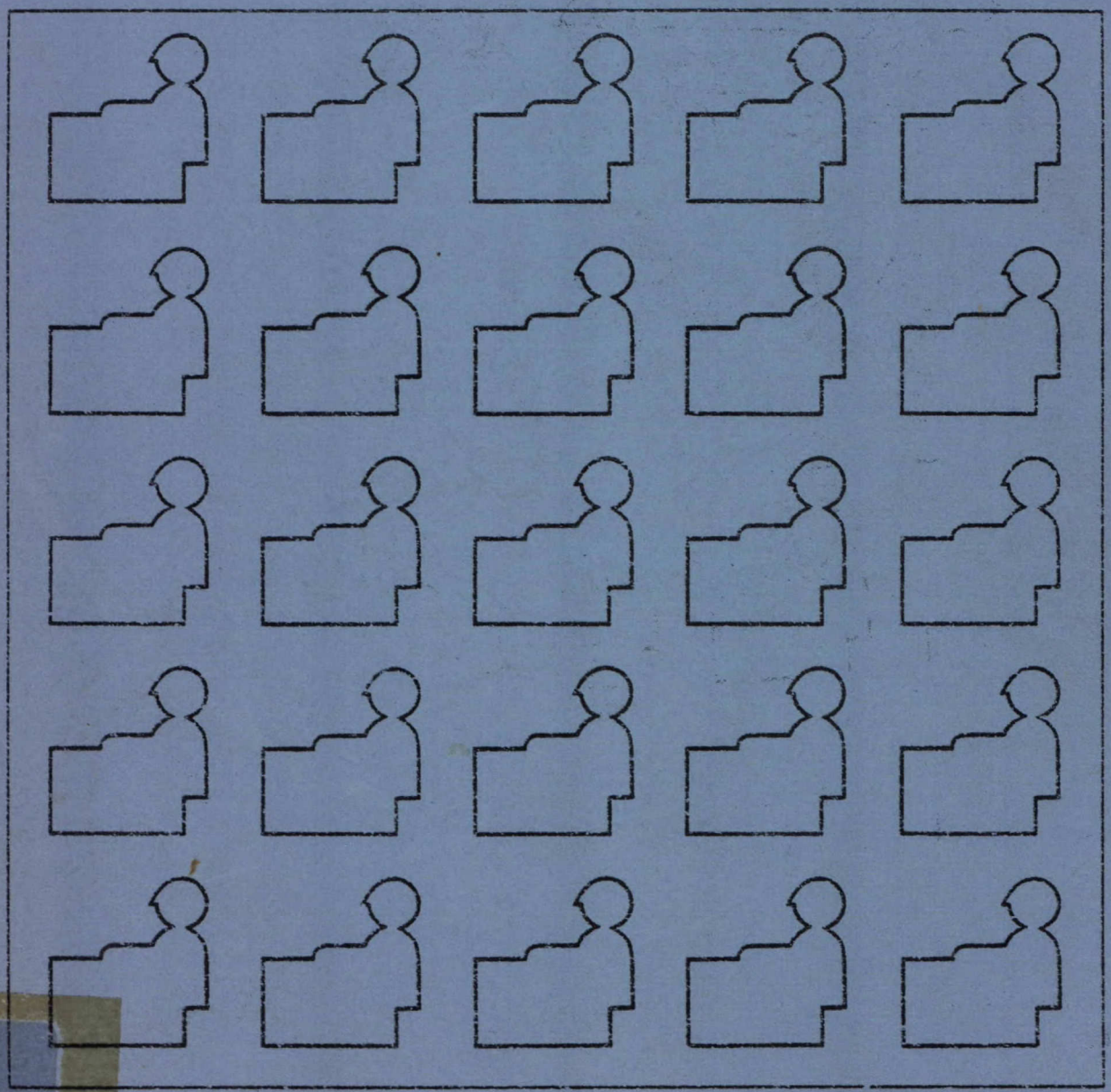
NICATIONS PROGRAM

PROGRAMME DE LA BUREAUTIQUE

UMAN AND SOCIAL ISSUES OF OFFICE COMMUNICATIONS TECHNOLOGY

1. Report of the Human and Social Impact Committee on Office Automation to the Users Group
2. Comments of the Personnel Policy Branch, Treasury Board Secretariat

January 25, 1983



Government of Canada
Department of Communications

Gouvernement du Canada
Ministère des Communications

Canada

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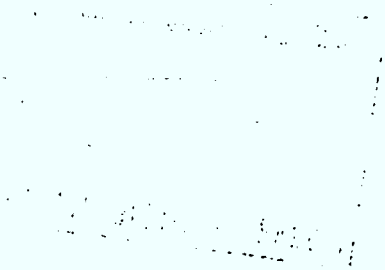
THE HUMAN AND SOCIAL ISSUES OF OFFICE COMMUNICATIONS TECHNOLOGY

EXECUTIVE SUMMARY AND REPORT

From: The Human and Social Impact Committee on Office Automation

To: The User's Group, Office Communications Systems Program, Department of Communications

January 25, 1983



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Preface

The human and Social Impact of Office Automation Committee was constituted by the Users' Group in September, 1981. A number of Departments and individuals immediately expressed interest and became members. The Terms of Reference prepared by the committee were approved by the Users' Group in December 1981.

The Committee's first task, at the request of the Users' Group, was to prepare a report which would review the human and social impact of office automation and make recommendations to the Users' Group about office automation in the federal public service. The report has taken 15 months to complete. The task was complex because there is a large amount of written material, most of which contains opinions, concerns and projections. There are very few established facts in this area. Nor were there any reviews which covered the issues. To deal with the complexity, the committee adopted a strategy which consisted of four steps:

1. The first step was to describe and classify all of the concerns that have been expressed about the human and social impact of office automation in both the academic literature and the public media.

2. Step two was to evaluate whether the quality of empirical evidence about each issue warranted firm conclusions and policy recommendations or whether further clarification was required.

3. The third step was to review federal government policies currently in place that appeared to be relevant to the issues and to evaluate whether these policies will be adequate to deal with the issues.

4. The fourth step was to make recommendations.

These steps have taken a great deal of work by many individual members of the Committee and have required many hours of discussion.

The report has strengths. After review by many people, we are quite confident that the report has covered the issues that have been expressed as concerns, and that our assessment of the state of empirical evidence about the issues is accurate. We also feel that the report provides general guidance and philosophical direction to the federal government about the human and social impact of office automation.

However, the report also has limitations. Although the report represents the views of the majority of Committee members, we have failed to arrive at a consensus on the contents of the report. This serves to alert the Users' Group that these issues are controversial and more time will be required within the federal public service to discuss the issues at many levels. The Committee recognizes that this report represents the thinking of a group as of January, 1983 and that it is not the final word on these issues. Many of the recommendations are stated generally, but without further time for study and reflection we are not prepared to provide firmer, more concrete recommendations. A further problem is that nearly a third of the recommendations are for further study. While this represents the state of lack of knowledge on which to base firm recommendations, it does not answer the questions of those facing implementations in the near future.

The 34 recommendations fall into 5 categories:

1. Studies were recommended where there was good reason to believe that change would occur but the nature and degree of impact was not yet known. Ten studies are recommended.

