



Newsletter

Number 4 May 1986

PROMOTIONAL WORK STARTS ON STV OPTION

Several CSTV members were busy in February getting the word out on the new STV option. An information session for student societies was held 27 Feb. at the Grad Club, where Society representatives heard an explanation of the Option and offered practical suggestions for effectively publicizing it. Small in numbers but keen on the new offering, the reps asked about the relationship of Option courses to presently available electives, the role of the Option's Student Advisory Board, and other points. The reps also provided names of groups and individuals for future contact. (More follow-up is planned for this spring and fall.)

On 28 Feb. a wine and cheese reception was held at the University Club for departmental undergrad advisors, registrars and other personnel who deal with incoming and first year students. About 50 people attended. Vice-President (Academic) Tom Brzustowski spoke of the STV Program's being "something quite important" to UW over the next decade, adding that the Program "rounds out the mission of the University." Sally Lerner (M-Env) outlined the Option, pointing out the desirability of a mix of students in the Program, the nature of the "theme packages" and fielding various questions. As in the student session, important contacts were made and a number of good ideas surfaced about who to reach, and when, and how. Option information will appear in several UW mailings in the next few months, and faculty/departmental follow-up is already underway.

Readers' suggestions for publicizing the Option (the first course is offered in Winter 1987) as well as help in spreading the word to colleagues and students are valuable parts of the promotional strategy. To pass along suggestions, obtain information sheets or request other details, call Ann Dunnet at UW ext. 6215.

TECHNOLOGY AND AUTONOMY WORKSHOP--21 MARCH



Starting on page 5, you'll find a report on CSTV's "Technology and Autonomy" workshop held at UW on 21 March. Included are summaries of the papers presented by David Olson, Willem Vanderburg, Frits van Holthoon, Langdon Winner, Albert Borgmann and CSTV Director Larry Haworth.

Also in this issue: BBC "Connections" series screens at UW this term, Zen and the Art of Motorcycle Maintenance revisited, plus more news and reports.

TECHNOLOGY IMPACT RESEARCH FUND

As Newsletter readers may already be aware, the Federal Department of Labour administers a "Technology Impact Research Fund." First announced in 1984, the Fund supports research on the human and social impacts of technological change in the workplace as well as demonstration and pilot projects on effective development and implementation of technological innovation. "Practical workplace-related projects by those likely or most likely to be affected" are the focus. Last year's grant recipients were awarded \$900,000. Receiving funds were unions, support groups, employee societies, university researchers and women's councils. Université Laval received \$55,000 to investigate the effects of information on work organization and working conditions in insurance companies, and the University of Manitoba shared a small grant to study the effect of computer communications technology on employment in the grain industry. For more details, call Joan Hadley at UW ext. 3433.

CONNECTIONS--BBC FILM SERIES AT UW THIS SPRING ***See also p. 12.

The acclaimed BBC/Time-Life film series "Connections" will be shown on campus this spring. The 10-part color series traces "surprising, strange and even incredible" chains of circumstance showing the interdependence of modern inventions as well as the relationship of past and present technologies. Prof. Carl Thompson (Civil Eng) says he's seen the series three times and is "still as impressed with it as I was initially." Filmed in 19 countries and 150 locations, the uniquely interdisciplinary production is presented by James Burke and was directed by Mike Jackson and David Kennard, best known for their "Ascent of Man" series. Some titles: The Trigger Effect; Death in the Morning; Faith in Numbers; The Wheel of Fortune; Eat, Drink and Be Merry. Each episode runs 52 min.

As the Newsletter goes to press, Prof. Thompson is arranging to screen one episode of the series each week during the Spring term. The schedule will be sent to all CSTV members. For more details, call Carl Thompson, who also has the companion book for the series, at UW ext. 3553, or Ann Dunnet at UW ext. 6215.

Alternatives WORTH CONSIDERING

Alternatives magazine, published in conjunction with UW's ES Faculty and edited by CSTV member Bob Gibson, is available for \$15 annually (four issues) for individuals and \$20 for institutions. Alternatives provides "critical analysis, informed comment and dedicated advocacy" on current environmental concerns. Each issue combines scholarship and journalism and comprises articles, Conserver Society Notes, book reviews, letters, interviews and other features. The April 1986 issue theme is "Science and Technology: Survival and Well-Being" and contributors include Willem Vanderburg and Eric Higgs ("Technology and How Society Solves Problems"), Beth Savan ("Sleazy Science"), and David Parnas ("Star Wars and the Scientific Community").

