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Philosophy and Computers

Jon Dorbolo, Editor

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FROM THE CHAIR

Committee on Philosophy and Computers

Robert Cavalier
Carnegie Mellon University

Barwise Prize

I am pleased to announce that the APA has approved the creation of the "Barwise Prize" for life-long achievement in the field of Philosophy and Computers. The idea for this kind of award came initially from Jim Moor. With the passing of Jon Barwise in 2000, The Committee chose to name the Prize in honor of Jon and his contributions to the field. The first recipient of this Prize is Patrick Suppes of Stanford. Pat certainly has exercised a life-long interest in computer-assisted instruction and his contributions also include sustained reflection on the use and meaning of such approaches. He has influenced many of us of working with aspects of computing and philosophy and sets the appropriate standard for receiving this kind of award.

The Impact of Computing on the Teaching of Philosophy

At the December APA in Atlanta, PAC organized a Special Symposium co-sponsored by the APA Committee on Teaching. The general title, "The Impact of Computing on the Teaching of Philosophy," set the agenda for a three-part presentation.

Jacquelyn Kegley (California State University, Bakersfield) chaired the session. The first section concerned issues in the use of Course Management Systems. Joel Smith (Carnegie Mellon) reported on the adoption and use of Blackboard at CMU. Remarkably, over 300 courses and over 6000 students used this Course Management System within the first year of its introduction. Robert Cavalier (Carnegie Mellon) outlined features of Blackboard used in his Introduction to Ethics class and Dan O'Reilly (University College of the Cariboo, Canada); demonstrated the functions of WebCT utilized in this logic courses. The second section addressed the "Computational Turn" and Its Impact on the Teaching of Logic, Ethics, and Epistemology." Marvin Croy (University of North Carolina/Charlotte) presented a survey and outlined future directions for integrating logic software into the curriculum; Richard Volkman (Southern Connecticut State University) and David Cole (University of Minnesota, Duluth) discussed the scope and limits of the computer impact on course in Ethics and Epistemology, respectively. In the last session, Ron Barnette (Valdosta State University) emphasized the role of the University Administration in relation to Issues of Distance Learning.

CAP

On matters relating to PAC's interest in furthering the arena for Computing and Philosophy (CAP) conferences, positive growth continues. As reported elsewhere in this Newsletter, the January CAP@OSU was a success. This is no small part do the tireless efforts of Jon Dorbolo. As this year's honored guest, Douglas Englebart, commented: "This is one of the best conference I've been to in years." There really is something unique about CAP and its ability to generate books, grant proposals, and initiatives far beyond the boundaries of the actual meeting.

At the international level, CAP conferences will be held in the UK and Australia during 2003. For information on this, and all matters relating to CAP, please go to the website for the International Association of Computing and Philosophy at <http://www.iacap.org>.

CAP@Glasgow

The deadline for proposals for CAP at Glasgow is August 30, 2002. The conference is scheduled for March 27th - 29th (2003).

Papers may be submitted for oral presentation during contributed sessions or for poster presentations at the Thursday evening reception.

Papers submitted for contributed sessions or poster presentations must not exceed a total word count of 3500 words. Papers must be accompanied by a word count and an abstract of not more than 500 words (to be included in the conference program booklet). Please indicate your preferred presentation medium (oral presentation or poster), and whether you wish your paper to be considered for the other if it is not accepted for your preferred. Papers must be written in a format appropriate for blind review. Authors may submit only one paper and should submit it as a plain text file accompanied by a formatted version in either RTF or PDF format, attached to an email message and sent to: Cap03@philosophy.arts.gla.ac.uk.

For more information on this conference, go to: <http://www.gla.ac.uk/departments/philosophy/ECAP.html>.

Yours truly,
Robert Cavalier

EVENT HANDLERS

Information Informs the Field: A Conversation with Luciano Floridi

Bill Uzgalis
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This is an edited transcript of a taped conversation between Bill Uzgalis and Luciano Floridi at the CAP conference at Oregon State University, January 25, 2002.

Uzgalis: Luciano Floridi, you are now a prominent philosopher of information, but I know from looking at your website (<http://www.wolfson.ox.ac.uk/~floridi/>) that before you

I'm confident philosophy can stop retreating into the increasingly small corner of its self-sustaining investigations, and hence re-acquire a wider view about what really matters.

became involved in the philosophy of information you were into the history of philosophy and epistemology. You've done papers on skepticism,

foundationalism, and you've done papers on the history of mathematics. Yes?

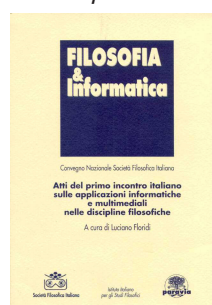
Floridi: Yes, although in the past I worked mainly on epistemology and philosophical logic. The historical work was largely a by-product of my interest in the history of epistemology.

Uzgalis: So, why don't you tell us about your philosophical background and how you came to be interested in the Philosophy of Information?

Floridi: Well, let's see if I can provide a short story. Let me first clarify that PI, the philosophy of information, is a label I introduced some years ago to refer to the new area of research that has emerged from the computational turn. I think that for many years I was doing philosophy of information without knowing it. I was speaking prose without being aware of it, as M. Jordan says in Moliere's play. Or to put it more philosophically, I was looking for my glasses, while having them on my nose. When I was an undergraduate in Rome, I was trained as a classicist and a historian of philosophy. When I left to do my graduate studies in the UK, first at Warwick and then at Oxford as a postdoc, I moved into philosophy of logic and epistemology, and so I acquired the second half of my bag of technical tools. For some time I moved across the standard topics in philosophy, looking for something I couldn't find. I was in search of a new methodology, to approach contemporary problems from a perspective that would be heuristically powerful and intellectually enriching when dealing with lively philosophical issues. I started off working

in straightforward philosophy of logic and epistemology. But quite soon, I began distancing myself from classic analytic philosophy. When I published some of the results from the thesis I had written for Rome University on the realism/antirealism debate, it became clear to me that the analytic movement had lost its propelling force, it was a retreating paradigm. Looking for a different approach, I worked on the foundationalist issue in epistemology. My first book was entitled *Skepticism and the Foundation of Epistemology*. If you read it, you see that what I was looking for was a concept of “subject-independent knowledge” close to what I now identify as semantic information. The book was a clumsy attempt to develop a sort of ecology of knowledge, really. Initially, it wasn’t meant to be an essay in method, but I had lost most of my faith in the fruitfulness of linguistic and conceptual analysis and, as a result, I was struggling to find a better way of dealing with problems I still considered to be philosophically interesting. I think philosophy should never be reduced to the archaeology or philology of thought, but it cannot survive very long as its manicure either. I was disappointed by the marginal impact that analytic philosophy had on the way we understand the world and try to solve its problems. I was looking for more understanding and interpretation of broader and livelier issues, and on a larger scale. My aim was and still is to develop a constructionist (I like this word, it allows me to differentiate my position from current constructivist theories) philosophy, where design, modeling and implementation replace analysis and dissection. In shifting from one set of tasks to the other, I’m confident philosophy can stop retreating into the increasingly small corner of its self-sustaining investigations, and hence re-acquire a wider view about what really matters. I moved across the historical disciplines, and I did more work on logic and philosophy of mathematics, still looking for the right, enlightening moment. One of the results of these investigations was a book called *Sextus Empiricus: the transmission and recovery of Pyrrhonism*. After many years, Oxford University Press will publish it this year. So you see I’ve always kept an eye open when considering epistemology and its history, which has meant working also, obviously, on skepticism. But, basically, my interest was in what happens, from a historical, epistemological, logical and an ethical perspective, to the stuff that we call information, in its dynamic development, creation, elaboration, and usage. Since I was an undergraduate I had always had a sort of “week-end passion” for computer science. I didn’t know it was philosophy of computing, I didn’t call it that way, and I hadn’t encountered anybody from the CAP group yet. But I’ve always considered myself a computer nerd. I took courses in computer science. I worked in humanities computing. I edited the *Iter Italicum* (a humanities database) on CD-ROM. Then I worked as the consulting editor for the *Routledge Encyclopedia of Philosophy on CD*. I developed a team-project for the Italian Web Site of Philosophy (<http://www.swif.it>), and I now direct the SWIF editorial board of about 60 philosophers. So, slowly, I came to envisage our new field, the philosophy of information, approaching it from two perspectives. The purely theoretical perspective provided by logic and epistemology, and the technical perspective provided by computer science, IT and humanities computing. Finally, a few years ago, the two things clicked together. They kind of encountered themselves and joined forces. And it just surprised me how obvious their interconnection was, and yet how long it had taken me to see it. As I said, it was like discovering I had had my glasses on all the time. I had written a small book in Italian on the philosophy of computing, which was basically applied IT for philosophers. Because of my work with Routledge, I had the opportunity to discuss with them the project for an introduction to the

philosophy of computing. People there were very supportive and I’m really grateful to them. They were very much behind me, and that gave me the courage and the energy to plunge into the project of developing my ideas on the philosophy of information. The turning point was an academic year I spent as visiting professor at the University of Bari, in Italy. They have an Epistemology and Computer Science Lab where a lot of applied IT work is done; truly an excellent infrastructure. The director, Mauro Di Giandomenico, offered me a great opportunity. He gave me all his support to develop a course on philosophical issues in computing, with complete freedom to select and shape the topics as I wished. I wrote the first draft for *Philosophy and Computing*, and Routledge published the book in 1999. I remember writing in the Preface that the book was meant for two kinds of philosophy students: those who need to acquire some IT literacy in order to use computers efficiently, and those who may be interested in acquiring the background knowledge indispensable for developing a critical understanding of our digital age and hence beginning to work on that would-be branch of philosophy, the philosophy of information, which I hope may one day become part of our *Philosophia Prima*. Since then, PI, or PCI (Philosophy of



Computing and Information), has become my major research interest. I’m currently editing the *Blackwell Guide to the Philosophy of Computing and Information*, for example. I still do some research in epistemology and on the history of skepticism, but that’s become much less central. Having said that, one day I hope to finish writing a book on mathematical skepticism that has been in the pipeline for many years.

Uzgalis: Do you see philosophy of computing and philosophy of information as synonyms, or do you distinguish them?

Floridi: Rather than synonyms, I see them as being very strongly related both conceptually and historically. One coming out of the other, not just after, but out of the other, PI coming out of PC. PI is really the brainchild of PC. The philosophy of computing, especially the philosophy of AI, has been a powerful force behind the development of this new research area in philosophy. PI is really the unifying context for investigations as different as computer ethics and philosophy of artificial intelligence, from applied computational philosophy of science to modeling in ethics. In all these areas we rely on the same special laboratory space, computers. Recently, I gave the *Herbert A Simon Lecture in Computing and Philosophy*, at the *Computing and Philosophy Conference* (Carnegie Mellon University, August 11, 2001). It was an analysis of some of the most interesting, open problems in PI. In that context I argued that it is better to refer to our field as PI instead of PC. This is not just a matter of vocabulary. PC focuses too much on the specific tools that allow us to concentrate our attention and do our work in the field, rather than on the ultimate “substance” of the field, data and information, which is what computers deal with. So my perspective is that historically, PI follows from PC. Logically, PC has made possible PI. From a philosophical perspective, in the future, I see the field as being unified by an overall concern for the way in which information is manipulated, transmitted, transformed, with the conceptual issues that arise in PI replacing what was the springboard provided by PC. In an article I just published in *Metaphilosophy*, entitled “What is the Philosophy of Information?” I wrote that PI privileges “information” over “computation” as the pivotal topic of the new field because it analyses the latter as presupposing the



former. PI treats “computation” as only one (although perhaps the most important) of the processes in which information can be involved. Thus, the field should be interpreted as a philosophy of information rather than too narrowly just of computation, in the same sense in which epistemology is the philosophy of knowledge, not just of perception.

Uzgalis: Your answer is interesting for a number of reasons. One is that one of the things we have tried to do in the Computers and Philosophy newsletter is to track the emergence of a unified field. So your reflection on what ties all of those pieces together is illuminating. I think the other reason why I asked the question is that I know some philosophers that deal in information, but I’m not sure that their relation to computers is the driving force of their research. I’m thinking of John Perry, Jon Barwise and the CSLI group that developed situation semantics. I think their project initially had a connection with computers, because formalizing ordinary language would make it easier for computers to deal with ordinary language. But a good deal of what they did had little to do with computers. On the other hand, it is quite clear that information was the central focus of their research.

Floridi: Well, take *Knowledge and the Flow of Information* by Fred Dretske. There is hardly any reference to computers, or to computation as the main, no the only, process we are interested in. The whole emphasis is on information. He explores the nature of information, the migration, management, and the transformation of information. And yet, I would consider that text as one of the most important contributions to our field that has appeared in a long while. I think that, as often happens in the history of philosophy, we might have been slightly sidetracked by the attractiveness of these machines, and by the fact that all they do, mostly, is effective computing, in the Turing-machine sense of the term. I think we need a broader concept of information processing and flowing, which includes computation but not only computation. Consider the debate in the philosophy of cognitive science concerning algorithmic vs. distributed (neural networks) models of intelligence. Clearly a Turing-machine conception of what the philosophy of information ought to be about is far too restrictive. We need a unifying, broad concern for what is being transformed by computation, I think that is a stronger paradigm that helps

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to unify the field better than an overall concern for the actual, let’s say gadgets. Consider our field in 20 years. In 20 years, we might actually be dealing with informational devices that do not closely resemble the standard Von Neumann machines that we have on our tables today. We could be (here’s a science fiction scenario) dealing with quantum computers. Or we might be dealing with computational devices that employ neural networks. Now, obviously the problems and the interest in the field would be still very much alive, if not even more substantial. But at the same time, if we were to stick to the machine currently on our desks, as to what keeps us together, I think it would be pretty much misleading. I usually say that PC (the philosophy of computing) is not the PC (the personal computer) but PI.

I think you raised a very interesting point, about looking at our field as a unified area of research that motivates a number of different lines of work. One may wonder whether we have any history behind us. Is there anything we can claim

as our own in the history of philosophy? I would say that, if we concentrate all our attention on our field as computing in philosophy or computers and philosophy, then of course, we can not go too far into the past. We could claim a number of people, great philosophers like Descartes, Pascal, Leibniz, and Hobbes, but basically those would be pretty much hints, an attempt to build a pedigree that we know is not really there. In any case, our history would be at most a few centuries old. On the other hand, we can talk about Plato and information. Consider the relationship between Plato’s world of ideas and how ideas format this world, just to take an example. Or Popper’s concept of World Three. We know there’s a lot to be said, and fantastic work to be done in terms of re-examination of the history of philosophy from an informational perspective. Of course, one cannot speak of doing philosophy of computing in order to interpret Plato. That would be ridiculous. There is nothing ridiculous, however, in trying to see how Plato could be reinterpreted from an information-based paradigm. Interpreting Plato from a PI perspective would not risk being anachronistic, or even being out of context. So I think this development from philosophy of computing to philosophy of information, from PC to PI has two great advantages. The first is that it provides us with a very robust theoretical frame within which to place and make sense of the different lines of research that have taken shape since the fifties. We can easily re-appropriate things like the philosophy of cybernetics, or the theoretical discussions being developed in aesthetics about digital art, as part of the general paradigm. I call the second advantage PI’s diachronic perspective, a perspective on the development of philosophy through time. PI gives us a much wider and more profound perspective on what philosophy might have actually been doing. As you know, this leads to the way in which I read the history of philosophy as developing toward the philosophy of information.