2. Policy reviews were recommended where federal government policy exists but it is not immediately clear whether existing policies will be adequate to deal with the changes. There are 6 such recommendations.

3. Policy development was recommended where, as far as the Committee members were aware, no policies existed and it is clear that they will be needed. There are only 4 recommendations in this category.

4. Six recommendations deal with development of training. These can probably be implemented under existing policies and represent new content for training.

5. Eight recommendations can be classed as general principles or statements of philosophy which the Committee recommends to guide the implementation of office automation.

Dorothy Phillips
Chair

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Departments Represented on the
Human and Social Impact of Office Automation
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Bureau of Management Consulting
Communications
Communications (Chair)
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Ministry of State for Social Development
National Defence
Public Works
Public Service Commission
Royal Canadian Mounted Police
Secretary of State
Statistics Canada
Status of Women
Treasury Board
Transport

EXECUTIVE SUMMARY

The Human and Social Issues of Office Automation

Prepared by: The Human and Social Impact Committee on Office Automation

For: The User's Group, Office Communications Systems Program

January 25, 1983

THE HUMAN AND SOCIAL ISSUES OF OFFICE COMMUNICATIONS TECHNOLOGY

Report of the Human and Social Impact Committee to the User's Group, Office Communications Program.

EXECUTIVE SUMMARY

The human and social impact of office communications systems technology will depend on the particular form of technology chosen and on the way it is integrated into government operations. There is a large element of choice involved in implementing the technology and in the organization of work using the technology. It is the choices made by organizations that will shape the impact of the technology.

This report on the human and social impact of office automation in the federal public service focuses on the federal government as employer and the situation of the individual public servant. As the largest single employer in Canada, the federal government will be subject to whatever human and social problems or changes arise, as information technology is used increasingly to enhance the processing and communication of text. The report takes the point of view of the employee and attempts to point out both potential benefits and problems from that point of view. The report assumes that employees at all levels will be affected by the introduction of office technology. The issue of productivity arising from office automation is the concern of another committee and will not be addressed here.

Office automation is being introduced in the 80's into a social context where quality of working life is important to employees. Quality of working life issues are presented to set the context and to give a set of goals for which to strive during the changes that will emerge during the automation process.

The human and social issues expected to arise as part of office automations are described and for each issue, an attempt has been made to review the quality of empirical evidence and to report on federal government policies which relate to the issue. Recommendations are made for further research where the evidence is incomplete or for development of policies where policies appear to be lacking or to be in conflict with the expected changes.

The human and social issues arising from office automation are considered at three levels of analysis from the micro level of the individual or small group, through the intermediate level of the organization, to the macro level of the society generally. The issues addressed at each level affect those at the other levels but this classification scheme provides a perspective on the issues that assists the conception of the needed level of policy development.

In the federal Public Service, issues at the societal level refer to the entire Public Service, at the organizational level to the department or agency, and at the individual/small group level, to the working unit.

QUALITY OF WORKING LIFE: The Context of Change

Organizational improvement will only result when the technical and social systems are analyzed and improved in conjunction with each other. People in organizations are shifting from a view that man is an extension of a machine, subject to external controls to a view that man is complementary to the machine and can be internally controlled. While the old view often leads to alienation of the employee, the new view leads to commitment and innovation on the part of employees. Employees want satisfaction in both the extrinsic characteristics of their jobs, such as fair and adequate pay, job security and in the intrinsic characteristics of their jobs, such as variety and challenge, and a chance to make a meaningful social contribution.

PUBLIC SERVICE WIDE ISSUES: Expected Changes at the Broader Level

Employment Levels

There is concern that the total amount of employment available will be reduced by office automation. Proponents of office automation claim that it will produce significant increases in productivity. Productivity can result from two sets of conditions: either the same amount of work is done by fewer employees or a larger amount of work is done by the same number of employees (jobless economic growth) as before automation. In either case there is concern among employees.

Where productivity increases because the number of employees required to maintain the level of work is reduced, there is concern about the loss of jobs. Where productivity results from the same employees doing more work, there is concern that the wealth thus created should be shared with the employees.

It is also possible that office automation may create more jobs and increase employment levels, particularly in certain types of employment. The greater the flexibility of the technology adopted, the greater are the possibilities for initiative and the creation of enriched jobs. The programmability of most existing word processing machines, for example, is quite limited compared to micro-computers which are capable of performing other functions in addition to word processing. An office automation system which incorporated the adaptive, programmable potential of micro-computers would be more likely to lead to the creative identification of new job opportunities than one based on less flexible, single purpose word processors. If the application of micro-technology is limited to the more efficient performance of existing narrowly defined tasks, net reductions in employment are more likely to occur. Of course, it is not the technology alone that can lead to job enrichment but its creative use within the organization.

Job Displacement

Concern is expressed about displacement of workers as some jobs become obsolete because of technological change. This concern is especially expressed in relation to women, but any identifiable group that is concentrated occupationally may be affected. It seems obvious that it will not be possible to transfer people displaced from jobs directly to the new jobs being created because there will be a large training differential between the two types of jobs.

Women and employment

At this societal level of analysis, there is also concern that the unemployment created will differentially affect women. Because women are a large part of the clerical and service industry work force, it is their jobs that may be eliminated by automation. A related part of this issue is the differential in training required for the jobs that are likely to be created versus the jobs eliminated. Those in clerical jobs cannot be directly placed into professional, technical and managerial jobs. People displaced will require training to change occupations. This is of particular concern to the large number of women with limited training who occupy clerical and service positions now. The fact that women are still entering the workforce in ever increasing percentages only magnifies the potential problem.

RECOMMENDATION 1: Guidelines should be established to guide the process of office automation in all departments and agencies of the Government of Canada. These guidelines should conform to those recently adopted by the Cabinet for government assistance to the development and application of microelectronics and information technologies. Specifically this would require that:

1) policies and programs be directed towards early identification of problems and incorporation of human resource planning into the process of adopting new technologies.

2) particular attention be paid to the likely impact of the technology on women, especially in clerical jobs.

3) internal federal government education and training efforts recognize the need for skilled human resources in microelectronics technologies. In particular, barriers to the participation and advancement of women in microelectronics-related work should be identified and removed through appropriate education and training expenditures.

RECOMMENDATION 2: The provision of new information based government services using microelectronics technology should be actively explored.

RECOMMENDATION 3: The federal government should continue to monitor the changes in level of employment in various categories in order to provide early warning of potential job loss.

ORGANIZATIONAL LEVEL ISSUES: The department or agency

Organizations have some choice in the particular form of technology chosen and the way it is integrated into government operations. The changes that will result from these choices may create problems or benefits for employees.

Hierarchical changes and the Managers' Role

It is expected that the organization will become hierarchically flatter with the introduction of technology. The manager will not only have more employees, but will also have more electronic services and information to use in making decisions.

RECOMMENDATION 4: A study should be conducted of the changes expected in the hierarchical structures of organizations, with focus on the manager's role in the public service, as a result of office automation.

