THE ELECTRONIC COTTAGE:
OLD WINE IN NEW BOTTLES:*

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A year ago, a front-page story in the New York Times highlighted the debate surrounding the future of work, by describing the experience of Mrs. Sharon Jones who, each morning at 6:30 ,

> sits before the green glow of a word pro-cessor and begins copying stacks of Blue Shield medical insurance claims.

> By the time she stops nine hours later, she has processed about 500 claims and earned $80. She has not left the basement of her home in Suitland, Md., except to dress her 5-year old son for nursery school and to make a sandwich, which she eats at her terminal.

> Mrs. Jones has few complaints about her job, but a growing number of people are prepared to complain on her behalf. An emotional debate is welling up around her, about freedom, exploitation, the conditions of working women and the future of work (May 20, 1984: 1, 32).

Mrs. Jones is an example of the new breed of the "electronic cottage" worker, known as the telecommuter, defined in the literature as someone who works from home with the aid of a stand alone computer, a word processor, or terminal, and who may or may not utilize a modem and a telephone to retrieve and process data from and transmit data to a remote computer site. Telecommuting, a pro-toype of the so-called "flexiliving", is being heralded by some as a possible panacea and cure to the socio-economic ills confronting advanced industrial societies. Telecommuting, job and work sharing, in conjunction with the informal economy model, are being advanced as the last straw to saving the welfare state in advanced capitalist societies from its impending economic crisis, to providing people, particularly women, with much needed "flextime" and flexiplace", thus enabling

them to exercise the freedom to choose the place, pace and schedule of work without abandoning family responsibility, and finally to encouraging the development of a healthy informal economy based on voluntarism and do-it-yourself society. This societal transformation, futurologists and post-industrialists argue, promises to restore the home and community to their idyllic pre-industrial phase with the family resuming its traditional role as the hub of human activity (see Jones, 1982; Heinz and Olk, 1982).

The work-at-home philosophy has its critics and advocates, as the following comment taken from Carla Lipsig-Mumme's assessment of home work indicates:

> To some analysts, homeworking is the future, offering the freedom of self-regulated work compatible with post-industrial society and an entrepreneurial system. To others, domicilesation threatens to undo the major advances of unionism over the past one hundred and fifty years by destroying job security, decentralizing production, and transferring production costs back to the worker (1983: 545).

A central theme in the writings of leading exponents of the post-industrial society thesis is the centrality of the home in the economy and social life in general. In the words of Toffler, the ultimate significance of the Third Wave is that the producer and the consumer will become one, in his word the 'prosumer', that there will be less hierarchical structuring of organizations, more self-sufficiency at the family and community levels, greater dependency by elites upon information from below, decentralization of power in organizations and demassification of values. In their work on the post-service and post-industrial society, Gershuny (1978) and Jones (1982), an economist and a sociologist, advocate considering domestic work in terms of its equivalent economic and monetary value. Essentially, Gershuny argues, that with diffusion and eventually mass accessibility of the new technologies, the do-it-yourself society, with a largely 'informal economy' centering around the household, will typify the future. Gershuny's solution for unemployment is neither increased state intervention nor minimum wage guarantees. Rather, he reconciles himself to the emerging trend within the self-service or informal-economy by redefining the concept of work, in particular household work. Once household work is defined as

real work, work in the home is perceived as socially rewarding.

Following similar reasoning, Jones proposes an amendment to the traditional three-fold sectoral classification of the economy, by adding the quaternary sector, which is devoted to the production of knowledge, and the quinary sector, whose basic feature is the provision of mainly unpaid domestic and quasi-domestic services which resemble the home paid professional services. Jones' main reason for including domestic work under the general rubric of productive work rests on an argument borrowed from Stretton (1976), which describes the home as the central place in which expressive and meaningful activity takes place:

> In affluent societies (as in most others) much more than half of all waking time is spent at home or near it. More than a third of capital is invested there. More than a third of work is done there. Depending on what you choose to count as goods, some high proportion of all goods are produced there, and even more are enjoyed there. More than three quarters of all subsistence, social life, leisure, recreation happen there. Above all, people are produced there, and are endowed with the value of capabilities which will determine most of the quality of their social life and government away from home. So the resources of home and neighbourhood have a common importance...It is in the activities of home, neighbourhood and voluntary association that there is least money exchange, least division of labour, least bureaucracy, least distinction between production and consumption, least occasion for appressive and exploitative or competitive uses of ownership, and most of the best opportunities for cooperative, generous, self-expressive, unalienated work and life (Cited in Jones, 1982:69).

