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FEMINIST THOUGHT AND THE CRITIQUE OF INFORMATION TECHNOLOGY

by Sarah Pritchard

Is there a special case to be made for a feminist analysis of information technology? Aren't women librarians and library users out there using computers as much as everyone else? How can technology be sexist anyway? Technology is now controlling much of our access to information; who has access, and whose information is stored? Such questions suggest an opportunity to analyze the relevance of feminist activism and scholarship to a key feature of our profession, a feature we must embrace and challenge at the same time. These remarks present an overview of current perspectives and issues, not a comprehensive documentation of research. The literature of the field is large and continues to grow, yet the more immediate problem is in fact how to define the field and how to synthesize its academic, political and pragmatic dimensions.

Feminist Critique

The feminist perspective is, of course, not a single unified perspective, and that is in itself one of the signal aspects of feminist theory in recent years: the breaking down of false universalisms, and the surfacing of diversity. For the sake of discussion, however, I refer to the "feminist perspective" as a term denoting the whole array of insights that have been achieved over the past twenty-five years or so. These insights have emerged in several broad domains, domains that include both research and activism and that lead to an analytical framework that I hope to outline as it applies to the critique of information technology. The most relevant domains are those of education, economics, politics, sociology, and philosophy, particularly ethics and the philosophy of science and language. The notion of the interdependence and interdisciplinarity of these areas, the context-specific ways in which we must evaluate facts and issues within them, and the cross-cutting impact of gender analysis, are particularly characteristic of feminist critique. Furthermore, feminist critique does not look just at "women" per se, but at the impact of gender relations and gendered conditions

of human development in all spheres of thought and action. This distinction is fundamental, and easier to understand as soon as one reflects on the many studies of "women," even the studies of sex differences, that are not at all feminist.

In each of these areas (e.g. education, economics), key issues have been identified that shape the feminist critique. A number of these issues are raised in other socio-political critiques, for example critiques arising from class or race analyses, and one can see overlap as well as unique contributions in the way an issue is constructed in these perspectives. What I believe is the explanatory power of feminist critique lies in its breadth, its ability to link and move coherently among such an array of issues, disciplinary methods, and social contexts.

I start with what I think of as the more applied, as opposed to the more abstract or theoretical, insights, for two reasons. First, these are the immediate practical issues that women noticed as they began to organize in the workplace, in schools and the professions. Second, it was in trying to understand the connections among these concrete issues, and the broader implications and obstacles to more fundamental change, that scholars were then able to articulate the philosophical and theoretical analyses.

Information Technology

As many authors have pointed out, Theodore Roszak prominently among them, technology is developed and deployed in a specific social context and thus is subject to whatever manipulation and definition may emerge from that context. It does not float in some sort of impartial sphere divorced from grittier social realities. The relationships between women and technological evolution have been the focus of extensive historical and sociological research looking at the development of household appliances, the typewriter, the automobile, new forms of the built environment, medical technologies and factory production machines. Within a given social/historical moment, there are two basic questions that begin to reveal the disparate impact of technologies on women, the disparate access of women to technology, and the perpetuation of hierarchical and patriarchal patterns of power and gender relations. First, whose needs is the technology responding to? Second, to what uses is it being put?

Women at work

To answer the first question is to describe the many occupational and political settings in which information technology is found. The general feminist analysis of the corporate workplace has examined the role and status of women workers as technology changes the nature of the daily work, and the nature of the broader corporate economic structure. Job segregation is at the root of much of the negative impact of technology; as women are clustered in lower-paying lower-status positions, they are less able to control the direction of their work and the uses of technology, and are the most likely to face exploitation rather than benefit. As technology raises the status of a task, women workers tend to have less access to those positions; at the same time, technology may make many formerly high-status tasks repetitive and "clerical," leading to deskilling and the creation of female-dominated low-level labor pools. Only high-level women workers, for example administrators and professionals, may find the telecommunications revolution works to their advantage; clerical workers see it leading to the formation of off-shore data entry operations that are little better than sweatshops, and remotely monitored work paid by the keystroke. Feminist activists were among the first to focus on the health issues associated with information technology work, for example the effects of long-term VDT use, carpal tunnel syndrome, and the need for ergonomic furniture. Large parts of the information economy itself rest on the labor of women workers doing input, assembly and processing; while women are far less numerous among the ranks of designers, owners, analysts and executives.

