–22 March.

RSC: Research Students' Conference in Probability, Statistics and Social Statistics, Lancaster University, 25–28 March.

INFORMATION: 5th Workshop on Philosophy of Information, University of Hertfordshire, UK, 27–28 March.

UNILOG: 4th World Congress and School on Universal Logic, Rio de Janeiro, Brazil, 29 March–7 April.

THE LIMITS AND SCOPE OF MATHEMATICAL KNOWLEDGE: University of Bristol, 30–31 March.

APRIL

SBP: International Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction, UCDC Center, Washington DC, USA, 2–5 April.

LATA: 7th International Conference on Language and Automata Theory and Applications, Bilbao, Spain, 2–5 April.

AISB: 6th AISB Symposium on Computing and Philosophy: The Scandal of Computation—What is Computation?, University of Exeter, 2–5 April.

THE ANALYSIS OF THEORETICAL TERMS: Munich, Germany, 3–5 April.

SOCIAL INTERACTION: Methods in Studying Social Cognition, Düsseldorf, 3–5 April.

UNILOG: 4th World Congress on Universal Logic, Rio de Janeiro, Brazil, 3–7 April.

IMLA: 6th Workshop on Intuitionistic Modal Logic and Applications, Rio de Janeiro, 3–7 April.

ICANNGA: 11th International Conference on Adaptive and Natural Computing Algorithms, Switzerland, 4–6 April.

PERCEPTION, MODELS, AND LEARNING: 15th Annual Pitt-CMU Graduate Conference, Carnegie Mellon University, 5–6 April.

ADS: Agent-directed Simulation Symposium, Bahia Resort, San Diego, CA, USA, 7–10 April.

INFORMATION: SPACE, TIME, AND IDENTITY: Milton Keynes, 8–10 April.

PHDS IN LOGIC: Munich, 8–10 April.

MODELS & DECISIONS: 6th Munich-Sydney-Tilburg Conference, Munich, 10–12 April.

IDENTITY AND PARADOX: Lille, France, 11–12 April.

CDM: Workshop on Collective Decision Making, ILLC, Amsterdam, 11–12 April.

TVSUT: Typed vs. Untyped Approaches to Semantics, Oslo, 12–13 April.

PAKDD: 17th Pacific-Asia Conference on Knowledge Discovery and Data Mining, Gold Coast, Australia, 14–17 April.

IEEE-SSCI: Symposium Series on Computational Intelligence, Singapore, 15–19 April.

Ontology of Evidence: Workshop, University of Geneva, 16–17 April.

GCTP: Graduate Conference in Theoretical Philosophy, Groningen, Netherlands, 18–20 April.

R&R: Reasons and Reasoning, Georgetown University, 20 April.

GSCL: Graduate Student Conference in Logic, University of Illinois, Urbana-Champaign, 20–21 April.

Implicit Bias: University of Sheffield, 20–21 April.

SOoSI: The Social Organization of Scientific Inquiry, Center for Philosophy of Science, University of Pittsburgh, 20–21 April.

GIRL@LUND: 2nd Conference on Games, Interactive Rationality, and Learning, Lund, 23–26 April.

Explanatory Power: Understanding Through Modeling. Epistemology, Semantics, and Metaphysics of "Inadequate", Ruhr-Universität Bochum, 25–26 April.

PoM&Psych: KCL Graduate Conference in Philosophy of Mind and Psychology, Institute of Philosophy, Senate House, London, 26 April.

Philosophy of Information: The Value of Information, American University, Washington DC, 26 April.

NU/NDGC: 4th Annual Northwestern / Notre Dame Graduate Epistemology Conference, University of Notre Dame, South Bend, IN, 26–27 April.

AISTATS: 16th International Conference on Artificial Intelligence and Statistics, Scottsdale, AZ, USA, 29 April–1 May.

May

ICLR: 1st International Conference on Learning Representations, Scottsdale, Arizona, 2–4 May.

SDM: 13th SIAM International Conference on Data Mining, Austin, Texas, USA, 2–4 May.