This portrayal presents the family as an autonomous unit capable of ameliorating social alienation. In our view Jones overlooks the counter position, elaborated in feminist writings and discussed below, which views the family as a transition belt which extends to the home the dominant mode of economic and social relations in capitalist society, and that unless those relations are transformed and devoid of exploitation, the family will continue to labour under the same societal influence and mirror its various aspects. As long as the dominant mode of production remains capitalist and built on private ownership of the means of production and the appropriation of surplus labour, the relationship between husband and wife, between parents and offspring, will continue to be affected by those same alienating factors. It is not clear from Jones' work how the mode of production will be altered in either the post-service or the post-industrial society by incorporating the value of domestic labour in national statistics. This is not to say that there will be no positive outcome if such a change in the basic definition of work were to take place. Clearly it would bring about far reaching changes in the dominant work ethic, which Jones favours abolishing altogether. By attaching concrete values to house and unpaid

community work, work that at one point was defined as unproductive will now acquire positive social-psychological and economic rewards. In the long run this may contribute to the emergence of the 'symmetrical family' in which more egalitarian division of labour prevails.

An elaboration of the same theme from a feminist perspective, taking into account the role of the new technology and reaching drastically different conclusions, is making a significant contribution to examining the labour process in advanced capitalism (see Haraway, 1984). The starting point of much of this literature is the observation that the introduction of domestic and home work in industrial capitalism was accompanied by wage exploitation and the subjugation of women to stressful roles and harsh working conditions, and there is no reason to expect that the situation will improve under the new motto of the Electronic Cottage. After all, the mode of production in society is determined 'in the first instance' by the method of labour appropriation and not by the type of technology used. Seizing upon this theme, Pat Armstrong in Labour Pains (1984) takes cue from Johnson and Johnson's The Seam Allowance, a study of homework in the garment industry, by isolating a structural similarity between women homeworkers in the garment industry and those working behind a terminal from home. In describing the conditions of women garment workers, she says:

> Such women are low paid, unprotected by unions and largely unprotected by labour legislation as well. Their hours are long, the tension is high. These high tension levels are created by the conflict between their several jobs and by their isolation from other workers.

And with regard to telecommuting, she says:

> Similar problems face the women who will work on the microelectronic equipment at home. The falling prices of the computers means that the employers can require word processor operators to purchase their own machines, just as do the seamstresses now... Thanks to the new technology, a whole new range of work can be quantified and monitored by the machines and thus at home rather than under a supervisor's control. Piece work becomes possible. In addition to avoiding the expense of providing office equipment, and in addition to saving money on pay and benefits, employers also effectively prevent union resistance (1984:167).

While there are no published estimates of the size of the Canadian telecommuting labour force or indeed the number of those who work from home, unofficial estimates in Britain and the U.S. show that in Great Britain there are between 100,000 and 400,000 people working from home, with part-time workers constituting close to 20 percent of the labour force (Handy, 1984:12,127). And a public opinion poll taken in ten West European countries revealed that 40 percent expect to see an increase in the number of part-time workers, 22.4 percent expect an increase in the number of

people working from home, and in response to the question "If you, individually, could work from home all or part of the week, would you prefer to do so?" an average of 35.5 percent of the Europeans answered in the affirmative, with the proportions in Britain and the Netherlands reaching 40.8 percent and 50.8 percent, respectively (Handy, 1984:74).

