NEWSLETTER ON PHILOSOPHY AND COMPUTERS

FROM THE EDITOR, Jon DorboLO

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PROGRAM

Computing and Philosophy, University of Pavia, Italy 2004

ARTICLE

Jon DorboLO
“Getting Outside of the Margins”
Call for Papers
Minds and Machines
http://www.wkap.nl/journalhome.htm/0924-6495
in collaboration with
The American Philosophical Association Newsletter on Philosophy and Computers
http://www.apa.udel.edu/apa/publications/newsletters/default.asp
Special Issues: Daniel Dennett and the Computational Turn
Guest Editors: Jon Dorbolo (Oregon State University) and Ron Barnette (Valdosta State University)
Deadline: March 1, 2005
(The submission date has been changed from earlier announcements)
Daniel Dennett will accept the Barwise Prize at the Eastern American Philosophical Association meeting in December 2004. Conferred by the APA Committee on Computing and Philosophy, the Barwise Prize is awarded for significant and sustained contributions to areas relevant to the philosophical study of computing and information.
To commemorate this award, Minds and Machines and the APA Newsletter on Computers and Philosophy will collaborate to publish two special issues regarding “Daniel Dennett and the Computational Turn.” The Fall Spring 2005 APA Newsletter on Computers and Philosophy issue (Guest Editor: Ron Barnette) and a special issue of Minds and Machines in Fall 2005 (Guest Editor: Jon Dorbolo) will present this work. Submissions made in response to this call will be considered for both publications, and authors will be consulted on the outcomes of the review process, with regard to which publication is suitable. An editorial board will conduct the reviews. Members of the editorial board are:

Terry Bynum, Southern Connecticut State University
Robert Cavalier, Carnegie Mellon University
James Moor, Dartmouth College
Susan Stuart, University of Glasgow
David Rosenthal, City University of New York
Bill Uzgalis, Oregon State University

For this publication effort, the editors will focus on those aspects of Dennett’s work that have implications for the issues where philosophy and computing or information intersect. These include artificial intelligence, artificial life, information ethics, machine learning, mentality and machines, robotics, and education, among others. Both expository and critical approaches to such topics are sought.

Based on the works received, the authors intend to pursue a book proposal and symposia at major meetings in addition to the Newsletter and Journal special issues.
Instructions for Authors are available at http://www.kluweronline.com/issn/0924-6495 and http://oregonstate.edu/groups/cap/newsletter
For this call for papers the Minds and machines author instructions have priority. Authors may inquire into issues related to topics and length prior to submission.
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A Conversation with Susan Stuart

Bill Uzgalis
Oregon State University

Bill Uzgalis: Susan Stuart, I met you at the first CAP conference here at OSU in 2001. You had come all the way from Glasgow, Scotland and you were giving a presentation titled “The Embedded Self-Aware Agent”. Why don’t you tell us a bit about your background, and how you ended up coming to that CAP conference and talking about that topic.

Susan Stuart: Apart from a year when I took some English Literature classes, my undergraduate degree was pure and not-always-so simple philosophy. For my Master’s degree, I read more Kant—realizing that I was probably better feeding this addiction than trying to resist it—and Philosophy of Language. But it was the subject of my Ph.D., “When is it justifiable to ascribe mental states to non-human systems?” that moved me towards the areas of Artificial Intelligence and Computing.

On completion of my Ph.D. I moved to Glasgow where my husband had secured a post doc in astronomy—he’s a mathematical physicist—and I began teaching in the Philosophy Department. Within the year I had a contract but was still only teaching on other people’s courses. How this changed is not at all interesting; but when it did I began, rather naturally, to put together courses of an interdisciplinary nature, courses that were being influenced, if not determined, by own research interests and experience, and which the students seemed to enjoy every bit as much as me. Alongside these courses, I have been running my more traditional classes on Kant’s epistemology, logic, philosophy of religion, and so on. But I found that in my discussion with the students, I was beginning, for example, to introduce cognitive science metaphors to explain Kant’s metaphysics, and I thought, if this goes on much longer, I’m going to have to write something to justify my claims. So, along with a colleague from the Open University, Chris Dobbyn, I did, and two of the issues that came up repeatedly were (i) what is meant by embodiment, and (ii) in what way might we specify the minimal requirements for consciousness. As you’ll know from hearing and reading the paper, these were the main themes of “The Embedded Self-Aware Agent.”

Now, I tend to think that the most exciting work in any discipline is done at its borders where it overlaps into other disciplines; for it is in that dialogue that we begin to perceive our problems differently and unearth novel resolutions. However, this isn’t the viewpoint of conventional philosophy departments or even some conferences, and occasionally you feel that your work doesn’t quite fit anywhere. Well, that’s when the CAP conference call for papers fell into my email inbox, and I thought that’s the one for me. There was such a variety of subject and approach, and I got a sense of, what I now know to be, your and Jon’s hallmark enthusiasm from the CFP. It never occurred to me that this was the winter and that there might be bad weather, nor did it occur to me that this was anything other than an international conference; so I was delighted when my abstract was accepted and planned my journey.