Uzgalis: I see this is going to be another example of the way great philosophers always read the history of philosophy. If you think of Aristotle, Kant and Russell, they all have the same perspective on the history of philosophy — *it leads up to me!*

Floridi: Yeah, (laughing). Well I think philosophy is inevitably and always going to be a way of understanding itself in new ways. It is the ultimate level of the reflective process, it cannot help reflecting on its own grounds, on its own roots. As long as this self-conscious attitude does not freeze conceptual innovation, it is very welcome. I think what is important is not to be exclusive. We don’t want to be like Hegel who says, look this is the history of philosophy, this is the way I reconstruct it, AND that’s the only story that holds. I think that kind of monist, single-perspective kind of attitude is no longer tenable. But there is no good philosophy without a reconstruction of the path that led to its emergence.

Uzgalis: I think the way I’d put what you’re saying is, that every generation has to look anew, it’s a new world every time, and when you start seeing those new things, it reorients everything.

Floridi: Precisely. It’s like riding a bicycle. You need to re-adjust your balance constantly to keep going straight. If one is short-sighted, one sees only the small little curves, the uncertainties, the micro-unbalances. But they are all finalized to the target one wishes to reach. What matters is to keep the road ahead open.

Uzgalis: And so you go back and suddenly you can see in the history of philosophy things the last generation couldn’t see because they were doing the same thing, seeing the world with their own vision or perspective.

Floridi: Yeah, it is like having played a game and then trying to make sense of it at the end of it. Now there are different ways of looking at what has happened and because philosophy is the ultimate level in the process of the semanticisation of being, of transforming the meaningless into meaningful, then obviously part of that process also consists in remaking sense of one's own history. Now, I think it's incredibly interesting how philosophy is actually able to constantly digitalize its own essence. I would say that one of the lessons we have learned in this new PI approach is that philosophy these days is very much open to contemporary problems, whereas in the recent past, philosophers claimed that philosophy had to enjoy a sort of ivory-tower detachment. It was either universal, absolute and timeless, or nothing. Now that has been a way of reading the history of philosophy, as a search for the timeless, for the absolute, for the unique and the unchangeable, which obviously contrasts dramatically with what we are doing in PI. In the philosophy of information/computing, we are dealing with issues that affect us now and tomorrow. We are looking at the past to try to understand where we are going, not just for the sake of understanding our roots. It is a way of looking at our roots that provides us with a kind of vector of perspective, knowing a little bit more about why we might be going in a certain direction. From this perspective, I think it is fundamental to abandon the view that philosophy is a sort of pure game of ideas, detached from and not engaged with the temporary modifications of the world. If that were the case, then it would be natural to see philosophy as having little relevance to contemporary issues or how to shape the future. But philosophy is immanent; it works within history not from without. This does not mean it is relative. It means that it has to be timely to be alive.

Uzgalis: Philosophy is part of the culture and is affected by the things that are affecting the rest of the culture. And it in turn affects the rest of the culture.

Floridi: Precisely. Philosophy is in a sort of open, fluid, interactive, feedback relation with the culture in which it is embedded. It's a little bit paradoxical to hear a philosopher claim that philosophy does make a difference but that philosophy is not affected by whatever its external circumstances are, its environment. Well, if you want to believe that philosophy does make a difference, as I do, then you have to acknowledge the fact that having made that difference, then the next round, the game will be slightly different. Because we've been making a difference, you see, precisely because we have behind us 25 centuries of Western philosophy, nowadays we cannot do things as they were done 25 centuries ago. There's an evolution in thinking, brought about by thinking itself, an evolution in the conceptual and historical environment in which we are operating, that brings us new problems, new frames, new tools, new aims. So philosophy is really this constant complex process of reflection, semanticisation, and reacquisition of what is the new environment, and the ability to deal with the environment in a constructive way, to understand it, model it and change it for the next generations. From this perspective, I think that the work that is being done by the CAP community is top rate. I mean, this is what philosophy should be about. And I see that the conferences, the newsletter, the PAC committee, the International Association of Computing and Philosophy (www.iacap.org) the publications in the field, have been more and more successful in attracting attention and respect from other philosophers in different fields. PI is definitely acquiring the kind of academic status, in a positive sense of the expression, that is required to make a difference. My hope is

that we shall soon see PI as one of the AOS in *Jobs for Philosophers*.

Uzgalis: I think that the CAP conferences have a wonderful trajectory.

Floridi: Yes, they really do attract an increasing number of excellent philosophers; they work like magnets, both the one here, in Oregon, and the one at CMU. They are, even for people like myself, coming from Europe, times for regrouping, rethinking, keeping informed about what the field is doing, and what other people are doing research about. There is a feeling in the air that we are shaping a new paradigm. I certainly benefited enormously from the experience. I think the final moment in my total conversion was basically when I got in touch with Robert Cavalier and you and Jon Dorbolo and the whole crowd of people connected with CAP. I finally discovered that I wasn't the only one who was looking for new horizons.

Uzgalis: You know one of the moments I was most proud of, and which I can't praise Robert Cavalier highly enough for, was when I realized that he had managed to get CAP run together with the World Congress of Philosophy in 1998. The XXI World Congress was in Boston and the reason that the organizers of the conference did that was because they had decided that computers and philosophy represented the one of the most creative aspect of American philosophy and they wanted to show the world.

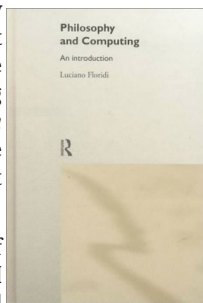
Floridi: Exactly. I would definitely agree with that. As a matter of fact, I was in Boston to give a paper on mathematical skepticism and to chair a session on analytic epistemology. I saw the CAP meeting in the program. That's how I got in touch with the CAP group for the first time. By the way, do you know that the XXI World Congress has organized a special session on the philosophy of information?

Let me tell you something else. American philosophy has provided many great giants in the history of philosophy and yet it is surprising how much European thought has always influenced American philosophy. But in this case, in the case of the philosophy of information, we are speaking of something that is entirely the product of the American tradition, that is bringing American philosophy to the verge of the cutting edge. PI has its roots in American pragmatism and American philosophers have produced some of the most innovative work done in the field for a long while. In my case, for example, my graduate work was an attempt to read the foundationalist debate using tools borrowed from Kant and Peirce.

Some colleagues in other research areas are constantly complaining about the unhealthy state of the discipline. If it's not dead, it's awfully sick. Now, for us in PI, we just cannot get enough energy to do all the fantastic work that lies ahead. We know that whenever we attend one more CAP conference, there are 10 new colleagues, 10 more issues every time, 10 more problems waiting to be discussed. It's like being in an oasis after having been through the desert. You discover that, wow! Philosophy is great fun, makes a difference in the world, and there is a huge amount of innovative, pure research of the highest quality to be done. So when I gave the paper on the fundamental problems of the philosophy of information at Carnegie Mellon, what I tried to do was really to give a clear sense of the scope, depth, richness and variety of the core problems and methodological approaches shared by people in this field. Of course, each of us has his or her own specific interest within this general frame. The colleague working in philosophy of artificial intelligence will have different skills and interests and different research projects from the colleague

working in computer ethics. But at the same time, they speak the same language. They look at the world from the same end. They respect and learn from one another. They acknowledge the presence of the same theoretical background and know what philosophy should be about. They share the same paradigm and agenda. I think that this is a unifying frame that is absolutely vital; it makes the whole discipline free from that claustrophobic and decadent atmosphere one breaths in some philosophical departments, where the basic meta-narrative is one of confusion, disorientation, crisis, disillusion, retreat from reality, as if philosophers were dreamy and hopeless losers, intellectual players in a world that does not listen to their voices. Working in PI gives back to the graduate students that kind of energy, that kind of sensation that something important, relevant and innovative is going on. Now we haven't had this for a long while. At the same time, teaching becomes a thrilling activity. Contemporary issues are placed at the centre of the philosophical stage. We are no longer sending more and more dreamers into the world, like cannon fodder for lost intellectual battles, but educating the new generations to deal successfully with a whole range of conceptual challenges. Professionally, we are no longer cloning academics, but preparing the citizen of our society, as Plato suggested.

Uzgalis: You said you acquired this new pair of glasses. And it seems in part that what you did when you did that was to take a look at the whole thing by writing *Philosophy and Computing: An Introduction*, but I suspect you also have your own favorite lines of research that you're going down. So...



Floridi: Yes, well, there are a couple of things to be said about this. One is that I come from an Italian educational background, and in Italy, German philosophy is still predominant, even nowadays. And so, as an undergraduate, I was trained in approaching philosophy systematically. The normal attitude was that philosophy was about looking at the whole world. It wasn't like a specialized interest in a small corner. It was like having a Weltanschauung.

Uzgalis: Right

Floridi: Now with this education in my academic DNA, when I came to study philosophical logic, I worked on the realism debate, when I moved to epistemology, I worked on the foundationalist debate. Again, it was that kind of perspective, saying: what are we doing here? And why? And when I gradually moved toward philosophy of computing and philosophy of information, my attitude remained one of seeking a broad picture. So from this kind of systematic attitude, I started to look at philosophy of information as a discipline that needed a general frame. This is why I wrote *Philosophy and Computing*. I might actually mention that working in this systematic way, the *Blackwell Guide to the Philosophy of Computing and Information* is going to be in my view, a fundamental base to develop further explorations. It consists of 25 chapters, from systems theory to computer ethics, from artificial intelligence to hypertext theory, from the impact that digital art has had in aesthetics to the impact that computational and informational notions and tools have had on decision theory and game theory and so on and so on. With that in place, I hope that the problem of having a general framework for research will be largely resolved. So, then, we can switch to my present interest, my more specific research interests. At the moment I am working on two areas of research.

Uzgalis: Good. What are they?

Floridi: One is in computer ethics. I'm trying to look at computer ethics from an environmental perspective. Computer Ethics concerns new moral questions arising in the information society; ethical issues that have been caused by the impact of information and computation technologies. Computer ethics has been developing almost separately from the other PI branches. It's something that has been going on for decades now, but that philosophers have not taken up yet. Certainly everyone at CAP knows about this and I have met many people who have done work on it. We have established an International Society for Ethics and IT (INSEIT) and every year or so we have an international conference (CEPE, Computer Ethics Philosophical Enquiries). There is also a specialized journal, *Ethics and Information Technology*. But, generally speaking, the philosophical community is not yet very much aware of the importance of this specific field. So my work in that area is an attempt to develop what I've called an information ethics. With a very quick outline, my research is an attempt to look at ethical problems from the perspective of the receiver of the action, not from the source of the action, where the receiver of the action could be a biological or a non-biological entity. It is, to put it in nutshell, an attempt to develop environmental and ecological thinking one step further, beyond the biocentric concern, to look at the possibility of developing an ontocentric ethics based on the concept of what I call the infosphere. A more minimalist ethics based on existence, rather than on life.

The second project of research concerns the concept of information. I'm trying to understand how the concept of semantic information is related to other key concepts: truth, knowledge, being and mind. The long-term project is a book on PI where I analyze several classic issues in philosophy and some new problems, approaching them from the new paradigm. A short-term project is a paper I'm working on for the next CAP meeting concerning the structure of the interaction between data, information, and knowledge. This is a triangle of concepts that I think is important to model properly. I hope the paper will provide an informational-approach to the definition of knowledge that may compete with the standard account in terms of justified true belief.

Uzgalis: Yeah, I think this came out in the discussion of your talk in August. People were having trouble with those terms.

Floridi: Yes

Uzgalis: There is an interesting, perhaps surprising contrast here. You are an epistemologist by training. When you study epistemology, you become very sensitive to the differences between belief, opinion and knowledge. It becomes obvious how important it is whether or not there are grounds for belief, and whether the belief is true or not. Yet, when we listen to the engineers, the computer scientists, you find this incredibly flat epistemic landscape where everything is just data, or just information, and it seems like nobody cares about whether or not it's true or not, or whether it's relevant or not, or whether it coheres together.

Floridi: I completely agree with you. It's surprising to see that, as soon as you move out of the epistemological context, people as well as scientists use terms and concepts as powerful as data, information and knowledge in the most casual way. That's strange. But the most surprising thing is how casual epistemologists and philosophers in general have also been with things like *data* and *information*. I completely agree with you that as soon as we start talking about knowledge, we have the Justified True Belief model, we have centers of analysis

that help us to make sense of it. And of course, for example, nobody today would claim that knowledge does not imply truth.

Uzgalis: Right

Flori: These elementary notions really help us to build our investigations. As soon as you scale down, you would expect things to get better. I mean, after all, if you can manage a decent analysis of knowledge, which is a more complex concept, dealing with information should be just as easy, if not easier. But you find that, on the contrary, there has been a

Oddly enough, philosophy progresses by impoverishing itself.

complete lack of substantial interest. Certainly some work has been done, but not nearly as much as the work done in epistemology about the concept of knowledge. And despite this, let's call it downgrading of the object of investigation, we find we are virtually powerless. We don't really have a clear grasp of the notions we've been using, how we've applied them, the context in which they are employed, and you find philosophy being very casual about fundamental concepts like data and information. This is surprising if one looks at the history of philosophy as the history of attempts to make sense of the world. Because one would expect people to start from the simpler and build up. In my view, we often do the opposite. To use a computer science metaphor, we very often proceed top-down, stopping halfway through. That's certainly true of epistemology, where the concept of knowledge has captured all the attention. Now, in my view, precisely in order to understand what knowledge could be and the dynamics of knowledge abstraction, it is extremely important to look at something less rich, something thinner than knowledge, like information. We need to move one step forward in our top-down approach. Oddly enough, philosophy progresses by impoverishing itself.

there is no question of whether the helium atoms or the imperfect vacuum belonged to somebody else, because they were made out of nothing. On that account, the notion of there being a creator who is *the* creator makes sense to me; but with music or other art forms, it doesn't seem to me that this picture of a creator works. So I'm curious about your notion of there being *the* creator of an artwork.

MARCEL: Well, the creator of any particular thing is the person who managed to take elements, admittedly already existing elements, technology, art, or anything else and put them together in a unique way. I don't think that it's necessary that one create in the godly manner, creating every single element that goes in to something, to be considered the creator of it. I don't think there would have been a *Ulysses* had there not been a James Joyce, and I don't think there would be, "*(I Can't Get No) Satisfaction*," if there wasn't Richards and Jagger. So, what gives artists rights over what they create is simply that (a) their works wouldn't have existed otherwise, and (b) they're under no obligation, having created something, to share it with anyone. So if they do decide to share it, they can do it under any terms they find acceptable.

TONY: Is it okay if I postpone talking about the obligation to share for a little bit, and just ask you a little bit more about this notion of the creator?

MARCEL: Certainly.

TONY: You and I have peculiar musical tastes. And we don't mean to alienate anyone in talking about the Beatles or the Rolling Stones. We could be talking just as easily about AC/DC or Kid Rock.

MARCEL: Some would say our tastes are antiquated, not just peculiar.

TONY: There are at least ten bootleg CDs of outtakes from the Rolling Stones album, "*Voodoo Lounge*." One of the CDs in this set has Richards instead of Jagger singing lead on the whole album. I am sure that there are bootlegs of other artists with similar variations from official releases. To make you listen to a bootleg I value would be torture; just like my having to listen to many CDs that exist of versions and outtakes of a Beatles album would be torture. When you listen to the sessions, it's not just that you have performers coming in separately and adding tracks or stripping vocals. You also hear Richards sitting around playing old blues songs from Mississippi John Hurt, for instance. And you can see that the creator question is not whether someone creates something in a new unique manner. You can hear traditional musical elements being just slightly transformed into something, which the market, the consumer, perceives as unique. I wouldn't want to say that Jagger and Richards didn't participate in creating this work of art, that they didn't add something to it. But I'd be willing to say that the contribution of Mississippi John Hurt is equal. And I'd certainly be willing to say that there wouldn't be the album that comes out, if it hadn't been for Muddy Waters, Willie Dixon, and many other nameless bluesmen. So, I want to say that there is a creative element, and I think the musicians would agree with me, supplied by people who produce new popular music, but I think their contribution is very exaggerated if they are labeled the creators.