The World Future Society, hardly an objective observer of future trends, predicts that by the year 2000 close to two-thirds of the labour force in industrialized countries will consist of telecommuters (Eder, 1983:35). This increase is explained on the basis of emerging dominance of the service sector in advanced industrial countries, where information workers and women comprise a large component of that sector. In 1981, one estimate put the number of Americans owning home computers around 175,000, with the expectation that this number will continue to increase exponentially, to reach 40 million by 1990 (Hartling:8). Estimates of the number of Americans who telecommute vary drastically from a low of 10,000 to a high of 100,000 (N.Y.T. Supplement March 24, 1984:35), with similarly varying projections for the year 1990 stretching from ten million (cited in Pratt, 1984:3) to 38 million (Salomon and Salomon, 1984:18).

While data on telecommuters in Canada is not available, it is believed that there are close to one million home computers in Canada, one-third of which are equipped with communications capabilities (The Globe and Mail, July 3, 1984:B-13). And we do know that part-time work and working from home are on the increase, particularly among women. Whereas in 1953, 63 percent of part-time workers were women, of the 1,477,000 part-time workers listed by the Canadian Census for 1981, 72 percent were women. And the majority of these women workers are concentrated in non-unionized service and other related sectors, which makes them suitable candidates for the so-called electronic cottage (White, 1983:29-45).

Although not directly concerned with telecommuting per se, the link between the new technology and part-time work is clearly recognized by the Canadian Advisory Council on the Status of Women in its sponsored report Women and Part-Time Work:

When automation is first introduced, the need for labour may fluctuate and the final requirements be unclear. For example, if the computer needs to be fed large amounts of information for retrieval purposes, the work-load may increase initially. Once this process is complete, the amount of work will drop back. Retraining staff to use machines such as word processors may take time at the start, but once the workers are proficient the work declines. During this transition period the flexibility of part-time work may be of great advantage to the employer. Because part-time workers have no job security, they may be hired or fired, called-in or not, to cover additional work periods, without the need to hire permanent staff who may not be

required later (White, 1983:46).

If we extrapolate from these trends, it appears that telecommuting is here to stay and in all likelihood will increase in its scope. The response of the U.S. government to this phenomenon is instructive, for it could set the trend for other Western countries in this regard. With the movement towards de-regulation proceeding in full swing in the U.S., one of its many casualties has been the 1941 Fair Labour Act which abolished child labour, enforced guaranteed minimum wage, and prohibited certain types of exploitative home work (such as industrial knitting). In its place the Reagan Administration has recently sanctioned home work under the pretext that legalizing what in fact has always been practiced illegally will in the long run provide better protection to home workers. Thus, the 1982 Family Opportunity Act singles out telecommuting for special tax incentives:

The purposes of this Act are to increase individual economic opportunity, expand potential for individuals to own their own businesses, restore the family setting by allowing families to earn and learn together at home, develop opportunities for America's handicapped and disabled citizens, provide a growing pool of computer-literate young people who can enter the jobs of the future and man the sophisticated military of tomorrow, and to decrease home-to-office commuting and national dependence on imported oil (cited in Hartling, Chap. One, 1985:5).

In the words of one commentator, "the bill makes clear that the pro-family [political] right sees home computers as a good organizing tool on which to hang their entire political agenda. They view the creation of the Electronic Cottage as a way of shoring up the privatized family by decreasing the influence of work settings and schools on parents and children, and increasing the influence of family members and the video screen on domestic life. They see it as a way of dissolving governmental responsibility to create barrier-free environments for mobility impaired persons and as a way of increasing the potential for technological warfare" (cited in ibid.:6).

Irrespective of the merits or demerits of telecommuting and its consequences for the future, it is worth examining the available evidence regarding the characteristics of the telecommuter. Although the evidence which I shall draw upon is based on recent studies carried out in the U.S., the findings could very well apply to Canada and other industrialized countries as well. However, because of the small size of the samples involved, extreme care must be used in generalizing from these results. As will be shown below, the findings are far from presenting a consistent picture of telecommuting.