Bill Uzgalis: One of the beauties of CAP conferences is that the presentations often end up getting published. Happily both you and I have Jim Moore and Terry Bynum to thank for publishing both the paper you wrote and the one Gene Korienek and I wrote up from our presentations at CAP 2001.

Susan Stuart: Yes, this was a wonderful stroke of luck! I had felt that there was a lot of energy in my presentation, but I was delighted to discover that there had been enough clarity to persuade Jim and Terry that there was something of publishable quality there. It’s a splendid book, and I am very pleased to be in there with you and Gene, but also with so many other really interesting people doing great work. If I list the people I know, I’ll be forced to leave out others, and they may then infer that their work isn’t great. So I’ll briefly mention John Weckert who he went to establish the first CAP in the southern hemisphere last year at The Australian National University, Canberra.

Bill Uzgalis: So, having experienced your first CAP conference, you decided to hold the first CAP conference in Europe? How did that happen?

Susan Stuart: At CAP@OSU Robert Cavalier explained that he had plans to expand CAP from its North American home and asked if I would be interested in organising one in Glasgow. I wasn’t exactly enthusiastic because I’d really only just met everyone and, although there was a tremendous buzz about the group and the place, I wanted to let things settle down and try to figure out what exactly I might be getting myself into. I also needed to let things settle down because some members of the philosophy department I was in weren’t too keen on interdisciplinary work, even going as far as to deem it not to be philosophy.

So, in the year when I thought things through, I decided that these people I’d met in Oregon were reliable people working in unconventional areas in a collegial and supportive manner, and I moved to another “department,” the Humanities Advanced Technology Information Institute, where the Institute’s Director was very encouraging about my running a Computing and Philosophy conference in Glasgow, and more especially so because it would be the first outside the United States. He also gave me £1,000 to get things started and didn’t ask that it be repaid. I can’t think of anything more I would have needed on my side!

Bill Uzgalis: Well, there certainly are difficulties in working in areas that are not recognized as traditional parts of philosophy. I think you were very lucky to find a place and people who were really supportive. Unfortunately, CAP@Glasgow took place at exactly the same time as the Pacific Division of the APA, and I had commitments there, so I didn’t get to attend.
that event. For those of us who weren’t there, why don’t you
tell us a little bit about how it went.

**Susan Stuart:** My one regret is that we couldn’t take into
account the APA Division meeting times, but I did think about
it and concluded that, since this was an event primarily aimed
at bringing together people from the continent of Europe, then
I should be swayed more by the European academic terms
and meetings than the North American ones. Nevertheless,
the conference was a terrific success: Luciano Floridi
presented the Alan Turing Lecture in Computing and
Philosophy, talking about consciousness and multi-agent
systems, and Aaron Sloman gave the Thomas Reid Memorial
Lecture in which he presented a case for an architecture-based
philosophy of mind. Nearly every paper was presented with
great passion and engagement, with one of the most
memorable being Claude Lamontagne’s presentation on how
to teach the neural functioning that underpins vision using
spreadsheets.

The feedback during and after the conference was extremely
positive, but I began to get a little anxious when people asked
me if it would be the same time and place in 2004! Not only
does it take a lot of energy to run a conference but I thought E-
CAP could quickly become stale if it stayed in one place. Europe
is a big place with a great deal of cultural, academic, and social
diversity, and if we really are going to create an international
network, then we need to move around, gathering in those
people who might be able to get to a conference that is local
to them one year when they would be unable to get funding
for a conference much farther away.

To my great delight, Lorenzo Magnani came forward to express
an interest in organising the second European-CAP (E-CAP) at
the University of Pavia, Italy, and he has done a splendid job. I
had only one small problem with Lorenzo running the conference and it was this: I feared that Pavia’s ancient and
medieval heritage might upset Glasgow’s conflation of late
medieval, neo-gothic, industrial architectural styles. Thankfully
after a day or two, I realised that they both have their merits, and
he and I are simply very lucky to live in two of the most
beautiful towns in Europe!

**Bill Uzgalis:** And, so this led, I take it, to your becoming the
European Regional Director of IACAP?

**Susan Stuart:** Yes, it seems so, and that’s something I didn’t
expect when I set out for Oregon State University in January
2001. That really was a very big opportunity, not just to meet
intelligent and like-minded people, but to meet people who
demonstrate a kindness and generosity of spirit that is at a
premium in the academic environment. I am glad that I took
up Robert’s offer/challenge to get E-CAP off the ground, very
pleased that Lorenzo took over and ran with the second one, and
that now our progression is to a third E-CAP is possible due
the vitality and spirit of Gordana Dodig-Crnkovic, who will be its host in 2005 in Västerås, Sweden.

Naturally, I shall provide support and assistance where I can
and when Gordana needs it, but being the Regional Director,
and not host, does give me an opportunity to do a bit more
research!