RECOMMENDATION 5: A study should be conducted of the effect of office automation on work patterns at all levels of the organization. The study should include 1) reporting relationships, 2) functions, 3) communication patterns.

Centralized or decentralized organizational structures

Centralized organizational structures such as word processing centres appear to lead to some job dissatisfaction because of the limitations imposed on the development of additional skills.

RECOMMENDATION 6: Because there may be hidden costs to the centralization of word processing (eg. turnover) a study should be conducted to review the evidence comparing the costs and benefits of centralized versus decentralized organization of these functions in the public service.

Job Classification

Changes in the tasks performed by those working in automated environments will require changes in the job classification system in the Public Service. New classifications may be necessary.

RECOMMENDATION 7: A study of the potential impact of automation on the classification of jobs should be commenced.

Bridging the Skills Gap

There is fear that the technology will create a widening skills gap between the upper and lower levels of the organization, effectively shutting off those at the lower levels from upward mobility. Those at the lower levels are disproportionately women.

RECOMMENDATION 8: In choosing office automation equipment, management should be encouraged to opt for systems that encourage flexibility and enriched careers, and to avoid creating jobs that are associated with machines only.

Training and Education

Five types of training are required in connection with office automation:

1) orientation for managers and employees
2) technical training for those who will be operating the new equipment
3) managerial training to ensure that the new equipment is used effectively
4) redeployment training to aid employees who move to new jobs
5) continuing training to promote effective use of the automated system.

Several of the issues addressed in this report could be redressed by effective training policies. Training programs along with flexible assignment could give employees the ability to adapt to changes.

RECOMMENDATION 9: Training programs should include modules that would attempt to develop conceptual skills common to office automation systems and that will assist people to change, adapt and transfer their skills as the technology changes.

Effective training programs will include the following considerations:

1) training program planning is begun as part of the first planning stage for automation
2) planning includes consultation with employees
3) purchases of equipment include training programs on that equipment
4) gains in productivity are expected to come about gradually.

Responsibility for Training in the Public Service

Responsibility is shared by the Treasury Board, the departments and agencies and the Public Service Commission. The Treasury Board has approved the establishment of a Staff Training Council to which it has delegated authority to recommend training policies and priorities, determine public service training needs, manage training programs through a series of specialized training boards, establish policies for the certification of trainers and instructors and coordinate the general staff training programs of the government.

RECOMMENDATION 10: The Staff Training Council should identify service-wide requirements for both present and projected training needs arising from office automation.

Alternate Work Sites

One of the many aspects of new office organizations arising from office automation is the possibility of work being performed at home rather than in conventional offices. Work at home may be beneficial to women with small children and to handicapped persons. However, if creating policies for employment at home shifts the policy emphasis away from enabling women with children and handicapped persons to participate fully and equally in the work force, it may result in narrowing the employment opportunities for these groups.

Work at home programs may create concern about the conditions of work, for example, possible limitations in development and promotion, job security and other issues may be of concern.

Public Service Policies relevant to Alternate Work Sites

Several public service policies recognize the need for parents to combine work and home responsibilities (eg. maternity/paternity/parental leave,

part-time work, flexible hours). Using these as a model, it is essential that work at home policies be based on the principle of equal opportunities for advancement.

RECOMMENDATION 11: Treasury Board should undertake a thorough study of the implications of alternate work site arrangements from both the employer and employee point of view and develop a policy with guidelines for departments.

RECOMMENDATION 12: Any work at home arrangements should be flexible and take into consideration the needs of employees as well as managers.

RECOMMENDATION 13: Public Service policies should be developed in consultation with employees to allow experimentation and implementation of the new opportunities offered by technology in the areas of handicapped workers, flex-time and flex-place. These options should be considered as part of the required human resource planning.

INDIVIDUAL/SMALL GROUP LEVEL ISSUES: the working unit

At this level, issues are those that affect the individual directly and can be controlled by the working group manager with some assistance from organizational or government-wide policies.

Health and Safety in the Workplace

Radiation: There has been concern expressed about possible radiation effects from visual display terminals, however, several reputable investigators hold the view that there are no harmful radiation emissions from VDT's. The fear of radiation remains an issue in itself.

RECOMMENDATION 14: Studies into the potential effects of radiation from visual display terminals should be conducted on an ongoing basis by independent research organizations. The federal government should continue to monitor on-going studies on potential radiation effects.

RECOMMENDATION 15: The federal government should ensure, through its policies, that pregnant employees not wishing to work on VDT's, should be granted administrative priority for reappointment.

Stress: Research suggests that stress can result from both under stimulation and from over stimulation. It is still a question whether office automation increases stress and whether any such increase could be reduced by the way work is organized.

RECOMMENDATION 16: A study should be undertaken of the empirical evidence relating to stress and stress-related disorders that might be expected to arise from office automation and any evidence related to how to determine and to control the optimal level of stimulation in the automated office environment.

Other physical effects of office automation: Vision and fatigue effects related to work with VDTs and to the organization of work in the machine environment have been cited as problems. Organizational and physical features of the environment may be planned to reduce these problems. In particular, adequate space will be required to allow for good workspace design.

RECOMMENDATION 17: Treasury Board guidelines in office space should be reviewed to incorporate space for office automation equipment as new equipment is provided for employees at all levels.

RECOMMENDATION 18: Employees who will be using office automation equipment should be consulted on issues related to organizational design, office layout and work station design.

RECOMMENDATION 19: Treasury Board should ensure a continuous monitoring of negative physical effects on employees and provide, in guidelines on the implementation of office systems, indications as to how to prevent them.

Usability as a requirement for functional specifications: Usability, the design of equipment to make it convenient and practical for a discretionary user, can be required in products commissioned and purchased. Manufacturers can be required to submit measures of performance of users that demonstrate usability. However, making these human factors considerations part of the specifications of equipment may make equipment more expensive and may freeze design so that improvements cannot be incorporated as technology develops.

RECOMMENDATION 20: In procuring equipment for office automation of the Public Service, serious consideration should be given to making human factors measures part of the functional specifications of design.

Public Service Policies related to Health and Safety Issues.

Employment health and safety in the federal government is the responsibility of the occupying department or agency, pursuant to policies and standards approved by the Treasury Board and issued through the Personnel Policy Branch.

RECOMMENDATION 21: The Public Service Occupational health and safety standards should be rigidly applied during both the preliminary and operational phases of the automated office.

RECOMMENDATION 22: Line managers should be educated in the health and safety issues related to office automation and in the policy options available to managers so that the manager can consider employees' needs in planning for change.

Privacy and Confidentiality: the problem of monitoring and loss of autonomy

Although office automation may have the potential to improve management control systems, there are also fears that it will depersonalize management communications, lead to alienation, obsessive monitoring and loss of privacy.

Privacy and productivity measurements: excessive monitoring is a source of stress to employees and can increase job discontentment. Checking and monitoring systems have been used to substantiate decreases in work hours and are therefore a source of fear of unemployment. At the same time that the technology is making detailed monitoring possible, there is a trend to reject close supervision among today's workers. Monitoring systems appear to increase stress when: the expected pace of work is too high or the monitoring accounts for minutes; the measures do not take into account variations in the job such as difficulty; the employee is unaware of how the data is collected and analyzed but is aware of its use; the employee has no control over the accuracy of the information; the machine demands would be considered harassment if performed by a person.