Future issue themes: Saving the Great Lakes, Northern Communities and Sustainable Development, and Technology and Work.

To obtain a sample copy of a recent issue, or to subscribe, get in touch with Linda Norton, ES Dean's Office--UW ext. 3586.

CSTV EVENTS--JANUARY - APRIL 1986

Since the last Newsletter, the Centre has presented the following events.

- 5 March "Computerization and the Future of Work" (lecture)
Patricia McDermott, Sociologist and Labor Lawyer
(Co-sponsored with Canadian Student Pugwash)
- 6 March "The Norad Agreement" (lecture)
Pauline Jewett, NDP Critic for External Relations and
Women's Affairs
(Sponsored by CSTV, Science for Peace, Waterloo Student
Pugwash, UW and WLU Women's Studies)
- 11 March "The Victorian Steam Locomotive" (illustrated lecture)
Colin Russell, The Open University
- 13 March "The Impact of the Media on How You Think" (lecture)
Max Allen, CBC Radio Features Producer
(Co-sponsored with Canadian Student Pugwash)
- 21 March "Technology and Autonomy" (workshop)
David Olson, U of T McLuhan Program in Culture and Technology;
Willem Vanderburg, U of T Industrial Engineering; Frits van
Holthoon, University of Groningen; Larry Haworth, CSTV;
Langdon Winner, Rensselaer Polytechnic; Albert Borgmann,
University of Montana
(Jointly sponsored by CSTV and U of T McLuhan Program)

See report, pp. 5 - 12.
- 8 April "The High-Tech Multi-Transformation and Human Settlements"
(lecture)
Michael Marien, Editor, Future Survey
(Co-sponsored with ES Research Group on Technological
Change and Human Settlements)
- 25 April "Can Technology be Too Good? Good Technology and Alienation"
(paper)
Robert Whelchel, Electrical Engineering, Tri-State University
(Angola, Indiana)

See "Zen ..." article, p. 4.

STUDENT CONFERENCE BOOK COMING OUT IN MAY

Critical Issues in Science, Technology and Ethics: Six Student Perspectives, a 110-page book collecting the prize-winning essays from last fall's national student conference at UW, will be published in early May. The top papers were contributed by students from Laval, York, UW, Montréal, Simon Fraser and Mount Saint Vincent, and the adjudication was carried out by CSTV. The conference was organized by the UW Canadian Studies Program, and the book is the first "occasional publication" of the Program. Included with the papers are English and French versions of the Conference Communique and other information. Display copies will be available from the CSTV office. For more details, call Gloria Smith (UW Publications Service) at ext. 3369.

RUSSEL LEGGE BECOMES CENTRE'S ACTING DIRECTOR

On 1 July, Russel Legge (Academic Studies Director, St. Paul's College) and a founding member of CSTV) steps in as acting director of the Centre. He'll be overseeing the Centre's activities for the year during which Larry Haworth is on sabbatical.

ZEN AND THE ART OF MOTORCYCLE MAINTENANCE--REVISITED

One of the characters in Robert Pirsig's 1974 classic made an appearance in Robert Whelchel's CSTV paper on Friday, 25 April. Whelchel, from Tri-State University in Angola, Indiana, used the character of John Sutherland to illustrate his thesis that technology that is "too good" produces alienation and estrangement. (In Zen..., Sutherland is flummoxed when devices don't work according to the book--"I wouldn't know where to start" is one of his lines--and he doesn't really understand, or want to understand, the inner workings of the machine he rides. He feels frustrated by the motorcycle in particular and by technology in general. He and his wife use technology and condemn it at the same time.) Whelchel defined "popular, successful technology" as technology that is sophisticated, relatively efficient and cheap, "user-friendly", widely used by the "technologically illiterate", not overtly threatening, and that does not produce negative physical effects in use. But in concealing its "operative structure," such technology distances the user from the device and makes him or her helpless when the device fails. "User-friendly" devices make us "strangers in our own country." The speaker contended that this problem, like other "fundamental problems of human existence" (death included), does not appear to have a solution. Thus it is wise to develop strategies for coping with this reality than unrealistically planning to eliminate it. More "user-friendliness" or better "education" are not the answer.

Discussion covered much ground, including the following areas: the criteria of a good user-model and a good interface (where "communicating the model" is taken as part of the task), the real objects of consumer hostility (technology or planned obsolescence?), "alienation" in ordinary human-to-human exchange, the larger context of "good" and "bad", and the relative importance of the whole issue. (The last in response to the speaker's request for help in locating a quotation from Hegel; the questioner arguing that for professional reasons, philosophers, for example, might have to worry about Hegel and engineers might have to worry about alienation from technology, but not vice versa...)

