

J. David Velleman, "Computing in Philosophy" (1996)

In the fall of 1995, the Department of Philosophy made its debut on the World Wide Web, at <http://www.umich.edu/~philos>,* where visitors can find information about the Department's faculty, courses, facilities, and programs of study. Since then, roughly 5,000 people have accessed the Department's home page, some from as near as UM residence halls, others from as far as Taiwan, South Africa, or Chile, as indicated by the return addresses on their postings to the online "guestbook."

The Department's entry into the Web is the latest step in a process of computerization that began more than a decade ago. In the early 1980's, no one in the Department was using Michigan's time-sharing system (MTS), which provided access to the University's mainframe computer, and only one or two members of the Department were using personal computers. Information was processed mainly by typewriter, telephone, and old-fashioned, face-to-face talk. Since then the Department has undergone at least two technological revolutions. First came the widespread use of personal computers, which also served as terminals for access to MTS, whose e-mail facilities became a mainstay of campus communication. Much of the Department's administrative work was soon being handled by e-mail, and students began to ask questions of their instructors online, either by e-mail or in electronic conferences associated with their courses.

The second revolution was the replacement of MTS by distributed computing -- a network of independent host computers offering a variety of services, to which desktop computers are linked by a fiber-optic network (on campus) or telephone lines (off campus). By running various "client" software programs, the user's personal computer can interact with different hosts that provide e-mail, conferencing, directory services, administrative data (such as current course enrollments), and a gateway to the wider world of the Internet.

In following sections, I'll outline some of the ways in which computing has changed the teaching and practice of philosophy. After describing how computers are used in our Department, I'll discuss ways in which you can stay in touch with philosophy over the Internet.

Instructional Computing

The teaching of philosophy has not changed dramatically in the computer age, but it has gained some valuable new tools. And with the advent of the World Wide Web, the pace of change is accelerating.

Communications

The greatest change that computing has brought to higher education is by now old news. The advent of electronic mail gave students individual access to their instructors outside the confines of traditional classes and office hours. Faculty are now well accustomed to receiving e-mail about their last lecture or the next assignment, and such inquiries are usually answered within a day. Students still take advantage of office hours for extended discussion and tutoring, but straightforward questions can be handled more quickly online.

E-mail is not only for one-on-one communication. Instructors can ask the Information Technology Division of the University (ITD) to set up an electronic mailing list of the students

enrolled in a course. A single message can then be addressed to the entire class. Some instructors use this capability to announce last-minute changes in assignments or to clarify issues between lectures. If one student's e-mail raises an especially good question, question and answer can be forwarded to everyone.

The next step beyond e-mail in student-faculty communication was the online conference, in which participants enter contributions that are accessible to all. Several instructors have run online conferences to accommodate spill-over from in-class discussions. Reaction to these conferences have been mixed, however, largely because the disparity between silent and vocal students seems to be even more pronounced online than in person.

The Web

Over the past year, the World Wide Web has greatly expanded an instructor's ability to disseminate course materials online. In the past winter semester, seven courses in the Department had home pages, with links to lecture outlines, assignments and answer-sheets, supplementary readings, or relevant sites elsewhere on the Web.

Here are a few specific examples. The page for Contemporary Moral Problems, taught by Professor Stephen Darwall, offered links to sites around the world dealing with each of the issues covered in the course, including moral issues about race, gender, the environment, pornography, and abortion. (You can access these and other ethics links from Steve's home page -- <http://www-personal.umich.edu/~sdarwall> -- which has been named as one of the top 5% of Web pages in philosophy.) In my Introduction to Philosophy, I posted an outline on the Web before each lecture and then used a data projector to display the main headings in class. The outlines also contained links to a glossary of philosophical terms, so that students could review the relevant vocabulary before coming to lecture.

The Web is being used by graduate student instructors as well as faculty. In the section of Introduction to Logic taught by David Aman, exercises and answer keys were posted on the Web. Another GSI, Mika Manty, has developed hypertext lessons on "Understanding Skeptical Arguments" and "How to Write a Philosophy Paper" for his sections of introductory courses. (Mika's home page is <http://www-personal.umich.edu/~mmanty>).