Measuring productivity without excessive monitoring: An effective system of measuring productivity has been developed in one unit at Statistics Canada in consultation with employees. Working groups of employees and manager determined the system. Only the work performed on the machine is measured. Employees are aware of performance standards and can obtain their performance report.

Alleviating concerns about monitoring and invasion of privacy: Employees must be consulted concerning the collection, analysis and interpretation of personal data collected; only pertinent personal information must be stored and that collected for one purpose must not be used for another; employees must be informed of the existence of such data and have the right to correct items they believe to be in error.

RECOMMENDATION 23: Employees at all levels should be consulted and be party to making the decision about the data collecting process to monitor their productivity, including the type of data collected and its use.

Privacy legislation and public service policies

Both Part IV of the Canadian Human Rights Act* and Chapter 415 of the Administrative Policy Manual of the federal government concern the use of personal information collected about individuals, the individual's right to request correction of records, to be informed about the use of the information and to be consulted about its use for purposes additional to the original one.

These laws and policies do not resolve the specific issues that office automation raises regarding personal privacy. The laws and policies do not give the individual any control over what information is collected, nor over the original purpose of its collection. The employee has the right to be informed of these features but no consent is required.

RECOMMENDATION 24: The Treasury Board should review its administrative policies relating to privacy of individuals in light of changing technology and office automation. Such a review should recognize the validity of an individual's privacy needs as an important factor in the relative improvement or deterioration of the conditions of work.

Job Enrichment

Job enrichment programs which encourage employees to learn a variety of tasks and take initiative are likely to increase job satisfaction and make employees better prepared to face changes in their jobs as automation proceeds.

RECOMMENDATION 25: Unit managers should be encouraged to provide opportunities for employee initiative and job enrichment in order to avoid specialized, single function jobs. This could be supported by government procurement policies which encourage the development of flexible, multi-function office automation systems. (see Recommendation 8)

*It is expected that B.11 C.43, the new Privacy Act, which replaces Part IV of the Canadian Human Rights Act, will be proclaimed in 1983.

Isolation and Alienation

Isolation refers to the separation of an individual from other workers and alienation refers to separating workers from the end products of their work. Office automation has the potential to increase both isolation and alienation. Most employees are more productive if they work together with others and have meaningful involvement in their work. Alternatively, office automation may lead to new social contact and new forms of social integration.

RECOMMENDATION 26: A study should be conducted of the potential for office automation to lead to social isolation and alienation or alternatively to new social contacts and new integration of social communications among workers.

Special interest groups: Handicapped, Natives, Women, Francophones.

While much emphasis has been placed on the negative impact which office automation may have on women, concern should also be given to other special interest groups in the Public Service.

Office automation could open new possibilities for employment of the handicapped, especially for the homebound.

RECOMMENDATION 27: Special measures should be taken to ensure that special interest groups are not disproportionately affected adversely by office automation and that they are given opportunities to benefit from it.

MANAGING THE PROCESS OF CHANGE: Introduction Strategies

In order to achieve the goals of organizational effectiveness and employee satisfaction with life at work, the technical systems considerations and social factors must be jointly optimized. The introduction of change is greatly facilitated by good planning and by meaningful consultation with employees at all levels.

Both the processes of planning and consultation are considered here for the field trials of office automation in the federal public service.

Planning for the human and social issues arising from office automation.

Planning for the human and social impact of office automation should be done before the trials. It should include:

- a description of what is being done within the work unit before the introduction of technology
- the human resources available in the unit
- the expected level of introduction
- the expected changes
- strategies for dealing with the expected changes

RECOMMENDATION 28: In their human resource planning prior to the introduction of office technology, departments should take into consideration the impact of the introduction of technology on career progression and other human and social issues in order to minimize any negative impacts on employees and on particular occupational groups.

Consultation with employees regarding the human and social issues arising from office automation

The model for consultation provided by the Quality of Working Life Program in the Public Service was recognized by the committee as an effective structure for managing change in office automation. The model consists of:

- a senior committee which hears reports and recommendations and provides support for innovative approaches to addressing issues
- an interdepartmental working group or groups representing participating

organizations which brings the issues to the attention of the senior committee

- an interbranch/interdivisional working group which coordinates policy in different parts of the public service regarding the issues.

The Office Communications Systems Program now has committees in place which reflect this model. Since the invitation by the User's Group to unions has been accepted, committees of the OCS program now represent all of the stakeholders. The process of consultation should also include orientation briefings for all those who will be directly affected by trials of office automation. Briefings can inform, enlist cooperation, head off problems and assist in planning and policy development.

RECOMMENDATION 29: Representatives of employees at all levels should participate in the planning stages from the beginning of an office automation project.

RECOMMENDATION 30: The federal government should provide briefings for decision makers prior to their design of office automation systems. These briefings should include consideration of the human and social issues.

RECOMMENDATION 31: Orientation briefings should be given for all employees at all levels about the issues and implications of office automation at the time the decision to introduce office automation is made.

The process of consulting and briefing of employees of the public service as automation proceeds will tax the available resource of knowledgeable people unless the government addresses this as a separate training need.

RECOMMENDATION 32: The federal government should consider establishing a central resource centre of people who could conduct briefings on human and social factors in office automation.

Field Trials of Office Automation in the Public Service

For the field trials of office automation in the public service, it is suggested that the evaluation of the human and social issues can take place with the following objectives:

1) to investigate the extent to which the human and social issues occur during the field trials;
2) to investigate and describe the effectiveness of the planning and consultation processes which occur as part of the trials;
3) to analyze the quality of working life of the employees concerned before and after the trials;
4) to make specific policy recommendations based on the evidence from the above investigations aimed at alleviating problems or improving the quality of working life of employees in the public service as it is affected by office communciations systems.

RECOMMENDATION 33: The field trials being designed under the Office Communications Systems program in the federal government should be used as testing grounds to investigate the human and social issues of office automation, to investigate implementation strategies and to recommend policies for the federal public service based on these investigations.

RECOMMENDATION 34: Studies undertaken by the federal government arising from this report on issues related to office automation should have management and union representation on the planning and implementation.

REPORT

THE HUMAN AND SOCIAL ISSUES OF OFFICE COMMUNICATIONS TECHNOLOGY

FROM: The Human and Social Impact Committee on Office Automation

TO: The Users' Group, Office Communications Systems Program

January 25, 1983

1. INTRODUCTION

This report on the human and social impact of office automation in the federal public service focuses on the federal government as employer and on the situation of the individual public servant. As the largest single employer in Canada, and as a large processor of written information, the federal government will be subject to whatever human and social problems or changes arise, as information technology is used increasingly to enhance the processing and communication of text.

The report takes the point of view of the employee. It assumes that employees at all levels, from senior management to clerical, will be affected by the introduction of office technology. The report attempts to point out both benefits and problems from the employees' point of view. If more paper is devoted to expected problems than to benefits, it is because there appear to be many problems and much has been written about them. Most of the expected benefits are thought to be related to increased productivity and new job opportunities. The issue of productivity is the concern of another committee and will not be dealt with extensively here. If the concerns of employees can be addressed as office technology is introduced, it is possible that there will indeed be benefits to the employees' quality of working life, for example, new career opportunities, more fulfilling work, participation in decision-making.