**Bill Uzgalis:** That brings us up-to-date about your background
and your involvement with CAP conferences and IACAP. So,
why don’t you tell us about your current research?

**Susan Stuart:** Of my current philosophical research, I consider
my most exciting to be (i) work on unifying approaches to the
unity of consciousness, where I start from a position of
accepting Kant’s metaphysics as prescriptive of the
requirements for conscious human experience and go on to
examine how Kant’s functionalist claims might be
reinterpreted, recognized, and possibly even realized within
the framework of contemporary neurophysiology and
robotics; and (ii) the compelling, yet illusory, sensory feedback
provided by haptic technology, which presents the agent with
an experience that seems to stretch them out into their world,
even though it is not a physical world and the agent is only
scarcely embodied within it.

I am also interested in the questions that surround the nature
of digital identity and reidentity over time, and in how we
define and determine the extent of collections, for example,
of texts, that are stored and accessed electronically. Oh, and as
a bit of fun though still academic work, I’ve written a couple of
papers on *Buffy the Vampire Slayer!*

**Bill Uzgalis:** Why don’t you tell us a bit about the paper you
are going to give in Pittsburgh at the upcoming CAP
conference?

**Susan Stuart:** The paper I’ll be delivering at CAP at Carnegie
Mellon in August 2004 is about Kant and cognitive science, but
I have moved beyond the claims for the necessary spatial and
temporal prerequisites for inner and outer experience to the
application of the categories, the synthesizing operation of
the application of the categories, and the drawing together
of the manifold into a unity, that is, a thought to which an “I
think” could, even only in principle, be attached.

In this enquiry, I am influenced, very naturally, by arguments
I’ve made in other papers about the need for embodiment and
sensory input, even if that embodiment is not physical but
virtual, and even if that sensory input is, in some sense,
illusory. And, further, in the paper I presented at CAP@OSU in
2001 I argued that any autonomous agent—the kind that might
be a candidate for consciousness—would have to be active in
its participation with the world, able to synthesize its internal
representations from its own point of view; effectively the
agent would have to be embedded in a complex and
dynamically changing environment.

Now, for all of this to be possible we need to be able to move
around our world, and this reminded me of Charles
Sherrington’s *Man on his Nature* (1940) and Sherrington’s
emphasis on movement and the need for muscular enquiry
when trying to understand our world, and I thought, this is in
Kant’s second Analogy—where he argues that self-conscious
experience is possible only if we can distinguish subjective
experience from objective fact, a distinction which, in its turn,
is only made possible if we can distinguish movement from
stasis—and it is in Rodney Cotterill’s 1995 paper “On the unity
of conscious experience” wherein he argues that consciousness
is primarily associated with movement and response, and that
the necessary coordination of movement and response
requires a unity of conscious experience. Cotterill goes on to
add that the position of our muscles and our subsequent
muscular movements are the things that make it possible for us to ask
questions about our environment; for example, where we are
in relation to other objects, are we balanced, is this object soft
to my touch, and so on. Thus, it is through muscular enquiry
that I engage with my world and, I want to argue that, as a
result of this, the whole system is cognitive, not just the bit
at the top of the spinal column.

Kant, Sherrington, and Cotterill’s models all work well if you are
in good shape physiologically with information being
processed and responded to appropriately, but what about
individuals who have lost their proprioceptive sense and
cannot gain that all important haptic input from their world;
for them, a visual sense providing visual feedback of their
relation to their world is crucial if they are going to learn to
move again in a controlled way, but it is insufficient for their
regaining a sense of a unified self. In “Self-Consciousness and
the Body” (2000), Monica Meijisng says of the patient IW, “In
the dark he did not know where his hand was; and even if he
knew, he would not have been able to move it towards the
bedside table without visual feedback” (p.42), but she goes
on to indicate that IW’s sense of unity, his coherent sense of
self, returned only when he had learned to move again. It is
the interplay between incoming information and active,
muscular self-movement that places the self, the unity of
experience, firmly at the centre of its environment.

And now my challenge in this paper is twofold: (i) to bring all
of this together to show that Kant is committed to an active,
sensorimotorily enmeshed view of consciousness, and (ii) to
demonstrate how Kant’s claims might be reinterpreted,
recognized and possibly even realized within the framework
of contemporary neurophysiology with Cotterill’s work on
the anterior cingulate as the possible “site” of consciousness,
and within the framework of contemporary robotics with Brookes’
work on COG and, possibly, a little something on soccer robotics
and sewer inspection teams!

Bill Uzgalis: I think one thing that continues to impress me as
I interview more and more members of the CAP community is
how traditional philosophy in conjunction with the
computational turn often spawns interesting insights both
about the new digital world we are encountering, but about
the old philosophers as well. Both your research efforts and
your involvement with CAP conferences and IACAP seem to
be adding up to a real CAP success story!

