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Editorial

It's a great pleasure to edit this issue of *The Reasoner* and I am grateful to Hannah Ginsborg for agreeing to meet with me for an interview in Berlin where she currently spends her sabbatical leave.

Hannah Ginsborg is Professor of Philosophy at UC Berkeley. Her research focuses on Kant's philosophy and on the relevance of his work to the theory of meaning and to contemporary philosophy of mind. Most of her published work engages with Kant's theory of judgment and the way it underlies his account of cognition, aesthetic experience and biological phenomena. Her research has been at the forefront of a recent surge of interest in Kant's *Critique of Judgment*, and in the literature she was one of the first to promote a unified reading of the book's unusual combination of philosophy of biology and aesthetics.

Her book *The Normativity of Nature*, a collection of essays on Kant's *Critique of Judgment*, appeared in print earlier this year, and I take our meeting as an opportunity to ask her about her reading and what lessons she thinks we can take from Kant.

Angela Breitenbach
University of Cambridge

Features

Interview with Hannah Ginsborg

Angela Breitenbach: *The Normativity of Nature* is a collection of essays you published over the last twenty years or so. Can you tell us a bit about the main themes of the collection?

Hannah Ginsborg: One major theme underlying all the essays is the normativity associated with the faculty of judgment, which I have labelled 'primitive normativity'. Another is the unity of the *Critique of Judgment*, in particular the relevance of Kant's aesthetic theory to the discussion of the purposiveness of nature and to his account of organisms. I am also very interested in the importance of the Critique to Kant's theory of cognition overall. This is the third major theme of my book.

But I also deal with more specific questions in both Kant's aesthetics and the theory of biology. In aesthetics I address in particular the interpretation of pure judgments of beauty. Here I argue for a controversial view on which talk of pleasure in beauty, judgments of beauty, and the free play of the faculties are all ways of talking about the same phenomenon, which is a non-conceptual state of mind in which we, so to speak self-referentially, take that very state of mind to be appropriate to the object. In Kant's theory of biology, I am particularly interested in the questions of why he thinks we need to regard

organisms in teleological terms, and why we're entitled to do so.

AB: On your view, what are the key insights we should take from Kant's account of judgment?

HG: Most importantly, that there is a kind of normativity that is distinct from and more fundamental than the normativity associated with reasons, and that we need to appeal to this kind of normativity in order to make sense of our capacity to grasp and follow rules of any kind.

AB: This notion of normativity, or primitive normativity, is central to your reading of Kant, and you also argue that it sheds light on questions about meaning. Can you tell us what you mean by this notion and why you think it is important for understanding what it is to grasp a concept?

HG: That's a big question and it is really central to my work, especially the work I am doing now, but I am still struggling with how to answer it and especially to give it a concise answer. Primitive normativity at the most general level is normativity which doesn't depend on a rule or principle. I think that we have to appeal to this kind of normativity in order to make sense of there being such things as rules and principles. And following Kant I think that we can identify concepts and meanings with rules, so the idea that we need primitive normativity to make sense of concepts is a special case of the idea that we need it to make sense of rules. The idea has to do with the difference between merely habitual behaviour and rule-following behaviour—behaviour in which the subject sees herself as according with a rule. I think we need to approach the question of what it is to grasp a rule via the more basic question of what it is for one's behaviour to be a case of rule-following rather than merely habitual behaviour. And I want to answer that question by saying that it's for one's behaviour to be informed by a sense of its own appropriateness—so that one has the attitude that what one is doing fits the circumstances.

I try to bring that out by contrasting what an animal does, when it has been taught to discriminate, say green things from things that aren't green, and what a child does when she learns to sort green things together, for example by saying the word 'green' on seeing something green. The thought is that the child is not just responding blindly or habitually to the green thing, but takes herself to be responding appropriately, even though she doesn't have in mind a rule which tells her to say 'green' when she sees green things. Doing that just strikes her as right. My claim is that we come to grasp the concept *green* in virtue of having a disposition to sort green things together with that primitively normative attitude that what we're doing in each instance—saying "green", or putting the green thing in the box with the other green things—is appropriate or called for. That's what it is for us to have the concept. It's the attitude of appropriateness that is the ingredient which converts what would otherwise be mere dispositions into seeing something as falling under a concept.

AB: Let me ask you about the second major theme of the book, the unity of the *Critique of Judgment*. Kant conceived of aesthetics and science, particularly biology, as related enterprises. Can you give us an idea of why you think these Kantian views are still defensible?

HG: Well, the part of Kant's view which I think is defensible is the idea that aesthetic judgment manifests in a pure form something which is essential to scientific activity. Namely, that in doing science we have to rely on preconceptual intuitions, which don't allow of being rationally justified, intuitions—roughly speaking—of what fits with what, what is similar to what, what belongs together, and so forth. It's hard to give examples because its so pervasive, but one example from biology would be the way in which taxonomy relies on intuitions about resemblance—whole organisms resembling one another, or bones, or even DNA sequences. Another such intuition is at the basis of our picking out living things as worthy of investigation in their own right at all: of our even having a science of biology. That depends on our tendency to pick out living things as salient and as having a distinct structure, and also to see some aspects of living things—roughly the ones that we identify with healthy or normal functioning—as essential to their nature in a way in which other aspects are not. I don't think that in doing that we are making aesthetic judgments *per se*. But what we are doing is taking our subjective natural responses to things to be appropriate to them, which is also what we're doing in aesthetic judgment.