This report begins with a focus on the quality of working life movement and its definitions of what employees want from work, quite apart from office technology. The reason for this initial focus is that it sets the context into which office technology is being introduced. It also provides a set of goals to strive for as changes are made in work organization with the introduction of office technology.

The report then considers the problems or issues that have been of concern to people, as office technology is introduced. For each issue there is an

attempt to review the quality of empirical evidence and to report on federal government policies which relate to the issue. Recommendations are made for further research where the status of empirical work leaves conclusions unclear. Policy recommendations are made where existing policies appear to be lacking or where they openly conflict with the expected changes. In some cases, new policy initiatives are recommended.

The expected changes described fall into three levels of analysis: societal, organizational, and individual/small group. At the societal level is the expectation of changes in employment patterns with the potential for increased unemployment. While such changes will obviously affect individuals, most of the analyses have been at the broader societal level or have attempted to exrapolate from the organizational level to the societal. In this report, the societal level is equated with public service-wide effects and policies.

At the organizational level, in this report referring to the departmental level, are a set of expectations for change in the structure of work. Again, these will influence individuals but can best be understood, and the change directed, from the level of the organization. At the level of the individual/small group are the changes that will affect the daily working life of the individual. These can often be addressed by the unit manager in consultation with employees, if they have the support of organizational level policies.

The report then considers some means of managing the process of change as office technology is introduced. Finally, assessment of the human and social impact of office automation during field trials in the public service is considered.

2. THE CONTEXT: Working Life in the 80's

Office Communications technology is being introduced in the 80's into a workplace and a society that has particular problems, goals and desires. The

context includes the influence of two approaches to assessing and implementing change in work organization which are particularly relevant when technology is introduced.

These two approaches, Quality of Working Life and Socio-technology, have been growing in influence in North America and Europe since the 1920's. Both approaches grew out of work that began with studies by Elton Mayo, in 1920's. The conclusion of his work was that when employees have a sense of involvement in the work process, job satisfaction and positive motivation increase. The Tavistock Institute of Human Relations in London, England, looked beyond the individual employee to the organization of the work itself in an effort to create more satisfying work and increased organizational effectiveness. During the late 1940's and 1950's, members of the institute began to recognize the influence of technology on both the nature of jobs and the social organization of the workplace. Tavistock researchers noted that engineers designed technical systems with little understanding of the human of social systems that would result from them. The group developed the concept of an organization as a socio-technical system. Design, then, should be a process of 'joint optimization' of the social and technical systems: an effective organization is one that is designed to meet the needs of employees as well as the requirements of the technical system.

The Quality of Working Life movement, which grew out of this work, focuses on the individual worker. QWL is an organizational philosophy based on humanistic values toward work and aimed at improving the effectiveness of the organization and the job satisfaction of employees at all levels. This is achieved jointly by management and other employees and their representatives in the organization. (Trist, 1981)

QWL has led to clear definition of what employees want from their jobs. Table 1 lists both extrinsic and intrinsic job properties (Trist, 1981) which define what constitutes a 'good' quality of working life for employees.

Table 1

What Employees Want from their Jobs

Extrinsic Requirements

- fair and adequate pay
- job security
- benefits
- safety
- health
- due process
- conditions of employment considered beneficial
- socio-economic benefits

Intrinsic Requirements

- variety and challenge
- continuous learning
- discretion and autonomy
- recognition and support
- desirable future
- meaningful social contribution
- psycho-social benefits

(from Trist 1981)

Socio-technology focuses attention on the options available in the design of a social system that will utilize a particular technology. Socio-technical system design can be viewed as a tool used to achieve QWL objectives. The key principle of this approach is that work systems should be designed so that the best match is obtained between the technical system (technology) and the social systems (people), thus achieving the "joint optimization of the two systems". (from Trist, 1981)

Organizations and the people in them are increasingly shifting their way of viewing work life. Traditionally, organizations sought efficiency by breaking jobs down into specialized and repetitive functions. This minimized worker responsibility and decision making, and minimized the requirements for employee training and development. Direction and creative contributions came from managers and supervisors. In contrast, QWL techniques emphasize employee participation with increased responsibility and decision-making and direction from both management and staff. Table 2 contrasts key features of the old organizational paradigm with those of the new paradigm of QWL concepts. The essential component of the new paradigm is the opportunity for individuals or task groups at any level of the organization to influence their working environments by participating in decisions on matters that affect them.

Table 2

Shift In The Organizational Paradigm

Old Paradigm	**New Paradigm**
The Technological imperative	Joint optimization
Man as an extension of the machine	Man as a complementary to the machine
Man as an expendable spare part	Man as a resource to be developed
Maximum task breakdwon, simple narrow skills	Optimum task grouping, multiple broad skills
External controls (supervisors, specialist staffs, procedures)	Internal controls (self-regulating subsystems)

Tall organization chart, autocratic style	Flat organization chart, participative style
Competition, gamesmanship	Collaboration, collegiality
Organization's purposes only	Members' and society's purposes only
Alienation	Commitment
Low risk-taking	Innovation

Source: Trist (1981), p. 42.

3. EXPECTED CHANGES WITH OFFICE AUTOMATION: Issues, Problems, Worries.

Against this background of increasing concern with the quality of working life, the introduction of office technology in the federal government is expected to engender substantial changes in the workplace. Description of these changes will be focused on three levels of analysis, the societal level (in the context of this report, the entire public service), the organizational level (departments, agencies), and on the individual or small working group level (work unit). Although the levels are not independent, the major focus of each provides a perspective on the issue which appears to point to the best level of solution. At the societal level, solutions must be large scale; at the organizational level, problems may be resolved by policies within the organization; at the individual/small group level, strategies of the middle manager, with input from the work group, may alleviate concerns although some support at the organizational level will be needed to provide the manager and work group with policy tools to address the problems.

3.1 Public Service Wide Changes Expected: Social Level Changes and Issues

3.1.1 Employment levels

Changes in the employment structure of the public service are widely expected as a result of office automation. One major concern expressed by the public is that the level of unemployment will increase. While this effect is widely predicted, there is, at present, no conclusive evidence that total employment will decrease, or that employment will increase, as a result of office automation. It is difficult to obtain reliable evidence for such effects because office systems have not been in place long enough; other changes in the economy at the same time also affect the employment level; and the technology also creates new jobs.

In addition, the relationship between technological change and labour market development has not been well understood in the past. This incomplete understanding "provides a shaky foundation for venturing to look at possible relationships between them in the future". (Canecs Report, 1979) Some levelling off of the overall rate of persons entering the labour force is expected in the next decade and a half and the overall unemployment rate is expected to decrease slowly along with a net increase in persons employed. However, it is not clear that such predictions have taken adequate account of the potential changes to be brought by technology in aggregate levels of employment.

