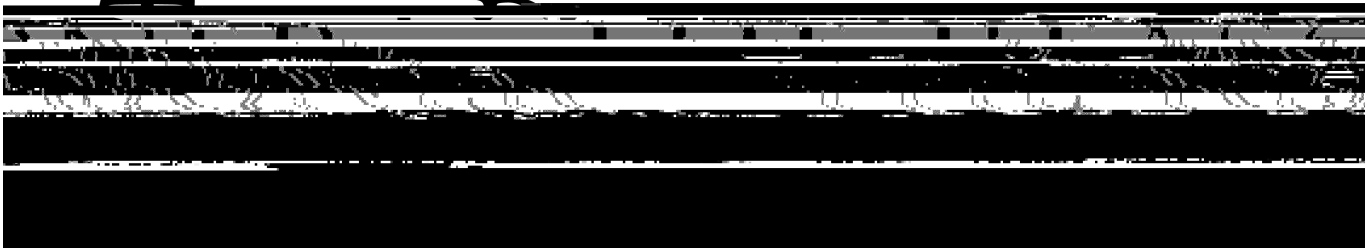


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## Contents

Editorial

knowledge in physics, data analysis and statistics, computer programming, knowledge of policy. . . . Would you say that the field is interdisciplinary in this sense?

Dave Stainforth: Let me answer this question by referring to my own academic background. I came into climate science as a physicist, after university. . . and I also liked computer programming on the side, sure. (I still enjoy playing with computers and do some programming here and there—it is fun problem-solving and doesn't require too many difficult decisions.) But I started working in climate science very much as a physicist—an atmospheric physicist. In the last ten years, however, I have broadened my interests to communication. I am now very much concerned about the communication of findings that are relevant for assessing impacts of climate change, questions of adaptation and so on. This does benefit from knowledge in a range of areas: physics, numerical analysis, economics and philosophy, to name a few.



I now think it is important to recognise that climate science is a matter of societal concern and is highly policy-relevant. One can choose to simply try to understand climate systems as best as possible, or one can choose to also focus on the social impacts of climate science.

KS: What is the significance of your emphasis on policy here? Are you saying that you now devote a lot of time to science communication, or, rather, that you approach your work as a climate scientist in a different way, i.e., with an eye to policy relevance?

DS: The latter. The attention to policy has led to a shift in emphasis in my scientific work—from modelling and running simulations to the proper interpretation of the data output of these model simulations.

In the past I set up and did a lot of runs (simulations) of these large complex climate models called General Circulation Models [GCMs]. This involves a lot of time and a lot of hard work in getting these computer models up and running. . . these simulations are difficult to produce. But I have done my time in this respect. The [climateprediction.net](http://climateprediction.net) project that I was involved in is still running, and that's great, but it is up to others now to facilitate the simulations.

The important issue for me now is this: these climate model simulations produce vast output, and there are so many questions about how to analyse these big data sets. . . In short, what does it all mean? Why run these simulations? We need to really think about what we can get out of these climate models and how the results should be presented. It is tempting to just keep making the models more and more complicated and apparently derive more and more detailed predictions of the type that policy-makers want. Moreover, the power of computers has its own allure. . . such shiny sophisticated machines that seem to offer endless opportunities for fast and powerful problem-solving. . . for the mathematically-minded, there is a temptation to create more and more complicated models. We need to be very careful, however, about faithfully representing what we actually *know* about the future climate on the basis of model simulations.

are by no means faithful representations of the actual climate

science. Why do you hold that view?

DS: I think it is unhelpful because people realise that there is a contradiction in talking about a consensus—it seems to imply that everything is understood and no-one disagrees with each other, when just a little amateur scientific research reveals that this is not so. Of course, climate scientists are not disagreeing about the basic fact that climate change is a very major concern, and that increased greenhouse gases leads to warming. But they disagree on so much else that talk of ‘consensus’ seems a falsehood.

Moreover, the notion of ‘consensus’ suggests something prescriptive—that there should be no arguments. But in fact: there should be more public arguments amongst scientists. In my opinion, the more apparent the arguments amongst scientists regarding the wheres and whys of the details of climate science, the more weighty the issue will appear to be. The well understood fact that climate change is a big concern will shine through in these arguments.

KS: I think this is a nice point. But this focus on consensus was itself a response to public distrust of climate science. Why do you think there has been such distrust of climate science in particular? Do you think it is simply because the science is very close to policy, and suggests quite big policy changes?

DS: Yes, I do think that is the reason for the difference between the response to climate science versus other sciences.