Left to right: Hannah Ginsborg and Angela Breitenbach

AB: Do you think aesthetic judgments can in any way contribute to understanding or knowing the world?

HG: I tend to follow Kant in emphasizing the contrast between aesthetic judgments about the world and cognition of the world. So if by understanding or knowledge you mean the kind of thing that we paradigmatically get through science, then I would say 'no'. However, I do think that reflection on aesthetic judgment is important for the philosophical understanding of the world and our place in it, and I think that there might be such a thing as distinctively aesthetic understanding. Think for example of hearing a familiar piece of music played in a new way, and 'getting the point' of a passage that you hadn't understood before. That might simply consist in having a different feeling than the feeling you had before—hearing it with pleasure as opposed to its sounding bland or trivial. That reminds me of Wittgenstein on the dawning of an aspect.

AB: A third major theme, you said, is the importance of the *Critique of Judgment* to Kant's theory of cognition overall. In particular, you have argued that the account of reflective judgment Kant develops in the *Critique of Judgment* is central

to his conception of cognition, which he first treats in the *Critique of Pure Reason*. Other interpreters have argued that something equivalent to reflective judgment is already at work in Kant's first Critique account of cognition. (I am thinking, for instance, of Béatrice Longuenesse's work on the capacity to judge.) What do you regard as the important difference between the two approaches to understanding judgment and cognition?

HG: Béatrice and I agree that the first Critique presupposes reflective judgment. But I think we differ about what reflective judgment is, and relatedly about the role of the categories in according for the possibility of cognitive judgment and in particular its universal validity. We both think that reflective judgment makes possible empirical conceptualization in that it allows us to think particular objects, like this spruce here, under a general concept of *tree*. But I think that it is also, and more fundamentally, the capacity to think our responses to particular objects as universally valid, in the sense of being responses that everyone should share. So for me, in contrast to Béatrice, reflective judgment is the capacity which—speaking roughly—distinguishes us from animals. It's because we have reflective judgment that we don't merely respond discriminatively to objects around us, but rather ascribe features to them, or in other words, make judgments about them. Most people, including Béatrice, think that that work is done not by reflective judgment, but by the categories.

In this context it is interesting that the *Critique of Judgment* can be seen as answering the question of how cognition is possible from the empirical perspective, whereas the *Critique of Pure Reason* raises questions about the possibility of knowledge from a transcendental perspective. The first Critique is written entirely from the perspective of a kind of disembodied, thinking subject, and it doesn't consider the question of 'well, look, here is the empirical world, and we are thinking beings in the empirical world, how do we ever attain this transcendental perspective?' So you could see the *Critique of Judgment* as telling the same story that the *Critique of Pure Reason* tells but from a different perspective.

AB: But even Kant's account of cognition in the *Critique of Judgment* is not an entirely empirical psychological story.

HG: Yes, that's right. Even if we consider ourselves from the empirical perspective there is normativity in what we're doing, so it's not just empirical psychology, it has a normative element. But there is still a difference. In the first Critique we might just as well not be human beings, there is never a community. There is just me and a manifold of representations; I'm not embodied, I'm not affected by empirical objects, I'm not looking at a bunch of flowers... But in the third Critique, we're in the spatio-temporal world, and there are these objects around us that are affecting our senses. How do we come to know about these objects? Well, it's not enough to say in an empirical psychological sense that they affect us, but we as human beings have to take normative attitudes towards them.

AB: You are spending this year in Germany, first as a Visiting Research Professor at the Ludwig-Maximilians-Universität in Munich and now in Berlin. I am curious to hear what you are working on at the moment. What is the next project?

HG: Well, I'm continuing to develop the notion of primitive normativity in connection with the question of what it is to know a language, what it is to know what our words mean. I think one of the most difficult philosophical questions has to do with the character of our knowledge of language. On the one hand it's not just a matter of having a set of behavioural dispositions, it's more intellectual than that. On the other hand it's not the kind of knowledge we have of a second language, where we can use our first language to make explicit to ourselves what the words of the second language mean. So what kind of knowledge is it? By giving us a kind of middle ground, I think that appeal to primitive normativity can help with this issue.

AB: I look forward to hearing more about this in the future. Thank you for the interview, Hannah!

News

Progic 2015 and Spring School on Inductive Logic, 20–24 April

The seventh in the series of conferences on combining probability and logic (Progic) was hosted by the University of Kent on 22 – 24 April 2015 and organized by Juergen Landes and Jon Williamson. This year, the Progic conference was focused on connections between formal epistemology and inductive logic. The conference was preceded by the two-day spring school (20 – 21 April 2015) with introductory lectures to the topics of the conference.

Spring School on Inductive Logic

Jon Williamson introduced and motivated three approaches to inductive logic: Classical Inductive Logic (CIL), Carnap's programme and objective Bayesian inductive logic. He showed that CIL captures logical entailment, but cannot capture inductive entailment, and Carnap's program cannot capture both logical and inductive entailment simultaneously. Williamson then argued that objective Bayesian inductive logic preserves CIL and captures inductive entailment by employing statistical theory.

In his tutorial, Jeff Paris investigated whether the use of a "by analogy" heuristic can be considered rational, or if it is on the same level as guessing. Paris used the context of pure inductive logic (PIL) in which he considered several possible formulations of "analogy". He concluded that so far the considered analogy principles in the context of the PIL either clash with the basic rationality principles—for example, Constant Exchangeability Principle or Predicate Exchangeability—or follow from them.