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ECAP REVIEWS

Review of the European Conference for Computing and Philosophy, 2004

Susan Stuart

On March 27, 2003 we gathered in the Senate Rooms of the University of Glasgow for the first European Computing and Philosophy (ECAP) conference. It was a very proud moment for everyone on the program committee to have brought together scholars from all over the world in the collegial interdisciplinary environment that typifies CAP conferences now the world over. But I hadn’t reckoned on how delighted I would be to be present at the University of Pavia, Italy, from the 3-5 of June 2004 for the second ECAP conference.

The setting was the magnificent Collegio Ghislieri, the conference organizer was Professor Lorenzo Magnani and, if he’ll forgive me for one moment, the smooth running of everything from accommodation and registration to the editing of the abstracts was done by, the much too modest, Elena Gandini.

The diversity of papers being presented was matched only by the diversity of backgrounds from which the conference participants came and all of this led to lively questions and dialogue in the discussion sessions that followed the paper presentations. The paper for me which most clearly exemplified this was Deborah Johnson’s “Integrating Ethics and Technology” in which she argued that technology is not just material objects in isolation but, in its creation and use, it is an integral part of our social relationships, institutions, practices and systems of knowledge. This was reasonably uncontroversial, but she went on to argue that in the creation of tools and objects we are creating technology that has an inherent moral agency. It was the first paper of the conference and its thesis produced such a rush and buzz of conversation that lasted right through to—and no doubt beyond—the end of the conference.

I will leave the review of the conference itself to Marcello Guarini (see below) but would like to add one last thing: it is the great success of this conference that has secured the future of CAP conferences in Europe and for that we must pay tribute to Lorenzo’s great passion and vision. Without his enthusiasm at the Glasgow conference, we might not have moved ahead so quickly and so assuredly. Similarly, our progression is once more assured by the vitality and spirit captured in Professor Gordana Dodig-Crnkovic who will be host to ECAP 2005 in Västerås, Sweden.

Review of the European Conference for Computing and Philosophy, 2004

Marcello Guarini
University of Windsor

The International Association for Computing and Philosophy (http://iacap.org/) has three regions: North American (NA-CAP), European (E-CAP), and Asia Pacific (AP-CAP). From June 3-5 of this year at the University of Pavia in Pavia, Italy, Lorenzo Magnani hosted the second E-CAP conference. The papers presented covered a wide range of topics, including ethical and pedagogical issues pertaining to information technology, theoretical issues in artificial intelligence, various types of abductive reasoning (and the prospects for computationally modelling them), the nature of consciousness (and the prospects for modelling it), computational models of scientific reasoning, and other topics as well. Magnani is to be commended for putting together a program with such diversity and strength. Summarizing all the papers presented at E-CAP 2004 is not feasible—there were approximately 40—but a summary of several papers should be sufficient to convey the depth of thought and breadth of subject matter.

Luciano Floridi (Oxford and Bari) delivered one of the invited addresses, entitled “Presence—Its Ethical and Epistemological Implications.” It was a fascinating exploration of the notion of telepresence. Floridi argues for the inadequacy of Epistemic Failure accounts of telepresence and defends a Successful Observation approach to understanding telepresence. On his analysis, one can be telepresent by controlling artificial agents from a distance (e.g., a Mars rover), participating in chat rooms, or playing a game online, but one may not be telepresent by reading War and Peace or by watching Casablanca. After clarifying the use of telepresence and distinguishing it from telepistemics, Floridi argues that carefully thought out notions of presence may help to shed light on our notions of privacy and pornography.

Deborah Johnson (University of Virginia) delivered an invited address entitled, “Integrating Ethics and Technology.” She argued that technology is not value neutral and that a proper understanding of it should not be separated from the social practices of which it is a part. This line of thinking is carried to the point where it is claimed that technological artifacts have effects on moral patients (defined as beings who have interests). That technological artifacts have effects on moral patients is relatively uncontroversial, so much of the talk discussed the kind of intentionality that artifacts may have, a kind of external intentionality (as opposed to the internal intentionality appropriate to conscious agents). The technological artifact that have the purported external intentionality would include...
entities as diverse as toasters and personal computers. By granting a kind of moral agency to artifacts, Johnson intimates that the effects that artifacts have on moral patients will be taken more seriously. In a related address, “Moral Mediators in a Technological World,” Lorenzo Magnani (University of Pavia and Georgia Institute of Technology) argues that the Kantian view that “there is not need of science or philosophy for knowing what man has to do in order to be honest and good, and indeed to be wise and virtuous” is outdated. Public policy decisions regarding artifacts that mediate our access to knowledge are sufficiently complex that we need to recognize our traditional ways of thinking about our moral and political obligations pertaining to the pursuit of knowledge.

One of the interesting twists in Magnani’s story comes when he suggests that we abandon the Kantian view that we are ends in ourselves (as opposed to means to the ends of others). Pace Kant, Magnani suggests that it may be by treating moral agents as means that we may be able to come up with a better account of agency and the duty to know. While my preference is to rehabilitate the notions of reason and agency found in, say, Aristotle and Kant, to achieve the kinds of theoretical and practical goals sought by Johnson and Magnani, their thoroughgoing challenge to these traditional notions provided an opportunity for stimulating discussion.