One uniform conclusion which emerges from the few publicly available surveys is that the telecommuter population tends to be bifuricated and polarized consisting on one side of the spectrum of professional/managerial/male dominated labour force, and on the other side of clerical/nontechnical/

female dominated work force. Margrethe Olson, who was among the first to examine in a systematic way the social characteristics of telecommuters, noted in the course of interviewing 32 organizational employees who were comprised of data entry clerks, professionals, such as software developers and programmers, and managers that "the individuals who were interviewed had two reasons for choosing this work arrangement: either personal preference or lack of ability to work any other way because of responsibilities or constraints" (1983a:185). But as we shall see below these choices were gender-based, with more of the women operating under family, organizational, and personal constraints, compared to the males in the sample who viewed tele-commuting as an informal activity and an extension of their office setting. Twelve of the thirty-two respondents interviewed "indicated that their family situation was the primary reason for them to choose the work-at-home arrangement. Many of those interviewed felt that relations with their family were a problem." (ibid.:185). Since most of those interviewed by Olson in her 1982 study were salaried employees, the issue of piece rate and exploitation did not arise. In a subsequent study, Olson noted that the reasons the companies gave for preferring work-at-home arrangements focused mainly on cost saving, increased productivity, attracting or retaining qualified personnel, social responsibility (i.e. employing the disabled), computer utilization during off-peak hours, and market potential (1983b:4-5). The welfare of the employees was hardly mentioned by management: "quality of work life, or the need to give employees flexible options in order to accomodate their non-work (i.e., family) requirements, does not seem to be a major concern" (1983b:29). In the follow-up study of 14 pilot experiments, Olson concluded that pilot arrangements "generally focusing on clerical and word processing employees were set up to reduce the costs of performing a necessary task. Pilots focusing on professionals were motivated by a need to attract or retain a valued skill in scarce supply, and thus increase productivity as an indirect benefit" (1983b:9). Of the 14 pilots, only eight were paid on salary basis with regular benefits, the remaining five (mainly women) were paid on an hourly basis or piece rate, with only one pilot study involving prorated benefit.

The formal arrangements involved more women and the constraints were dictated by having to care for children, whereas the male dominated informal arrangements were dictated by the need to enhance one's concentration in performing demanding and professional jobs. "The clerical employees had very short-term deliverables requiring turnaround in a day or even hours. Deadlines were reported as critical only for the clerical employees in the formal programmes," whereas deadlines were "critical for professionals at least some of the time" (1983b:20). Clerical work tended to be seasonal and irregular (1983:20). When it came to performance evaluation, "professional employees were measured primarily by their ability to meet deadlines; this also served as a form of feedback. The clerical employees were measured primarily on the amount they produced per unit time; the quality of work they produced was checked periodically" (1983:21). Clerical workers felt that working at

home decreases their chances of promotion, whereas professional workers tended to be less concerned with promotion and more with accomplishing challenging tasks. Half of those in formal programmes experienced deteriorating relations with their supervisors (ibid.:25). And working at home does not seem to have freed the individual to engage in extra community-related activities, as anticipated by Toffler and other prophets of post-industrialism.

A more recent study of telecommuting by the Salomons starts by hypothesising "that the incidence of the nonmonetary costs on the individual is relatively large compared to the benefits he or she will accrue and that, therefore, employees' acceptance of this arrangement will be far from enthusiastic." (1984:16). In summarizing three previous studies pertaining to home work the authors point out that:

1- "having the husband, wife, children, and pets in the same environment is likely to be more of a strain than most people can survive."

2- "the experience with flexitime programmes, which increased the presence of the head of household at home, led in most cases to problems of alcoholism, physical conflicts, and divorce."

3- "workers' adjustment to a four-day week [was correlated with] unfavourable effects on their home life." (ibid.:23)

In concluding their review of the literature, the Salomons remarked: "In summary, the body of research reviewed indicates that the impacts of work-at-home on the household's life style are not all favourable. Adding yet another function to the physical space of the home could cause more tension, which may outweigh the expected benefits for the individual." (1984:23-24).

Turning to their own findings, the Salomons discovered as a result of interviewing 39 potential telecommuters, of whom the majority (74 percent) were professionals and the remaining 26 percent were managerial and clerical staff, the following:

1- "Respondents were asked to evaluate the importance of keeping work-life and home-life separate. Two-thirds replied that it is important to maintain a separation, and only 26 percent thought that it is not important" (ibid.:25).