SCIENCE FOR PEACE--TORONTO CHAPTER'S RECENT EVENTS

16 April: "Living in the Shadow: the Effects of Continual Fear"--Joanne Santa Barbara (McMaster, Psychiatry; Chedoke Memorial Hospital, Children's Services Director); 23 April: "Nuclearism, Law and Morality"--Graeme MacQueen (McMaster, Religious Studies); 30 April: "The Peace Issue as a Political Issue"--Richard Swift, Co-Editor, New Internationalist.

The Chapter is co-sponsored by the Toronto chapters of Physicians for Social Responsibility and the counterpart Lawyers' group. Details: Eric Fawcett--(416) 978-5217 or 486-9801.

UTUWCIT CO-SPONSORS COMPUTERS AND THE HUMANITIES CONFERENCE

The U of T/UW Co-operative on Information Technology co-sponsored, with U of T's Centre for Computing in the Humanities, a major conference at U of T 15 - 18 April. From all reports, the conference and the accompanying software fair were well-organized and well-run events. The scale of the events is reflected in the massive Conference Guide, containing 35 pre-printed papers, and the Software Fair handbook, which runs to 200 pages.

Organized by Ian Lancashire (Centre for Computing in the Humanities, U of T), the conference was set up to explore advances in interdisciplinary computing that are expected to alter education significantly in the next decade. "As Humanities computing facilities spring up on university campuses," explained the registration brochure, "humanists are developing their own expert systems, establishing large online text libraries, using computers routinely for academic publication, and forging a new and closer intellectual community by means of worldwide computer networking."

The three-day event featured panels on humanities computing facilities (this one chaired by Grace Logan of UW's Arts Computing Office); tools for teaching writing; computer science and the humanities; literary analysis (chaired by Larry Haworth); databases for the humanities; and publishing and networking. (Another panel was a symposium on a proposed provincial consortium for humanities computing, chaired by Elaine Nardocchio (Romance Languages, McMaster); seventeen universities were involved, with Phil Smith (Computer Science) representing UW.) Other UW faculty taking part in the conference included John Stubbs (Centre for the New OED) and Paul Beam and Harry Logan (English). Altogether nearly 50 panelists, representing about 30 universities and related institutions in Canada, the US, England and France, took part.

The opening address was given by Joseph Raben, editor of Computers and the Humanities and SCOPE. Keynote speaker was Paul Bratley (Informatique, Université de Montréal) who, along with Larry Haworth and Grace Logan plus eight others, served on the conference steering committee. Closing remarks were by Glyn Holmes (French, UWO), another member of the steering group.

For more details on the Conference proceedings, call Ian Lancashire at U of T (416) 978-6487. (Bitnet/NetNorth: IANL@UTORONTO. UNIX: utcsri! ianne@utcs)

TECHNOLOGY AND AUTONOMY WORKSHOP--21 MARCH

CSTV's major workshop of the Winter term was held Friday, 21 March at Conrad Grebel College. Attendance peaked at about 60 (faculty, students, visitors) during the afternoon sessions of the all day event. A wide range of topics and styles marked the presentations given by six speakers. Morning sessions were organized by the U of T McLuhan Program in Culture and Technology, which co-sponsored the event, and afternoon sessions were under the direction of CSTV. The papers were generally formal, tightly structured and thus somewhat resistant to brief summarization. Nevertheless, what follows is the editor's attempt to summarize the six presentations and the discussions that followed. At the end of the report is a short list of relevant books by the speakers or by authors they cited at length. Full texts of several papers are now available for loan from the CSTV office, as are audio cassette recordings of all the sessions. Call Ann Dunnet for more information--UW ext. 6215.

Technology and Subjectivity

David Olson, Co-director, McLuhan Program in Culture and Technology, University of Toronto

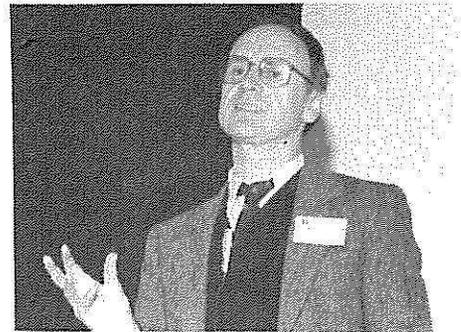
Concepts traditionally associated with the notion of subjectivity--personal identity, individuality, mental states, intentions, responsibility--are themselves the product of technology.