Niki Pfeifer tutored on connections between formal theories and experimental findings, in particular, formal epistemology and psychology of reasoning. Pfeifer first introduced the theory of mental models and theory of mental rules pointing out problems with these old paradigms of psychology of reasoning. He offered an alternative approach based on probabilistic rationality norms that is called mental probability logic and presented experimental results related to the new paradigm.

Gregory Wheeler introduced in his tutorial the theory of lower previsions; that is, an approach to imprecise probabilities. Wheeler presented two ways to construct lower previsions. Firstly, Wheeler used credal sets to construct lower previsions and then he used sets of acceptable gambles. He then introduced coherence conditions for both constructions, including coherence conditions for conditional lower previsions. Lastly, he addressed some problems with imprecise credences like dilation or that there is no strictly proper scoring rule for imprecise credences.

Juergen Landes explored the question of what rational partial inferences we can make on basis of incomplete information. The inference process Landes argued for is based on maximizing Shannon entropy. Firstly, he argued that this inference process meets some desiderata, for example, renaming, independence and obstinacy. Secondly, Shannon entropy is optimal when an agent's epistemic utility is given by the logarithmic scoring rule, and the decision principle is to maximize the worst case expected logarithmic utility.

The Seventh Workshop on Combining Probability and Logic

Jeanne Peijnenburg, the invited speaker who opened the conference, presented a stance against a thesis that knowledge is categorical. Peijnenburg defended a view that knowledge is gradable introducing "partial knowledge" and she explained how to measure it. Peijnenburg's approach to measuring graded knowledge is inspired by Timothy Williamson and is based on the combination of possible world semantics and classical probability theory giving a greater role to probability than Williamson does.

Seamus Bradley discussed the formal constraints on change in evidence base in the light of new information. Drawing on the AGM theory of belief revision, Bradley discussed addition, contraction and revision operations for evidence bases and extended this to the idea of probabilistic evidence bases. He also considered a difficulty in this framework when inadmissible evidence leads to contracting not only a particular chance claim, but also a generic chance claim and that is undesirable.

Nicole Cruz presented results of the experiments to study the extent to which people conform to probabilistic validity and coherence for a novel set of inferences between conditionals, conjunctions, and disjunctions. Cruz presented experimental results that provide evidence that people respect these normative criteria for uncertain deduction, at least when explicitly engaging in reasoning. An exception is the conjunction fallacy that was confirmed to be a robust bias.

David Miller considered an alternative measure of degrees of classical deducibility other than probability. Miller's talk was concerned with the measure of deductive dependence of one statement on another statement (or the same one). Miller argued that replacement of probability by deductive dependence sheds light on the problem of indicative conditionals, especially on the hypothesis of the conditional construal of conditional probability.

Paul D. Thorn presented informal considerations that favor inheritance in the case of exceptional subclasses. Thorn then presented computer simulations to compare the reasonableness of systems of conditional reasoning that differ in whether or not they license default inheritance for exceptional subclasses. In particular, Thorn compared the performance of system Z, which does not license default inheritance for exceptional subclasses, with inference by c-representations that do.

Jonathan Lawry argued that assessing beliefs about the world with embedded vague predicates requires an integrated approach capturing uncertainty about the world and linguistic uncertainty about the conventions of language, together with non-Boolean truth models. Lawry considered three-valued logic and argued that the notion of borderline cannot be satisfactorily defined in terms of intermediate probability values. Lawry then proposed belief pairs corresponding to lower and upper measures.

John Norton, who was the second invited speaker presenting, claimed that there is no non-trivial, complete calculus of inductive inference. Norton showed that non-trivial calculi of inductive inference are incomplete. That is, it is impossible for a calculus of inductive inference to capture all inductive truths in some domain, no matter how large, without resorting to inductive content drawn from outside that domain. Hence, Norton argued, inductive inference cannot be characterized merely as inference that conforms with some specified calculus.

Rossella Marrano argued that our grasp of the relevant mathematics of many-valued generalizations of classical logic is not matched by our understanding of the graded notion of truth that arises within such logics. Marrano proposed a framework in which, under suitable conditions, degrees of truth are interpreted as objective probabilities. Marrano then considered two distinct instantiations of the framework reflecting two accounts of the notion of objective probability: "intersubjective agreement" of subjective probabilities and chances.

Tom Sterkenburg explored whether algorithmic probability can indeed be called a universal or objective-logical prior distribution. Sterkenburg concluded that the question of the objectivity of algorithmic probability became the question of the unrestrictiveness of the inductive assumption of effectiveness. While there is little ground that it is universal as an assumption on data-generating sources in the world, it can be argued that it is universal as an assumption on competing prediction rules.

The third invited talk was given by Jeff Paris. Paris considered the question what probability, as willingness to bet, would we assign to processes like that the next tormentil flower you see will have 4 petals. If the probability function w is exchangeable then there is a countably additive measure μ, and the question is what this μ is. We could go with uniform measure, but we know, Paris argued, that we are dealing with natural process that tells us something: that it is very complicated and the randomness is buried deep. Paris then interpreted μ as distribution of natural probabilities.

Pavel Janda suggested an alternative philosophical approach to the representation of uncertain doxastic states by considering how to model an agent who is concerned about the accuracy of her credences in Belnap's four-valued logic. He used accuracy considerations to motivate the approach. Janda introduced ordered pairs to represent an agent's uncertain doxastic states, legitimate inaccuracy measure for ordered pairs and necessary conditions of rationality for uncertain doxastic states represented by ordered pairs.