2- "Asked about the impact of working at home, 31 percent thought that it would improve their relationship with their spouses, while 35 percent thought that it would worsen it" (ibid.:25).

3- "53 percent thought that working at home would improve the relationship [with their children], compared with 18 percent who thought that the impact would be negative" (ibid.:25).

4- "Overall,...30 percent felt they would be happier [working at home], 35 percent felt they would be less happy, and the remaining 35 percent did not express feelings one way or the other" (ibid.:26).

5- "In the most direct question, respondents were asked if they would like to work at home. Only

34 percent replied positively, compared with 45 percent who responded negatively" (ibid.:26).

In their summing-up, the Salomons say that "different population groups are likely to vary in their willingness to accept the new arrangement. Those having an 'extension' type of relationship between work and non-work, namely, professionals and managers, are assumed to be more likely to accept it voluntarily. Others, who we believe comprise the majority of the white-collar labour force, are less likely to accept the arrangement" (ibid.:27).

Pratt, though writing from the perspective of a consultant, noted that "[c]lerical and contract employees paid on a piece-rate basis expressed concern about their lack of guaranteed income resulting from an inability of employers to consistently supply them with full quota of work. Those individuals chose to work at home for the dollars they could earn while being a 'good wife and mother'..." (Pratt, 1984:10). However, Pratt cites Karen Nussbaum, the Executive Director of Working Women, as echoing the concerns of other feminists by saying that "far from being a solution for women [it] will just mean women will do two jobs at the same time...The physical separation of the worker, uneven pay scales, hourly rate, all work against individual workers" (ibid.:10).

A fourth study, yet to be published (Vitalari, Venkatesh, and Gronhaug, 1984:15-16) and based on the impact of home computers for general use on the allocation of family time, reveals the following conclusions:

1- The majority of those who have computers at home are professionals (63 percent of sample of 300 respondents).

2- Computer use in the home is associated with instrumental and not expressive tasks. Those who owned computers tended to spend more time alone and less in collective familiar leisure activities.

And finally, a consumer survey of computer adopters by Dickerson and Gentry reinforced the above findings, and noted that the likely candidate for a successful computer adopter is a "logical introvert", i.e., a homebody who is "introverted, rational, quantitatively oriented, unsocial." and who is "interested neither in the arts nor in innovations that would enhance [the] ability to communicate" with others (1984:233).

Conclusions

Several conclusions emerge from this brief overview of telecommuting. First, although the technology is still in its infancy, the pace with which it is being deployed is proceeding without adequate public or even user awareness of its implications. While this problem is not unique to the new technology, in the sense that we have seen how previous technologies were introduced wholesale without prior assessment of their direct and indirect effects, what makes this case unique is that the new technology will impinge on family life, an area hitherto spared the intrusion of the work environment. Enthusiasm for the new technology and the hype surrounding its utilization, evident in advertising and trade publications, have in many respects created a climate whereby any questioning of the side effects of the new technology is frowned upon and quickly equated with anti-technology and Ludditism.

Second, while the rate of diffusion of this technology in the home is difficult to measure with precision, it is clear that the extent and mode of its absorption are a function of the status of the user, although as we have seen above psychologists tell us that regardless of social status the personality type of the computer user leaves something to be desired. High status individuals, professionals for example, are more inclined to make use of this technology and consider it as a tool to enhance their occupational standing, compared to low status users, for whom the technology has reinforced their already disadvantaged status in the social class system. This is not to deny the fact that, even for the latter group, the deployment of the technology at home has meant a margin of choice, though narrow this margin may be.

Third, there appears to be emerging a correlation between occupational status and gender, in the sense that women are slotted in low status jobs and men in higher ones. Here we have a case whereby the new technology is being instrumental in producing the invidious labour duality already present in the old industrial order.

Finally, a remedying of what may develop into a case of 'old wine in new bottles' calls for concerted efforts on the part of the unions to address the impact of telecommuting upon unionism in general through initiating a public debate around the issue. Women organizations must become involved in this debate, and hopefully employers, among whom the public sector ranks at the top in this industry, may see fit to join the debate in its early phase before it acquires divisive dimensions.

NOTES

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