In discussing the origin of the notion of subjectivity, Olson referred both to the ancient world and to contemporary research. Some claim that the Homeric Greeks must have lacked the concept of the self, since individuals' intentions were usually attributed to the influence and action of the gods. But this was the only language available at the time and since "you can't have a human being without intentional states", Homer's usage doesn't prove that selfhood somehow didn't exist. Modern anthropologists have discovered that the non-literate Samoans don't seem to recognize intentions in other people; the Samoans "don't imagine a world of mind behind what people do"--they don't fill in each other's uncompleted sentences, use follow-up questions in conversation, or possess a word for "understand." In our own culture, psychologists claim that young (pre-literate) children acquire rather late in their development the recognition that people have intentions as opposed to beliefs.

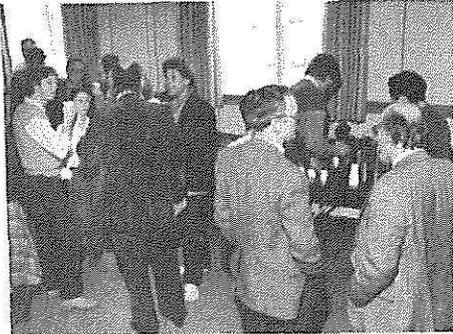
The distinction between "subjective" and "given" received new precision in the Renaissance, thanks to the (technological) development of literacy and of "fixed, objective, reproducible texts." What was applied first to texts was later extended to man and nature. By defining man as the thing that thinks, Descartes became "the prime exponent of what subjectivity is all about", providing a way for us to express the reality of the inner world which, of course, humans had always possessed but were unable to articulate.

The traditional Cartesian notion of the self is now seen as jeopardized by the incursions of modern technology. But like the technology of literacy in the past, modern technology may be seen as opening a way to the discovery of the nature of the self rather than a way to its destruction or disappearance.

Discussion centred on whether technology discovers or creates the self, with the speaker conceding that technology may best be regarded as "extending the self's possibilities."



Friday 21 March 1986



Technology and Autonomy: a Cultural Perspective

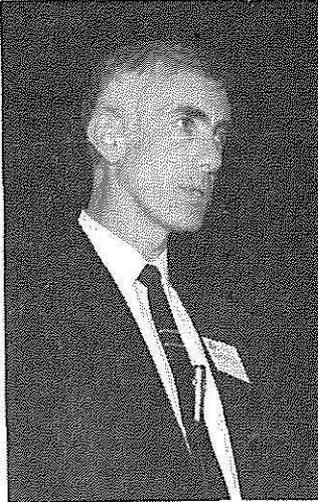
Willem Vanderburg, Industrial Engineering,
University of Toronto

Vanderburg outlined ways whereby cultures come to terms with the possibilities and problems of technology. Cultures create "mental maps" that determine the range of possible experiences and allow people to live together in a fundamentally binding unity. Unspoken assumptions rule out alternative ways of viewing phenomena. An intellectual "railroad track" is laid down for the culture and a comprehensive "cultural myth" starts to take shape. New situations are interpreted in the light of the myth, and when problems arise, applying more of the myth-sanctioned "solution" is thought to be the answer. This sets in motion an unproductive "positive feedback" system.

In the modern period, the mental maps of custom and tradition lost their authority and gave way to the ideal of autonomous technological rationality. Criteria such as technical efficiency, which unfortunately "tells little about how things are put together", have become dominant. Technological rationality allows piecemeal improvements taking place in one corner of society to create serious problems elsewhere. And because the myth "has oriented us in a certain direction" we mistakenly try to solve new problems with old methods.

Problems like the "sick building syndrome" and dangerous water pollution levels are left for the technological experts to solve, while at the same time the complaints and suggestions of those most affected are ignored. The "we're-experts-trust-us" attitude devalues ordinary human experience. Given the potential of some of these problems, "it's surprising that people aren't taking to the streets." Our current difficulties reveal that "we're not being terribly creative" and that we need to "demythologize ourselves." As individuals and as institutions, society still has the capacity to snap out of the prevailing mindset.

Discussion questions focused on how to "pull the plug" on autonomous technology (Response: issues must be forced into public debate and interdisciplinary cooperation is needed), the undeniable resilience of modern technology, and the plausibility of some risk assessment measures recommended. (Response: in some cases even stopping to "recognize what we're doing" would be a big step forward).