Within the work environment of professional librarians, feminist writers have looked in depth at the job segregation among library specializations and, of course the status of the profession overall as compared to other professions. We all know there was a great call for more men to enter the profession back in the 1960s, as a way to raise its status; but while men have entered, they have often moved quickly into the high-status jobs while the overall status of the profession has changed little. The high-status jobs are seen to be those linked to technology: systems librarians, automation consultants, special librarians, automated system vendor representatives. Directors are more likely to be

chosen from among the ranks of those with such status and technical backgrounds. The most elite technical specialties, rather than raise the rest of the profession, in fact try to divorce themselves from it by creating new names: information manager, chief information officer. In the areas of the library most heavily automated, like technical services, we have reverted to an industrial and sex-segregated mode of organization where paraprofessionals — mostly women — handle the bulk of copy cataloging and acquisitions tasks.

The public sphere

In addition to the needs of specific employers, information technology can be seen as responding to and creating a range of formal political and public policy needs. As information technology has become a matter for governmental utilization and control, feminists have joined with other groups in asking questions about social equity and resource allocation. Women's access to information technology, and to the applications and contents engendered by the technology, is hampered by their generally weaker economic and political position and by subtle sexism in social priorities. What is the role then of the government in promoting policies related to privacy of and access to various kinds of personal and official information, and to the funding of technological initiatives? Is the primacy of defense or multinational economic applications shutting out social and educational developments of information technology that would benefit women, as individuals and as workers? Are women involved in the setting of national technology policy? Does the emergence of rarified "experts" privilege a small group over the lived experiences of millions of women? Are women exploited as consumers and workers using this technology without considering their real needs? These are immense challenges, and luckily there are many progressive coalitions trying to face them; what is important to remember is that in every case, there is likely to be a special impact on women as a whole, and within that group, one must continue to differentiate women affected by situations of race, class, disability, and the like. The democratic potential of information technology is significant, but it has yet to be realized. Personal computers may be inexpensive, access to the Internet simple (for the moment); but the web of factors that enable us to use them cannot be taken for granted.

Who's using it, for what?

Turning now to the second question, that of the uses to which information technology is being put, feminists see both problems and opportunities. In the realm of education, research has revealed that girls in school may enjoy less access to computer equipment than boys, and may be consciously or unconsciously subjected to teachers' stereotypes of their abilities, learning styles and interests regarding computer technology. Certain aspects of the very design of software and programming languages have been shown to reflect socially-constructed gender differences in language and training; interestingly, some "female" approaches to design and problem solving are now being understood as genuine improvements. Efforts to support girls' success and eventual career entry in areas of computers and technology are increasing, but only after years of accumulated evidence that the differences were largely a factor of sexism as opposed to innate characteristics. It is at the level of primary and secondary education that the most long-term positive change can be wrought, thus the role of school and public librarians in improving girls' access to information technology, and strengthening the relevance of its contents to them, is vital.

The arena of higher education and research is perhaps the one with which many of us are the most familiar. Here, I am speaking of the feminist perspective on the content of information technology systems, and of women as users of this content. What's in all those databases and networks? How is it indexed? Who's doing communication networks, and through whose graces can you get to them? There has been a steady growth of feminist research and activism on these questions, and while we see a lot of progress in the academic library environment, we must remember that this is one of the most elite environments to begin with. Librarians influenced by the development of feminism and the growth of women's studies as an academic topic began early on to criticize commercial databases for their lack of coverage of feminist issues and feminist publications, and for their sexist terminology — a terminology that had already been under fire within the general library science framework. Changes in technology have now

made it possible for many more people to create and share specialized databases and communications networks; the growth in electronic mail use for women's studies, and for women as scholars and professionals with feminist interests, is one of the salient features of the last couple of years in this field. Researchers in communications have already found fascinating, sometimes disturbing, differences in the styles of conversation and exchange between men and women in the networked environment.

The feminist perspective on libraries overall, as collectors and purveyors of information and information services, goes beyond this academic context. Can you get to these databases and networks if you're "just a housewife," or an illiterate illegal immigrant? What if some crucial information about health, employment or housing is only — or never — available through computer technology? We have been calling for more technological access and training for, and information relevant to the needs of, women in the local community; but this costs money and is not the kind of thing vendors will offer independently. When we install public-access computers and software, we must look at the impact of these on girls and women, and we must continue to urge public support for effective levels of service.

Basic Questions

In looking at the workplace, the schools, the university and the community, we are looking at women as workers and consumers and public citizens. Do information technologies benefit the educational and economic status, and the civic participation of, women across society? Do women of diverse backgrounds and opinions have equitable access and opportunity to define and shape the directions and uses of information technology? Is the nature of the information itself transformed and broadened? Is the array of information that is stored and preserved and communicated reflective of the breadth of feminism, women's studies, lesbian communities, grass-roots international projects and other women's activities and contributions? What is the very language of the debate that we are conducting here, and are we being understood?