The length of the papers varied. The invited addresses (including but not limited to those mentioned above) were an hour in length. Other papers were either 20 or 40 minutes long. In a 40-minute session, Rens Bod (Universities of Amsterdam and Leeds) presented a computational model of reasoning by exemplars. The model focuses on derivational explanations and presupposes a corpus of previously explained phenomena. Bod shows how to use parts of previous (exemplary) derivations in the derivation or explanation of new phenomena. The model attempts to capture both deductive and non-deductive explanations. Of particular concern to Bod is showing how to capture derivations that incorporate the kinds of ad hoc rules and approximation schemes that Nancy Cartwright has discussed in her work. Mark Sprevak (Cambridge) also dealt with scientific reasoning in “The Frame Problem and the Treatment of Prediction.” After an extended discussion of what the frame problem is and is not, Sprevak suggests that it may be useful for distinguishing between common sense reasoning and scientific theorizing, arguing that (a) the kinds of qualifications and context sensitivities at issue in predictive scientific reasoning differ from the concerns of common sense reasoning, and (b) that the frame problem is best understood as a problem that arises in trying to model reasoning present in everyday contexts, not scientific contexts.

At least five of the papers presented dealt with abduction, and some dealt with the prospect of computationally realizing it. At least four papers dealt with the nature of consciousness, and at least two papers were explicitly critical of the very idea of computationally modelling cognition. (Some other papers had the critique of computationalism as a background theme.) Still other papers dealt with issues as diverse as semantic theory, the language of thought, and appropriate and inappropriate uses of technology in the classroom. While this summary does not capture all the subject matters discussed at the conference, it should provide a sense of the range of the material engaged.

As impressive as the material discussed was the way in which it was discussed. The conference was thoroughly interdisciplinary with many participants coming from outside of philosophy. While differing theoretical backgrounds can lead to confusion and impatience, this conference was marked by an exceptionally high level of collegiality and constructive evaluation.
LOGIC, COMPUTATIONAL MODELS AND TOOLS
    Chair: Alison Pease

Music to Our Ears: A Required Paradigm Shift for Computer Science
    Dave Billinge
    Tom Addis

The Scheme of Development of Mathematics according to Lakatos and its Application to Riemann's Scientific Activity
    Wieslaw Wójcik

Moral Mediators in a Technological World
    Lorenzo Magnani

LOGIC, COMPUTATIONAL MODELS AND TOOLS
    Chair: L. Magnani

Coping with Meaning Towards an Evolutively Plausible Computational Semantics
    Asunción Álvarez

Can Vision Be Computational?
    Rosaria Domenella
    Alessio Plebe

“It’s a Wonderful Model”: An Investigation into the Notion of an “Algorithmic Explanation” and its Computational Limits
    Chiara Tabet

A Modal Persepctive on Proof Dynamics
    Patrick Allo

COGNITIVE SCIENCE, EPISTEMOLOGY, AND METAPHYSICS
    Chair: Selmer Bringsjord

Compositionality, the Language of Thought, and the Dynamic Map of Thought
    Marius Dumitru

Philosophy of Information, a New Renaissance and the Discreet Charm of the Computational Paradigm
    Gordana Dodig-Crnkovic

INTERNAL AND EXTERNAL REPRESENTATIONS, CONSCIOUSNESS
    Chair: Roberto Feltrero

Authentic Robots and Inauthentic Daseins
    A. Barua
    M. Satpathy

INVITED LECTURE
    Chair: Mario Stefanelli

Modelling Lakatos’s Philosophy of Mathematics
    Simon Colton
    Alison Pease

COGNITIVE SCIENCE, EPISTEMOLOGY, AND METAPHYSICS
    Chair: Claudio Pizzi

An Argument against Computationalism
    Eduard Barbu (Talk Cancelled)

Ontology for Information Systems Artifacts as a Case Study
    Massimiliano Carrara
    Marzia Soavi

A Relational Stance in the Philosophy of Artificial Intelligence
    Colin T. Schmidt

ETHICS, TECHNOLOGY, AND TEACHING AND LEARNING
    Chair: Eliano Pessa

On the Importance of Teaching Professional Ethics to Computer Science Students
    Gordana Dodig-Crnkovic

Intentionality and Moral Agency in Computers
    Thomas M. Powers

If a Divination and Computer Science: A Case for African Tradition
    T. Otselu Ogbemhhe
    T. Imafidon Obaseki

ABDUCTION, CREATIVE REASONING, SCIENTIFIC DISCOVERY
    Chair: R. O. Elveton

Is a Closed-Loop Discovery System Feasible?
    Alexander Riegler

Intelligent Alarm Correlation and Abductive Reasoning
    Stefania Bandini
    Alessandro Mosca
    Matteo Palmonari