O&M: Ontology and Methodology, Virginia Tech, 4–5 May.

CTFoM: Category-Theoretic Foundations of Mathematics, Irvine, California, 4–5 May.

MSDM: 8th Workshop on Multiagent Sequential Decision Making Under Uncertainty, Saint Paul, Minnesota, USA, 6–7 May.

EMAS: 1st International Workshop on Engineering Multi-Agent Systems, Saint Paul, Minnesota, USA, 6–7 May.

ALA: Adaptive and Learning Agents Workshop, Saint Paul, Minnesota, US, 6–7 May.

MSDM: Multiagent Sequential Decision Making Under Uncertainty workshop, Saint Paul, Minnesota, USA, 6–7 May.

AAMAS: 12th International Conference on Autonomous Agents and Multiagent Systems, Saint Paul, Minnesota, USA, 6–10 May.

ADMI: 9th International Workshop on Agents and Data Mining Interaction, Saint Paul, Minnesota, USA, 6–10 May.

AISB: Workshop on The Emergence Of Consciousness, London, 9 May.

PhiLang: 3rd International Conference on Philosophy of Language and Linguistics, University of Lodz, Poland, 9–11 May.

PoI&IQ: Philosophy of Information and Information Quality, Lund, Sweden, 10 May.

INTENSIONALITY IN MATHEMATICS: Lund, Sweden, 11–12 May.

UK-CIM: Causal Inference in Health and Social Sciences, University of Manchester, 14–15 May.

MCS: 11th International Conference on Multiple Classifier Systems, Nanjing University, China, 15–17 May.

MATHEMATISING SCIENCE: University of East Anglia, Norwich, 16–17 May.

ISCLC: 9th International Symposium of Cognition, Logic and Communication: Perception and Concepts, Riga, Latvia, 16–18 May.

LMP: 13th Philosophy of Logic, Math and Physics Graduate Conference, Ontario, Canada, 18–19 May.

SLACRR: St. Louis Annual Conference on Reasons and Rationality, St Louis, MO, 19–21 May.

TAMC: 10th Conference on Theory and Applications of Models of Computation, Hong Kong, China, 20–22 May.

NIDISC: 16th International Workshop on Nature Inspired Distributed Computing, Boston, Massachusetts USA, 20–24 May.

CARNAP: Lectures and Graduate Conference, Ruhr-Universität Bochum, 21–23 May.

UNCERTAIN REASONING: St. Pete Beach, Florida, USA, 22–24 May.

NVWF: Philosophy of Science in a Forest, The Netherlands, 23–25 May.

EI&I: Evolution, Intentionality and Information, University of Bristol, 29–31 May.

SILFS: Postgraduate conference in Logic and Philosophy of Science, Urbino, Italy, 29–31 May.

AIME: Artificial Intelligence in Medicine, Murcia, Spain, 29 May–1 June.

LoQI: Logic, Questions and Inquiry, Paris, France, 30 May–1 June.

GRADUATE EPISTEMOLOGY CONFERENCE: University of Edinburgh, 31 May–1 June.

JUNE

BENELEARN: 22nd Belgian-Dutch Conference on Machine Learning, Nijmegen, Netherlands, 3 June.

BSPS: British Society for the Philosophy of Science Annual Conference, University of Exeter, 4–5 June.

BAYSM: Bayesian Young Statistician Meeting, Milan, Italy, 5–6 June.

BISP: 8th workshop on Bayesian Inference in Stochastic Processes, Milan, Italy, 6–8 June.

LOGIC OF SIMPLICITY: Carnegie Mellon University, Pittsburgh, USA, 7–9 June.

LORI: 4th International Workshop on Logic, Rationality and Interaction, Hangzhou, China, 9–12 June.

CADE: 24th International Conference on Automated Deduction, Lake Placid, USA, 9–14 June.

NECESSITY, ANALYTICITY & A PRIORI: Oslo, 10–11 June.

ICAIL: 14th International Conference on Artificial Intelligence & Law, Rome, Italy, 10–14 June.

