

“philosophy talk”. The program that “questions everything, ... except your intelligence” relates fundamental problems of philosophy to contemporary, day-to-day events. But Perry had the most success with a well-known, ordinary and likewise unacademic topic: the joys and sufferings of procrastination. His essay “Structured Procrastination”, published online, got an overwhelming response from people all over the world recognizing their own strategies of replacing high-priority actions, and was soon extended to a book. Today, Perry’s expertise on procrastination is in great demand, there are “Structured Procrastinator” T-Shirts available and he regularly reports in a blog about his personal procrastination activities.

The work of John Perry is characterized by outstanding philosophical theories as well as popular science activities. John Perry was very pleased about being honoured by a German university and resumed his main thoughts of more 30 years of philosophy in his festival lecture “Meaning and the Self”.

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## Syntactical Treatment of Modalities, 6 February

The [workshop](#) took place in Leuven, Belgium, and was hosted by the KU Leuven’s Centre for Logic and Analytic Philosophy. The workshop’s theme was the syntactical treatment of (alethic, epistemic, etc.) modalities. The standard view on modalities nowadays is that they are operators. Syntactic theories, however, treat modalities as predicates, and thus have to assume a background theory which is sufficiently strong to encode its own formulas (usually, one works with some system of arithmetic and Gödel coding). As a consequence, such theories suffer from paradoxes of self-referentiality. For example, just as the liar sentence states of itself that it is false, the knower sentence states of itself that it is unknown. Kaplan and Montague (1960: ‘A paradox regained’, *Notre Dame J. Formal Logic*, vol. 1, pp. 79–90) famously showed that any sufficiently strong theory that contains the knower is inconsistent.

Martin Fischer (LMU Munich) explored paradoxes in systems with *two* syntactic modalities. Intuitively, some such paradoxes seem to be essentially due to the ‘interaction’ of the two modalities, whereas others seem to be ‘reducible’ to one of the two modalities. To investigate this formally, Fischer proposed to look at translations between logical systems, in particular, between the ‘full’ system (which has both modalities) and its ‘subsystems’ (which have only one modality). However, most ways of translating between logical systems that are available in the literature assume that those systems are consistent, which is not the case here (because of the paradoxes). Fischer therefore proposed a new notion of translation, which *is* able to deal with inconsistent systems.

Jan Heylen (KU Leuven) showed how his work on epistemic and modal-epistemic arithmetic sheds new light on the knower paradox. In particular, if ‘knowability’ is represented using the sequence of operators  $\diamond K$  (with  $\diamond$  an alethic possibility modality and  $K$  an epistemic knowledge modality), the distribution axiom for knowability reads:  $\diamond K(\varphi \rightarrow \psi) \rightarrow (\diamond K\varphi \rightarrow \diamond K\psi)$ . Heylen convincingly argued that this principle is too strong, and explored several weakenings, which are obtained by dropping one (or several) of the alethic modalities. However, if such weakenings are used, straightforward derivations of the Knower paradox are blocked. Since these weakenings are in-

dependently philosophically motivated, we thus get a non-*ad hoc* way of blocking the knower paradox.

Walter Dean (University of Warwick) attempted to locate some results by Montague (1963: ‘Syntactical treatment of modality, with corollaries on reflection principles and finite axiomatizability’, *Acta Philosophica Fennica*, vol. 16, pp. 153–167) with respect to the broader role of proof-theoretic reflection principles. In particular, he suggested that Montague himself saw the various inconsistency results reported in the first part of the paper largely as a stepping stone to proving the non-finite axiomatizability of theories such as PA and ZF. In the second part of the talk, Dean discussed various forms of reflection principles in the light of results by Kreisel and Lévy (1968: ‘Reflection Principles and their Use for Establishing the Complexity of Axiomatic Systems’, *Mathematical Logic Quarterly*, vol. 14, pp. 97–142). In particular, he suggested that while the arithmetical versions of the Local and Uniform reflection principle differ significantly in mathematical strength, this issue is obscured by the syntactical treatment wherein the proof-like (or knowledge-like) operator is treated as a primitive predicate.

Next to these talks, Johannes Stern (LMU Munich) was scheduled to talk about modality and axiomatic theories of truth, but his talk had to be cancelled due to illness. The workshop’s small scale encouraged interaction: each of the talks was followed by a long and vivid Q&A session.

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## Calls for Papers

**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 . . .

### Logic and Rational Interaction

The last month saw an event that has the potential of providing fascinating examples to research in informational cascades, strategic actions, political reasoning and many more areas. Unfortunately, the papal conclave is one of the best preserved black boxes in modern times, so probably none of these events will ever make it into the scientific literature.

However the novel event of a pope voluntarily resigning has drawn attention to a different topic: Dynamic reasoning about social choice or: What is the best time to schedule elections? (A question well known from the British parliamentary system). Obviously, knowing exactly when which member of the electorate loses his right to vote and having the right to appoint new members, as the pope does, adds some fun and complexity to this kind of reasoning. In a recent [post](#), Forrest Maltzman and Melissa Schwartzberg attempt an ex-post rationalization of what kind of strategic considerations could have preceded the pope’s resignation.

Fittingly, Jason Roy and Christopher Alcantara provide a recent experimental [paper](#) showing that the right to schedule an election can prove beneficial for the governing party—if there is not too much time between the decision to have new elections and the ballot.