The effect of office automation on aggregate levels of employment in the public service is hard to predict. While the technology may increase the level of productivity of the employees required to provide a given level of service, thus reducing the number of jobs, it is also possible that new services will be demanded of the government. New or expanded information based services, which would previously have been prohibitively expensive may now be possible. This expected increase in the level of service with the same number of employees, or

"jobless economic growth" is also of concern to employees who feel that they should benefit from the increasing productivity of their labour.

3.1.2 Job displacement

Concern is also expressed about displacement of workers as some jobs become obsolete because of technological change. While new jobs will be created, it seems obvious that it will not be possible to directly transfer displaced employees to new positions because there will be a large training differential in the two types of jobs. The issue of training will be addressed later in the report. Here it is important to note that major dislocations might be expected in certain jobs and among certain groups. A useful distinction is made by Menzies (1981) between "information workers", who handle, process, store and retrieve information and "knowledge workers" who apply information and have much greater scope for exercising initiative. The functions performed by information workers, most of whom are women, are generally the first to be automated as micro-technology is introduced into the office.

3.1.3 Women and employment

The concerns of women as office automation is introduced are partially with the level of employment. Throughout the economy, the employment of women is highly concentrated in those office functions which are the first targets of automation. Since, according to the Dodge and Allmand Task Forces, most of the labour force growth in the 1980's will be from adult women, there is clearly a danger of higher unemployment among women if the current pattern of female employment does not change. Unless preventive measures are begun at once, the result could be one million unemployed women by 1990 (Menzies, 1981). Given the importance of the federal government as an employer of women, internal policies relating to office automation may significantly affect future female unemployment rates.

3.1.4 Public Service Practices

Within the Public Service, the creation of centralized word-processing pools has been the main manifestation to date of micro-processor-based office automation. These existing word-processing operations represent only a partial utilization of the potential micro-processing technology, since they are being used for the transcribing and editing of only a fraction of typed documents. Most of the storing and retrieval of documents continues to be carried out on a manual, paper-based system. The expected large scale shift toward electronic storage and retrieval will mean a sharp reduction in the production of paper documents and may significantly reduce employment of both typists and clerks and/or may radically alter the tasks they perform. The major effects on labour demands of even this earliest phase of office automation technology development have yet to be felt in the Public Service.

Attrition has been used widely within the Public Service to avoid layoffs during the introduction of word processing. If the rate of diffusion of office automation increases and the range of functions affected also increases, the absorptive limits of attrition may be surpassed.

There is room for new and improved services with the new technology and some of these are already under development such as automated job search and career counselling and the provision of information on government services.

3.1.5 Recommendations Regarding Employment Levels

RECOMMENDATION 1: Guidelines should be established in the very near future to guide the implementation of office automation in all departments and agencies of the Government of Canada. These guidelines should conform to those recently adopted by the Cabinet for government assistance to the development and application of micro-electronics and information technologies. Specifically this would require that

1) policies and programs be directed towards early participation of employees, identification of problems and incorporation of human

resource planning into the process of adopting new technologies.

2) particular attention be paid to the likely impact of the technology on women, especially in clerical jobs.

3) internal federal government education and training efforts recognize the need for skilled human resources in micro-electronic technologies. In particular, barriers to the participation and advancement of women in micro-electronics related work should be identified and removed through appropriate education and training expenditures.

RECOMMENDATION 2: The provision of new information based government services using micro-electronics technology should be actively explored.

RECOMMENDATION 3: The federal government should continue to monitor the changes in level of employment in various occupational categories in order to provide early warning of potential job loss.

3.2 Organizational Level Changes Expected (Departments and Agencies)

The human and social impact of office communications systems technology will depend on the particular form of technology chosen and on the way it is integrated into government operations. There is a large element of choice involved in implementing the technology and in the organization of work using the technology. It is the choices made by organizations that will shape the impact of the technology. At the organizational level, these choices are expected to lead to changes which may present problems for employees, especially if the changes are not anticipated.

3.2.1 Hierarchical Changes and the Manager's Role

Changes are expected in the way work is organized. For example, the hierarchy may become flatter with each manager handling more subordinates. Although this effect is commonly expected, there is no evidence yet that it

actually has taken place where technology has been introduced. The new technology will make it possible to have different types of organizations and hierarchies if the flexibility of the technology is used to advantage.

The manager's role is expected to change, not only in the number of employees he or she supervises but also in the automation of his or her own job. Several organizations are now stating that real productivity gains are to be realized by automation of the manager's tasks and not by clerical automation alone. Already in some companies, managers are being provided with electronic services for traditional functions such as attending meetings to make decisions. In addition, sophisticated electronic decision support tools, not previously available, are providing more knowledge of company operations quickly and with flexibility. These changes will require additional training for managers who will have to process more information but who may be able to do so in shorter time.

RECOMMENDATION 4: A study should be conducted of the changes expected in hierarchical structures of organizations, with focus on the manager's role in the public service, as a result of office automation.

RECOMMENDATION 5: A study should be conducted of the effect of office automation on work patterns at all levels of the organization. The study should include 1) reporting relationships, 2) functions, 3) communication patterns.

3.2.2 Centralized or Decentralized Organizational Structures

So far, the organizational structures adopted to deal with office automation have tended to produce centralized word-processing pools where the work of the operator is confined to word-processing. Although remuneration is often higher than for typists, these jobs appear to lead to some dissatisfaction because of the limitations imposed on the development of additional skills which could enhance alternate employment opportunities. There is also the potential that if voice operated entry into word-processing becomes a reality, this group of word-processors will find their skills obsolete. Again, this group is largely women.

Within an organization, this problem could be alleviated by making the word-processing operation part of the job of most secretaries and administrative assistants. Even managers and professionals may wish to do much of their own word-processing in the future. Most university graduates now are familiar with computers and many of those already in the lower management level of government could use a computer terminal to perform many functions.

RECOMMENDATION 6: Because there may be hidden costs to the centralization of word-processing (eg. turnover), a study should be conducted to review the evidence comparing the costs and benefits of centralized versus decentralized organization of these functions in the public service.

3.2.3 Job classification

Changes in the tasks performed by those working in automated environments are requiring changes in job classification. Job descriptions for clerical jobs fail to recognize the skills required in using the technology. In addition, because some tasks are performed more efficiently, time is available to take on other tasks. Probably because the manager is now able to complete more work, the secretary is not short of the additional tasks required to fill the time. In some cases, a redistribution of tasks between employees is occasioned by new technology. Job classification systems in the public service must recognize these changes in order to provide adequate remuneration, otherwise employees will take their skills to the industrial sector where they will also be in demand.

RECOMMENDATON 7: A study of the potential impact of automation on the classification of jobs and on job selection criteria should be commenced.

3.2.4 Bridging the skills gap

There is fear that new technology will create a widening skills gap between the upper and lower levels of organizational hierarchies. Menzies

(1981) describes a trend in that direction as a result of office automation. Effectively the widening gap can shut clerical workers off from upward mobility. Again, because most clerical workers are women, the effect on this group is disproportional. It will be a challenge to meet this problem in an environment where new technology requires additional skill, often obtainable only by higher education. The public service will need to consider some type of career path design for employees who want to move from clerical positions and other lower levels of the organization. Some ideas are considered below (Section 3.3.3) regarding creating flexibility in jobs.