IWINAC: 5th International Work-Conference on the Interplay between Natural and Artificial Computation, Palma de Mallorca, Spain, 10–14 June.

PRIESTFEST: Conference in honour of Graham Priest, University of Melbourne, 12–14 June.

SPE: 6th Semantics and Philosophy in Europe Colloquium, St. Petersburg, Russia, 12–14 June.

INEM: Conference of the International Network for Economic Method, Erasmus University Rotterdam, The Netherlands, 13–15 June.

SocPhilPsych: 39th meeting of the Society for Philosophy and Psychology, Brown University, Providence, RI, 13–15 June.

AALP: Annual Meeting of the Australasian Association for Logic, University of Melbourne, 15–16 June.

TRoREC: The Reach of Radical Embodied or Enactive Cognition, University of Antwerp, 17–19 June.

LOGICA: Hejnice, Czech Republic, 17–21 June.

TAP: 7th International Conference on Tests and Proofs, Budapest, Hungary, 18–19 June.

GP@50: The Gettier Problem at 50, University of Edinburgh, 20–21 June.

ICFIE: 2nd International Conference on Fuzzy Information and Engineering, Kanyakumari, India, 22–23 June.

ISF: 33rd International Symposium on Forecasting, Seoul, Korea, 23–26 June.

HDIA: High-Dimensional Inference with Applications, University of Kent, Canterbury, 24–25 June.

CSR: 8th International Computer Science Symposium in Russia, Ekaterinburg, Russia, 25–29 June.

BW8: 8th Barcelona Workshop on Issues in the Theory of Reference, Barcelona, 26–28 June.

COGNITIO: Montréal, Canada, 26–28 June.

APPLIED PHILOSOPHY: Society for Applied Philosophy Annual Conference, University of Zurich, 28–30 June.

AIME: Artificial Intelligence in Medicine, Murcia, Spain, 29 May–1 June.

JULY

CaEitS: Causality and Experimentation in the Sciences, Paris, 1–3 July.

CEPE: Ambiguous Technologies: Philosophical Issues, Practical Solutions, Human Nature, Lisbon, Portugal, 1–3 July.

SIROCCO: 20th International Colloquium on Structural Information and Communication Complexity, Ischia, Italy, 1–3 July.

CiE: The Nature of Computation, Milan, Italy, 1–5 July.

ISIPTA: 8th International Symposium on Imprecise Probability: Theories and Applications, Compiegne, France, 2–5 July.

IC-EpsMsO: 5th International Conference on Experiments/Process/System Modeling/Simulation/Optimization, Athens, Greece, 3–6 July.

YSM: Young Statisticians' Meeting, Imperial College London, 4–5 July.

CARNAP ON LOGIC: MCMP, Munich, 4–6 July.

ECSQARU: 12th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty, Utrecht University, The Netherlands, 7–10 July.

AAP: Australasian Association of Philosophy Conference, University of Queensland, 7–12 July.

GDRR: 3rd Symposium on Games and Decisions in Reliability and Risk, County Cork, Ireland, 8–10 July.

ICALP: 40th International Colloquium on Automata, Languages and Programming, Riga, Latvia, 8–12 July.

SCEPTICISM: New Perspectives on External World Scepticism, MCMP, LMU Munich, 9–10 July.

GÖDEL: From Logic to Cosmology, Aix-en-Provence, 11–13 July.

IUKM: 3rd International Symposium on Integrated Uncertainty in Knowledge Modelling and Decision Making, Beijing, China, 12–14 July.

IACAP: Annual Meeting of the International Association for Computing and Philosophy, University of Maryland at College Park, 15–17 July.

PLS: 9th Panhellenic Logic Symposium, National Technical University of Athens, Greece, 15–19 July.

FoP: Foundations of Physics, LMU, Munich, 29–31 July.

AUGUST

WL4AI: Weighted Logics for AI workshop, Beijing, China, 3–5 August.

NRAC: 10th International Workshop on Nonmonotonic Reasoning, Action and Change, Beijing, China, 3–5 August.

IJCAI: 23rd International Joint Conference on Artificial Intelligence, Beijing, China, 3–9 August.