MARCEL: Certainly, no one creates in a vacuum. But if Jagger and Richards' contribution to a song is minimal, inadequate or wholly derivative then I don't think they are the creator of a new work of art. If there isn't some element of originality in it, then it's not a work of art at all. Originality is a condition of a thing being a work of art. But also, if their contribution were

COMPUTING ETHICS

Music and Morals

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At the January 2001 meeting of CAP held at Oregon State University, Daguerre (M) and Graybosch (T) engaged in a dialogue about the moral issues surrounding the music file program Napster. This is a revised and expanded version of the dialogue.

I. Music File Sharing Programs Such as Napster, Gnutella, Audiogalaxy, and Morpheus are Morally Wrong

TONY: Marcel, in some theologies God is represented as existing alone and becoming the creator of the universe by making everything out of nothing. So since he or she made things out of nothing and there were no other persons around



that minimal, then the creators of the song are the people you talked about as being the influences. In that case, the ascription of creator of the work shifts to somebody else. It doesn't follow that there is no creator of the work, nor many of them. So if the Stones take a blues tune like "Crossroads" and change a lyric here and there, but otherwise just perform the song as they heard it from a recording, they are interpreting somebody else's work of art. Suppose that the creator of "Crossroads," Robert Johnson, was also a major influence on the writing of "(I Can't Get No) Satisfaction." Is that just another case of interpretation? No. Jagger and Richards' contribution makes "Satisfaction" a new and different animal, something that Robert Johnson would not, even could not, have produced. I'll admit that a lot of popular music is highly derivative, unworthy pap, but those who produced it created something of value, apparently, to some people. And that contribution, if it's enough of a contribution anyway, makes them the creator of that particular thing. James Joyce used words in the English language that other people had used before, but he managed to combine them in a unique way. As far as I know, nobody thinks that Joyce was uninfluenced. But he clearly created something unique, a way of saying something that is original. In such a case it makes perfectly good sense to say that he created something.

TONY: Let me offer "Satisfaction" as an example. The Stones' contribution to the production of "I Can't Get No Satisfaction" is greater than the contribution that Brittany Spears made in her recent version. I also think that the cover that Otis Redding put out of "I Can't Get No Satisfaction" shows a great deal more original contribution than Spears'. The Stones' contribution, at least to that song is significant; but it has echoes of Muddy Water's song, "I Can't Be Satisfied," and echoes of other blues. And that's an important element of artistic creation. Ownership of a work of art looks to me more like, say, ownership of a corporation. Some people have stock in it, and we tend to treat them as if they're the creators because they're just the most recent buyers or contributors. It certainly doesn't seem to me that any contribution warrants that Jagger and Richards own this collective artwork and ought to be able to decide what happens to it. Which I guess points to the sharing question.

MARCEL: Yeah, I think that example cuts to the heart of where we differ, because we both agree that there is a cultural commons. The question is, how are we supposed to regard the things that individuals produce based upon that shared commons? If I were to build a house, I wouldn't build it from scratch. First off, I don't have to invent *how* to build houses. And I don't have to cut down trees and make lumber, mine copper and form it into water lines, etc. But if I make the effort to combine various elements into a house, the house itself doesn't belong to the commons or those who "influenced" its construction. The owner of the lumber mill cannot spend the night whenever she likes nor even on some prearranged schedule. Jagger and Richards likewise relied on the commons, but they created something that would not have existed otherwise. They combined elements into a thing of value. I don't think Brittany Spears or Otis Redding claim that their versions of "Satisfaction" are new songs — they are tokens of the song, "(I Can't Get No) Satisfaction." Speaking of Otis Redding, I think there is an interesting and relevant comment that he made regarding "Respect," a song he wrote and recorded, which was covered by Aretha Franklin. When he first heard her recording, he remarked, "That girl stole my song." I believe he meant that she made a contribution to the song that was so original that her version could be considered a whole new song. He was acknowledging not just her

interpretation but also her creation of something new in that song. So we might consider this a borderline case.

TONY: I remember driving through Texas, and having this talk show on the radio, and some fellow had called in and asserted that Elvis had done more for African Americans than Martin Luther King. This fellow's view was that by popularizing African American culture, Elvis had helped to mainstream black Americans. There are a bunch of things wrong with the fellow's statement. I've read, I forget where, that Pat Boone now claims that he has done a lot for musicians such as Little Richard, by having covered their songs. But there are instances where performers take a work or a style that was largely created by someone else and make the song their own. Esquerita was a major influence on Little Richard's music and hairdo. Bessie Smith was famous for issuing cover versions that would become more popular than the originals. If Otis Redding were the one who had made "Satisfaction" popular, there would be something more akin to collective ownership of this work of art.

MARCEL: Jagger, Richards and Redding all contributed to the creation of a commodity and each should be compensated. But in terms of the creation of the work of art, Jagger and Richards in fact, created the song, and it doesn't look like Otis or anybody else ever thought otherwise. Every cover version of "Satisfaction" is a token of the work created by Jagger and Richards.

TONY: Perhaps you are right factually. But it is still possible for someone else to make the song their own or establish collective ownership. "Walk this Way" by Aerosmith underwent such a transformation into rap. And here is another disagreement between us about what constitutes a work of art. Your model is that it's made by the person who writes the lyrics and the score. In music and other performance arts, a lot of what goes into the success of the artwork is in its presentation. Creative packaging not only gets people to want to buy a work but also makes it an occasion of aesthetic experience. Kid Rock, although he may have written none of the music, is an author also.

MARCEL: Then it does make sense to say that Elvis, or Pat Boone for that matter, did the things that the caller claimed for African Americans because he was the one who added that element that you're speaking of, to popularize the music. All we are talking about here is the difference between a writer and an interpreter of music. Presley, Sinatra, Ella Fitzgerald and the London Symphony interpret works as performers. But there is no reason to think that Mahler conducting Mahler will produce the definitive versions of his works. The Rolling Stones' recording of "Satisfaction," may be the best recorded version of it, but the thing that they created isn't merely *that* particular recording. The work itself, as I want to talk about later, was the creation of something of a particular type, and their recording is a token of that type.

TONY: When you were talking about building a house, it made me think of the build-it-yourself housing plans that you see in newspapers. I thought you'd want to talk about how what someone owns is ultimately this *type* of the house. But once you buy the type, what you buy is not the right to sell the plans of the house to someone else, but the right to build one token of the house. Is that your view?

MARCEL: The architect would be the creator of the type. One who purchases the plan is entitled to create a token of it. And what one does with her token — paint it purple, give it away, burn it down — is up to her. But what she ought not to do, is to then take the plans, reproduce them and make them



available to others. She hasn't acquired the type (what the architect created). She has acquired the right to make a token.

TONY: Then if what the artist owns is the type, as opposed to a token of a work of art, what is it that I am doing wrong if I copy a token? I bought the token? I haven't bought the type; but I'm not copying the type on my CD burner, I'm copying a token.

MARCEL: In my argument, to say that the creator of a work of art is the rights holder of that work means that the artist has distribution rights over the type. When you purchase a token, you haven't acquired any distribution rights - they inhere in the type. If you had purchased the type, as record companies sometimes do, fairly or unfairly, from artists, then you would have the distribution rights. But to make your token available for the production of additional tokens violates the legitimate rights of the owner of the type.

TONY: I'll just say at this point that everything that I want to say against the artist owning the work of art conceived as a token, I'd also want to say against the artist owning the work of art as a type. It seems to me something like collective or cultural ownership is appropriate, rather than talking about the type or tokens. But now I'd like to ask you, what we purchase when we purchase this CD. I think everybody understands that when you go down to Tower Records and you pick up a CD that you don't purchase the right to make copies of it on CD burners and scan the artwork. However, if I purchase that CD it does seem to me that the record company isn't telling me that I can't play it for anybody other than myself. I think the record company realizes that I may play it, and that my spouse or my children might listen to it, and enjoy it, and that they ought not to be charged a separate fee for enjoying it. I play music in my office, to the great pleasure of my coworkers. I could, maybe, if I like it enough, make a backup copy. I'm not quite sure whether it would be okay for me to make a copy for my spouse to play in her car. Is it okay for me to share these tokens that I buy with family members and close friends who share my musical interests?

MARCEL: Of course it is, just as you can allow other people to live in your house (your token). Technically, making a backup copy or an additional copy for the car or office would be wrong — it would be the creation of a new token. However, I don't think artists or record companies mind that you make additional copies for yourself. Actually I think current laws reflect this. What they do rightfully object to is your making recordings available for mass distribution, which is what file-sharing programs do.

TONY: We will talk more about what file sharing programs do later. But when we're talking about what record companies mind, and the right to make copies, are we talking morally or legally? Because I am a little bit more pessimistic about record companies than you are. If when you went into Tower and bought a CD and they could ask how many are in your household, and you said three, and they could get away with tagging on an extra dollar for every potential user of the CD, they would. Just like the cable television company wants to charge extra for every television hookup in a household. But whether the type of sharing I mentioned is legal, or whether record companies like it or not, when I purchase something, at least within a family, I don't grant they have a moral right to charge me an extra for every potential user. It's a work of art for sharing with my family and with my friends. Napster called itself a music community, and a facilitator, and it thinks of itself as like a museum Marcel: a way of making music available to people who have aesthetic experiences listening to the music.

I know this is a different type of sharing than the sharing that goes on between family members or friends, but its certainly not the same thing as knocking off fifty copies and selling them for fifteen dollars each with phony artwork. This sharing with intimates has gotten blurred in the public discussion of Napster to the advantage of corporations.

MARCEL: Firstly, I am equally skeptical about the motives of record companies. Secondly, Napster, et.al., can call themselves a musical community if they like, but in fact they are not like a museum and the members of the community are not intimates. Museums acquire works of art, whereas Napster fails to do so. Intimates have relationships – Napster users are anonymous. I don't think record companies have a moral right to limit the use of your token to your ears only. But they can reasonably expect that you will not produce additional tokens. Now if they want to allow you to produce some limited number of tokens, they can. But in moral terms they may refuse even this.

TONY: Napster users are far from anonymous. Often users carry on email conversations during downloads. But I understand that you think the token made on a CD-R or a CD is an additional token. If I burn a copy, that's an additional token. But is an additional token created when music is played for someone else and embodied not in a CD-R but embodied in sound waves, is that an additional token?

MARCEL: Without getting overly metaphysical, a CD is a medium of distribution by which tokens can be produced, just as a symphony orchestra is a medium by which a token of Beethoven's Third can be produced. So I've been speaking loosely as if CDs are themselves tokens. It is, of course, the music a CD reproduces (with the help of your stereo system) that is a token. So when you buy a CD you've purchased the right to multiple iterations of the same token. I don't think that affects whether one should be allowed to distribute additional copies.

TONY: One of the important distinctions in intellectual property cases is the distinction between idea and expression. Blues music, for instance, is about all sorts of things, but mostly about romance and sexual frustration. Certainly nobody has a copyright on romance and sexual frustration. What people copyright, in an intellectual copyright, is the form in which ideas are expressed. How, Marcel, does this idea/form distinction match up with your view that what an artist owns is the type? Because it seems to me that the type is similar to the idea and not to its expression.

MARCEL: I don't think that a work of art is identical to an idea. Works of art have properties that ideas can't possibly have. For example, a musical work of art has audible properties that an idea cannot have (an idea itself is not audible at all). An idea must be expressed in a medium of some kind in order to be a work of art. I assume this is what you mean by "the form of expression." It does not follow however that there is some physical object with which the work can be identified. Consider my copy of Beethoven's Third Symphony. It cannot be the work of art, because if it were, and I were to lose my copy, Beethoven's Third would become a lost work, which clearly isn't the case. Neither can the work be the original handwritten composition that Beethoven himself produced. First off, somebody who has access to the original manuscript is in no better or worse position to evaluate the work of art than somebody who doesn't have access to it. Secondly, the loss of the manuscript does not entail the loss of the work. Shakespeare's original manuscripts are lost, but most of his works aren't. So, for music and literature at least, it doesn't



look to me like there is any physical object with which we can identify the work of art. If they are not ideas and not physical objects, then what are works of art? They are types. (What I'm saying here is based on Richard Wollheim's analysis of the nature of works of art in *Art and Its Objects*). Just as a class is a generic entity whose elements are members of the class, a type is a generic entity whose elements are tokens of the type. The elements of the class of red things are various red objects. The elements of the type, "*Beethoven's Third Symphony*," are the various performances (i.e., tokens) of it. When I say, "Beethoven's Third is a great symphony," I'm referring to the type. When I say, "I did not enjoy Beethoven's Third this evening," I'm referring to a token. I don't know if what I mean by "type" is what you (or the law) means by "form of expression."

TONY: So an author is someone who takes things, out there perhaps in the cultural commons, and gives them a new form. But that doesn't quite match up with this notion of a work of art as a generic type. I'm just asking if this is a faulty model, the current model, of, you know, you can't own an idea, you can own the expression. If that doesn't match up, well, with where you feel the nature of the work of art is.

MARCEL: I think the argument against owning an idea is fine since I don't think a work of art is an idea. Where the intellectual property would lie is not in the idea itself but in the creation of something of a particular type of which tokens can be identified. So, that would be true for architects who create a particular design, inventors of various sorts of gadgets and creators of works of art. The distinction between type and token is a good one for analyzing these kinds of problems.

TONY: Let's take the song "*Motherless Children*" which has been performed by a whole *variety* of artists. How many works of art are there? How many types are there of a song that undergoes many different interpretations? The traditional model of romantic authorship suggests that originality applies in expression. Not physical expression but expression in a new form, and so, given the difference between Mance Lipscomb's version of "*Motherless Children*" and Eric Clapton's version — do we have two art works? two types? or do we just have one?

MARCEL: We have a single type; each version is a token of the type, "*Motherless Children*." The tokens may be considerably different from each other, but each has properties that make it a token of the same type. Just as *this* performance of Beethoven's Third Symphony may sound considerably different from *that* performance while both remain tokens of the same type. At the margins, such alteration may occur that an artist's interpretation lacks the properties necessary to identify it as a token of the original type. I think that's what Otis Redding had in mind with his comments about Aretha Franklin and "*Respect*." Another example might be George Harrison's "*My Sweet Lord*" which he apparently wrote without having any idea that he had copped the tune, "He's So Fine" and put new words to it. Should "My Sweet Lord" count as a new type? Well, he's added new lyrics so maybe it could be. But the tune is almost note for note the Chiffons' song. He didn't create anything new musically. Apparently the court felt it wasn't a new type. Harrison, in his comments about it, acknowledged this.

TONY: And the influences, of say, several thousand years of religion.

MARCEL: What we are talking about here is a continuum. At one end, a cover band might take the Rolling Stone's "Satisfaction" and try to reproduce it exactly. At the other end

the song is changed so dramatically that we would hardly recognize it. In fact, we would probably say that we have a new type (song) that is merely influenced by the Stones' "Satisfaction." In between the two might be Devo's version. Now, I don't know precisely where one might draw the line on the continuum between a token of the original type and the creation of a new type. But that is not to say that there is no difference between a cover or an interpretation and a new work.

TONY: I'd like to go back to one of your basic claims, and perhaps, this will be a way of drawing us towards a summary of your views on ownership and rights to musical and other artistic creations. You seem to feel that the rights holder of a work of art has the right to dispose of the work as he or she sees fit. Recently, I was in the Pergamon Museum in Berlin that holds cultural artifacts from Ancient Greece, Turkey and Babylon. What are these things doing in Berlin? One of the answers is that the curators from the Berlin Museum dug these things up and, in some cases exchanged some money. But every once in awhile countries will request return of cultural treasures. In the Pergamon there's one exhibit of a city from Turkey from Greek times and on the wall there's pictures of a similar city that is still in Turkey today. The museum curator has put a sign on the wall that says something to the effect of — "Notice the condition of the city as we have it in the museum versus the city as it exists in Turkey today." What is being conveyed is that Turkey doesn't get this exhibit back because Turkey does not properly care for artworks. If you want a more recent example, take the case of Afghanistan, where the religious government blew up the two big Buddhas.

