

New Technologies.” Both of these sessions promise to be great fun as well as intellectually rewarding, so please join us if you can. Keep an eye on the *Proceedings* for information on other Committee sessions.

That’s all for now. In my next report, I’ll detail various Committee projects and will provide an overview of where each stands given various changes in Committee membership and APA leadership. Let me know if you have questions, concerns, or suggestions related to PAC Committee activities.

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## REVIEW

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### *E-CAP05 Review*

The Program chair for the third European Computing and Philosophy 2005 (E-CAP05) conference was Professor Gordana Dodig-Crnkovic. The conference was hosted by her home institution, the Department of Computer Science and Engineering, Mälardalen University (Mälardalens Högskola), Västerås, Sweden. Professor Dodig-Crnkovic was assisted in her organization by an international Program Committee and a very attentive and knowledgeable group of Local Organizers including: Christina Bortas, Baran Cürüklü, Ylva Boivie, and Harriet Ekwall.



*The University of Sweden*

modern sculptural artifacts to give a sense of progress being made and comprehension being sought. This dynamic setting was certainly ideal for the first speaker of the conference and keynote, Greg Chaitin, who gave the Alan Turing Lecture on Computing and Philosophy entitled “Epistemology as Information Theory: From Leibniz to the Omega Number.” It was an invigorating start to the conference that provided us with a speculative metaphysics, something we tend to be more familiar with coming from the seventeenth century. Chaitin’s mix of digital philosophy and physics confronts the possibility of uncomputable real numbers by arguing that real numbers don’t exist. In support of his position, he presented us with an algorithmic information theory based on Leibniz’s dictum (1686) that the universe has been created simplest in hypotheses and richest in phenomena; thus, any explanation has to be simpler than that which it attempts to explain. Chaitin’s dynamic style of presentation and his ability to convey complex material set a cracking pace for the rest of the conference.

From here, we moved straight into an invited talk by Pedro Marijuan on “An Informational Approach to Biological Complexity” and three parallel sessions on Cognitive Science, Philosophy of Information, and Ontology, respectively. It is true that, for many people, it was rather hard making a decision

about where to go because each of these sessions and the invited talk were running simultaneously, but, having been asked to chair the Ontology session, my decision had been made for me. Had it not been, I would probably have gone to the Cognitive Science session and missed the splendid set of papers presented by Amnon Eden and Raymond Turner, Davide Crippa, Srinandan Dasmahapatra, and Till Gruene-Yanoff. At one point, Eden and Turner raised the possibility of a philosophical analysis of software design, and, at another, they led us into the ontologically murky waters of levels of abstraction—strategic (global) and tactical (local)—and implementation. It was rousing stuff, as was Crippa’s Poincaré-inspired examination of the ontology of geometrical objects, and Dasmahapatra’s work on the ontological issues surrounding the representative and interpretative frameworks for, and diagnosis of, breast cancer. The session drew to a close with Gruene-Yanoff’s preference model that distinguished epistemic and descriptive perspectives within explanations of intentional states such as beliefs and desires. The conclusion, one with which we could all agree, was that preferences aren’t simple, and it’s partly because ontologies are so complex.

After lunch, we had the second keynote presentation, the Carl von Linné (Carolus Linnaeus) Lecture on Ontology, from Professor Barry Smith, who spoke specifically about “Biological Ontologies.” It was an eloquent account of the misapplication of controlled vocabularies, which provide an inflexible uniform framework within which it is supposed that items and their relations can be adequately described. The prominent example of a controlled vocabulary in Smith’s talk was the Gene Ontology, which, in their use of the very limited “is-a” and “part-of” relations, run counter to the rules of logic. One very telling failure was when “is-a” is used tacitly to mean “within,” for example, when wanting to express the fact that the embryo is in the uterus, the gene ontologist writes completely falsely that the embryo “is-a” uterus. It was, in equal measures, an amusing and alarming presentation.

Following this, we reverted to the parallel sessions with an invited talk from Ingvar Johansson on “Emergent Properties and Inference Rules,” alongside an array of sessions on Cognitive Science, the Philosophy of Information, and Technology and Pedagogy. After a brief break for coffee, Luciano Floridi gave us an introduction to information logic—as distinguished from epistemic and doxastic logics—where his basic claim was that being informed is a transitive state, but knowing and believing are not. A further, though not quite so convincing, claim was made along the lines of information has to be true for it to be information in the first place. But, since we’re all quite used to being misinformed by the press and our politicians, I’m not so sure that many of us would accept this part of the claim without some resistance.

To round the day off, we made a short boat trip—on which champagne was served—to the Island of Elba in Lake Mälaren. Here, we had dinner and the opportunity to talk with one another in relaxing and convivial surroundings.

After such a busy first day, I feared that I wouldn’t have the energy for day two, but, once again, we got off to an extremely interesting and energetic start with an invited presentation by Peter Århem on neurophysiological approaches to consciousness. Århem examined Crick and Koch’s phylogenetic approach to consciousness, extending it into and beyond Edelman’s, Cotterill’s, and Eccles’s work, respectively. He also emphasized the importance of understanding anesthesiology because although there’s still very little known about what happens at either the system or the molecular level when anesthetics are administered we do know that they can switch a network of neurons from high-

frequency firing to low-frequency firing. If further analysis reveals what it is that is being inhibited, then we might have some indication of what is important as the underpinning for consciousness.