Rational Perception and Creative Processes in Cognitive Science
    Arturo Carsetti

INVITED LECTURE
    Chair: Arturo Carsetti

Computer Imitation and Mathematical Understanding
    Giuseppe Longo

INVITED LECTURE
    A Brief History of CAP
    Robert Cavalier
COGNITIVE SCIENCE, EPISTEMOLOGY, AND METAPHYSICS
Chair: Laura Pana

Unifying Approaches to the Unity of Consciousness
Susan Stuart

Rationalism versus Empiricism: A New Perspective
A.M. Stepak

From the Middle Age to Multimedia: How Ramon Llull’s Ars Magna can be Revived on the Computer
Thessa Lindof

INTERNAL AND EXTERNAL REPRESENTATIONS, CONSCIOUSNESS
Chair: Thomas Powers

Revealing Colours
Ludovica Lumer
Luca De Carli
Davide Gadia
Daniele Marini

Towards Meaning Processes in Computers from Peircean Semiotics
Antônio Gomes
Ricardo Gudwin
Charbel Niño El-Hani
João Queiroz

Mechanisms and Simulations
Gianluca Paronitti

ETHICS, TECHNOLOGY, AND TEACHING AND LEARNING
Chair: Tarja Knuuttila

The Role of Computers in Scientific Research: A Cognitive Approach
Roberto Feltro

Behaviour, Mental Processes and Theories: Prisoners in the Room of our Beliefs (and our Computations)
Luciano Celi

INVITED LECTURE
Chair: Lorenzo Magnani

Philosophy of Science and the Ethics of AI and Robotics
Roberto Cordeschi
Guglielmo Tamburrini

ABDUCTION, CREATIVE REASONING, SCIENTIFIC DISCOVERY
Chair: Susan Stuart

From Theoretical and Empirical Constraints to Synthetic Experiments on Symbol-based Communication
Angelo Loula
Ricardo Gudwin
João Queiroz

Problems with Simplicity and Analogy in the Theory of Explanatory Coherence
Marcello Guarini
Pierre Boulos

Can Tacit Knowledge fit into a Computer Model of Scientific Cognitive Processes? The Case of Biotechnology
Andrea Pozzali

COGNITIVE SCIENCE, EPISTEMOLOGY, AND METAPHYSICS
Chair: Roberto Cordeschi

Computable and Non-computable Procedures in Turing’s Theory of Mind
Jean Lassègue

Computer Science as a Subject Matter for Philosophy of Science
Peter Kühnlein

ETHICS, TECHNOLOGY, AND TEACHING AND LEARNING
Chair: Guglielmo Tamburrini

Metaphor Processing in Text Understanding on the Web: A Hermeneutic Approach
Stefan Trausan-Matu

Defining and Using Deductive Systems with Isabelle
F. Miguel Dionisio
M. Paula Gouveia
Joatildeo Marcos

The Interactive Learning Environments Made on a System Dynamics Basis
Stanislava Mildeová

INVITED LECTURE
Chair: Luciano Floridi

Introducing Chogic: A Primitive Part of the MARMML Machine Reasoning System
Selmer Bringsjord
Kostas Arkoudas
Paul Bello
Marc Destefano
Bram van Heuveln
Yingrui Yang

Internal and External Representations, Consciousness
Selmer Bringsjord

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Getting Outside of the Margins

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Margin, noun. Middle English, from Latin margo border.

1. The part of a page or sheet outside the main body of printed or written matter.
2. The outside limit and adjoining surface of something.
3. A spare amount or measure or degree allowed or given for contingencies or special situations.
4. A bare minimum below which or an extreme limit beyond which something becomes impossible or is no longer desirable.
5. Measure or degree of difference.

(2004, Merriam-Webster Online Dictionary)

Do web pages have margins? Though there is a physical limit to the screen, hypertext links on a page exceed those limits. For instance, Pierre de Fermat set the mathematical world on a three hundred fifty-year quest by posing a theorem in his notebook then adding in the margin; “I have discovered a truly remarkable proof which this margin is too small to contain.” With hypertext in an electronic medium there are no margins too small for proofs or anything else. The electronic medium extends the potential of texts.

This matter of margins is of immediate significant to the Newsletter on Computing and Philosophy, because as of this issue, the publication is moving to a completely electronic format. Some of the advantages of online publication are being forgone in favor of restricted access. The newsletters are restricted to APA members. A result of this choice is the danger of imposing strict margins on a medium that possesses potential for broader horizons.

In the twentieth century, significant new attention was focused on positions, writers, voices, and groups that have been historically marginalized. Marginalization involves being left out of the main body of texts that constitute the officially received and mainstream philosophical discourses throughout history. The American Philosophical Association (APA) produces newsletters in service of topics in philosophy that have been historically marginalized. These include: The Newsletters on American Indians in Philosophy, Asian and Asian-American Philosophers and Philosophies, The Black Experience, Feminism and Philosophy, Hispanic/Latino Issues in Philosophy, Philosophy and Lesbian, Gay, Bisexual and Transgender Issues. These publications regularly produce top-quality articles and discussions. For any contemporary philosopher who may have missed it before, these publications document the distinct philosophical importance of topics that have moved (or are moving) well out of the margins and into central focus.