RECOMMENDATION 8: In choosing office automation equipment, management should be encouraged to opt for systems that encourage flexibility and enriched careers, and to avoid creating jobs that are associated with machines only.

3.2.5 Training and Education

Changes in office tasks and in organizational roles will require training in the use of the new machines and in the new roles. Five types of training which should be included in office automation projects have been outlined: (BMC, 1982) 1) orientation, for both managers and employees; 2) technical training for those who will be operating the new equipment; 3)managerial training to ensure that the new equipment is used effectively; 4) redeployment training to aid employees who move to new jobs as office tasks change with automation, and, finally, 5) a continuing training program to promote continued effective use of the automated system. (1)

1. Courses presented by the Office Systems Center for the United States Government might serve as useful models for the development of managerial level training programs. Seminars and conferences running from one half a day up to three days cover topics such as "Evaluating your office automation needs", "The people factors in implementing office automation", and "Electronic mail, its technology and application". This information may be obtained from the "Office Systems Center FY 1982 Catalogue", United States Office of Personnel Management, Workforce Effectiveness and Development.

As long as automated office systems are new and relatively unknown, orientation and managerial training will be particularly important. (Some of the recommendations in Section 4, Introduction Strategies, are relevant to this issue as well).

Several of the issues addressed elsewhere in the report could be redressed by effective training policies. The effect of the widening skills gap between those in lower level positions and the professional, managerial and technical levels (see Section 3.2.4) could be partly alleviated by programs of educational leave. The strategy of providing flexibility in jobs in order to leave employees able to change and adapt and take advantage of new opportunities could be enhanced by effective training programs.

RECOMMENDATION 9: Training programs should include modules that would attempt to develop conceptual skills common to office automation systems and that would assist people to adapt and transfer their skills as technology changes.

3.2.5.1 Guidelines for Developing Effective Training

Some guidelines for making training more effective can be drawn from experience with the introduction of computers and other technological changes:

1) training should be an integral part of the office automation project from the very first planning stage. A human resource plan, outlining anticipated personnel resource requirements, displacement or retraining of existing staff and probable needs for additional recruitment could be invaluable for the smooth implementation of new techniques.

2) early planning stages should involve wide consultation with employees (including managers), as well as the systems analysts and/or equipment vendors. The consultation process in itself could serve as one element of the orientation training.(see Section 4 regarding introduction strategies)

3) the training of equipment operators should be considered part of any purchase. Training expectations should, therefore, be included in the specifications for offers to tender for equipment. However, the brief sessions offered by the vendor should be considered only the starting point in an ongoing training program for operators.

4) Productivity gains should be expected to materialize gradually as operators and managers learn to use the new tools effectively.

3.2.5.2 Responsibility for Training in the Public Service

The Treasury Board is responsible for establishing training policy for the public service, for setting the terms and conditions under which training is provided, and for monitoring compliance. Departments and agencies have primary responsibility for identifying employee training needs, for developing and conducting programs to satisfy these needs, and for evaluating the results of training. The Public Service Commission is responsible for assisting departments in providing training, in particular those training programs which can be provided most effectively and economically on a central basis.

Treasury Board conducts an annual review of all training in the public service and reports the results in the Annual Training Report. The information contained in this report is used to monitor the implementation of training and other personnel management policies and as the basis for setting training priorities.

The TB Secretariat is presently reviewing and revising the framework of policy and guidelines for training in the public service to ensure that employees who require training receive it and that the training is provided in an effective and efficient manner. The Treasury Board approved a new general policy on training on June 26, 1980. Policies on specific training matters are being prepared, eg. educational leave and apprenticeship training, orientation training for managers at all levels.

The TBS has approved the establishment of a Staff Training Council to which it has delegated authority to recommend training policies and priorities; determine public service training needs; manage training programs through a series of specialized training boards (Management Training Board; Professional and Technical Training Board, Special Needs Training Board), establish policies for the certification of trainers and instructors; and coordinate the general staff training programs of the government.

This structure of organization seems adequate to meet the training needs for office automation. At present there appears to be a requirement for public service-wide policies regarding training relevant to office automation.

RECOMMENDATION 10: The Staff Training Council should identify service-wide requirements for both present and projected training needs arising from office automation.

3.2.6 Alternate Work Sites

One of the many aspects of new office organizations arising from automation is the possibility of work being performed at home rather than in conventional offices. The "electronic cottage", as Toffler called it (1980), may well be one form of the office of the future. This raises the issue for employers of the impact of such a physically decentralized work place on organizational effectiveness. This issue will not be addressed here since this report focuses on the point of view of the employee. For employees, the major issue is whether work at home increases or decreases employment opportunities and the quality of working life.

Work at home has been described as beneficial to groups such as women with young children. The employment barriers currently facing this group include the lack of adequate and affordable child care, and the rigidity of work scheduling, both of which limit the ability of parents to combine work and family roles. As

women are still assigned the primary responsibility of maintaining the family unit, these factors place major constraints on their labour force participation. Work at home may thus provide this group with the possibility of employment, but it remains a major question whether this is an appropriate long term solution to the inadequacy of child care arrangements and the inability of both parents to combine family and work responsibilities. Similarly, handicapped persons face employment barriers because workplaces and transportation systems are not designed to accommodate them.

The question here again is whether it is appropriate to shift policy emphasis away from enabling full and equal participation in the work force to developing special and segregated work environments. For both women with pre-school children and for the handicapped, the development of work at home arrangements may result in a narrowing of the number of employment opportunities if it results in a decreased emphasis on accommodating work places to the needs of families and persons with physical handicaps.

Work at home programs offer some specific advantages: for the employer, reduced office space requirements, overhead and fringe benefit costs; for the employees, less supervision, lower work related expenses, and increased flexibility.

However, considerable concern has been expressed about the conditions of employment for those who choose to work at home. For example, there might be limitations in development and promotion, and limitations in social contact among employees. Other issues to be considered would be protection of employees with respect to job security, workmen's compensation, means by which employment is monitored (piecework vs. salary), employment conditions including vacations, training, and recognition in the remuneration that the overhead of office space is supported by the employee.

There is little information available on work at home arrangements actually in place. One company, Control Data Corporation, introduced an

alternative work site experiment aimed at women in the home and homebound handicapped people. The rationale given by CDC for encouraging other companies to follow its lead was based on benefits to the employer such as savings in office space and energy costs and tapping of the homebound labour force. (Manning 1981). There was little discussion of benefits to employees.

3.2.6.1 Public Service Policies Relevant to Alternate Work Sites

The intent of several Public Service policies adopted in recent years (eg maternity/paternity/parental leave, part-time work, flexible hours) has been to recognize and support the need of parents to combine work and home responsibilities without being penalized in the workplace (ie. through lost benefits or opportunities for advancement).

It is essential that any move toward work at home (especially in the clerical sector) be based on the same principle of equal opportunities for advancement. The long term implications for human resource planning, training, classification and other organizational concerns should be well thought out and the implications for women (eg. occupational segregation, equal pay, etc.) should be assessed in light of equal opportunity goals.