KS: In any case, your view that it is better to communicate the uncertainties and methodological issues associated with climate science was affirmed in my opinion by the reaction to the exhibit you organised at the [Royal Society Science Fair](#) last year. Initially I thought you were being rather ambitious in trying to communicate issues of risk versus model uncertainty, the status of predictions from ‘model ensembles’, and problems of decision-making under severe uncertainty, but then I saw that people really engaged a lot more with the climate change predicament when they were brought into the ‘inner circle’ with respect to these issues.

DS: Indeed. That was the idea. And of course, that highlights another reason not to focus on consensus in climate science—it hides all the interesting and difficult problems. We are talking about a relatively new area of science, and of course an important area of science, and we want to spark intellectual curiosity on these topics, and to enthuse more people to work on these problems.

KS: Well this call to arms is I think a good note to end on... Thanks very much Dave for taking the time out for this chat today!

## Is Ethical Relativism Self-Stultifying?

Ethical relativism is purported to maintain there is no single true morality and thereby to encourage an attitude of tolerance or non-interference *vis-à-vis* competing and incompatible bodies of moral value. (See, David Wong 1984: *Moral Relativity*, University of California Press.) However, critics of ethical relativism have found the combination of these two propositions incoherent and self-refuting. Bernard Williams, for example, argues that ethical relativism consists of three propositions: (1) ‘right’ means ‘right for a given society’, (2) ‘right for a given society’ is understood in a functionalist sense, and (3) it is wrong for people in one society to condemn or interfere with the values of another society. But, ‘the view is clearly inconsistent since it makes a claim in its third proposi-

tion, about what is right and wrong in one’s dealings with other societies, which uses a *nonrelative* sense of ‘right’ not allowed for in the first proposition’ (Bernard Williams 1980: *Morality*, Cambridge University Press, p. 34). Thus ethical relativism is a ‘logically unhappy attachment of a nonrelative morality of toleration or non-interference to a view of morality as relative’ Williams (1980: p. 35).

But, is ethical relativism guilty of logical inconsistency? The purpose here is to propose a way of exonerating ethical relativism from the charge of incoherence by drawing on Alfred Tarski’s distinction between *object-language* and *meta-language* in ‘The Semantic Conception of Truth’ (Alfred Tarski 1944: ‘The Semantic Conception of Truth,’ *Philosophy and Phenomenological Research* 4, 341–376). In discussing the problem of defining truth against the backdrop of paradoxes like the liar antinomy, Tarski suggests that ‘we have to use two different languages’: the first is the language which is “talked about” and the second is the language in which we “talk about” the first language (Tarski 1944: p. 349). In this dichotomy, statements involving the concept of truth are strictly speaking not uttered at the same level of language use and should be lasoed into two different levels of object and meta utterances.

Applying this Tarskian schema to the pronouncements of ethical relativism, the claim is basically that the doctrine of ethical relativism (1) and the doctrine of tolerance (3), are not at the same level of language use and thus their utterance should be bifurcated into two different levels of linguistic expression. Should this separation of linguistic levels of utterance work, it would show that ethical relativism is not self-stultifying after all. The application of the Tarskian schema to ethical relativism may run thus: having observed the variety, variability, incompatibility, and incommensurability of ethical statements made

normativity, and thus the *relativity* of one is not in conflict with the *non-relativity* of the other.

However, if the distinction between different types of normativity fails to have purchase on hardcore non-relativists, the ethical relativist may resort to a second option (B): unlike option (A), it is denied that propositions (1) and (3) are at the same level of language use. The ethical relativist reaches proposition (1) at the *meta*-level while observing how individuals in various cultures express their moral judgments at the *object*-level. However, we are still none-the-wiser about the moral relativist's *normative* ethics: that is, what is her moral assessment of those variable, incompatible, or incommensurable ethical values? Given her meta-ethical position, normatively she can neither condone nor condemn any particular moral value. Her meta-ethical stance bars her from celebrating or censuring any value unless she descends to the object-level where she can approve or disapprove of moral values in accordance

they describe “bottom-out entities and activities” (p. 131). Our thesis that ways to achieve understanding are context-dependent implies, by contrast, that mechanistic analyses are not intrinsically intelligible, nor essential to understanding. It is a contingent fact that understanding Boyle’s law via the kinetic theory involves a description of mechanisms. Macroscopic gas

talks and 8 as poster presentation by an interdisciplinary program committee chaired by Burkhard C. Schipper, University of California, Davis. The program included work by Adam Bjorndahl, Joe Halpern and Rafael Pass on [language-based games](#). In standard game theory, the domain of the utility functions includes just the outcomes in the game. Language-based games generalize the domain to maximal consistent sets of formulas in some language, thus allowing to model psychological notions like guilt or reference-dependence. It also included a paper by Jayant Ganguli and Aviad Heifetz on [universal interactive preferences](#). In games, a player's belief about other players, beliefs about beliefs etc. are modeled with type spaces

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which claims to be doing exactly this: provide a liar-type paradox without self-referentiality.