WCP: 23rd World Congress of Philosophy, Athens, Greece, 4–10 August.

KSEM: International Conference on Knowledge Science, Engineering and Management, Dalian, China, 10–12 August.

LMoGDM: Logical Models of Group Decision Making, Düsseldorf, Germany, 12–16 August.

RACR: 4th International Conference on Risk Analysis and Crisis Response, Istanbul, Turkey, 27–29 August.

EPSA: European Philosophy of Science Association, University of Helsinki, Finland, 28–31 August.

EoM: Epistemology of Modality, University of Lisbon, 29–31 August.

SEPTEMBER

ICSCCW: 7th International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control, Izmir, Turkey, 2–3 September.

DIAL: Dialectic in Aristotle's Logic, Groningen, Netherlands, 2–4 September.

CSL: 22nd EACSL Annual Conference on Computer Science Logic, Turin, Italy, 2–5 September.

ECAL: 12th European Conference on Artificial Life, Taormina, Italy, 2–6 September.

ENPOSS: European Network for the Philosophy of the Social Sciences and the Philosophy of Social Science, University of Venice Ca' Foscari, 3–4 September.

Many-Val: Games, Decisions, and Rationality, Prague, Czech Republic, 4–6 September.

WPMSIIP: 6th Workshop on Principles and Methods of Statistical Inference with Interval Probability, Switzerland, 5–10 September.

MCU: Machines, Computations and Universality, University of Zurich, 9–12 September.

ITA: 5th International Conference on Internet Technologies and Applications, Glyndwr University, Wrexham, North Wales, UK, 10–13 September.

SUM: 7th International Conference on Scalable Uncertainty Management, Washington DC, 16–18 September.

CLPS: International Conference on Logic and Philosophy of Science, University of Ghent, 16–18 September.

ASAI: Argentine Symposium on Artificial Intelligence, UNC, Córdoba Capital, Argentina, 16–20 September.

Progic

The sixth workshop on Combining Probability and Logic. Special focus: combining probability and logic to solve philosophical problems. Munich, 17–18 September

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CAEPIA: 15th Conference of the Spanish Association for Artificial Intelligence, Madrid, Spain, 17–20 September.

IJCCI: 5th International Joint Conference on Computational Intelligence, Algarve, Portugal, 20–22 September.

TbiLLC: 10th International Tbilisi Symposium on Language, Logic and Computation, Georgia, 23–27 September.

AIAI: 9th IFIP International Conference on Artificial Intelligence Applications and Innovations, Paphos, Cyprus, 26–28 September.

Courses and Programmes

Courses

BFAS: Spring School on Belief Functions Theory and Applications, Carthage, Tunisia, 20–24 May.

Nordic Spring School in Logic: Nordfjordeid, Norway, 27–31 May.

RISS-WOW: 2nd Robotic International Summer-School, Robots as Intelligent Systems Working in the Outer World, CAAS, Dubrovnik, Croatia, 17–22 June.

ACAI Summer School 2013: Computational Models of Argument, King's College London, UK, 1–5 July.

EASSS: 15th European Agent Systems Summer School, Kings College London, 1–5 July.

ESSLLI: 25th European Summer School in Logic, Language and Information, Heinrich Heine University in Düsseldorf, Germany, 5–16 August.

MLSS: The Machine Learning Summer School, Max Planck Institute for Intelligent Systems, Tübingen, Germany, 26 August–6 September.

EthicSchool: Virtual Summerschool on Ethics of Emerging Technologies, 9–13 September.

Programmes

APhil: MA/PhD in Analytic Philosophy, University of Barcelona.

Doctoral Programme in Philosophy: Language, Mind and Practice, Department of Philosophy, University of Zurich, Switzerland.

HPSM: MA in the History and Philosophy of Science and Medicine, Durham University.

Master Programme: in Statistics, University College Dublin.

LoPhiSC: Master in Logic, Philosophy of Science & 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.

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 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 of Biological and Cognitive Sciences: Department of Philosophy, University of Bristol.