Again, a set of parallel sessions ran alongside this invited lecture, and, again, there were strong panels of papers in each of the Cognitive Science, Ontologies, and Biosemantics sections. There is a high quality of interdisciplinary work being carried out by E-CAP conference participants, and it was especially clear in this session in Jessica Lindblom's work on embodied cognition: "Reaping the Best of Both Worlds: The Body-in-Motion Meets Cultural Cognition," in John Harpur's "Philosophical Lessons in Autism for Artificial Intelligence," and in Daniel Novotny's "How to Deal with Granularity" in biosemantics.

After a brief coffee break, we resumed with sessions on Computer Ethics, Biosemantics, and Cognitive Science. Once again, my predilection was for the cognitive science stream, and I was rewarded by a marvelous presentation from Keith Downing, entitled "A Neuroscientific Barrier to Situated and Embodied Artificial Intelligence," in which he tackled Andy Clark's notion of cognitive incrementalism. This was followed by an equally interesting but very different paper by Alexander Riegler on purposeful robots and the paradox of autonomy, after which there was a great deal of discussion.

As a way of picking up many of the threads raised in previous sessions, the morning was rounded off with an invited paper by Lorenzo Magnani on "Building Mimetic Minds from the Prehistoric Brains to the Universal Machines."

There was a very definite move into the territory of computer ethics after lunch with the Georg Henrik von Wright Lecture on Ethics being given by Terrell Bynum. The specific title of his talk was "Ethics for a New Millennium: Cybernetics and the Copernican Revolution in Ethics," and, with his long historical connection to both the American Association of Philosophy Teachers (AAPT) and Computing and Philosophy (CAP), we were all entertained by his claim that he thinks of us as his grandchildren; it was especially entertaining to those of us who aren't that much younger than the man himself! Bynum's main claim is that information ethics is presenting us with a revolution in ethical discourse and that, taking a line out of Aristotle's book, excellence in information processing will produce human flourishing. It was easy to see some dovetailing between Bynum's plea and Floridi's information logic; if we employ the latter, we will, perhaps, flourish.

And so the day progressed through a series of splendid papers, including Philip Brey's "The Epistemology and Ontology of Human-Computer Interaction" and Søren Brier's "A Cybersemiotic View on Information and Computation," right into the evening with Tom Ziemke closing the day's academic proceedings with an invited paper on "Agent-Environment State Machines."

I think our wonderful host, Gordana, may have been testing our stamina, though she was more likely demonstrating Swedish beneficence, when, that evening, we were all invited to the Town Hall for a very lively and welcoming reception by the director of Industry and Commerce for Västerås, Helmer Larsson, together with Inger Lindqvist from Västerås City Council, who were full of praise for the organizers of E-CAP05.

On Saturday morning, the third and final day of the conference, we made an early start with an invited paper from Lena Trojer on "Building Epistemological Infrastructures—Interventions at a Technical University" and parallel sessions on Cognitive Science, Computer Ethics, and Computational Linguistics. I had expected there to be some exhaustion

showing by this stage, but, extraordinary as it may seem, everyone seemed as keen as on the first day. The papers varied in subject matter but rarely in quality, and of the papers I was able to attend—being unable to be in more than one place at one time—Paavo Pylkkanen's examination of dynamical modeling as a possible explanation of temporal consciousness made a particularly strong impression on me. Time as a necessary aspect of consciousness intrigues many of us, but there was something particularly engaging about Pylkkanen's weaving together of Husserl, David Bohm, Heraclitus, and van Gelder into a conceptually coherent picture that caught my imagination.

At this stage, the program seemed to move quite concertedly toward computational linguistics with invited papers from Torbjörn Lager on "Computational Linguistics and Philosophy," and Timo Honkela on "Translation within and between Languages," alongside parallel sessions, which now included one on Gender and Technology. At this stage, I decided to go for a complete change of scenery, so I attended a series of thoroughly enjoyable and richly stimulating papers by Magnus Sahlgren on word spaces as geometric metaphors for meaning, Pascale Sébillot on symbolic machine learning, and Pius ten Hacken on computational linguistics as an applied science. Their presentations had a clarity that made it possible for a novice like me to follow but were challenging enough to provoke the more knowledgeable members of the audience into lively debate.

As a mark of the true interdisciplinary nature of these conferences, the final afternoon had a range of papers from the straightforwardly philosophical synthetic examination of causation by Lars-Göran Johansson to a paper on the coordination of flexible education by Elvy Westlund to an intriguing discussion of the oriental approach to the philosophy of information provided by Liu Gang. Whether deliberate or not, Gang's paper, which has been heavily influenced by Leibniz, brought us full circle to the Leibniz we had heard about from Chaitin in the first keynote address. Perhaps we will find that the twenty-first century metaphysics that surrounds digital philosophy and information theory will owe a great debt to the speculative metaphysics of the seventeenth and that it is mistaken, after all, to forget our history.

The conference drew to a close on Saturday afternoon when all of those remaining who still had some energy retired to Bondtorget for beer, light conversation, and to toast Gordana for having done a splendid job as Program Chair for E-CAP05.

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## ARTICLE

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### *e-Teaching Philosophy*

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***Computers invade philosophy, swallow printed books and put them on file, fire most of the philosophers and teach on the web classes with no human instructor.*** That is not exactly the headline from two recent APA discussions about the online teaching of philosophy. One of the talks was at the Pacific Division meeting, organized by the APA Committee on Philosophy and Computers and chaired by Royce Jones. The other was at the Central Division meeting, sponsored by the