Jan Sprenger defended a thesis that conditional probabilities in scientific reasoning can be understood as the probabilities of conditionals. More generally, Sprenger aimed at rethinking a theory of scientific evidence, and scientific reasoning as a theory of suppositional reasoning. He hopes that it will help to solve the problem of Old Evidence and the critique that the degree of belief interpretation of probability makes no sense in

contexts where we are almost sure that all of our models are wrong.

Mathias Madsen reexamined the condition of the uniform law of large numbers in the light of Kolmogorov's structure-noise decomposition for binary strings. Madsen argued that a system S can be seen as extracting a certain quantifiable amount of "structure" from a sample x, leaving the remaining complexity to be explained as noise. The condition of the uniform law of large numbers can consequently be seen as a cap on the expressivity of a modeling language in terms of how many patterns it can recognize.

Dragan Doder presented the proof-theoretical and model-theoretical approaches to probabilistic logics which allow reasoning about independence and probabilistic support. Doder extended the existing formalisms to obtain several variants of probabilistic logics by adding qualitative operators for independence and support to the syntax. He axiomatized these logics, provided corresponding semantics, proved that the axiomatizations are sound and strongly complete, and discussed decidability issues.

Eric Raidl addressed a problem of iterated revision encountered by both approaches to updating epistemic states that, from the probabilistic perspective, we can take when we accept the idea that the problem of induction is a dynamic problem. That is, by objective Bayesianism in the form of maximising entropy on the cumulated information and orthodox Bayesianism, in the form of minimising the Kullback-Leibler divergence on the new information with respect to the previous probability. Raidl offered a solution in terms of ϵ-revision.

Ted Shear provided a diachronic coherence constraint on (qualitative) beliefs and credences. Shear aimed to develop and explore a veritistic account of how epistemically rational agents should update their beliefs upon receipt of new information with certainty. Shear developed a version of Foley's Lockean thesis. According to his constraint, an agent with a qualitative belief state B and a credal function b who then learns some proposition E is diachronically coherent iff her qualitative belief state after the update maximizes expected epistemic utility (EEU) relative to $b(\bullet \mid E)$.

The invited speaker who delivered the closing talk of the conference was Richard Bradley. His talk concentrated on incompleteness and unawareness and promotion of relational conception of belief. Bradley showed how to model incompleteness and unawareness, and what are rational requirements for relational belief and possibilities for numerical representation. Bradley concluded that rationality requirements on less-than-fully-aware belief states are just the same as those on incomplete states (coherent extendability), but the attitude changes triggered by new awareness are very different from those triggered by a change in opinion.

Pavel Janda
University of Bristol

Belgrade Graduate Conference in Philosophy and Logic, April 24–26

A successful conference on analytic philosophy and logic along with a Symposium on Proof Theory and a Panel in Philosophy of Science was held in Belgrade this April. Five prominent logicians addressed the audience as keynote speakers. A number of graduate students from all over Europe gathered for the conference. Theme lines of the conference were applications of dynamic logics and new tendencies in the proof-theoretic semantics. Graduate sessions included topics such as: logic, philosophy of mathematics, philosophy of language, ethics, history of philosophy, etc. This huge event together with the satellite ones lasted for three days and was most successful when it comes to audience turn-up. The conference was supported by the Society for Pure and Applied Logic in Belgrade. Participants were able to enjoy the sights of the city situated on two rivers, traditional cuisine and rich social life of the Serbian capital. The goal of the conference was to bring together researchers from all over the world, with the emphasis on young scientists since the organisers believe that they possess the greatest potential, and to raise awareness of the contemporary questions in logic.

More concretely, keynote speaker Sonja Smets (University of Amsterdam) opened the conference with a lecture on the applications of dynamic logics to social epistemology. She presented the newest results in modelling questions concerning group knowledge aggregation. It was a great privilege to have Alexandru Baltag (University of Amsterdam) as a keynote speaker, who presented a probabilistic version of the defeasibility theory of knowledge. Apart from its smooth technical behaviour, such an approach can overcome puzzles of traditional epistemology. In the Panel in Philosophy of Science the research group led by professor Slobodan Perović (University of Belgrade) presented the results of their data-driven stimulation and their benefits for tackling the topics of the social epistemology of science.

On the side of the history of philosophy, the plenary lecture by Michael Griffin (Central European University, Budapest) concerned Descartes' views on the relationship between God and modality.

In line with the second conference theme—proof-theoretic semantics, the plenary lecture by Kosta Došen (University of Belgrade) discussed the notion of exactitude that is required in logic in opposition to the necessary imprecisions of natural language. During the last day, the Symposium on Proof Theory gathered researchers from Belgrade and their friends from abroad. A whole array of contemporary topics in proof theory were addressed, such as the criterion for proof identity, measuring the size of proofs, links between correspondence theory and general proof theory, inferential criterion for synonymity, and Gödel's conceptual understanding of proofs. Professor Peter Schroeder-Heister (Eberhard Karls University, Tübingen) closed the conference with a talk on proof-theoretic semantics that nowadays extends beyond natural deduction to considerations about sequent systems. Professor Schroeder-Heister discussed the incorporation of features of natural deduction into the sequent calculus which is clearly beneficial from the point of proof-theoretic semantics.

More information along with the video lectures of the plenary talks can be found on the following link.

As organizers we hope that this event will help to create new opportunities for international collaborations especially

for young researchers but also to promote logic.