I think the Pergamon museum is claiming that because it's taking care of this ancient city better than Turkey would that it has acquired a property right. And Afghanistan lost a property right when its rulers decided to destroy the statues. I don't want to go in the property rights direction, but I do want to say that I am not inclined to accept your claim that the creator or an owner who acquired an artwork gets to do anything they want with it.

MARCEL: In your examples the creators of the works of art no longer exist. I don't have any problem with works becoming part of the cultural commons after their creators are dead. But if I carved the two Buddhas and had them in my backyard, my view is that it's well within my rights to blow the things up if I so choose.

TONY: We do have a serious disagreement here, because it does seem to me that I didn't mean to emphasize the no longer existing artist.

MARCEL: I just think that that's why your example works. There may be no one who can rightfully claim ownership — these artifacts have become part of the commons.

TONY: Let me say it this way then so we can really bring out the disagreement. There's a recording of Keith Richards doing Mississippi John Hurt's "*Salty Dog*." It has never been released. Do I think that the artist is justified in withholding this song? No. And, I think if he withholds it or decides he wants to destroy it then he ought to be stopped. Works of art belong to culture.

MARCEL: I don't think that's right anymore than I think it's right that some draft of a paper that you're going to deliver belongs to the common intellectual culture. The draft version may not say what you mean. Or you might decide that you've got it wrong. You've no obligation to make public your errors. So if Richards has recordings he does not want released, he is simply exercising his editorial prerogative. Your view would make it immoral for us to edit this conversation before



publication even if it were a misrepresentation of our views. We would just have to keep it all. We could release the edited version, but then we would have to release all of the errors and mistakes that we made.

TONY: Do you, Marcel, think that an artist's judgment of whether or not something is significant enough to be considered a work of art can ever be wrong?

MARCEL: I think it's often wrong, but they're entitled to be wrong about what their best work is, and if they decide not to make it available — that's their call.

TONY: I would, of course, as you can guess, disagree. I'll save it for our next chat, but at this point would you like to sum up your view?

MARCEL: Sure. My position is that the creator of a work of art is the legitimate rights holder of the work. The rights holder can dispose of the work as she sees fit. Whether or not she makes the work available to other people is entirely up to her. When somebody acquires (at least in music) a copy of the work of art, he has not acquired the work itself. That's where the type/token distinction comes into play. If one purchases a *token* of a work of art, he doesn't acquire the distribution rights that the creator of the *type* holds. So, the token owner has no right to make available for distribution additional copies of the work. The rest of the argument then is simply that sharing music files via the internet using file-sharing programs does make available for reproduction tokens of a work of art. So, using Napster-like programs to make additional tokens violates the legitimate rights of the holder of the type, i.e., the creator of the work.

II. File Sharing Programs are Moral

TONY: I think of Audiogalaxy and Napster as listening stations that give a consumer a chance to preview music — all music. They also facilitate research — tracing musical roots. File sharing programs are not a replacement for purchasing the CD but the means to be a more informed consumer. The record industry's opposition to them is an attempt to keep the consumer uninformed.

MARCEL: They can be used as a listening station (that's the way I assume most people would use such devices) but this doesn't rule out the possibility of use for other purposes — such as getting a copy of the latest Rolling Stones record without having to go and buy one at the record store. Is there a difference between using it to be a more informed consumer or to trace the roots of various types of music and making copies of current releases?

TONY: Some people would probably use these things in lieu of purchasing a CD at the record store; but the musical quality is inferior and lacks art work. They would do this for music that they probably wouldn't buy new anyway.

I used to enjoy watching my mom going to the supermarket and over to the produce area where they had the tomatoes all wrapped in plastic, bust the plastic, and turn the tomatoes over and make sure they weren't rotten underneath before she took it home. If the record companies were more amenable to returns of rotten tomatoes, then I would be less inclined to think that Audiogalaxy or Napster are justified as a means of combating a record industry that wants to force releases on an uninformed public and manage tastes. These programs are a means of research for the music connoisseur as well as a means of self-defense for the ordinary consumer.

MARCEL: But the consumer has access to other methods of doing research — for example, listening to radio stations or watching music channels on television. So why are we justified in using this other means?

TONY: Radio stations have limited play lists and time-slots. I recently bought a Chet Atkins and Mark Knopfler CD on the basis of a video I saw on Country Music Television. That one song was great; but the rest of the album was disappointing. I was able to take it into Tower Records and exchange it. But, many of the major record stores don't have that kind of flexibility.

But ethically, I think one of the differences between us is that I don't see this as a rights question — I see this as a utilitarian question. Record companies and artists have some entitlement to profits from their efforts. But their entitlement is given too much weight. An important utilitarian consideration here is what way of delivering music products is going to lead to the greatest happiness for the greatest number of people in our society? Napster does make people more informed and that leads to the greatest good for the greatest number of people.

MARCEL: One might want to suggest then, that as a music customer, being able to get all the music that I want for *free* would maximize my utility. I presume that *many* others would agree that they would rather get their music for free. So if it just inconveniences a *few* artists while benefiting the many — why should we have to pay for any music at all?

TONY: I don't think that that follows from a utilitarian perspective, because you want artists to produce more product. So, another utilitarian consideration is keeping record companies in business and keeping artists producing new material.

MARCEL: Well, you're certainly not going to get me to defend record companies. My concerns are more for the artists themselves. Let's take an example of things that are commonly traded using these various file-sharing programs: bootlegs — copies of music that were not officially released, and pirated pieces — copies of released works. And you would agree that pirating a work is not what you have in mind when you claim it is okay for people to share various works?

TONY: I'm not going to say I think it's wrong to download to your computer a released track. If you consider *that* pirating then I would object to that characterization.

MARCEL: The pirating you would object to would be the kind of thing that can be done with a CD burner and a nice printer?

TONY: Yes. I would just like to add to our list one more item. Many of the most popular tracks that are downloaded by Napster are Weird Al spoofs. They are slightly risqué, for instance, Al's spoof of AC/DC, "*Dirty Deeds Done Cheap*" which will never be in the record stores.

MARCEL: So, as a consumer who might want to do research and/or find these interesting cuts that they couldn't otherwise find...

TONY: Or just enjoy themselves, because pleasure's good.

MARCEL: As long as it's not at others' expense.

TONY: After considering relative value.

MARCEL: So, on your view then, it looks like it would be okay to trade alternate takes of songs that the Stones recorded during the making of "*Some Girls*."

TONY: Sure, or songs that they recorded and didn't release.

MARCEL: And, the purposes for which one might want access to these tracks is what?

TONY: Aesthetic enjoyment and pleasure.

MARCEL: So by knowing more about how a song developed in the studio, one can appreciate the track that we're most familiar with – the track that was actually released on the record.

TONY: Sometimes the unreleased tracks are better than the released tracks because the released tracks can be juiced-up and massaged for what the record company or the artist believe the market wants. Whereas the tracks not so far along in the production line can be significantly better.

MARCEL: *The Beatles Anthology* has some examples of that.

TONY: There are also songs that aren't released because of how they didn't fit with an album or they're not released because of fears of lawsuit. For instance, one of the most frequently traded Rolling Stones tracks is "*Claudine*" about the ex-wife of Andy Williams, Claudine Longet. It's also called "*Accidents Will Happen*."

MARCEL: Right. But, it isn't that the Weird Al record and "*Claudine*" by The Stones can't be released. It's that those artists, I presume, have chosen not to release them given what it might do to their marketability, etc... Because there are records, like Mojo Nixon's "*Drunk, Divorced Floozy*" about Princess Di, that certainly do get released. The content itself isn't what makes it unreleasable — it's that that artist has chosen not to release that track for whatever reason. How is it that we gain the right to hear, have access to, things that artists have chosen not to release?

TONY: I accept your point that the examples I gave are not examples of things that could not be released but things that the artists have chosen or the record companies have chosen to withhold. I could give examples of songs that could not be released or certainly could not be air-played like the infamous "*Cocksucker Blues*." (It's hard for me to say that it can't ever be released because it was "accidentally" released on a legitimate German offering once; but you're never going to find it in the bin at Tower Records.)

Your question though is that if an artist or the record company decides to withhold something from the market, how is it that we acquire the right to release it or to have it?

MARCEL: If the artist has chosen not to make it available, why, through this bootleg process, should it become available anyway?

TONY: I will not say that we have to justify it to begin with, because that would recognize that there's a presumptive right on the part of an artist to withhold an artistic product. I don't think that there is such a presumptive right on the part of the artist because I don't think there's such a thing as "The Artist" or "The Creator" to begin with. An aesthetic product is like a river. It's something that cannot be justifiably withdrawn from common ownership, and so, I won't grant that an artist has a presumptive right to destroy or withhold an artwork.

MARCEL: Do you think it would be morally wrong for The Stones (in a recording session) to cut a track and then decide, "you know, that wasn't very good — let's rewind and do it again," thus recording over the original cut and destroying a work of art that they have no right to destroy? Indeed, anytime an artist in a studio records over something that they've already

recorded they've essentially done something morally unacceptable in your view?

TONY: Artists make mistakes. Kafka made a mistake. Nietzsche made a mistake. And sometimes, even Mick Jagger and Keith Richards make mistakes. John Lennon never made any such mistakes. So, what would be wrong, would be for an artist to think that I, the artist, am the only one who ought to have input on whether or not these tapes should be destroyed. If people seem to find them worthwhile, then it is the artist's responsibility to explain *why* these things should be withheld or destroyed — not the other way around.

MARCEL: Anybody that has heard Lennon's "*Two Virgins*" record will note the sarcasm in your claim that Lennon has never made any mistakes. But to go back to the case of recording over a studio take, it does seem to follow that it shouldn't be just the artist's call whether it's okay to go back and record over a track. After all it destroys it on the tape.

TONY: I don't think we can legislate that much regulation into the band's life. The band deserves some utilitarian consideration. But suppose you've heard that there was this unreleased John Lennon CD that Yoko has had in her vault for 20 years and she's decided that she's going to destroy it. Or maybe Eric Burdon has an unreleased tape of blues covers with the original Animals. Does Eric have a right to destroy it? I think the answer's "No." It's an item of aesthetic value.

MARCEL: Well, I would like to hear these recordings. I think it would be interesting to hear them. I would be pleased if they were released; but I certainly don't think Ono (operating on Lennon's instructions, I presume) or Burdon are obligated to do so. Just like if John had recorded some tracks and then recorded over them because he decided they were not things he wanted other people to hear. It's the same thing if, in the studio, a band completes a track — doesn't record over it but just moves on to other things — and ultimately decides, "This isn't something that we want the public to hear," and so, doesn't release it. I don't see the difference between recording over something and deciding later not to release it. Why should we get access to the product of the latter if there's nothing wrong with doing the former?

TONY: But, I would think that if there were such a recording available – I would want to preserve it. The public wants to hear it. These products have significant moral status because they're aesthetic objects. If my neighbor ignored an unwanted child when the child fell into the swimming pool, I think that I ought to pull the child out. Aesthetic objects are a lot like children. The parents don't own them. They have them in trusteeship.

MARCEL: I doubt that aesthetic objects are the moral equivalents of human beings, especially in this context since we are talking about works of art as commodities. And we certainly would disagree about preserving unreleased recordings since whatever means you undertook to get them from their creators would constitute stealing.

TONY: We've run up right against a basic moral disagreement. I don't think that it can be stolen, because I don't think art is private property any more than the Columbia River is private property. And certainly if we can discount the long-established interests of human farmers in the Klamath region in order to preserve a fish, then certainly, we should show the same care for aesthetic objects. They don't belong to Lars Ulrich. They belong to the commons.

MARCEL: This analogy isn't straight-forward, though, since there is a difference between natural assets, like rivers, and



artifacts. So, let's consider a different type of artifact. Suppose that, besides creating music, John Lennon had designed and created a table that he kept in his living room. Yoko now decides she's ready to throw the thing out or use it as firewood. Do you think we would be justified in confiscating the table before she turns it into firewood? That would be okay too?

TONY: I think she's being unreasonable. I would be happy to give her firewood. I don't want to discount Yoko's interests entirely. I'll give her a cord of wood.

MARCEL: But you do think she ought to be forced to make this transaction. It would be wrong for her to just destroy it?

TONY: In the absence of some sort of reasonable explanation, yes, I would think so. The U.N. pleaded with the Afghanistan government to allow the transfer of those Buddhas outside of the country.

MARCEL: I think it is certainly a defensible position that works of art like the Buddhas have become part of the world's cultural commons. It's less clear to me though how it is that the moment a work is produced, it somehow becomes part of the commons. Such a view has the odd consequence that when I paint something that I think is trash, in one way or another, I'm obligated to preserve it. What if it's something that I don't *desire* for anyone ever to see? I'm wondering how we distinguish this object from the ones you think must be preserved.

TONY: I'm not operating from a rights perspective and so some of what you're asking I can't answer.

MARCEL: I don't mean to ask you questions in terms of rights. Here's the musician with his recorder, his guitar and his voice. — He produces something — there it is — it's in existence. It sounds like your position is, from the moment of creation, it's a part of the commons.

TONY: It is. But I'm not saying that they haven't added anything, that artists have no say. They're adding to a commons that they've drawn upon and that their creative contribution is overvalued, and it's overvalued when one thinks that just because so and so is alive and John Hurt is dead — the live people get to say whether something sees the light of day or not. Certainly as a teacher I say things in my classes and publications that later I would wish to remove. But I don't get to structure and restructure the universe to meet my desires. Neither should Kafka or any other artist. So, if you produce something and you decide not to use it but other people see it as a legitimate aesthetic object, it doesn't follow that the artist gets to decide whether it goes out or not. Artists aren't that important.

MARCEL: So the value of file-sharing programs is that they make available the means by which we can preserve valuable works that otherwise wouldn't be released?

TONY: ...and to share them.

MARCEL: ...to make them available as aesthetic objects because they're part of the cultural commons and we ought to have access to them. I assume if other means were available that were less intrusive on the interests of the artists, you would be for that?

TONY: I don't see the file-sharing mechanism as a threat to the profits of record companies and artists. If I were shown that it had an impact, then as a good utilitarian, I would be concerned. Aesthetic objects ought to be shared, and aesthetic objects are of value to all members of human society and the best way for delivering them is a combination of

methods that we designate as good for the greatest number of people. That includes some profit for people whom you want to encourage to continue to contribute to the commons. Society needs to adopt a system of rules governing artistic property that encourages continued additions to the commons on which artists draw.

There's one other nice thing to notice about the file-sharing systems and that's that it's one of few areas on the Net where there actually is some form of peer review. Audiogalaxy, for instance, ranks songs in terms of popularity, and so, not only are you aware of something right before you purchase it, but there are statistics available — even for the record companies, to measure the popularity of emerging bands.

MARCEL: I doubt the usefulness of these statistics for selecting music since most of what is popular is trash. But I am very concerned about the comment that we ought to design things so that artists are encouraged to contribute to the commons. It sounds innocuous. But I think what really follows from the utilitarian standpoint is that, in principle, we should be allowed to do more than encourage artists to produce works. We should force them to do so should it create great happiness for the masses and not too much inconvenience for the artists. If the Rolling Stones haven't made a record in some time and the legions of Stones fans desire one, should we require them to make one?