In addition to the above-named newsletters, four more are included in the biannual APA newsletter bundle; Philosophy and Law, Philosophy and Medicine, Teaching Philosophy, and Philosophy and Computers. These subject matters may not be subject to historical marginalization and are produced for other reasons. Issues of teaching and learning are important because so many philosophers do teach as a part of their profession. As editor of the Newsletter on Philosophy and Computers, I have continually argued that
information technology is changing the nature and practice of philosophy in general. The ubiquity of information technology in use by contemporary philosophers and the deep changes at work in the computational turn render it necessary to address the issues of computing and philosophy in a scholarly forum. This Newsletter, Computing and Philosophy conferences (CAP), the journals such as Minds and Machines and Ethics and Information Technology, as well as the International Association for Computing and Philosophy (IACAP), are addressing those issues. The APA Newsletters perform important roles in the philosophical world.

Moving to an electronic publication offers much potential to take advantage of the medium to enhance production and usability values. To gain these advantages it is necessary to recognize that print media and electronic media are very different forms and require different design strategies. It will not be sufficient to take a print publication and make text files available on the web (e.g., by posting pdf files of the newsletters). Such an approach would be no more an effective use of media than it would be to merely printout a website as a means of producing a journal. An online newsletter is an excellent idea for many reasons. It can only satisfy those reasons if it is designed with maximum value to the online author and reader in mind. Here are some advantages that can be gained by publishing an online newsletter.

**Multiple format:** an online publication should be presented in multiple formats so that readers can use it in the ways most suitable to their needs. A high-quality hypertext design with strong link strategies, multimedia, reader response, and regular maintenance is essential to a successful online publication. Print versions of pages (either plain html pages or pdf) with appropriate graphics for easy printout make online publications more usable. Some quality sites allow readers to select among different features and modes of view. Responding dynamically to the needs of the reader is one of the core values of a strong electronic publication. Americans with Disabilities Act (ADA) compliance is an important goal for an online publication that can be approached with thoughtful design.

**Global access:** The web allows unprecedented access to resources from all parts of the world. Despite the reality of the digital divide between have and have nots, the web is well utilized by educators, scholars, libraries, publishers, journalists, and governments. Any publication that aspires to high quality in online publication must make an effort to be accessible globally. Language barriers are not yet surmountable by translation software (though it is advancing) but abstracts of articles should be provided in multiple languages so that international scholars may determine whether pursuing translation of an article is worthwhile. The APA Newsletters should reach out to the world community rather than hold to a subset of professional U.S. philosophers. The *Paidaia Project* produced in conjunction with the Twentieth World Congress of Philosophy at Boston University is a superb example of a well-designed (though still monolingual) site with an international authorship and readership. *Labyrinth: An International Journal for Philosophy, Feminist Theory and Cultural Hermeneutics* provides a valuable example of a multilingual site, though not cross lingual. *Sic et Non* is a bilingual German/English journal that does an admirable job of synthesizing dual languages.

**Reader and author interaction:** One of the major changes from print media to online media is the capability for rapid feedback from the readers. When we publish in print journals, there is sometimes no way to know whether anyone has read the paper or what they think of it. This is one reason why academic conferences are valued; an audience is immediately available for discussion, even if only for ten minutes or so. The Internet changes this factor radically by allowing for feedback and discussion from readers in the same Web pages that the paper is presented in. The journal *Monist* carried out an early experiment in interactive journal publishing. Many current publications provide for reader feedback and discussion. Newsletter readers and all APA members will benefit amply by an interactive publication.

**Content flexibility:** When readers react, authors discover reasons to revise their work. Online publications allow for content revision and version control. The paradigm case of flexible content in an online publication is the Stanford Encyclopedia of Philosophy. Editor Ed Zalta asserts that a main purpose of the online encyclopedia is to provide a solution to the currency problem that many print publications have. The solution is “a dynamic encyclopedia which gives the authors direct access to their entries and the means to update them whenever it is needed, and which does so without sacrificing the quality of the entries.” Online newsletters with author driven flexible content and version control will add to the quality of the content by allowing authors to correct errors and update their work indefinitely.

**Content management:** The costs of maintaining a high-quality online publication can be mitigated by using content management software. *Open Journal Systems* of the Public Knowledge Project, University of British Columbia is a sophisticated open source program (i.e., available at no cost) that supports the style and management of an online publication. The features of this well-designed tool include: online submission of articles by authors, managing and tracking the publication’s sections and structure, managing and tracking the editorial and review process, automated indexing of published articles with metadata marking for library searching, maintenance of subscription email lists for editors with automatic mailing of a notice with the contents of the current issue upon publication. Such software focuses the editorial effort where it belongs, on content decisions, rather than web design and production questions.