Vlasta Sikimic
University of Belgrade

Vienna Forum for Analytic Philosophy, May 28–30

From May 28th-30th, the Vienna Forum for Analytic Philosophy (VFAP) held its 4th Graduate Conference. This year's conference focused on Bayesianism and its purpose in philosophy. Invited speakers were Jonathan Weisberg (Toronto), Anna Mahtani (LSE), and Jon Williamson (Kent).

Innertheoretical Developments

Jonathan Weisberg opened the conference with his work on priors. He argued in favour of 'Absolute Permissivism', i.e., being permissive about doxastic justification without relativism in case of propositional justification. Another talk about priors was held by Aron Vallinder (LSE). He spoke about a theory of priors based on Solomonoff's complexity measure and demonstrated how such a theory is highly language-dependent. Colin Elliot (Tilburg) presented his work on betting odds. His results show that given an expected utility maximizer and a realistic model of the knowledge about one's opponent, one's degrees of belief should not be one's betting odds. Pavel Janda (Bristol) talked about the problem with choosing one updating plan for present and future accuracy. Teddy Groves (Kent) presented some problems accuracy arguments have to face in general and comes to the conclusion that one has to think of accuracy arguments as methodological rather than epistemological. Anna Mahtani focused on Adam Elga's argument against imprecise probabilities and its critics. She argued that situations in which one could argue for imprecise probabilities are situations in which one could argue for rational unstable betting behaviour. She then criticised both Elga's 'sharp beliefs' and the 'choice rules' of the critics on the grounds that neither can handle unstable bedding behaviour. Jon Williamson discussed the difference between objective and subjective Bayesianism. He presented his new work about the problems of a middle ground between those two positions based on his proof that the Principal Principle implies the Principle of Indifference. Jon Williamson's objections against a knowledge theory of evidence were criticized by Michael Wilde (Kent). He argued that the imperfect accessibility of knowledge is no reason to reject the theory, since only trivial conditions are perfectly accessible.

Applied Bayesianism

Yuanming Shi (WMU) focused on the weight of evidence. He worked out how a Bayesian Account of unification affects the concept of weight of evidence. Elena Derksen (Toronto) argued that one shouldn't be interested in the truth-conduciveness of coherence but in the truth-conduciveness of justification and presented his work on a Bayesian measure of coherentist justification. In a talk focused on a Bayesian confirmation theory, Paweł Pruski (Jagiellonian University) argued against Carnap's symmetry requirements for a confirmation measure. Irena Cronin (UCLA) presented her work on a formal epistemological framework for group epistemology by extending the structure of belief coherence to a group. Christian Feldbacher (Düsseldorf) argued that Bayesianism can be used to formalise the concept of testimony and thereby throw new light on the question if it being a source of knowledge.

We are thankful for all the insightful talks and an enjoyable conference which introduced a broader Viennese audience to Bayesianism not only during the three days of the conference but also by the weekly preparation sessions the VFAP held in the year before the conference.

Patrick Johannes Klug
University of Vienna

Ground in Biology, June 19–20

In metaphysics, two facts are said to stand in a relation of ground when the grounding fact is *ontologically prior* to the grounded fact, or the grounded obtains *in virtue of* its ground. How is the notion of ground to be interpreted in biology? For instance, what is the ground of an organ's function? And what are the grounds of mechanistic phenomena?

These were some of the questions addressed in the workshop "Ground in Biology", organized by Lorenzo Casini (University of Geneva) and Marcel Weber (University of Geneva) in the framework of the SNF project Grounding – Metaphysics, Science, and Logic.

On the first day, the first speaker was Matteo Mossio (CNRS, Paris), who gave a talk on "Organisation as a Biological Ground". He argued that one can account for the teleological and normative dimensions of biological organisms and the notion of biological function in terms of organization, more precisely in terms of closure of constraints in a self-maintaining, differentiated system. Lorenzo Casini (Geneva) gave a talk on "Grounds and Functions in Biology". He proposed a ground-theoretic definition of the concept 'biological function', applicable to dispositional accounts. He showed how a more fine-grained definition is made possible by the fact that ground is a strict partial order, such that a hierarchy of functions map onto the hierarchy of mechanistic decompositions. Next, in the talk "Dopamine and the Heuristic Identity Theory", Matteo Colombo (Tilburg) discussed the adequacy of the so-called Heuristic Identity Theory (HIT) in the context of the research on dopamine and reward. He argued that the case study does not vindicate HIT, but rather research strategies driven by refined localization/decomposition claims and/or functional isomorphisms. Jens Harbecke (Witten) closed the first day with a talk titled "Is Mechanistic Constitution a Version of Material Constitution?" He discussed the similarities between the regularity account of mechanistic constitution and the standard accounts of material constitution, and argued that the two relations and the criteria for discovering their relata are different.

The second day was opened by Marie Kaiser (Cologne), who presented recent work on "The Metaphysics of Constitutive Mechanistic Phenomena". After identifying three adequacy criteria that plausible accounts of constitutive mechanistic phenomena must satisfy, she argued that constitutive mechanistic phenomena are best understood as "object-involving oc-

currents". Next, Marcel Weber (Geneva) gave a talk on "How Objective Are Biological Functions?" Against John Searle, he argued that once a goal state is specified, functional attributions attain a truth value, which is at least as objective as causal statements. He then presented a new challenge to the objectivity of functions based on considerations about the nature of biological mechanisms: to the extent that mechanisms are not decomposable into a well-defined set of constituents, no well-defined set of functions may exist in them. Last but not least, Stuart Glennan (Butler) gave a talk on "Mechanism-dependence as the Ground of All Biological Phenomena". He contended that all biological phenomena are grounded in the activities of mechanisms, and that the mechanism-dependence is all the grounding that biological phenomena need. He defended this claim against arguments to the point that natural selection is not a mechanism, that systems biology offers distinctively non-mechanistic explanations, and that "living causes" cannot be grounded in mechanisms.