Logic Software

When it comes to teaching formal logic, instructional computing can go beyond the delivery of text and pictures. Because computers are "logical engines," they can be programmed to construct or check truth tables, derivations, Venn diagrams, and other tools of logical analysis. A wide variety of software packages in logic are available for personal computers. Among the best programs are "HyperProof" and "Turing's World" by Jon Barwise and John Etchemendy. (For more information, visit <http://www-csli.stanford.edu/hp/Logic-software.html>.)

A few years ago, our Department began to experiment with its own logic software, written in HyperCard for Macintosh computers. Our aims were to free instructors from routine grading, so that they could spend more time on students' difficulties; to accommodate differences in ability with self-paced exercises; and to liven up the subject with interactive demonstrations of logical concepts on the screen.

The result was a paperless course, in which the graded work consists entirely of computer exercises, and the only "textbook" is a set of online lecture notes and tutorials. The class meets twice a week for lectures, which are illustrated by the computerized materials projected onto a large screen. Students can then access the same materials during their online work sessions. The instructional file-server on the campus network maintains a record of each student's progress through the exercises, so that the student begins each session where the last one left off. The grading algorithm is designed to reward improvement through practice rather than penalize mistakes.

Student response to this course has been uneven, and the Department has not made it a regular feature of the curriculum. The change of pace from traditional teaching methods is by and large popular with students, but other aspects of the course get mixed reviews. Some students make good use of the ability to set their own schedule and pace; others miss the structure of traditional written assignments. Many find the computer an entertaining source of instruction, but others come to regard it as an unsympathetic taskmaster. The greatest problem, perhaps, is the near impossibility of comparing the effectiveness of computerized and traditional instruction: virtually any instrument for assessing what students have learned will be biased in favor of one method or the other.

Computing in Research

In research as in teaching, the greatest changes have been due to simple and (by now) familiar computing tools -- in this case, the word-processor. Unlike many scientists, who sit down to write only when their research is largely complete, philosophers write throughout their research, which is, after all, a matter of experimenting with what can be cogently argued. So when computers changed the way we write, they also changed the way we do philosophical research. Computing has also changed the way philosophers use the library. The University Library's card catalog is now in storage, and the active catalog is online. Before walking over to the Library for a book, we can check from our desktops whether it has been charged out. A computerized version of the Tanner Library catalog has recently been completed and will go into service in the new academic year.

Tanner also has a CD ROM copy of Philosopher's Index -- the published index to current philosophical literature -- which can be searched on the Macintosh computer in Tanner or from any Macintosh connected to the campus AppleTalk network. When Philosopher's Index index existed only in print, users had to search for citations to one year's literature at a time, using only one keyword at a time. Now they can perform searches on boolean combinations of keywords over the entire database, which spans several decades of literature.

Historians of philosophy also use search software on electronic texts of the philosophical works that they study, to help them locate every occurrence of crucial words and phrases. One of our historians, Professor Edwin Curley, has been engaged to edit electronic texts for the IntelLex Corporation, whose Modern Masters series is the primary vendor of e-texts in philosophy. Electronic resources in philosophy are not just accessible to professional philosophers, however. If you have access to the Internet, you can stay in touch with philosophy from your home or office computer.

Philosophy on the Web

A good place to start exploring philosophy resources on the Internet is the World Wide Web site of Tanner Library, developed by former librarian Pam Pavliscak and linked to our Departmental home page (<http://www.umich.edu/~philos/tanner.html>). Tanner's Web pages include links to electronic texts, electronic journals, and subject guides to philosophy on the Web. The latter set of links will quickly connect you to more compendious listings of philosophy resources, such as Peter King's philosophy pages at Oxford University (http://users.ox.ac.uk/~worc0337/phil_index.html) or the Johns Hopkins philosophy pages (<http://www.jhu.edu/~phil/philhome.html>).

Unfortunately, many Web sites contain only links to other sites, which contain links to other sites, and so on. After visiting only a few of these sites, you can find yourself wondering, "Where's the beef?" My aim in this section will be to answer this question, by offering a few examples of sites with philosophical content. I won't attempt to provide an exhaustive guide to such sites, since I cannot hope to match the exhaustiveness or the timeliness of the subject guides mentioned above. I'll just offer a taste of what's available.

Electronic Texts

Many of the great works of philosophy are available on the Web. Of course, you would probably prefer curling up with a printed copy of Kant's Critique of Pure Reason to scrolling through all 1.2 megabytes on your screen. But accessing texts on the Web can have advantages -- such as saving you a trip to the library or enabling you to search for words and phrases. Most Web browsers have a "Find" function, and some of the online archives offer more sophisticated searching capabilities via HTML forms.