Autonomy, Technology and the Crisis of Liberalism

Albert Borgmann, University of Montana

Borgmann's paper was addressed mainly to Michael J. Sandel's critique of liberalism. Sandel sees the notion of an "unencumbered" (autonomous) self lying at the heart of liberal theory as exemplified in John Rawls's A Theory of Justice (Harvard, 1971). This abstract, pure, antiseptic self is free not only of such characteristics as gender, race, religion and cultural heritage but also of any particular principles that would bind it to others and create the social contract that Rawls argues for. So the resulting actual society is a confusion of "atomized", dislocated and frustrated individuals. Today's consumer advertising portrays the autonomous self as "defined by the commodities it chooses to possess." Like Musil's "Man without Qualities" the self has "no abiding traits" and "lurches between detachment and engagement." Individual responsibility shrivels up, since a "technological fix" such as liability insurance is, at least until very recently, always available.

The technological culture fails to meet liberalism's own criteria for an open society and is ironically producing a society as closed as those it decries. Goods are unequally distributed and some citizens are condemned to the margins. Parents find they can encourage their child to pursue excellence only to a point; eventually they must surrender control over the child's leisure and consumption habits to the larger society. Excellence gives way to its "bastard brother" affluence, and a "legitimate way of life" is unable to flourish.

Reforming technology requires an understanding of the self as neither radically "unencumbered" nor as totally immersed in consuming commodities. Haworth's work reflects this understanding. And Sandel presents a "communitarian alternative" but it lacks specifics and clarity of vision. Sandel's "procedural republic" would be unstable and would etch away its own foundations. True reform demands that we have regard to the non-human, divine and artistic "things" that are "greater and other than ourselves" and irreducible to "devices" or "commodities." Resources for reform include the "literature of testimony"--artistic works that point to another vision of life.

Points of discussion included constructive versus decadent uses of technology, cross-cultural differences on personal responsibility, the logical status of personal autonomy as a necessary but perhaps not sufficient condition for excellence, and the relationship of justice, pluralism and the good life in liberal theory.

Friday 21 March 1986

Liberalism and Technological Change

Frits van Holthoon, University of Groningen
(Visiting at University of Michigan)

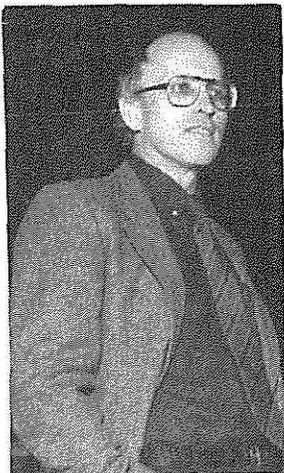
Observing that the 19th C. technological revolution had "unprecedented effects on European culture and society," van Holthoon outlined salient features of the relationship of technology and political liberalism in the period.

The paper dealt mainly with the thought of Alexis de Tocqueville, Max Weber and Emil Durkheim. After observing the American democratic experiment in action, Tocqueville concluded that, despite earlier misgivings, liberal individualism in the technological age could produce social stability and equality. Weber saw an irrational drive lurking behind the expansion of technological rationality, with men and women becoming increasingly the victims of the liberal society's own rules. Durkheim's original optimism turned into pessimism as he envisioned a society beset by anomie. Durkheim thought that science might replace religion as a force for social cohesion but he was not fully confident this would occur. He also developed the beginnings of a psychological theory (in order to explain social changes in terms of individuals' choices and behavior), but he failed to make full use of it.

Viable theories of social change must be individualistic, the speaker contended, and not collectivistic. (This is a contested point in the theory of social explanation, the opposing views being "methodological wholism" and "methodological individualism.")

In the question period, van Holthoon suggested that historians and sociologists might do well to look to current economic theorists for models of fruitful methods of explaining social change. The speaker also acknowledged that some social problems are due more to politics than to technology and that technology can be both liberating and constraining. Another speaker argued that the method Van Holthoon actually used in his paper, that of "tracing" the history of European liberalism, was distinctly different from the one Van Holthoon was recommending, that of "explaining" social change by recourse to individualistic psychological laws.





The Prospects for Personal Autonomy in a Technological Society

Larry Haworth, Director, CSTV

At the start of the modern era, technology promised to be a force for personal liberation, but our present ensemble of technologies seems to some to have created a prison instead.

Personal "autonomy" must be distinguished from personal "freedom." Autonomy is the power to have effective control over one's own life, while freedom simply implies the possibility of choosing among a range of alternatives. Autonomy has to do more with how one chooses and the sort of life he or she is brought to by exercising choice. A truly autonomous way of life is an "energetic and competent one."