A pre-workshop reading session took place on June 18. Selected parts from Stuart Glennan's manuscript book were discussed, with Stuart as a special guest. Both workshop and reading group generated a very lively discussion. The next event in the pipeline is an international conference on the broader theme "Ground in Philosophy of Science". Stay tuned!

Lorenzo Casini
Philosophy, University of Geneva

Calls for Papers

Reasoning about Preferences, Uncertainty and Vagueness: special issue of *Journal of Logics and their Applications*, deadline 21 July.
Logic Theorems: special issue of *Logica Universalis*, deadline 31 July.
Probabilistic Beliefs: special issue of *Theory and Decision*, deadline 1 October.
Uncertain Reasoning: special issue of *Journal of Applied Logic*, deadline 15 October.
Reasoning, Argumentation, and Critical Thinking Instruction: special issue of *Topoi*, deadline 30 October.

What's Hot in ...

Uncertain Reasoning

On June 3rd 2015 Professor Lord Stern of Brentford (aka Nicholas Stern) delivered a public lecture based on his recent book *Why Are We Waiting? The Logic, Urgency and Promise of Tackling Climate Change*. The podcast of the lecture is available from the London School of Economics website and I warmly recommend its viewing. For in a relatively short time, Stern is able to persuade the audience of (at least) two key points. First, we shouldn't dispair. Though the situation is quite critical, this is no time for pessimism. The goal (of reducing carbon emissions to a threshold which is believed to give us a 50% chance of keeping the rise of global mean temperature within 2 degrees Celsius by 2040) is undoubtedly within the means of the international community. Provided, that is, we stop procrastinating. Second, this is humanity's most urgent and exciting problem. Part of the excitement, Stern suggests, lies in the unprecedented scale of complexity that characterises Climate policy-making.

It is well known to those who have an interest in the topic—and easy to guess for the others—that an important part of the complexity of the Climate Change problem consists in the severe uncertainties which accompany its scientific understanding. Whilst Stern does mention the problem of uncertainty several times, he doesn't really say what this amounts to in practice for the scientists, as well as for the policy makers, who are indeed involved in tackling climate change. But this is no minor issue. It turns out, in fact, that agreeing on the very meaning—i.e., definition and interpretation—of the concepts of "uncertainty" and "risk" is still a major open issue in the international community efforts to get to grips with the problem of choosing and implementing suitable policies to mitigate and adapt to climate change.

A commendable, but according to many insiders largely unsuccessful, attempt to reach a methodological agreement on how climate's risks and uncertainties should be communicated to policy-makers and stake-holders, is being carried out by the Intergovernmental Panel on Climate Change (IPCC). Back in 2010 the IPCC produced the "Guidance Notes for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties", which essentially still informs the IPCC work groups. In essence the guidance notes require experts to tag their assertions with two weights. One is the "likelihood" (i.e., the probability) with which the statement is held to be true and the other is the "confidence" with which the statement (involving the likelihood) is made. So, for example, a typical statement from the IPCC reads as follows

> "In the Northern Hemisphere, 1983-2012 was likely the warmest 30-year period of the last 1400 years (medium confidence)."

Many specialists think that the way "uncertainties" are being treated by the IPCC is not so consistent after all. Readers interested in finding out more are referred to the recent paper by T. Aven, and O. Renn (2015: "An Evaluation of the Treatment of Risk and Uncertainties in the IPCC Reports on Climate Change" *Risk Analysis*, 35: 701–712).

It is quite easy to foresee that many more studies on this fundamental topic will follow. At this point one would be tempted to add that this shows how challenging the key questions in uncertain reasoning are, and consequently, how deep a subject it is. Yet the temptation must be (somewhat) resisted, as The Problem, in this case, is not just the title of the first section of a brilliant research paper which may nonetheless go unnoticed in the literature.

Hykel Hosni
Marie Curie Fellow,
CPNSS, London School of Economics

Evidence-Based Medicine

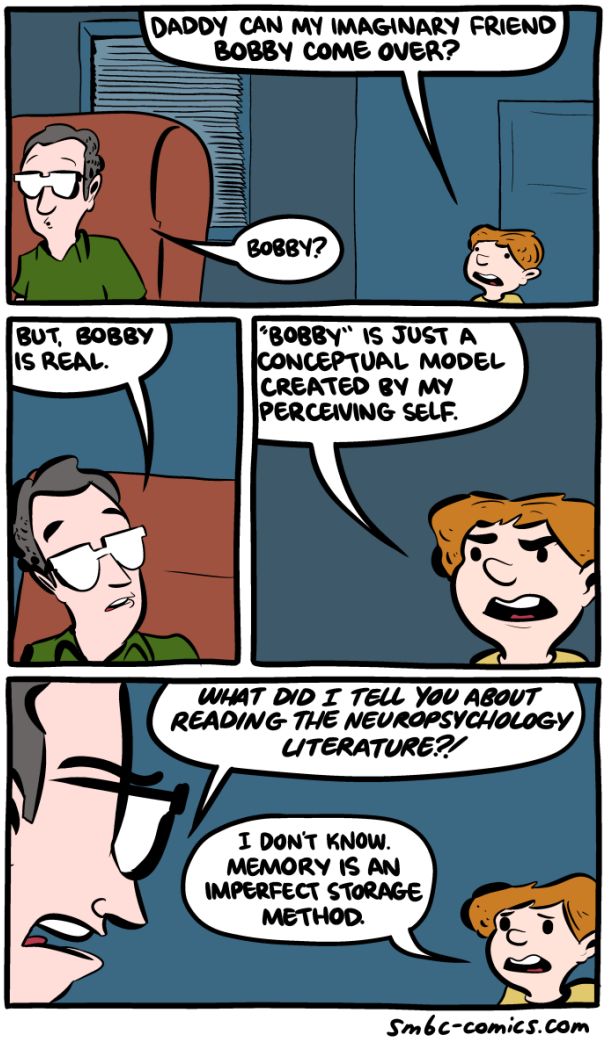
Last month there was a short course on The History and Philosophy of Evidence-Based Health Care at the University of Ox-