Numerous content management systems are available for different purposes. For example, *phpWebSite* from the Web Technology Group at Appalachian State University is a sophisticated, yet highly usable website production system with which a variety of utilities useful to online publications (e.g., discussion forums, group memberships, image galleries, etc.). Many other general use and specialty content management systems are available at SourceForge.net. These software package are all Open Source which means that they are developed collaboratively and free of charge (sustaining donations are accepted).

**Open access:** The attractive potential of using Open Source content management software to produce and administer APA Newsletters online raises a related issue about who is allowed to read them. I maintain that the APA membership would benefit by making these publications openly available across the disciplines and around the world.

The physical sciences, medicine, and the social sciences are currently engaged in a discourse about open access and proprietary publishing. The concerns about academic publishing are partly in response to the “serials crisis”; the attrition of serial publications purchased by libraries due to steeply rising costs of subscription. Another factor in academic publication is that scholarly authors typically offer up their articles to journals for free with the result that future access to the pieces by the authors and colleagues can only be had by paying (sometimes exorbitant) fees.
The Open Access movement is a global effort led by academics who envision electronic publishing as a means to low-production costs and free access to scholarly output. Peter Suber is a leader in the Open Access movement, as well as a contributor to this Newsletter. Suber describes the advantages of Open Access to academic authors:

Compared to print, the Internet lets us achieve wider distribution and lower costs at the same time. That’s a very good reason to use it. But the Internet doesn’t itself remove the price and permission barriers that restrict access today. These are removed by the will of the author or copyright holder. We scholars are likely to consent to open access for journal articles because we are not paid for them. We write them in order to make a contribution to our fields, and thereby to make a contribution to our careers. We are paid by our employers to make this kind of contribution to knowledge, which compensates us even when only a handful of people around the world care to read what we’ve written. When we consent to open access, we increase the size of our audience and the impact of our work. But we don’t lose any revenue. So we have everything to gain and nothing to lose.9

Making the APA Newsletters open-access works will benefit the contributing authors, the global philosophical community, the areas of concentration in the Newsletters, and the association as well.

Open access newsletter publishing is the rule rather than exception among high-quality professional association websites. Some large associations also have journals, some of which are positioned as benefits to members. Newsletters, however, are typically available to everyone. Academia and the professions provide many excellent models, such as Perspectives of the American Historical Association, various newsletters of the American Psychological Association, Academe of the American Association of University Professors, Footnotes of the American Sociological Association, Spectrum of the Institute of Electrical and Electronics Engineers.14

The Ethics of Association

There is a strong ethical case to be made for open access to APA Newsletters.

1. The APA is an association—that is, individuals connected by common interests.

2. The APA Constitution specifies the common interests in its statement of purpose; “The purposes of The American Philosophical Association shall be to promote the exchange of ideas among philosophers, to encourage creative and scholarly activity in philosophy, and to facilitate the professional work of teachers of philosophy.”15

3. The APA Newsletters are implementations that serve APAs’ purposes.16

4. This purpose is advanced by facilitating the widest range of exchange of ideas. If it possible to exchange those ideas globally, then it is in the interest of the association to do so. Indeed, APA members do have global concerns and relationships. Limiting the APA Newsletters to members of the American (U.S.) association is not based in the principles of the APA Constitution and By Laws.

5. Online publication offers the potential for a global open access and interaction.

6. It is in the interest of the association of APA members to have globally open access newsletters with interactive forums.

7. So, the APA Newsletters should be Open Access globally and should seek to develop open interactive forums.

This case is further strengthened by the ethical standards of contemporary discourse. In a forward-looking article, Charles Ess details how computer networks, especially those employing hypertext (e.g. the World Wide Web) embody design aspects that parallel the theories of discourse ethics of Jurgen Habermas and Robert Alexy.17 The publically available World Wide Web was not yet one-year old when Ess published this piece, yet he clearly describes the potential for online systems in which democratic discourse could thrive:

Such a system would facilitate discourse among a diversity of grass-roots communities that might agree, by way of the same form of discourse upon different norms, and thereby preserve individual and cultural differences.18

That is, it serves the interests of a community to have open communications outside of its own membership. The APA is such a community. An inclusive, rather than an exclusive, stance is most beneficial to the association.

This discourse must further be free from other forms of social coercion—the subtle but powerful cues of hierarchy, status, gender, and so on.19

Several of the APA Newsletters deal specifically with issues of social coercion, hierarchy, and power. The Newsletter on Philosophy and Computers includes inquiries into how information technology may affect social structures of power. Producing the APA Newsletters as openly accessible to all with forums for interactive discourse is consistent with the APA Constitution, contemporary practices of professional associations, effective uses of available technology, and the principles of ethical discourse within a diverse community. I hope that we head there soon. It will help get us outside of the margins.

Endnotes


16. Ibid.
18. Ibid., 251.
19. Ibid., 252.

References