TONY: There is a difference between deciding what is morally obligatory and taking the additional step of using the state to require action in conformity to morality. But utilitarianism does think it morally obligatory to contribute to the good of society, Kantians recognize a duty of beneficence informed by a person's particular talents and resources, Confucius urged that social institutions approximate to the family, and the New Testament urges us not to bury our talents. I am comfortable with that company.

MARCEL: Do you think this common ownership also extends to articles in philosophical journals? Should they be made available for anybody to share via download or photocopy given that our ideas, say in this particular conversation, are not wholly created by us? We are coming from either a utilitarian point of view or a Kantian point of view and our contribution, in terms of what is new in it, is relatively minor. So, is there no problem if someone who is currently reading this wants to make copies and distribute it to all their friends?

TONY: Well, it's okay with me.

TEACHING IN CYBERSPACE

Are Paper Mill Websites a Serious Threat to Teaching Philosophy?

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Plagiarism by students in higher education has become enough of a concern that many instructors who accept electronic paper submissions now employ plagiarism-detection software as a means to uncovering illegitimate work.¹ Although the availability of scholarly work on the Internet is part of the concern, according to Ellen Laird:

The majority of papers plagiarized from the Internet are devoid of the professional gloss—an instant tip-off—characteristic of the products of research-paper mills. Writing of all kinds is taken from student and class Web sites, where text has been shared and “published” for laudable purposes. In other words, text that students download from the Web is written by students just like them, so it appears student written—exactly what we instructors want it to be.²

I want to suggest the presumption that paper mill websites of this kind are not a serious threat to teaching philosophy. Suppose the following. An instructor in a undergraduate course in political philosophy assigns a short (two pages, maximum 500 words) paper on John Locke's *Second Treatise of Government*. The assignment reads: “Explain Locke's state of nature.” Locke's conception is discussed in class, and students have the help of explanatory remarks on the idea in the course text. The point is for students to demonstrate an understanding of Locke's conception of a state of nature by writing a short explanatory essay in their own words.³ Here is what I found when I searched for a paper on the Internet to fulfill this assignment.⁴

One of the first things I discovered is that there is no free lunch. The so-called “free” sites do not appear to require a per page payment, however, they seem to either be linked to a site that does charge by the page, or the “free” site charges an annual access fee. An example of the former is <http://www.essaydepot.com>, which takes you to <http://www.Papers24-7.com> once you search for a paper on Locke. [Papers24-7.com](http://www.Papers24-7.com), <http://www.12.000papers.com>, <http://www.Termpapers-on-file.com>, <http://www.Paperstore.net>, and <http://www.Buypapers.com>, charge around ten dollars per page. In the case of the latter, both <http://www.geniuspapers.com> and <http://www.cheathouse.com> charge an annual fee of around ten dollars. Indeed, one cannot even view a paper description at [cheathouse.com](http://www.cheathouse.com) without first paying the fee.

Without payment of the fee, <http://www.cheathouse.com> only allows one to view a list of paper titles, with each title accompanied by comments from the author. There were two papers on Locke listed, only one of which seemed as if it might be relevant to the assignment. The paper is titled “Mill and Locke's Conception of Freedom,” and it received a “grade B 72%.” According to the author, the paper is “not that good but with some work it could get you a good grade.”

A paper listed at <http://www.Papers24-7.com>, <http://www.12.000papers.com>, <http://www.Termpapers-on-file.com>,

<http://www.Paperstore.net>, and <http://www.Buypapers.com> with the title “The Political Theory of John Locke” also seemed as if it might be relevant to the assignment. The paper is described as follows:

This 7 page paper takes a look at John Locke's writings, with a focus on The Second Treatise of Civil Government, in contemplating the contradictions in his theory. The paper concludes that Locke's political theory is valid, despite inconsistencies, as those are unavoidable anyway. Bibliography lists 4 sources.

Since the third paper I found included some discussion of Locke's state of nature, it was clearly the most relevant to the assignment. This paper was listed at <http://www.12.000papers.com>, <http://www.Termpapers-on-file.com>, <http://www.Paperstore.net>, and <http://www.Buypapers.com>, with the title “John Locke's ‘Two Treatises on Civil Government’ & How It Applied to America's Revolutionary Government.” It is described as:

A 9 page paper which analyzes the pros and cons of John Locke's ‘Two Treatises on Civil Government’ in terms of how it applied to the revolutionary. Specifically considered are the creation of state constitutions following the Declaration of Independence; theoretical problems of Locke's treatise concerning the foundation of imperial connection; how Locke paid little attention to the mechanism by which people could make their decisions known; Locke's failure to clarify the rule of parliament in relation to the community (or state of nature) as a whole; problems of the revolutionary allegiance to the king after the colonist break from Great Britain, considering that a state of nature had not been created. Bibliography lists 5 sources.

My attempt to find a paper on the Internet to fulfill the assignment raises several issues, which, when taken together, are sufficient to establish the presumption I am suggesting. First, there is the matter of redundancy. Of only three papers found, two of these can be found on the same four websites. Hence, the number of sites seems to belie the number of available papers. Then there is the matter of cost. The second and third papers cost roughly seventy and ninety dollars respectively. For many students this alone will make using these sites prohibitive. But even in cases where cost does not make acquisition of these papers prohibitive, given the assignment, the paper will have to be purchased in its entirety, then either edited down to size, or, a portion of it must be extracted and then edited in order to fulfill the assignment requirements. Hence, length is also an issue: no short papers seem to be available.

There are also the issues of relevance and, perhaps most importantly, quality. It seems that the availability of relevant papers may be inversely proportional to the level of specificity in a given assignment. As near as I could tell, only one of the three papers dealt directly with the assigned topic: Locke's conception of the state of nature. As for quality, the author of the first paper tells us that the paper is “not that good but with some work it could get you a good grade.” Hence, we know without even seeing a description of the paper that it is of poor quality. The author of the second paper claims to “tak[e] a look at John Locke's writings, with a focus on The Second Treatise of Civil Government, in contemplating the contradictions in his theory,” and “concludes that Locke's political theory is valid, despite inconsistencies, as those are unavoidable anyway.” This indicates the lack of a coherent

understanding of Locke by the author, and so suggests that, like the first paper, this paper is also of poor quality. Moreover, the claim that inconsistencies “are unavoidable anyway” casts serious doubt as to the author’s understanding of the philosophical enterprise generally. In the third paper, the author discusses, *inter alia*, “Locke’s failure to clarify the rule of parliament in relation to the community (or state of nature) as a whole,” and “problems of the revolutionary allegiance to the king after the colonist break from Great Britain, considering that a state of nature had not been created.” Like the second paper, the description of this paper indicates that the author lacks a coherent understanding of Locke. Hence, it seems all three papers are of poor quality.

My suggestion, therefore, is that, at least *prima facie*, paper mill websites of this kind are not a serious threat to teaching philosophy

Endnotes

1. See “Confronting Plagiarism,” *Academe* 86:3 (May-June 2000) and Jeffrey R. Young, “The Cat-and-Mouse Game of Plagiarism Detection,” *The Chronicle of Higher Education* (July 6, 2001). Young informs us that plagiarism-detection software by Louis A. Bloomfield, a physicist at the University of Virginia, is available at <http://plagiarism.phys.virginia.edu>
2. Ellen Laird, “Internet Plagiarism: We All Pay the Price,” *The Chronicle of Higher Education* (July 13, 2001): B5.
3. For a discussion of writing assignments for undergraduate philosophy courses see [self-identifying reference omitted].
4. The search was conducted on July 14, 2001.

Argument Mapping with Reason!Able

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Reason!Able is educational software supporting argument mapping. This essay introduces computer-supported argument mapping as an alternative to prose as a medium for reasoning and argumentation, reviews the main features of Reason!Able, and discusses the use of Reason!Able in teaching reasoning skills.

1. Argument and Prose

Reasoning and argumentation are at the very heart of philosophy. A series of classic arguments is a large part of our subject matter, and argumentation is our primary means of making progress. And one of the main benefits of studying philosophy is that it is supposed to enhance reasoning abilities.

As a profession, we have standard practices for handling reasoning and argumentation. One feature of these practices is so familiar and pervasive that it is almost invisible: the *medium* of philosophical argumentation is *prose*. We spend a great deal of time articulating arguments in written prose, and identifying arguments in the writings of others. The dominance of prose goes beyond writing; even when discussing arguments or jousting philosophically, we are using prose, albeit in its spoken form.

Sometimes we do use other methods. Occasionally, for example, we shift from standard natural-language prose into the medium of formal logic. And even when using prose, we add special terminology, strategies and conventions. Yet these idiosyncrasies don’t alter the fact that, overwhelmingly, philosophers handle arguments in prose.

Interestingly, in this regard little has changed in thousands of years. That is why we can expect our undergraduate students to engage as productively with the writings of Plato and Aristotle as they can with the latest textbooks and journal articles. We do have new technological supports such as word processors and email. What we do with this new technology, however, is very much the same as would have been done 200 or 2,000 years ago. Descartes hand-wrote letters to Queen Christina; we now send Word documents as email attachments. But these are superficial differences; in both cases, the philosophical work is largely a matter of expressing arguments in lengthy concatenations of words and sentences.

Is this constancy simply due to the fact that philosophical argument is somehow *essentially* prose-based? Not at all. As already noted, philosophers find that certain arguments are best handled by shifting to symbolic logic, though formal techniques are only useful in a narrow range of cases. However there is now emerging another alternative to prose, one which is naturally suited to the vast range of argumentation which is intrinsically informal. That alternative is computer-supported argument mapping.¹

2. Argument Mapping

Any argument can be understood as a structure of claims standing in inferential or evidential relationships to each other. An argument map is a presentation of an argument in which the inferential structure is made completely explicit, usually by graphical techniques. The typical argument map is a “box and arrows” diagram in which the nodes correspond to claims and the links indicate their evidential relationships.

Argument mapping is the activity of producing (or, more generally, using) argument maps. The activity is thought to have originated with J.H. Wigmore, who early last century used mapping techniques to complex evidential structures in legal cases (Wigmore, 1913).² Closer to our time, Stephen Toulmin in *The Uses of Argument* (Toulmin, 1958) used maps to illustrate his theory of the general structure of informal arguments.³ Most philosophers, however, will be familiar with argument maps mainly as the simple structure diagrams found in many introductory logic or critical thinking textbooks (e.g., Govier, 1988).⁴

A great deal of philosophers’ work involves articulating and communicating arguments, and identifying arguments as communicated by others, so you might have thought that a means of presenting arguments in which inferential structure is made completely explicit would be deemed very useful. Yet argument mapping has never really taken off among philosophers. One of the most important factors behind this neglect is that it just hasn’t been easy to for your average philosopher to produce, modify and distribute diagrams of any kind, let alone diagrams of complex arguments. Given the range of tools that nature has provided (e.g., voices) and those we have developed (pens, paper, printing presses, etc.) the obvious choice for handling argument has always been prose: ever-available, cheap and easy to produce, and infinitely malleable.

3. Computer-supported Argument Mapping

This is changing. Equipment such as the personal computer, graphics software, colour printers, overhead projectors, email attachments and websites mean that producing, presenting and distributing diagrams of quite professional appearance is now fairly straightforward for all but the most technologically challenged philosophers. Using such tools, pioneers have found that even massively complex philosophical debates can be effectively mapped; the most notable example, of course,

being Robert Horn’s argument map series *Can Computers Think?*⁵ The latest development is the arrival of software designed from the outset to support argument mapping. A number of teams around the world are developing software packages which make it easy to assemble and modify “box and arrow” argument maps. Of those publicly released, the best examples are Reason!Able⁶, Araucaria⁷, and Athena⁸. With only a small amount of training, philosophers using such tools can produce arbitrarily complex argument maps at least as quickly and easily as they can generate the corresponding prose. Argument-mapping software packages can also provide users with greater power over their arguments (or at least, the presentations thereof): power to view, manipulate, annotate and display in new ways.

In what follows, I will illustrate computer-supported argument mapping using Reason!Able, a package we have been developing over a number of years at the University of Melbourne and Austhink.⁹ Reason!Able is educational software, designed to be used in undergraduate critical thinking classes. It has however been picked up and used in many different contexts and at many different levels, both inside and outside the academy.

4. Reason!Able Features

4.1. Building Argument Trees

Reason!Able provides a workspace within which click and drag operations are used to build and modify hierarchical “tree” structures representing the inferential relationships among the various claims which make up argument.

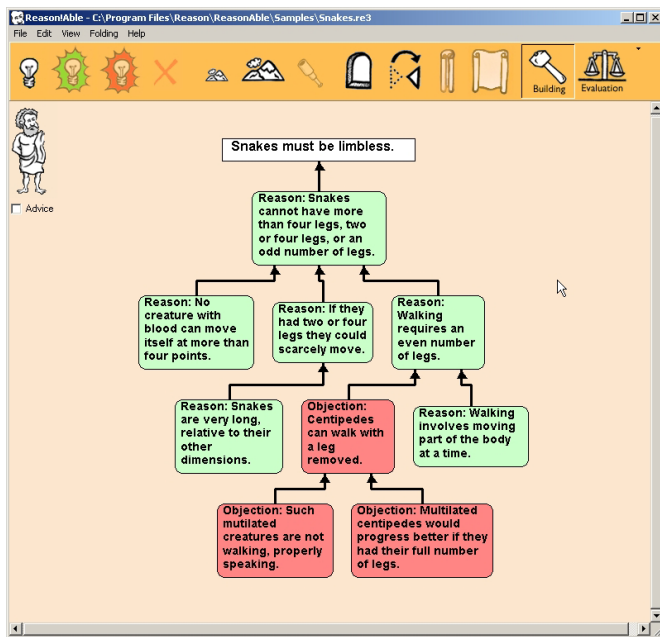


Figure 1: Reason!Able, illustrating an argument tree on the workspace. This argument map presents Aristotle’s reasoning in support of the claim that snakes *must* have no legs, from his *On the Gait of Animals*.

The primary objects in a Reason!Able-style argument tree are claims, reasons and objections. (As will be explained below, reasons and objections are themselves groups of claims.) A claim is represented by a white box; reasons are green boxes and objections are red boxes. Sentences expressing the relevant claims are written in the boxes. In this respect, Reason!Able differs from many other argument mapping schemes and programs, which don’t put the full text in the nodes themselves, but hold them in a separate list, thereby creating a heavy cognitive burden for the user who must mentally pair nodes with sentences.

In the argument tree, a “child” is always evidence for or against a “parent.” Thus in Figure 1, there is one reason providing evidence for the main conclusion; that reason is supported by three secondary reasons; there is an objection to the third of those primary reasons, to which there are two rebuttals; and so on. Note that because the reasoning is presented in a diagram, you can see all this structure at a glance.

Additional reasons and objections can be added to any node on the tree by selecting that node and then just clicking on the appropriate button on the toolbar. In this way, you can rapidly assemble arbitrarily complex argument trees.

4.2. Viewing Argument Trees

Given the size and resolution of contemporary monitors, with even moderately complex arguments it soon becomes impossible to see both the forest and the trees (i.e., the structure of the whole argument and the contents of the individual nodes) at the same time. Thus Reason!Able provides various mechanisms for changing view on the argument:

- **Zooming.** The user can zoom in or out by increments; can zoom in one click to a size at which the entire argument fills the window; and can select any area on the workspace and zoom in to that area.
- **Panning.** As you would expect, panning across the workspace can be achieved by scrolling. It can also be achieved by dragging a rectangle representing the current view on the workspace within a small overview window.
- **Rotating.** The argument can be viewed in any one of four orientations (top-down, L-R, R-L, bottom-up). Sometimes rotating can make for a more revealing layout.