ford. The course was aimed towards historians, philosophers, and health care professionals. The aim of the course was to encourage health care professionals to think critically about their profession, and to provide historians and philosophers with a detailed account of the practice of evidence-based health care.

To this end, the course included sessions on the history and philosophy of quantification and probabilistic reasoning in medicine led by Alexander Bird (Bristol), and a session on the history of evidence synthesis given by Mike Clarke (Queen's University Belfast). Jeremy Howick (Oxford) led a number of sessions on defining placebos, and the history and philosophy of blinding to reduce observer bias. Andrew Papanikitas (Oxford) spoke from a clinician's perspective about the importance of ethics for treating patients. Sarah Wieten (Durham) spoke about the role of expertise in evidence-based medicine, and Mike Rayner (Oxford) spoke about the philosophy of evidence-based health care and public health. There was also a session on the role of values in health care decision making delivered by Bill Fulford (Oxford). The plenary lecture was given by Brian Hurwitz (King's College London), who argued that clinical case reports have multiple evidential roles. Alongside these sessions there were a number of workshops on constructing arguments, debating, and structuring and publishing essays led by Jeremy Howick, the course coordinator.

It was an informative and enjoyable week, and I recommend it to those interested in the philosophy of evidence-based medicine. In particular, I enjoyed a talk by Alexander Mebius (Oxford) on the stance that evidence-based medicine takes towards evidence of mechanisms. The standard account is that evidence-based medicine adopts a stance which for the most part downplays evidence of mechanisms in favour of statistical evidence. Some philosophers have criticized this stance, as neglecting important or even necessary evidence. But Mebius gave an argument in support of the evidence-based medicine stance. He suggested that much putative evidence of mechanisms comes from animal research, and argued that much animal research is of poor methodological quality. Those interested in these issues might want to check out the following articles: Extrapolating from animals to humans; Where is the evidence that animal research benefits humans?

Michael Wilde
Philosophy, Kent



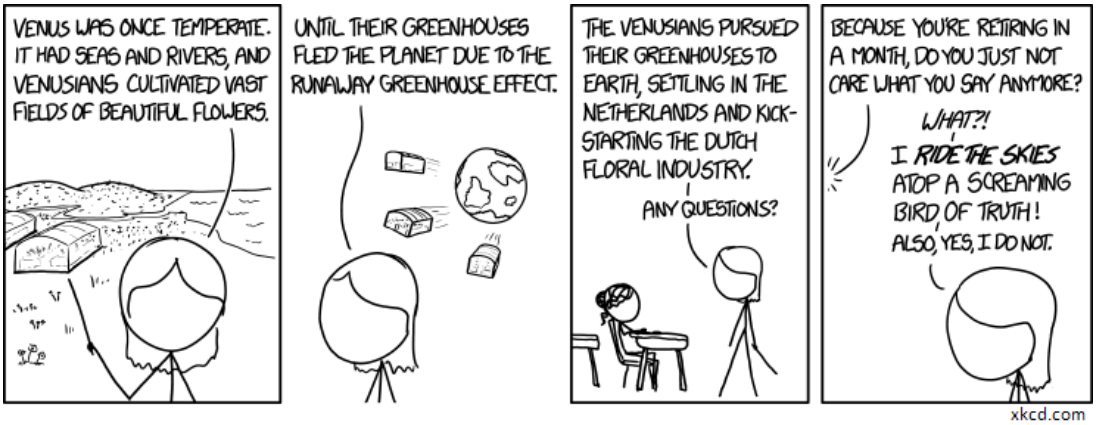
Events

July

AAL: Conference of the Australasian Association of Logic, Sydney, 2–3 July.

BSfPoS: British Society for the Philosophy of Science, University of Manchester, 2–3 July,

.CRS: Context-relativity in Semantics, University of Salzburg, 2–4 July.



FE: Formal Epistemology Conference, University of Bristol, 4–8 July.
ICoML: International Conference on Machine Learning, Lille, France, 6–11 July.
T & C: Time and Causation, Cologne, 10–11 July.
ET: Ethical Theory, University of Southampton, 13–14 July.
AiCI: Advances in Causal Inference, Amsterdam, 16 July.
SRAI: Statistical Relational Artificial Intelligence, Amsterdam, 16 July.
BMAW: Bayesian Modeling Applications Workshop, Amsterdam, 16 July.
CoNR: Conference on Computing Natural Reason, Indiana University, Bloomington, 19–20 July.
ISIPTA: Society for Imprecise Probability, Pescara, Italy, 20–24 July.
MoM: The Making of Measurement, University of Cambridge, 23–24 July.
EC: Epistemic Consequentialism, University of Konstanz, 23–24 July.
MV & MH: Mind, Value, and Mental Health, University of Oxford, 25 July.
WLAI: Weighted Logics for Artificial Intelligence, Buenos Aires, 25–27 July.