MA in Rhetoric: School of Journalism, Media and Communication, University of Central Lancashire.

MA programmes: in Philosophy of Language and Linguistics, and Philosophy of Mind and Psychology, University of Birmingham.

MRes in Cognitive Science and Humanities: Language, Communication and Organization: Institute for Logic, Cognition, Language, and Information, University of the Basque Country, Donostia, San Sebastian.

MRes in Methods and Practices of Philosophical Research: Northern Institute of Philosophy, University of Aberdeen.

MSc in Applied Statistics: 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.

MA in Reasoning

A programme at the University of Kent, Canterbury, UK. Gain the philosophical background required for a PhD in this area. Optional modules available from Psychology, Computing, Statistics, Social Policy, Law, Biosciences and History.

MSc in Cognitive & Decision Sciences: Psychology, University College London.

MSc in Cognitive Science: University of Osnabrück, Germany.

MSc in Cognitive Psychology/Neuropsychology: School of Psychology, University of Kent.

MSc in Logic: Institute for Logic, Language and Computation, University of Amsterdam.

MSc in Mathematical Logic and the Theory of Computation: Mathematics, University of Manchester.

MSc in Mind, Language & Embodied Cognition: School of Philosophy, Psychology and Language Sciences, University of Edinburgh.

MSc in Philosophy of Science, Technology and Society: University of Twente, The Netherlands.

MRes in Cognitive Science and Humanities: Language, Communication and Organization: Institute for Logic, Cognition, Language, and Information, University of the Basque Country (Donostia San Sebastian).

Open Mind: International School of Advanced Studies in Cognitive Sciences, University of Bucharest.

PhD School: in Statistics, Padua University.

Jobs and Studentships

Jobs

Assistant Professor: in Logic or Analysis, Department of Mathematics, University of Connecticut, until filled.

Post-doc Position: in Artificial Intelligence, Institute for Artificial Intelligence, University of Georgia, until filled.

Post-doc Position: in Artificial Intelligence / Biomedical Informatics, Stevens Institute of Technology, until filled.

Post-doc Position: in Philosophy of Science and Technology, Tallinn University of Technology, Estonia, deadline 1 March.

Post-doc Position: on the project "The Metaphysical Basis of Logic: The Law of Non-Contradiction as Basic Knowledge," Northern Institute of Philosophy, University of Aberdeen, deadline 4 March.

Post-doc Positions: in Philosophy of Computing or Technology, University of Middlesex, deadline 6 March.

Post-doc Position: in Statistics, University of Bristol, deadline 5 April.

Post-doc Position: in Theoretical Philosophy working on "Infinite Regress" project, University of Groningen, The Netherlands, deadline 8 April.

Studentships

PhD Position: on project "Non-Classical Foundations of Mathematics," Department of Mathematics and Statistics, University of Canterbury, New Zealand, until filled.

PhD Position: on the project "Models of Paradox," Philosophy, University of Otago, until filled.

PhD Position: in Philosophy, AOS: Analytic Philosophy / Logic / History and Philosophy of Science and Technology / Philosophy of Social Sciences / Philosophy of Mind and Cognitive Sciences, Tallinn University of Technology, Estonia, deadline 1 March.

PhD Positions: in Philosophy of Science, University of Aberdeen, deadline 8 March.

PhD Positions: on the project "Interdisciplinary Studies in Epistemology," Northern Institute of Philosophy, University of Aberdeen, deadline 8 March.

PhD Positions: in Science and Policy, Centre for Humanities Engaging Science and Society (CHESS), Durham University, deadline 11 March.

PhD Position: on the Durham Emergence project, Department of Philosophy, University of Durham, deadline 11 March.

PhD Position: in Philosophy of Mind, Ruhr-University Bochum, Germany, deadline 24 March.

PhD Position: in Logic, Department of Philosophy, Linguistics and Theory of Science, University of Gothenburg, Sweden, deadline 25 March.

PhD Position: in "Sequential Decision-making under Uncertainty," Machine Learning, INRIA, Lille, deadline 15 April.