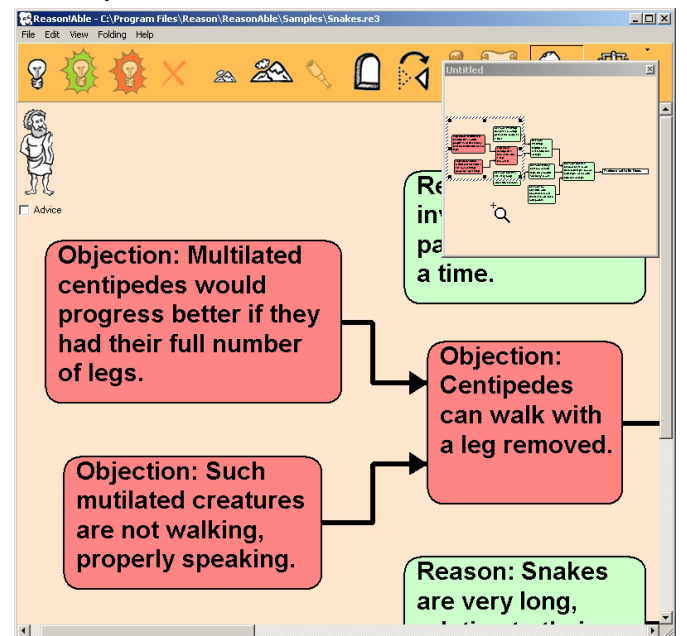


Figure 2. The same argument map, after zooming, panning and rotating. This allows the user to focus on a particular piece of reasoning. One click on the “Fit to Window” button will zoom out so that the structure of the entire argument can be viewed. In the upper right hand corner there is an overview window, which shows the “forest” and provides an easy way to zoom and pan.

4.3. Editing and Modifying

The text inside the nodes can of course be edited in the normal way. More significantly, the argument tree can be reorganized at will by drag and drop operations. Nodes or branches can be torn off the tree, or relocated to new positions.

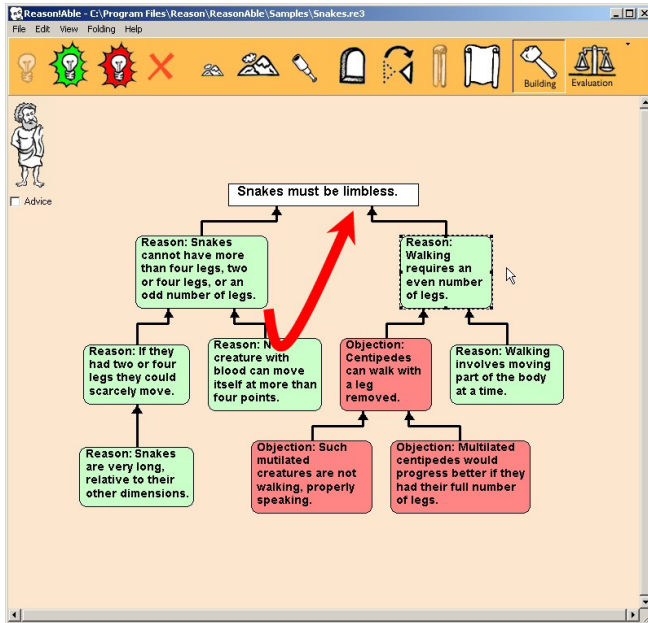


Figure 3. The argument from Figure 1, after a single drag-and-drop operation in which an entire branch of the argument was relocated so as to be attached directly to the main conclusion.

4.4. Premises

A key feature of Reason!Able is that reasons and objections are always complex objects, made up of sets of claims (premises) working together. Consider the classic philosophical argument:

- P1: Socrates is a man.
- P2: All men are mortal.
- C: Socrates is mortal.

The argument has two premises, but how many distinct reasons have been provided? Only one, and both the premises work together as part of this reason.

In Reason!Able, reasons are initially represented as single green boxes containing the main premise, but they can be “unfolded” to show the full set of premises (“helping premises,” or “co-premises”).

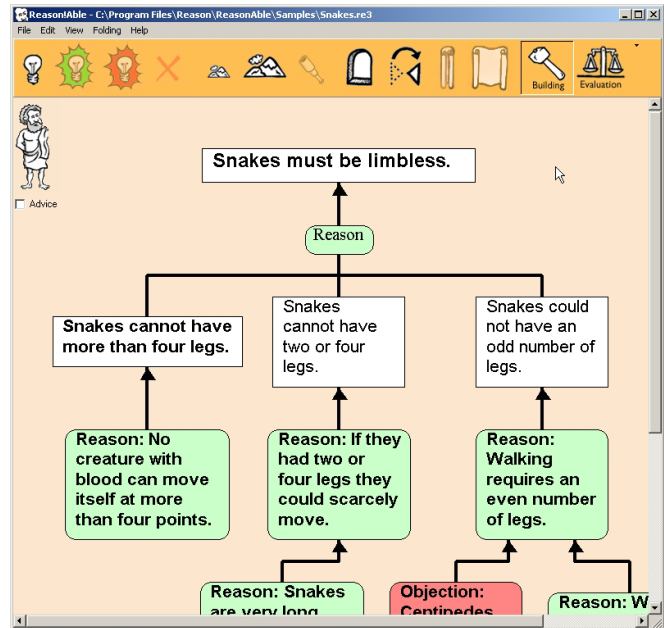


Figure 4: The primary reason of Aristotle’s snake argument is unfolded to reveal that it has three distinct premises, which work together to provide evidence that the conclusion is true. Distinct premises are separately debateable; in this case, each premise has been provided further supporting evidence.

By default a reason has two premises (a main premise and one co-premise) but additional premises can easily be added by clicking on the “claim” icon on the toolbar. Premises can be moved around by dragging and dropping in much the same way as whole reasons or objections.

Objections, of course, are constructed from claims in the same way as reasons.

4.5. Evaluating Arguments

Thus far we have considering the *structure* of arguments, and how Reason!Able supports assembling, viewing and modifying argument structures. Colour has been used to indicate the *type* of object: white for claims, green for reasons and red for objections. In philosophy, however, we are at least as interested in the quality of arguments, and in assessing quality we make various evaluative judgements. The verdicts we reach constitute further information which can be represented on the same argument tree.

Reason!Able has two primary modes, Build and Evaluate. In Evaluate mode, three kinds of evaluations can be represented:

Kind of evaluation	Possible evaluations	Represented by
Strength of reasons/objections	Conclusive (deductively valid with definitely true premises), Strong, Weak, None	Intensity of colour of reason/objection
Degree of confidence in the truth of claims	Definitely, Probably, No Verdict, Probably False, Definitely False	Intensity of colour of claim (blue for true)
Independent grounds for accepting a claim as true	Common knowledge, Personal knowledge, Testimony, Expert opinion, Necessary truth, Considered plausibility	An icon attached to the claim

It is certainly possible to be more sophisticated in one's choice of evaluative dimensions and values. For example, the simple range of discrete values for degrees of confidence could be replaced by a numerical scale. The options built into Reason!Able were chosen to meet two dominant criteria: (a) maximizing the utility of the package as an educational tool, and (b) providing a tool which "makes sense" to ordinary people dealing with real-world argumentation.

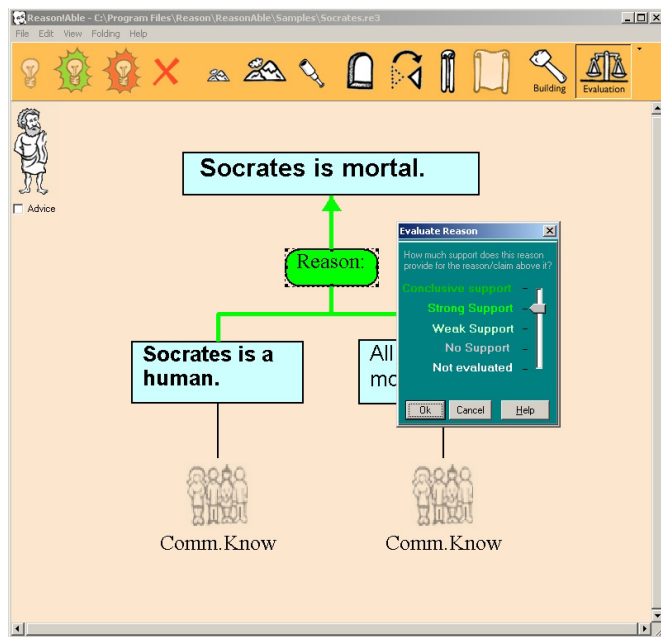


Figure 5: Evaluate mode. This simple example illustrates how evaluative information is represented. Claims have been rated as probably true (light blue); the premises are both accepted as probably true on the grounds of common knowledge; and the whole reason is being evaluated as offering strong support (mid green).

When evaluative information is represented on the trees of complex arguments, strengths and weaknesses (including "fault lines") are immediately visually apparent. The overall effect is akin to having a satellite photo of a region of the country, in which city, farmland, forest and water can be instantly distinguished by vivid colour differences.

4.6. Guidance

As mentioned, Reason!Able was developed as an educational tool. Undergraduate students typically have only the foggiest grasp of the concepts and procedures involved in analyzing

and evaluating arguments. In order to help them learn, the software provides guidance in the form of context-sensitive instructions from "Socrates," a character similar to the infamous paper clip in the Office software suite. When he is switched on, clicking anywhere on an argument tree will prompt Socrates to proffer a piece of advice pertinent at that point and at that stage of the process.

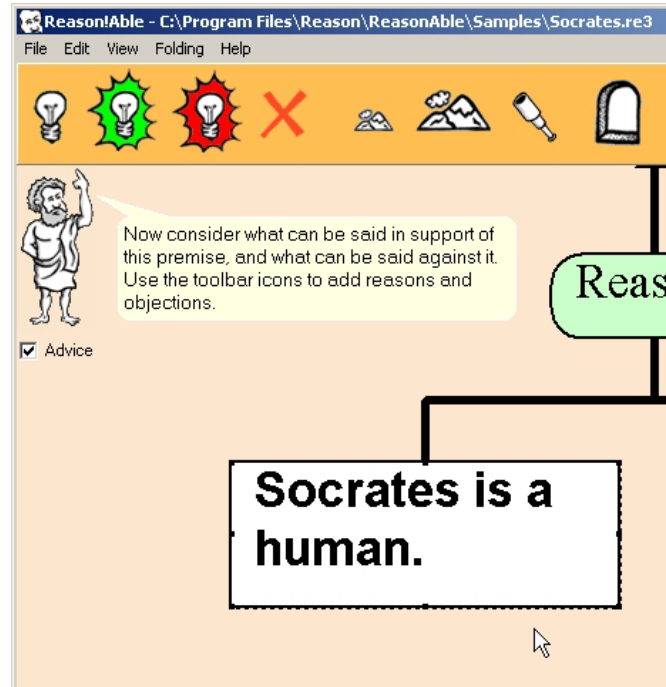


Figure 6: Socrates' context sensitive advice.

Socrates provides two major kinds of advice. One is for critical evaluation; it guides the student through the process of identifying an argument as presented (in prose) by another person, and evaluating that argument. The other is to guide the student in the process of producing their own argument, and evaluating it to ensure that it is a strong one.

We find that students rapidly get the hang of what Socrates is going to say, and prefer to switch him off. This is good; these students have internalized the steps involved in systematically handling an argument.

5. Reason!Able in Critical Thinking Instruction

One domain within which computer-supported argument mapping has already been extensively deployed is in teaching the general skills of reasoning and argument. For three years Reason!Able has been the primary learning vehicle in a large, one-semester undergraduate Critical Thinking subject at the University of Melbourne. The subject has been intensively evaluated to determine the extent to which students actually improve their critical thinking skills. The data gathered so far suggest that an approach based on computer-supported argument mapping is substantially more effective than traditional methods.¹¹

The Reason!Able software is a central part of what we call the Reason! approach. The conjecture driving this approach is that critical thinking is a skill, and that skills improve through "quality practice." Quality practice is practice with certain features: it must be motivated, guided, graduated, scaffolded, and feedback-modulated. In addition, for a general skill such as critical thinking, it must be practice-for-transfer – that is, practice in the transferring of skills from one domain or context to another. The fundamental challenge is how to

get students doing lots of practice with those features, within the constraints and limited resources of an undergraduate subject.

To help address this challenge, Reason!Able was developed to function as a “quality practice environment,” intended to help students engage in better quality practice than they would using traditional methods. In particular, Reason!Able provides guidance and heavy scaffolding, and facilitates more targeted feedback. Students use the software in dozens of exercises which become gradually more challenging as the semester progresses. The two main kinds of exercises are *critical evaluation*, in which they identify and evaluate the reasoning of others as expressed in prose, and *production*, in which they generate and evaluate their own arguments (and perhaps go on to express those arguments in prose).

Does it work? Each batch of students is pre- and post-tested using the California Critical Thinking Skills Test, a 34 question multiple-choice test. Over the past three years we have found that students on average improve their score by almost 4 points, or about 0.8 of a standard deviation. (For two years we also used a written test, which found gains of the same order of magnitude.) This may not sound much, but consider that students would normally be expected to improve by about 0.5 of a standard deviation over three years of college. The Reason! approach thus dramatically accelerates growth in critical thinking skills, relative to undergraduate education. Alternatively, consider that a gain of equivalent magnitude in IQ would be one point per week.

How does this compare with traditional approaches? This is a bit hard to say, since disturbingly little is really known about the effectiveness of traditional one-semester critical thinking or introductory logic. We are currently engaged in an extensive survey of relevant empirical literature. The bad news is that traditional subjects appear to make little if any difference. Our best estimate, at the moment, is students in traditionally taught first-year undergraduate subjects improve by not more than 0.1 of a standard deviation over and above the amount they would have improved anyway due to growing up and being at university, which is about 0.2. If this is correct, then the Reason! approach is around 6 times more effective.

Why is this? We have been taking detailed measurements of the amount of practice students are doing, and so far are *not* finding strong correlations between amount of practice and gain. My hunch is that the other obvious difference between Reason! and traditional approaches – the use of computer-supported argument mapping – is largely responsible.

6. Argument Mapping in Philosophy Instruction

Many philosophers, even if not teaching critical thinking or introductory logic, work hard to help their students improve their general reasoning and argument skills. This is a slow, difficult and often frustrating business. Computer-supported argument mapping, using a package such as Reason!Able, may help instructors be more effective in this respect, no matter what their subject (ethics, philosophy of mind, etc.).

Here are some relatively straightforward pedagogical strategies:

When setting argumentative essay assignments, require students to hand in a map of their main argument along with their essay. Students will find that expressing their reasoning in an argument map requires that they be much more clear and explicit about what that reasoning is, and it gives them a logical backbone on which to hang their essay. When it comes to grading their work and giving

feedback, you’ll find that having their argument map is like having x-ray vision into their thinking (though this is generally not a pretty sight).

Require students, when doing their reading, to map the author’s main line of argument. Tell them that reading properly consists in understanding the text to the point where mapping the argument is a straightforward matter. This will give most students a whole new perspective on what it is to engage seriously with a philosophical text.

When lecturing, display arguments (whether your own, or those you are discussing) in map form. This can be done in a variety of ways. One is to print out the argument map on a transparency and display it using an overhead projector. A better way, for those with both the technical agility and a suitably equipped classroom, is to do “live” argument mapping, projecting from a PC running argument mapping software.

In tutorials, if facilities allow, project an argument map and use it as the basis of discussion. Arguments or debates can be mapped in real time, and you can require students to make their contributions in the form of additions or modifications to the argument tree.

7. Future Directions

From the brief tour of Reason!Able given above, it should already be apparent that handling arguments in computer-supported argument mapping mode can be a very different experience than is had when using the traditional spoken or written prose. Argument maps represent information more densely than prose, and make that information more immediately available to the mind, by using a wider range of representational resources (colour, line, shape). Computer software supports a wider range of interactions with these maps. The abstract complexity of argumentation has become more visual, concrete, and manipulable.