Today's technology entails what Langdon Winner has called "reverse adaptation." (In modern agribusiness, this is what happens when the tomato is adapted to the high-tech harvester rather than vice versa.) Reverse adaptation applied to humans defeats personal autonomy, unless we acquire information on the adaptations new technology would demand and then use that data to decide which technologies to employ.

Is there something about technology *per se* which dictates that the adaptations it demands will jeopardize personal autonomy? If accepting a new technology means adopting an "objectified procedure" then indeed technology works against autonomy. So when a practice is "technologized" (e.g., collecting tickets on a pre-tech ferry boat in Mexico), people find their activity constrained by a necessity to conform to this "antecedently decided on" routine. Some claim that people in a technological society enjoy enhanced autonomy, because adhering to the technologized routines produces greater leisure (free time) and more choices (freedom). But because this leisure and these choices are being given a technological specification, it is doubtful that objectified procedures really provide greater autonomy.

Haworth concluded that the specifics of "reverse adaptation," especially in computer technology, need more investigation; that human values must go to the centre of a re-structured technology; that public dialogue needs to be stimulated on these issues; and that political and economic processes must be altered in order to translate the outcome of this dialogue into public policy.

Information Technology and Democratic Freedom

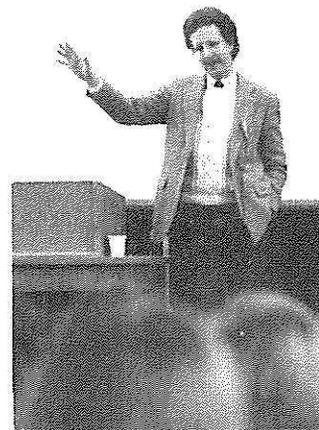
Langdon Winner, Department of Science and Technology Studies, Rensselaer Polytechnic Institute

The computerized information gathering and processing utilized by today's technology-based banks, insurance companies and government bureaucracies is tending to undermine individual freedom. Computer matching, profiling and surveillance are creating an electronic equivalent to Jeremy Bentham's infamous "Panopticon." (Social reformer Bentham once designed a 100-foot high, 6-storey circular prison structure that would permit a warden to monitor and control all his inmates at once, while the inmates themselves could neither see him nor communicate with each other.)

The "panopticon" possibilities of modern technology may seem benign, relatively palatable and not very Big Brotherish at all. Yet the disproportionate power of centralized organizations is clearly increasing, and the likely result is that overt dissent, crucial to a really functioning democracy, will become circumscribed as people "play it safe." The question at stake is not merely one of personal privacy, though it is often expressed that way.

Remedies for the problem now being proposed include "data euthanasia" and "technology as legislation." "Data euthanasia" refers to establishing or improving rules for the use of computer data, so that information on an individual is destroyed after a particular transaction is completed, rather than being stored or passed along. "Technology as legislation" is the approach that seeks to build safeguards right into data bank design so that a bank card, for instance, through a system of pseudonyms would achieve the same anonymity that cash has now. But the public's "well-educated passivity" hampers the success of such remedies. "Men are born free but everywhere they watch TV," noted the speaker. The ongoing electronic spectacle served up by the media fails to counteract widespread apathy. Society seems to "lack the language to talk about these things and respond."

Winner was asked whether data collected on individuals is really very important (Response: Yes), whether organized crime will find it easier to launder money under remedied electronic systems (Response: No), and whether electronic information technology poses a serious threat, since many things once considered private (e.g., pornography) are now public (Response: Today's developments corrode the most basic and healthy sense of personal freedom).



Technology and Autonomy--a short booklist

Borgmann, Albert Technology and the Character of Contemporary
Life Chicago, 1984

Haworth, Larry Decadence and Objectivity Toronto, 1977
Autonomy Yale, 1986

Rawls, John A Theory of Justice Harvard, 1971

Vanderburg, Willem The Growth of Minds and Cultures Toronto, 1985

Winner, Langdon Autonomous Technology Cambridge, Mass. 1977
The Whale and the Reactor Chicago, 1986

"CONNECTIONS" Schedule Announced

As the Newsletter goes to press, the "Connections" series
schedule of screenings has just been announced:

Thursdays, 11:30 am - 12:30 pm

EL 207

Starts 15 May

For an overview of the series, see page 2. For additional
details, call Carl Thompson (Civil Eng)--ext. 3553.

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Photographs: Karen Wein, UW Central Photo