Questions that arise from apparently diverse settings indicate the need to challenge social and scientific concepts at a more

basic level, which leads then to the philosophical critique that I included among my list of domains at the beginning of these remarks. What are the assumptions about science, rational thought, values and language that are implicit and unexamined in our creation and use of information technology? The ultimate impact of feminism as a perspective will not be felt with minor changes in, for example, the numbers of women on the city council or the legal regulations governing life insurance; we will only have real change when there is a paradigm shift in the fundamental concepts that shape and filter our perceptions.

Feminism and Philosophy

This area of feminist writing may represent the most profound exploration of feminist scholars over the last decade. I can only begin to sketch the outlines of some of the complex and sophisticated analyses that have been developed; and it is a body of literature that is not easily situated in a single discipline or line of research. Feminist philosophers look at science — and therefore at technology — as an historically specific social construct, where what are called "facts" and "proofs" may not necessarily represent universal truths or objectively determined laws of nature. This epistemological analysis asserts that there is a false universalism in claiming such objectivity, and in defining what is knowledge while at the same time denying any subjectivity to such definitions. What is called "rational" thinking is one particular mode of thinking whose primacy has been aligned with European men, and used to discredit other approaches, specifically to accuse women and other non-dominant groups of being irrational and therefore not worthy of serious consideration.

Scientific inquiry is often constructed, rhetorically, as an excavation into the mysteries of Mother Nature; has the predominance of men in science (historically) led to the use of male metaphors in defining scientific and technological discovery as actively opposed to a presumed passive female essentialism? Feminist thinkers have challenged dichotomous thought, the setting up of conceptual opposites that have had an immense scope throughout history of linked values and hierarchies: women/men, nature/civilization, body/mind, and so forth. Breaking down these dichotomies leads to greater equity, less stereotyping, and increased creativity as the formerly fixed boundaries of roles,

disciplines and debates are extended. These concepts go directly to the heart of the critique of education, of applied science, and of modes of programming and understanding computer systems.

Feminist scholarship in literature, linguistics and logic has generated critiques of language, imagery and discourse that are subject to vigorous debate even among their proponents. It is not for me here to advocate or even explain the subtle shades of meaning among varieties of deconstruction, semiotic analysis, theories of representation and more. Yet some points central to our discussion of information technology can be drawn from these investigations. In addition to the prevalence of male metaphors of dominance and control in science, management and other fields, formal systems of logic have themselves been criticized for the implication that subjectivity can be eliminated when using language to try to portray reality. If there is always some kind of context to the ways that "true" and "false" are established, it does not mean that there is no truth or falsehood, but it does mean that we must consciously delineate the outlines of the question and the environment in which is it asked, especially the environment outside of the dominant group.

It is not far from this position to then say that information itself is socially constructed — its definition, content and worth. One way this affects our profession, as revealed in several studies by feminist librarians, is in our systems of indexing and classification. Not only may the terminology be sexist, but the classification hierarchies and relational connections may reflect specific (and discriminatory) hierarchies and values. When we build databases and communication networks, we must look at whether or not information for, by and about women is included, and we must furthermore ensure that the basic principles for selection and inclusion are themselves equitable and unprejudicial in this very broad sense.

As we move from science to social values, some issues raised by feminist ethics are applicable to the understanding of the uses of information technology in schools and at work. What are the dependency relationships that are created, what are the gender roles and stereotypes that are perpetuated? Are "rules" privileged over "feelings," and are these arbitrarily polarized and construed as gender-related? And, as I noted earlier with respect to the concrete implementation of technology, who is defining the problem and who is controlling the solutions? Whose values and needs are represented?

Thoughts for the Future

Feminist criticism and activism span the information technology world from the mundane to the profound, the academic to the commercial to the political. One must be careful, however, not to go too far into reverse stereotyping and the glorification of some purported female-superior cultural approach. By carefully examining underlying roles, interests and assumptions once thought to be universal or even nonexistent, we can try to distinguish abstract traits and values from specific people and contexts. The economic, social and philosophical critiques described here merge in the profession of librarianship in a fashion that I believe is exciting, dynamic and unique. To acknowledge these underlying issues is not to increase the bias or politicization of the topic; it is, on the contrary, a revelation of the centuries-old, multi-faceted and pre-existing politics, and a beginning toward making our uses of information technology truly unbiased, productive and relevant to all our needs.