That said, it is also important to realize that these are early days in the development of computer-supported argument mapping. Back in 1962, Douglas Englebart imagined and predicted computer-supported argument mapping as a means of augmenting human intellect.¹² Four decades later, his vision is at last starting to be realized. Reason!Able (and other packages available today) are like Model T Fords compared with the automobiles of today, let alone the “maglevs”¹² of the future. I brashly predict that once the technology becomes sufficiently advanced, those who deal with complex arguments for a living will switch to the new methods just as the accounting profession has switched entirely to computer packages in preference to the old system of ledgers and manual entries and calculations.

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12. Maglevs are vehicles in the recent movie *Minority Report*, set in 2054. The film also portrays a wall-sized information display controlled remotely using data gloves. It will not be long - much less than five decades - before complex argumentation is processed on this kind of interactive display.

TOOLS AND TECHNIQUES

Indexing a Book—Fast and Easy

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Indexing a book has always been tedious work. Occasionally, it may rise to the level of a work of art—as, for example, the index that Rawls did for the original edition of *A Theory of Justice*. Indeed, years earlier Rawls and his wife Margaret Fox spent their first summer of marriage doing the index for Walter Kaufmann's *Nietzsche*. But for the rest of us mere mortals, indexing remains an onerous task. I would like to offer a way of making it less onerous, even if it will not rise to the level of Rawlsian greatness.

Modern word processing programs such as *Microsoft Word* appear to make indexing easier, but they leave us with a crucial question unanswered: if I use *Word* (or *WordPerfect* or some other comparable program) to compile an index to my book-length manuscript, how can I get the pages in the manuscript to match the pages in the printed version of the book? And if I can't do so, then what use is the index?

There is, in fact, a comparatively easy answer to this question, and it will allow you to prepare indices to books quickly and accurately. Let's presuppose that you now have the final page proofs of your most recent book.

The first step is to assemble all the chapters of your book in a single computer file, if you have not already done so. Also include the preface, forward, introduction, appendices and bibliography, but not the table of contents. Make sure that everything is in the proper order, that is, that it follows the printed version.

Here's the second step. Some introductory material such as the preface may be paginated with lower case Roman numerals; the rest of the book will be standard Arabic numbers. Make sure you insert a section break between that introductory material and the body of the text; then set the body of the text (presumably beginning with Chapter One) to begin with the numeral "1."

Now you are ready for the third step: making the page numbers in your computer file correspond to the page numbers in the printed version of your book. In order to do this, you must replace automatic page breaks with manual page breaks. But before doing that, you must make sure that no automatic page breaks occur accidentally in your file. You can accomplish this quite simply: just change the default length of your page to something fairly long, say twenty inches.

Once you have set the default page length to twenty inches, go to page 1 in the printed book. Look for that same spot in the computer file. Set your page numbering in this section of the computer file to begin with "page 1." In Microsoft Word, you do this by using the following command:

Insert | Page Numbers... | Format | Page numbering start at...

Look at the end of page 1 in your printed version, and then enter a hard or manual page break at that point in your computer file. Now "page 2" begins at the same place in both the computer file and in the print version. Look at the end of page 2 in the printed version, and place a hard page break at that point in your computer file. Simply continue to do this until you reach the end of the manuscript. If there is a break page in the printed book, enter two hard page breaks, etc. You will quickly get the hang of it and be able to do a couple hundred pages in an hour.

Once you have finished paginating the main section of the manuscript, go back to the prefatory material. Let's say you have only a preface to be indexed, and that it begins on page viii. Set your section up in *Word* to paginate beginning with "page viii." Then check your preface against the printed version, again entering hard page breaks to correspond to the printed version.

At this point, you should now have a computer manuscript whose pagination is identical to the pagination in your printed final proofs. You can now compile an index using your word processing program's built-in indexing tools, and the resulting index will have a set of page numbers that corresponds exactly to your printed version. Typically, programs such as *Microsoft Word* offer powerful and easy indexing features. For example, if you mark the word "Kant" as a word to be indexed, *Word* will automatically find all other instances of that same word and list them in the index, so you only have to mark the word once for indexing and the program does the rest. You can also create sub-entries. Say that you had an entry for "emotions," you can then have sub-entries for "Aristotle," "Stoics," and "Kant." You can also have *Word* index a range of pages on a particular topic and do cross-references as well.

Once you have finished marking all your entries, make sure that all field codes are hidden, go to the end of your document, and then click on the command:

Insert | Reference | Indexes and Tables | Index

and choose the options you prefer for the index. *Word* will then compile your index in the format you prefer. Copy and paste (or print) the index and send it to you publisher and you're done.

BOOK REVIEW

Ethics and Values in the Information Age. **Joel Rudinow and Anthony Graybosch, eds.**

Wadsworth, Thomson Learning, 2002, xii + 483 pp,
0-15-507956-5

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It is commonly held that we live in the Information Age; it is far less common for advocates to explain precisely what this appellation means. A moment's reflection on the influences of technological developments in information processing on our daily lives makes this characterization appear intuitively appropriate, though it seems fair to expect any text adopting the term as part of its title should justify its use with an explicit explanation. To be sure, information is central to every age. Society and culture could not emerge without effective management of it. In fact, information management has been a concern of ethicists from the beginning. Plato gives considerable attention to questions of censorship and information distribution in books two and three of *The Republic*. Clearly, then, the value of regulating information in the interest of promoting public consent was not lost on the Ancients. So what novel conditions of the present age make our relationship with information so pivotal as to warrant special identification? Does information mean something different to us than it did to, say, the Athenians?

The editors of *Ethics and Values in the Information Age* offer what I think is a promising approach to these questions. With the recent development and widespread dissemination of sophisticated information technologies (IT), the means by which information can be accessed, stored, processed, and distributed have been so greatly expanded and accelerated that scarcely any facet of life has escaped their influence. As the editors rightly point out, if we address only the power and utility of technological innovations, we fail to adequately grasp the more profound permutations of the age, some of which have wrought revolutions in the conceptions of ourselves and our communities.

We now can have regular interactions with “neighbors” thousands of miles away yet be utterly ignorant of who lives next door. We are faced with challenges to our conventional uses of language as well as the standards of law and etiquette that guide our public lives. Nearly every electronic commercial transaction we engage in, whether buying groceries or crossing a municipal bridge, may now involve the exchange of personal (and often sensitive) information, blurring the line between public and private life. Our desires and expectations become the incessant target of thousands of persuasive attempts each day by those who wish to manufacture and transform them to facilitate their own interests.¹

As philosophers, we can conclude that all of this demands serious analysis, perhaps even a complete reconfiguration of the language and strategies we use for coping with ethical dilemmas, both new and old. As the contributions to this text show, this work is under way. But as instructors, we have the additional responsibility of helping students make sense of the age they live in. Until now, there have been few instructional resources which focus on the concept of information while

integrating traditionally separate fields of computer and media ethics. And this is where *Ethics and Values* represents a significant contribution to the literature.

What will likely interest instructors most are the numerous pedagogical strengths that make this book suitable as a primary text in a course of applied ethics. The book's eleven chapters cover at least six primary areas of ethical concern ranging from constitutional freedoms and media performance to issues of information access. Every chapter contains an introduction and from three to four readings, each of which is preceded by a brief summary and discussion of its central concepts. On the whole, I found the introductory statements quite helpful to students. They orient the subject of each chapter within the larger picture and draw various implications that alert students to the complexity of each topic. Each reading is also preceded by study questions and accompanied by case studies intended to foster discussion and reflection. In addition, there are also a number of inventive and useful exercises throughout the text.

For the most part, the editors have collected articles that represent a fair and well balanced survey of perspectives. In certain instances, the editors operate from a Jeffersonian interpretation of the constitutional role of the media as educator of the public and watchdog of authority. They also reveal an explicit concern for robust civil liberties, though there is no blatant evidence of an ideological bias that might impair equitable dialogue between the competing positions represented. For example, chapter two contains divergent contributions by Nat Hentoff and Catherine A. MacKinnon on the question of free expression, and chapter three contains articles by Walter Lippmann and Noam Chomsky on issues of mass media propaganda. Later, in chapter ten we find a statement from the United States Navy on information warfare and “cyberterrorism” followed by a defense of computer-assisted civil disobedience by Anthony Graybosch (one of the editors of this text).

Those familiar with the literature of either media or computer ethics will recognize many of the text's contributors. For instance, there are engaging essays by Richard A. Spinello, Deborah Johnson and Sherry Turkle. There are, however, some surprising entries, including a refreshing chapter devoted to questions on the ethics of humor. Here, we discover an original defense of slapstick comedy by Robert Solomon and a feminist critique of sexist humor by Merrie Bergmann. In the final chapter, which explores transformations of everyday life and speculates on ethical approaches for the future, there is a contribution by the Dalai Lama as well as an intriguing essay by Stewart Brand, a biologist and founding member of the Long Now Foundation, on the relationship between our perception of time and our responsibility to future generations. I found that most of the articles were accessible and captivating to my undergraduate students, though in some cases (e.g., the essays by MacKinnon and Joel Feinberg) they benefited from an explanatory discussion of legal and philosophical jargon.

Overall, I found that the study questions not only fostered understanding of the particular readings, they also helped situate each reading within the broader issues encompassed by the book as a whole. In many instances, the study questions draw attention to important concepts used by a particular author while also addressing fundamental concepts common to standard textbooks on theoretical ethics. Preceding James Moor's article on privacy, for example, is the following question: “What determines whether something has instrumental value or intrinsic value? Give an example of each.” And a question preceding Deborah C. Johnson's essay

on intellectual property rights asks: “What does Johnson mean by the claim that a property right is not a natural right but a right created by law?” The benefit of asking such questions in the context of applied ethics is that students more readily grasp the utility of what might otherwise appear in isolation as esoteric hairsplitting. Some study questions require that students simply read the articles carefully for the appropriate answers, whereas others cause students to reflect more broadly on how key concepts presented in the article relate to their own lives and society at large. Often they encourage students to apply what they’ve learned from one reading to other readings. In all cases, I found that class discussions benefited greatly when I formally assigned the study questions as homework.

Perhaps the most desirable feature of *Ethics and Values* is its inclusion of some sixty-five case studies and exercises. We are told by the editors that the case studies and exercises will “help you digest, understand, and apply the issues, concepts, and arguments presented in the readings.” This is a fair description, though I think it understates their usefulness. Generally, the case studies and exercises draw upon some contemporary moral issue (often of relatively high profile) related to information. One valuable feature of the case studies is their relevance to students’ present interests, such as whether the Internet presents a reliable source for research or whether trading music online is ethically dubious. In certain cases they provide a vehicle for group cooperation. Some of the exercises are common to textbooks on computer and business ethics, such as one addressing the moral permissibility of monitoring employee e-mail, though many are far more inventive. One in particular challenges students to produce three minutes of standup comedy according to specific guidelines of humor etiquette. Following an especially rich essay by Crispin Sartwell on stereotypes in rap music is a case study that asks students to develop an interpretive hypothesis of the term “violence.” Here, students are asked to explore how the official extension of value-laden terminology might reflect the biases inherent in class interests. An intriguing aspect of some of the case studies is that they require students to become familiar with IT by using the Internet to investigate issues. In one instance, students are encouraged to compare various approaches to counterspin in the media by looking at the websites of both conservative and liberal watchdog groups. The exercises I tried with my class generated lively discussion and inspired some of the best written work I have received from students.

Space prevents an exhaustive list of the specific topics addressed in the book, so it may be useful to comment on its timeliest attributes. There are extended discussions in the book concerning the competing interests of security and civil liberties; there are effective treatments of the special concerns regarding privacy and computer technology; the complex tensions between property rights and public goods is addressed; and the editors do an exceptional job of making accessible and coherent the complex relations between democratic values, corporate interests in the mass media, and political spin. For technological tenderfoots such as myself, there are easily approachable, though not oversimplified, readings on the sometimes obscure topics of cryptography and information warfare. If pressed to find some fault in the selection of topics, I would perhaps note the absence of an essay on genetic engineering or cloning technology. However, as it stands the text is already of considerable length, and there is a rich variety of important subjects addressed that would more than fill even the most ambitious course schedule.

I highly recommend *Ethics and Values in the Information Age* for use in a course of applied ethics, or as a reader in a general course of ethics or critical thinking.

Notes

1. See Leslie Savan, “The Bribed Soul” in chapter 4 of the text (p. 139). “Studies estimate that, counting all the logos, labels, and announcements, some 16,000 ads flicker across an individual’s consciousness every day.”

PLATFORM

War and Anti-War Online War and Anti-War Online

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Sound science requires that explanations be testable and that

The purpose of this essay is to consider a point of political epistemology: if a government does exercise control over war news, what options remain for an informed citizenry to test the news they are given?

evidence be public. Just politics are subject to similar criteria: to be just and justifiable, government action must be open to review by a body politic with the

power to revise it. The relationship between truth, justice, and verifiability has been investigated by numerous philosophers, notably Mill, Popper, and Arendt. This philosophical concern is currently at a high point of relevance to thinkers in the United States. We are embarked in a *War on Terror* that extends to indeterminate enemies, indeterminate duration, indeterminate cost, with an indeterminate mission. We do know that *the War on Terror* is coincident with an increase in government secrecy and this nation’s strongest military restrictions on press investigation. This state of war is expected to be long term, perhaps permanent. It is well worth wondering what the state of the union will become under such conditions. This essay is a beginning inquiry into the possibilities of informed citizenry and social activism in circumstances where state controlled media coexists with the evolution of information technology.

A major revision in the US government-press relationship occurred in 1991. As A. Trevor Thrall puts it in his well documented book, *War in the Media Age*: “The Gulf War was both the most widely covered war in history and the one in which the U.S. government imposed the greatest restrictions of the press short of outright censorship.”¹ The restrictions were initiated by Assistant Secretary of Defense for Public Affairs Pete Williams, under then Secretary of Defense Dick Cheney. Williams sent a memorandum out to press organizations on December 14, 1991;

All interviews with service members will be on the record. Security at the sources is the policy. In the event of hostilities, media products will be subject to security review prior to release... You must remain with your military escort at all times, until released, and follow instructions regarding your activities. These instructions are intended only to facilitate troop



movement, ensure safety, and maintain operational security.²

These rules ensured government oversight of what information was gathered from the militarized area and what information left that area. Along with the control of press operations, the Bush administration imposed tight internal controls on military information. Commander of the allied war forces, General Norman Schwarzkopf recalls;

So a lot of times, things were blamed on the people in the theater had been directed straight from Washington for—let’s face it—principally political reasons, probably...I’ll give you a very good example. At one point, we all got told that we couldn’t deal with the press anymore. This started, I think, about the end of November. From then until the war started, we were told: ‘You cannot talk to the press anymore. None of your generals can talk to the press anymore.’³

The closing down of sources for the press to gather from resulted in a primary reliance on information produced by the government directly for the purpose of influencing public opinion. The White House and Pentagon jointly crafted the majority of the news that U.S. citizens received about the war. Lt. General Thomas Kelly, then director of operations for the Joint Chiefs of Staff, recalls;

For the first time ever, the administration—the Department of Defense—was talking directly to the American People, using the vehicle of a press briefing, whereas in Vietnam, everything was filtered through the press. I think that was a major advantage for the government. The press, wittingly or unwittingly, between Riyadh and Washington, was giving us an hour-and-a-half a day to tell our story to the American people...the American people were getting their information from the government—not from the press.⁴

The result of these information control strategies is the appearance of an autonomous press that actually is reliant on State selected and produced information.