One useful list of online texts in philosophy can be found on Carnegie Mellon University's English Server (<http://english-www.hss.cmu.edu/philosophy>). An example of an especially well-implemented collection is the Hume Archive (<http://www.utm.edu/departments/phil/hume.html>).

Of course, philosophy texts are only the tip of the e-text iceberg. Texts in all subjects and genres are available on the Web. Michigan's Humanities Text Initiative (HTI) is a leader in this field, although some of its resources are available only to users located on the UM campus. HTI's unrestricted resources can be found at <http://www.hti.umich.edu/all/unrestrict.html>.

Electronic Publications

There are now several journals publishing original philosophy on the Web. For example, the Electronic Journal of Analytic Philosophy (<http://www.phil.indiana.edu/ejap/ejap.html>) publishes regular issues, with articles and discussion pieces on a single topic. These papers will never appear in print: they are published exclusively on the Web.

EJAP looks like a printed journal in many respects. The "current issue" consists of a Contents page, with links to the papers contained in that issue. Of course, this layout, borrowed from print journals, is entirely optional within the online environment. There is no reason why electronically published articles have to be organized into collections and posted simultaneously. A slight variation on the standard journal format can be found in the On-line Journal of Ethics (<http://condor.depaul.edu/ethics/ethg1.html>), where readers can submit comments on the published articles. For a further departure from the conventions of print, see the International Philosophical Preprint Exchange (<http://www.L.Chiba-U.ac.jp/IPPE.html>), which is run by

Chiba University in Japan. Here original papers in philosophy are listed by subject and posted as they are received. A more radical departure is the Chicago Philosophy Project (<http://csmaclab-www.uchicago.edu/philosophyProject/philos.html>), where small groups of philosophers engage in "conversations" that are posted online. Perhaps the leading edge is represented by a site reporting on a Conference entitled "Toward a Science of Consciousness," which was held in Tucson last April. This site includes not only abstracts and papers but also sound clips from some of the talks (<http://www.eu.arizona.edu/~uaextend/conferen/consc.html>).

The Web enables scholars to dispense not only with the constraints of print but with editors and publishers as well: on the Web, every individual is potentially his own publisher. Hence some philosophers now post copies of their work linked to their personal home pages. Among these self-publishers are Stanford's John Perry (<http://www-csli.Stanford.EDU/users/john>) and Princeton's Gilbert Harman (<http://www.cogsci.princeton.edu/~ghh>).

Perhaps the most exciting online publishing venture in philosophy is the Stanford Encyclopedia of Philosophy (<http://plato.stanford.edu>). Like printed encyclopedias, this work will contain articles written by various subject-area specialists and vetted by an editorial board. Unlike printed encyclopedias, however, the Stanford Encyclopedia will be continually in flux, since the entries will be updated online in response to new developments or feedback from readers. Only a few sample articles are currently available, but there is a complete list of proposed subject headings.

Online Courses and Discussion

A few philosophers are experimenting with online instruction on the Web. Some "courses" require readings in printed texts and participation in discussion via e-mail. Others post readings on the Web and offer a "chat" site to which students log on via telnet. A short list of current courses is available at the Web site of the American Philosophical Association (<http://www.oxy.edu/apa/courses.html>). For more information about real-time chat on the Internet, visit <http://www.bris.ac.uk/Depts/Philosophy/VL/talk.html>.

An interesting new site for philosophical discussion is the Philosophy For Children Server (<http://www.deakin.edu.au:80/arts/SSI/PStud/p4c.html>). This site offers downloadable client software that enables children to participate in real-time discussion.

Online Bibliographies

For a rich guide to print and electronic resources in ethics, visit Ethics Updates:

<http://www.acusd.edu/ethics>.

David Chalmers offers a bibliography of roughly 1800 works in philosophy of mind:

<http://www.artsci.wustl.edu/~chalmers/biblio.html>.

The Collaborative Bibliography of Women in Philosophy is a database of over 8,000 items:

<http://billyboy.ius.indiana.edu/WomeninPhilosophy/WomeninPhilo.html>.

Philosophical Fun

Play the Prisoners' Dilemma game interactively:

<http://serendip.brynmawr.edu/~ann/pd.html>.

View pictures of famous philosophers:

<http://watarts.uwaterloo.ca/PHIL/cpselle/Gallery/gallery.html>.