The Yablo set consists of statements  $Y_i$  indexed with the natural numbers, where each statement says that all  $Y_j$  with  $j > i$  are wrong. It is easy to see there is no consistent ascription of truth values to the set of all  $Y_i$ .

Yablo himself claims that the paradox does not involve self-referentiality, since none of the  $Y_i$  refers, implicitly or explicitly, to itself. However, this question has been the topic of a long and ongoing debate involving, *inter alia*, Yablo, Leitgeb and Priest.

In a recent paper, [Ming Hsiung](#) presents a new connection between Yablo's paradox and the Liar paradox. He shows that both are equiparadoxical, thereby making an argument for Yablo's paradox to rely on circularity.

In another [forthcoming paper](#), Cezary Cieśliński and Rafał Urbaniak examine the behaviour of Yablo's paradox when truth is replaced by provability in a sufficiently strong background theory.

Finally, [Thomas Forster](#) connects a logical analysis of Yablo sequences to the omitting types theorem.

LORIweb is always happy to publish information on topics relevant to the area of Logic and Rational Interaction—including announcements about new publications and recent or upcoming events. Please submit such news items to [Rasmus Rendsvig](#), our web manager or to the [loriweb address](#).

[Dominik Klein](#)  
TiLPS, Tilburg University

## Uncertain Reasoning

Logic is often partitioned into classical and non-classical. Whilst we all have a vague intuition about the meaning of the distinction, it turns out to be quite difficult to pinpoint a precise characterisation of it. The partition is, for a start, hardly symmetrical. Classical logic is always thought of in the singular, whereas there is an intrinsic plurality of non-classical logics. In addition, some non-classical logics—notably intuitionistic logic—take issue with the universal validity of their classical counterpart, whilst other logics are put forward as non-trivial extensions—friendly amendments, that is—of classical logic. As it turns out, some non-classical logics are more classical than others. Modal and many-valued logics are perhaps the names which most readily come to mind in this respect.

One might thus be led to the following consideration. It might well be that practitioners implicitly rank the classicality of logics based on their mathematical depth or relevance. This would account for the fact that non-classical logics are often categorised as “philosophical logic”, as witnessed by the fact that the standard reference for the subject has been, for the past three decades, the monumental *Handbook of Philosophical Logic*.



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**LAFLang**: 2nd International Workshop on Learning, Agents and Formal Languages, Barcelona, Spain, 15–18 February.  
**ICAART**: 5th International Conference on Agents and Artificial Intelligence, Barcelona, Spain, 15–18 February.  
**CSEE**: 2nd International Conference on Advances in Computer Science and Electronics Engineering, New Delhi, India, 23–24 February.  
**SAPHIR**: Systematic Analytic Philosophy and Interdisciplinary Research, Ruhr-Universität Bochum, 25–27 February.  
**STACS**: 30th Symposium on Theoretical Aspects of Computer Science, Kiel, Germany, 27 February–2 March.

March

**Theoretical Agency**: Auburn, Alabama, 1–2 March.  
**PTS**: 2nd Conference on Proof-Theoretic Semantics, Tübingen, Germany, 8–10 March.  
**LKL**: Logic, Knowledge, and Language, Paul Gochet Memorial Conference, Brussels, Belgium, 14–15 March.  
**PhiloSSTEM**: 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.  
**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.

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.  
**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.  
**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.  
**GCTP**: Graduate Conference in Theoretical Philosophy, Groningen, Netherlands, 18–20 April.  
**R&R**: Reasons and Reasoning, Georgetown University, 20 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-



[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.

**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.

**PhD Position:** in Logic and Cognitive Modelling, ILLC, University of Amsterdam, deadline 15 February.

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

## 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.

**Lecturer:** in Philosophy, AOS: Philosophy of Science / Mind / Language or Epistemology, University of Sussex, deadline 4 February.

**Post-doc Positions:** in Bayesian Inference, Department of Statistics, University of Oxford, deadline 8 February.

**Lecturer:** in Philosophy of Science, University of Oxford, deadline 8 February.

**Lecturer:** in Probability or Statistics, School of Mathematics, University of Bristol, deadline 11 February.

**Post-doc Positions:** in Philosophy of Social Science, TINT Centre of Excellence in the Philosophy of the Social Sciences, Helsinki, deadline 15 February.

**Post-doc Position:** in Metaphysics of Science, Institut d'Histoire et de Philosophie des Sciences et des Techniques, Paris, deadline 15 February.

**Post-doc Position:** in Philosophy and Cognitive Science, University of Murcia, Spain, deadline 15 February.

**Post-doc Positions:** in Philosophy and Science, The Rotman Institute of Philosophy, University of Western Ontario, Canada, deadline 15 February.

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