In the *War on Terror* the degree of government control of press information about the war has increased. In addition to very limited and highly regulated access to troops and battle areas, reporters have been detained, confined, and relieved of images in areas where casualties occurred.⁵ While the Pentagon claims to support “open and independent reporting” news bureau chiefs and reporters claim that no such condition obtains.⁶ Says a New York Times article;

The media’s access to American military operations is more far more limited than in any recent conflict, including NATO’s war against Yugoslavia, the American invasion of Haiti or the American intervention in Somalia.⁷

While the press is now excluded from traditionally covered war stages such as the Aircraft carrier from which operations into Afghanistan were launched, the Pentagon compensates by providing its own produced combat camera footage, which the Defense Department points out is “not only intended to fill a gap in the media’s news coverage” but also is “a way to put psychological pressure on the Taliban and other regimes around the world that protect terrorists.”⁸ The international press faces even tougher restrictions imposed by the Pakistan, access point to Afghanistan and recent ally to the U.S. in the *War on Terror*. Journalists seeking independent coverage of the war have been arrested and deported by the Pakistani

military government.⁹ As the *War on Terror* grows in scope, scale, and duration we can expect State controlled media and information operations to increase in sophistication, subtlety, and calculation.

War and Peace in the Information Age War and Peace in the Information Age

Thus far I have presented a brief argument in support of my position that the U.S. government exercises extensive control over information about an expanding (perhaps global) war. I anticipate a variety of counter-arguments that would seek to reject, justify, or depreciate my position. The purpose of this essay, however, is to consider a point of political epistemology: if a government does exercise control over war news, what options remain for an informed citizenry to test the news they are given? That is, what options remain for individuals who believe that their government controls (i.e. selects, conceals, modifies, and invents) their major sources of information? The point is relevant, even if my position about current U.S. war information is taken as merely hypothetical. I maintain that the internet provides access to information in ways that are not subject to the same controls as are mass-media (i.e. television, newspapers, and radio). Thus, individuals have access to wide varieties of information pertaining to the ongoing war, if they know how to get at it and how to manage the results.

The internet bears some radically distinguishing characteristics from other mass-media (e.g. television and print). Because of these characteristics, it is possible for individuals to find, access, and distribute information outside of traditional media controls. These characteristics are: global scale, distributed production, low cost, and logical plasticity. By intentionally employing these characteristics it is possible for individuals to pursue a powerful information campaign even in the context of a controlled mass-media.

Global Scale: The internet is world-wide. Individuals may search and collect information from a wide range of sources that are not subject to central control and that have various agendas. For example, the above information about Pakistani arrests and deportations of journalists covering the *War on Terror* come from British and Indian sources. In about the same amount of time it takes to read the morning New York Times, one may comb a dozen or more international sources for war information.

Distributed Production: Mass-media control by governments is facilitated by the control of production by a relatively few enterprises. The internet, by contrast, is a radically distributed system production sources. Groups and individuals of all sorts may publish internet information directly without the mediation of an editor. This leads to a strong need for quality discrimination (given the lack of control). It also leads to sources of information that would be very hard to come by otherwise. For example, the Indian journalist who was deported from Pakistan in October 2001 was scheduled to interview members of the Revolutionary Association of the Women of Afghanistan (RAWA). While that organization has received significant press coverage for opposing the Taliban, less coverage is given to the criticism RAWA mounts on the U.S. and Allied conduct in the war on Afghanistan. As individuals, however, we may access information from RAWA directly at <http://rawa.false.net>. This open source information networking does not replace the value of expert journalism, but when journalistic sources are influenced and silenced this open access to information becomes crucial.

Logical Plasticity: Computing produces a unique form of technology because the raw material of software is

information. Individuals with sufficient programming knowledge can create programs that operate within the internet environment. With industrial age technology (including book production and distribution), even if one had the skills and knowledge needed to build a tool, the resources required to produce them were expensive or inaccessible. This remains true with information technology hardware, but not so with programming. Given sufficient knowledge, a programmer can construct, use, reproduce, and distribute information tools at no cost beyond the time it takes to make it. Because of this flexibility, the internet hosts a proliferation of independently produced software. Individuals and groups may be motivated to create software by political and moral values, rather than commercial and governmental values. For example, Peek-A-Booty <http://www.peek-a-booty.org> is a web browsing utility designed to defeat internet censorship. Countries such as China, Malaysia, Singapore, Arabic nations, and lately the United States, restrict and filter what sorts of content citizens may access on the web (e.g. pornographic, political, classified).

Peek-A-Booty uses a combination of encryption and distributed proxy network to mask the identity of each node. "So the user can route around censorship that blocks citizens' access to specific IP addresses, because the censor doesn't know they're going there. If you're a Peek-A-Booty node, you might be doing it on their behalf."¹³ This strategy may frustrate government censors, government surveillance, industry controls over content (e.g. online music and movie sites). "If Peek-a-booty is used by large numbers of people its use of encryption could make a mockery of any police attempts to monitor electronic communications."¹⁴

Peek-A-Booty is an instance of values-motivated programming. Individuals and groups are more capable than ever to impact the information environment. In the current climate it is not difficult to picture efforts such as Peek-A-Booty to be declared illegal. Were that to happen, such programming will go underground and the *War on Terror* will have to grow to encompass some domestic U.S. civil libertarian agenda. The Peek-A-Booty enthusiast motto is; "*Let freedom ping.*"

As well controlling internet content by censorship, governments are increasing systematic surveillance capabilities as features of the internet infrastructure. "In the UK, the controversial Regulation of Investigatory Powers Act calls for the placing of "black boxes" inside Britain's internet connection companies, so law enforcement agencies can easily dip into and tap data streams."¹¹ In the United States, after the September 11th attacks, the FBI immediately transcended the obstacles of political opposition to its plan of installing email and web monitoring systems such as Carnivore and Magic Lantern that allows "investigators to secretly install over the Internet powerful eavesdropping software that records every keystroke on a person's computer."¹² Carnivore is installed on an Internet Service provider (ISP) server and monitors packets of information moving through it. Magic Lantern operates like a computer virus and installs itself on individual personal computers then issues reports beach to the surveyor on the keystrokes entered into that machine.

Data Control Data Control

The internet provides individuals with access to a huge amount and broad diversity of information. In a climate of secrecy and purposeful disinformation, the challenge is to access that information strategically; i.e. to advance one's knowledge in the areas of greatest concern. The internet is rife with speculation, rumor, and outright hoaxes. Any information used from the internet should be verified against other sources (as

I have attempted to do above with my war information analysis). With the massive stream of uncontrolled data on the internet, such rigor is hard to actualize. This challenge may help explain the centrality of TV and Newspapers as sources of news: the edited and interpreted information sources have the advantage that everyone gets the same information from a variety of sources. Ultimately this information comes from a single source (the Associated Press, the Pentagon, etc.) and is disseminated by many vehicles. Thus, while attending to different vehicles, almost everyone gets the same basic information. When we compare accounts, by checking with one another or by changing channels, we satisfy the verification process in form. Insofar as these vehicles derive from a single information source, there is little genuine verification in content.

One way to broaden one's information base and verification options is to sample a wider range of sources. The internet provides a large body of news sources from every part of the world. The sources that I use include:

World Press

Afghanistan News (Afghanistan) <http://afghanistan.newstrove.com>
Ananova (UK) <http://www.ananova.com>
Arab World News (Unclear) <http://www.arabworldnews.com>
Asahi Shimbun (Japan) <http://www.asahi.com/english/english.html>
Bahrain Tribune Daily (Bahrain) <http://www.bahraintribune.com>
Canada Online (Canada) <http://www.canoe.ca>
Central Europe Online (Czech Republic) <http://www.europeaninternet.com/centraleurope>
China Daily (China) <http://www.chinadaily.net/news/index.html>
Christian Science Monitor (USA) <http://www.csmonitor.com>
Daily Mail & Guardian (South Africa) <http://refdesk.com/paper.html>
Ha'aretz Daily (Israel) <http://www.haaretzdaily.com>
Globe and Mail (Canada) <http://www.theglobeandmail.com>
Guardian (UK) <http://www.guardian.co.uk>
International Herald Tribune (France/international partnership) <http://www.ihf.com>
Irish Times (Ireland) <http://www.ireland.com>
Japan Times (Japan) <http://www.japantimes.co.jp>
Jerusalem Post (Israel) <http://www.jpost.com>
Jordan Times (Jordan) <http://www.jordantimes.com>
London Times (UK) <http://www.thetimes.co.uk>
Los Angeles Times (USA) <http://www.washingtonpost.com>
Pakistan Today (Pakistan) <http://www.paktoday.com>
Pravda (Russia) <http://english.pravda.ru>
Sydney Morning Herald (Australia) <http://www.smh.com.au>
South China Morning Post (China) <http://www.scmp.com>
Syrian Times (Syria) <http://www.teshreen.com/syriatimes>
Terhan Times (Iran) <http://www.tehrantimes.com>
Taipei Times (Taiwan) <http://www.taipeitimes.com/news>
The Daily Star (Lebanon) <http://www.dailystar.com.lb>

The New York Times (USA) <http://www.nytimes.com/>
The People's Korea (Democratic People's Republic of Korea) http://www.korea_np.co.jp/pk
The Times of India (India) <http://timesofindia.indiatimes.com>
Turkish Daily News (Turkey) <http://www.TurkishDailyNews.com>
Vanguard (Nigeria) <http://www.vanguardngr.com>
WashingtonPost.com (USA) <http://www.washingtonpost.com>
WorldNews.com <http://www.wn.com>

Links to many of these online newspapers and many others are collected by Refdesk.com <http://refdesk.com>, a very powerful internet portal. The links to US and Worldwide Newspapers online are collected at <http://refdesk.com/paper.html>. Among the search capacities, data bases, encyclopedias, and much more collected at Refdesk.com, I find the Journalist Tools <http://refdesk.com/jourtool.html> most valuable. These are web sites created by and for journalists to aid in online investigation. In addition, the many sites and issues groups that provide analysis of the media and issues are valuable sources of information.

Media and Military Analysis

Arms Control Association; A national nonpartisan membership organization dedicated to promoting public understanding of and support for effective arms control policies. <http://www.armscontrol.org>

Cato Institute; non_profit public policy research foundation headquartered in Washington, D.C. <http://www.cato.org>

Federation of Atomic Scientists; A primary source of weapons and military process information. <http://www.fas.org>

Jane's Defense Weekly; A private information source on global military industry and military policy. <http://jdw.janes.com>

MediaChanel.org; MediaChannel.org is a nonprofit public interest group dedicated to information and analysis about media. Topics regularly covered include: Media ownership, censorship, minority perspectives, and new technology. <http://www.mediachannel.org>

MidEast Web Gateway; a US/Israeli effort to promote peace in the middle-east. <http://www.mideastweb.org>

Project on Government Secrecy; Including *Secrecy News email list*. <http://www.fas.org/sgp/index.html>

War on Terrorism: Jane's Analysis. http://www.janes.com/security/international_security/terrorism_index.shtml

One of the richest stores of information comes from the US Federal government. Hundreds of agencies have websites with policies, news, and statistics. Many state and local agencies provide similar information.

Government Sources

Chiefs of State; Who's Who Globally <http://www.odci.gov/cia/publications/chiefs/>

Congressional Email Directory http://www.webslingerz.com/jhoffman/congress_email.html

Congressional Record; The Congressional Record is the official record of the proceedings and debates of the United States Congress. It is published daily when Congress is in session. Helpful Hints provide instructions for searching the Congressional Record database. http://www.access.gpo.gov/su_docs/aces/aces150.html

Defense Link; U.S. Department of Defense Portal. <http://www.defenselink.mil>

Electronic Activist; research and educational organization focusing on the separation of church and state. Our database currently contains contact information for U.S. senators and representatives, governors, and some state legislatures. <http://www.berkshire.net/~ifas/activist/index1.html>

Federal Web Locator; Links to all Federal Agency Websites <http://www.fedweb.com>

FedStats; gateway to statistics from over 100 U.S. Federal agencies <http://www.fedstats.gov>

National Security Agency; all information in, not much out. <http://www.nsa.gov>

National Security Archives; George Washington University project on Freedom of Information Act procured information. If history repeats, then the collections at this site are critical reading. <http://www.gwu.edu/~nsarchiv>

Stars and Stripes Online; US Military Newspaper. <http://www.stripes.osd.mil>

The Federal Times; Federal Government and Agency Reporting. <http://www.federaltimes.com>

Thomas; Federal Legislative Information. <http://thomas.loc.gov>

U.S. Office of Management and Budget; where the money goes, so far as publically. <http://w3.access.gpo.gov/usbudget>

United States Intelligence Community. <http://www.odci.gov/ic/icagen2.htm>

Robot Journalism and Reverse Censorship

The good news is that the above listed sources provide the opportunity for genuine investigation and comparison of war information. The bad news is that such a wealth of information is hard for an individual to assimilate and manage. Moreover, these sources content frequently. One value of centralized media (TV and Newspapers) is that it sorts and edits for us. It is no use having access to a vast information resource if one has not sufficient time to use it. There is, however, more good news. Web robots provide a means to implement a serious online research strategy. A robot is a program that carries out internet tasks such as linking to pages, scanning content, searching, etc. Many web robots are in use to aid shoppers in finding the lowest price for an item among online vendors. Some robots are valuable in the effort to carry out personal journalism.

C4U <http://www.c4u.com> is a freeware web robot that links to and scans web pages for changes in text, keywords, links, images, or email addresses. A C4U button sits on the browser bar allowing you to select and configure a page for checking as you use the web. The user has control over the scanning variables. When a match is found, that page link in the program window is flagged with an icon with a report of what is new in that page. One can preview the page to see the new content highlighted. C4U is not a type of search engine. Rather, it automates a task that many of us perform on the web: link to a page and scan it for something interesting. With C4U, we stipulate the content of interest in advance and then monitor selected pages for changes in that content. If concerned with the growth in government secrecy, for

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instance, one might tune C4U to the main pages of the news sources listed above with the keywords “secret, secrecy, covert, classified.” A weekly check on the C4U window will show which pages have new content containing those words. Creating folders in C4U for different groups of content allows one to conduct multiple investigations at once. When a keyword is found, one previews the page to determine whether it is relevant to the investigation. If so, then go to that page and read it. I monitor more than one hundred sources for several topics on a daily basis in about the same time it takes me to read the front page of the New York Times.

The personal investigative research effort using internet sources, which is a means to circumvent government manipulation of war information, is made practical by tools like C4U. To render that information useful as knowledge, one must employ a strategy for storing and retrieving what is learned. After all, the point of personal journalism is to compare and synthesize information, not merely apprehend multiple sources. Such a strategy should be time-efficient and robust enough to grow with unexpected turns in the information stream. One such investigative research strategy proceeds as follows:

1. Pick an issue (e.g. expanded uses for nuclear weapons)
2. Produce a keyword analysis (e.g. “nuclear,” “nuke,” “nuclear AND tactical,” “atomic AND weapon,” etc.)
One way to produce a keyword set is to look for the major terms used in articles on that issue.
3. Search web for the sites with content related to the issue. A collection of news related search sites is <http://www.refdesk.com/newsrch.html>.
4. As you browse, configure C4U to those pages
5. Monitor C4U periodically (i.e. daily or weekly) to flag relevant content changes.
6. Check the relevant content changes and save relevant web pages to disk. Opera 6 and Microsoft Internet Explorer allow saving pages with all images intact (tip: create a new folder for each article saved).
7. Copy key passages from the pages to a word processor file.
8. Hyperlink passages in the word processor file to saved page sources.

One can perform this process in a quick and informal manner, making it a task that can be allocated to slack moments at the terminal. The key is to perform this operation enough times to build a resource base that can be used for further study. When the time comes to investigate an issue more carefully, so as to write a paper or letter, or to check an official claim against other information, the hyperlinked reference page will serve as an immediate source of highly relevant documentation. Learning to use the internet strategically is a step towards information independence. Even where government control of war information is strong, chinks in the armor show through for those who take personal responsibility in the pursuit of truth.

Notes

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