Read The Jean-Paul Sartre Cookbook:

http://www.unf.edu/students/mlaska/sartre_c.html.

Miscellaneous

The American Philosophical Association: <http://www.oxy.edu/apa/apa.html>

The American Society for Aesthetics: <http://www.indiana.edu:80/~asanl/asa/asa-info.html>

The Times Higher Education Supplement Internet Service: <http://thesis.newsint.co.uk>

InteLex Corporation, vendor of electronic texts: <http://www.nlx.com>

Mailing Lists and Newsgroups

There is online philosophical activity beyond the World Wide Web. Philosophers disseminate and receive news, and can even carry on some discussion, via automated mailing lists, which re-post electronic messages to subscribers. A long catalog of mailing lists, with instructions for how to subscribe, can be found on the Web at <http://www.calpoly.edu/~dhoracek/lists.html>. You needn't have access to the Web in order to participate, however: all you need is an electronic mailbox. Here are a few mailing lists that may be of interest:

PHILOSOP: A large mailing list for anyone interested in philosophy. To subscribe, send an electronic message saying simply SUBSCRIBE PHILOSOP to MAJORDOMO@MAJORDOMO.SRV.UALBERTA.CA.

HUMGRAD: A list for postgraduates in the Humanities. Send the message JOIN HUMGRAD <Your Name> to MAILBASE@MAILBASE.AC.UK.

SWIP-L: The mailing list of the Society for Women in Philosophy. The list is also open to non-members interested in feminist philosophy. Send the message SUBSCRIBE SWIP-L <Your Name> to LISTSERV@CFRVM.CFR.USF.EDU.

Finally, there are many USENET newsgroups devoted to philosophical discussion. Examples include:

alt.atheism
alt.atheism.moderated
sci.logic
sci.philosophy.meta
sci.philosophy.tech
talk.philosophy.misc

Issues for Debate

Information technology has raised many new questions of ethics and policy for the academy. Here is just a sampling of issues currently under debate.

Pornography, Hate Speech, and Censorship

Some students at Michigan have used University computing facilities to circulate material that is offensive in various ways. Those who once scrawled pornographic or racist messages on bathroom walls can now post them on the Internet for the whole world to see, using workstations and networks provided to them by the University. The University is still wrestling with the

question of how, and to what extent, the use of its computing facilities should be policed. Should a stricter standard be applied to electronic communications than to speech on the Diag? Several controversial cases have fueled this debate in recent years. In one case, an undergraduate posted violent sexual fantasies on an Internet newsgroup, using the real name of a fellow student for his imagined victim. This student was expelled from the University, but criminal charges against him were dismissed before coming to trial. In another case, an unknown hacker stole the ID and password of a University student and circulated virulently racist material in that student's name. The President of the University ultimately issued an apology for this material, even though the perpetrator may not have been associated with the University.

The Privacy of Electronic Communications

The University has been the target of several lawsuits by individuals seeking to obtain copies of electronic mail and conferences under State and Federal Freedom of Information Acts. Users of e-mail tend to regard it as ephemeral, and hence to "speak" as freely in electronic correspondence as they do on the telephone. But copies of electronic messages may remain in existence on backup disks or tapes for years, long after they have been deleted from the recipient's mailbox. Plaintiffs have argued that archived correspondence between University employees constitute "records" of the University, recoverable under State or Federal law.

These lawsuits, some of which are still underway, have moved the University to change its practices for backing up electronic mail systems. But they have also moved users to be more circumspect about e-mail, in the knowledge that what's said online may not be entirely confidential.

Distance Learning

The University of Michigan, like many other public universities, is exploring the possibility of delivering instruction to students at remote locations by technological means, including two-way television hookups and multi-media computer software. Some envision an international student body in the hundreds of thousands, sending tuition dollars to Ann Arbor and receiving degrees without ever setting foot on the Diag.

Most members of the Philosophy Department remain skeptical, to say the least. Distance learning may indeed be feasible in those academic programs which provide mainly information and training, such as programs of continuing education for professionals. Physicians, accountants, and engineers may be able to update their knowledge and skills with instruction delivered online. But philosophers are primarily engaged, not in informing or training, but in educating -- a process of cultivating intellectual and personal growth. And we tend to believe that a liberal education will always require human contact and participation in a real (rather than virtual) academic community.

* As of 2005 this link is no longer valid.