August

AD: Automated Deduction, Berlin, 1–7 August. CLMPS: 15th Congress of Logic, Methodology, and Philosophy of Science, Helsinki, 3–8 August.
EPI: Epistemology Workshop, University of Helsinki, 11–12 August.
MSS: Modelling for Social Sciences, London School of Economics, 17–21 August.

Courses and Programmes

Courses

Combining Probability and Logic: University of Kent, 20–21 April.
EPICENTER: Spring Course in Epistemic Game Theory, Maastricht University, 8–19 June.
EPICENTER: Mini-course on Games with Unawareness, Maastricht University, 22–23 June.

Programmes

APhil: MA/PhD in Analytic Philosophy, University of Barcelona.
Master Programme: MA in Pure and Applied Logic, University of Barcelona.
Doctoral Programme in Philosophy: Language, Mind and Practice, Department of Philosophy, University of Zurich, Switzerland.
HPSM: MA in the History and Philosophy of Science and Medicine, Durham University.
Master Programme: in Statistics, University College Dublin.
LoPhiSC: Master in Logic, Philosophy of Science & Epistemology, Pantheon-Sorbonne University (Paris 1) and Paris-Sorbonne University (Paris 4).
Master Programme: in Artificial Intelligence, Radboud University Nijmegen, the Netherlands.
Master Programme: Philosophy and Economics, Institute of Philosophy, University of Bayreuth.
MA in Cognitive Science: School of Politics, International Studies and Philosophy, Queen's University Belfast.
MA in Logic and the Philosophy of Mathematics: Department of Philosophy, University of Bristol.
MA Programmes: in Philosophy of Science, University of Leeds.
MA in Logic and Philosophy of Science: Faculty of Philosophy, Philosophy of Science and Study of Religion, LMU Munich.
MA in Logic and Theory of Science: Department of Logic of the Eotvos Lorand University, Budapest, Hungary.
MA in Metaphysics, Language, and Mind: Department of Philosophy, University of Liverpool.
MA in Mind, Brain and Learning: Westminster Institute of Education, Oxford Brookes University.
MA in Philosophy: by research, Tilburg University.
MA in Philosophy, Science and Society: TiLPS, Tilburg University.
MA in Philosophy of Biological and Cognitive Sciences: Department of Philosophy, University of Bristol.
MA in Rhetoric: School of Journalism, Media and Communication, University of Central Lancashire.
MA programmes: in Philosophy of Language and Linguistics, and Philosophy of Mind and Psychology, University of Birmingham.
MRes in Methods and Practices of Philosophical Research: Northern Institute of Philosophy, University of Aberdeen.
MSc in Applied Statistics: Department of Economics, Mathematics and Statistics, Birkbeck, University of London.
MSc in Applied Statistics and Datamining: School of Mathematics and Statistics, University of St Andrews.
MSc in Artificial Intelligence: Faculty of Engineering, University of Leeds.

MSc in Cognitive & Decision Sciences: Psychology, University College London.
MSc in Cognitive Systems: Language, Learning, and Reasoning, University of Potsdam.
MSc in Cognitive Science: University of Osnabrück, Germany.
MSc in Cognitive Psychology/Neuropsychology: School of Psychology, University of Kent.
MSc in Logic: Institute for Logic, Language and Computation, University of Amsterdam.
MSc in Mind, Language & Embodied Cognition: School of Philosophy, Psychology and Language Sciences, University of Edinburgh.
MSc in Philosophy of Science, Technology and Society: University of Twente, The Netherlands.
MRes in Cognitive Science and Humanities: Language, Communication and Organization: Institute for Logic, Cognition, Language, and Information, University of the Basque Country (Donostia San Sebastián).
Open Mind: International School of Advanced Studies in Cognitive Sciences, University of Bucharest.

Jobs and Studentships

Jobs

Lecturer: in Applied Ethics, University of Zambia, until filled.
Professorship: in Statistics, University of Oxford, deadline 9 July.
Fellow: in Statistics, University of St. Andrews, deadline 13 July.
Research Fellow: in Experimental philosophy, University of Warwick, deadline 14 July.
Chair: in Metaphysics, Durham University, deadline 16 July.
Chair: in Philosophy of Mind, Durham University, deadline 16 July.
Post doc: in Applied Probability, University of Auckland, deadline 22 July.
Lecturer: in Formal Philosophy, University of Auckland, deadline 24 July.
Post doc: in History & Philosophy of Science, University of Notre Dame, deadline 15 August.
Associate Professor: in Probability Theory, University of Copenhagen, deadline 25 September.

Studentships

PhD position: in Bayesian learning, University of Leicester, deadline 6 July.
PhD position: in Scientific Inferences, Tilburg University, deadline 10 July.
PhD position: in Bayesian Cognitive Modelling, Birkbeck, University of London, deadline 14 July.
PhD position: in Psychology of Reasoning, Ludwig Maximilian University of Munich, deadline 25 July.
PhD position: in Causal Discovery, Radboud University, deadline 31 July.
PhD position: in Theoretical Philosophy, University of Oslo, deadline 1 September.