RECOMMENDATION 11: Treasury Board should undertake a thorough study of the implications of alternate work site arrangements from both the employer and employee point of view and develop a policy with guidelines for departments.

RECOMMENDATION 12: Any work at home arrangements should be flexible and take into consideration the needs of employees as well as managers.

RECOMMENDATON 13: Public Service policies should be developed in consultation with employees to allow experimentation and implementation of the new opportunities offered by technology in the areas of handicapped workers, flex-time and flex-place. These options should be considered as part of the required human resource planning.

3.3 Individual Level Changes Expected (the working unit)

The issues at this level are those that affect the individual directly in his or her daily work. These issues can come under some control of the unit manager or the middle level manager who may alleviate the problems with some support from organizational policies and with employee participation.

3.3.1 Health and Safety in the Workplace

The major health and safety issues of concern to employees are the effects of radiation, possible stress effects and physical effects of office automation.

3.3.1.1 Radiation

Concern has been widely expressed in the press about the potential effects of radiation from visual display terminals (VDT's). The Radiation Protection Bureau of Health and Welfare Canada as well as other reputable investigators in other countries hold the view that there are not harmful radiation emissions from VDT's. (Treurniet, 1982) Despite these assurances, the public continues to be fearful. Partly this fear seems to be based on the assurances that were given in the past about, for example, asbestos or Thalidomide, which later proved to be incorrect. Partly they are based on the still continuing controversy among experts about the possible effects of low frequency radiation, and about cumulative, long-term or synergistic effects of radiation.

The fear of radiation has been of particular concern to pregnant women and some companies have agreed to move pregnant women, as well as women who are planning to become pregnant in the near future, off the machines without loss of benefits. In a recent judgement in Ontario Supreme Court, a woman was granted compensation because a company fired her when she did not want to work on a VDT after becoming pregnant. Thus, regardless of evidence regarding any real

effects, the fear of radiation will be an issue that must be addressed by the Public Service.

In response to concerns expressed by a number of employees about the performance of all or part of their duties on VDTs, the Federal Government established in April, 1982, a policy on the transfer of pregnant employees. The transfer is subject to the employee presenting a medical certificate and to the availability of another similar position within the department. Such a transfer can occur without appointment.

RECOMMENDATION 14: Studies into the potential effects of radiation from visual display terminals should be conducted on an on-going basis by an independent research organizations. The federal government should continue to monitor on-going studies on potential radiation effects.

RECOMMENDATION 15: The federal government should ensure through its policies, that pregnant employees not wishing to work on VDT's should be granted administrative priority for reappointment.

3.3.1.2 Stress

Hans Selye (1974) defines stress as being the non-specific response of the organism to any demand made upon it; the response is the same whether the agent is pleasant or unpleasant. He refers to distress as being the EXCESSIVE response given to a noxious or unpleasant stress.

Commonly we use stress in the sense of distress: prolonged physiological response of an organism to emotions or stimuli in the environment that can result in damage to body tissues or in abnormal behavioural responses.

Stress, in the sense of distress, is a common factor in our industrial environment and the question for office automation is whether it increases stress significantly and whether any such increases can be reduced by the way

work is organized. Since research suggests that stress can result from either over-stimulation or boredom (Bradley, 1981), the research related to office automation should be geared to determine the optimal level of stimulation that favors the optimal performance (without distress).

RECOMMENDATION 16: A study should be undertaken of the empirical evidence relating to stress and stress-related disorders that might be expected to arise from office automation and any evidence related to how to determine and to control the optimal level of stimulation in the automated office environment.

3.3.1.3 Other Physical Effects of Office Automation

There is some empirical evidence to support the concern that office automation can have other negative physical effects on employees. The National Institute for Occupational Safety and Health (NIOSH) in Cincinnati, Ohio, has been conducting tests for about six years; they have found that vision, stress and musculature problems are much more prevalent among VDT users than among the general working population (U.S. Department of Health and Human Services, 1981). (See also Rosenbaum, 1981; Treurniet, 1982). In Canada, the Canadian Labour Congress has undertaken a survey of 10,000 VDT operators; their report should be released soon. There is evidence that, in addition to the effects of VDT's, some problems may be caused by the organization of the work environment (see Section 3.3.2 regarding privacy and autonomy) and by the design of work stations, and by the spatial arrangements in which work stations are set. Problems such as chronic fatigue, irritability, musculature pain, and eyestrain have been attributed to these organizational and physical features of the environment.

The physical effects of office automation might be alleviated by appropriate organizational design, office layout, workspace design and attention to quality of working life considerations.

RECOMMENDATION 17: Treasury Board guidelines in office space should be reviewed to incorporate space for office automation equipment as new equipment is provided for employees at all levels.

RECOMMENDATION 18: Employees who will be using office automation equipment should be consulted on issues related to organizational design, office layout and work station design.

RECOMMENDATION 19: Treasury Board should ensure a continuous monitoring of negative physical effects on employees and provide, in guidelines on the implementation of office systems, indications as to how to prevent them.

3.3.1.4 Usability as a Requirement for Functional Specifications

Usability has been defined as the quality making a device convenient and practical for a discretionary user, one who is not a computer specialist. Usability must be designed into a product from the beginning; it cannot be an add-on. Design features can meet both the physical demands of users such as comfort and flexibility; and the cognitive requirements of users such as understanding messages and ease of learning.

Some companies are now specifying the functional characteristics of the end products they commission in terms of usability. For cognitive human factors, this requires the manufacturer to provide measures of performance. For example, performance may be specified in terms of expected training time for the intended population, time to achieve an "automatic" reaction, kind and rate of errors, time to recover from errors, warm up time when work is resumed and others. (Bennett, 1979).

Making human factors considerations part of the specifications for office equipment procured for the Public Service can have two disadvantages: 1) it will likely make the equipment more expensive; 2) while developing standards for an organization like the Public Service can reduce learning time for employees who transfer from one environment to another, standards may also freeze the design and not allow improvements as new ideas occur.

Ergonomics aims at providing a better "fit" between the machine and the person using it. Ergonomic requirements are increasingly used in the design of

new office equipment, work stations and office layout. If the technology is designed to reflect the needs of individual equipment operators, these employees will likely be more productive and satisfied with their work, and less prone to suffer adverse physical effects related to automation.

RECOMMENDATION 20: In procuring equipment for office automation of the Public Service, serious consideration should be given to making human factors measures part of the functional specifications of design.

3.3.1.5 Public Service Policies Related to Health and Safety Issues

The occupational health and safety of Public Service employees should be a prime consideration in the planning, design and operation of office environments To the extent that it is reasonably practicable, measures must be taken to ensure safe and healthy working conditions and procedures for employees. Employment health and safety is the responsibility of the occupying department or agency, pursuant to policies and standards approved by the Treasury Board and issued through the Personnel Policy Branch.

The health and safety objectives are to prevent or reduce the risk of occupational injury and illness through the identification and correction of potential hazards in the working environment. Such hazards (e.g., excessive noise, toxic fumes, radiation, unsanitary conditions) are normally prevented by the application of the various health and safety standards and by the use of inspection and monitoring activities. Assistance in respect of the program is available from many sources, including the Departments of Labour and National Health and Welfare.

RECOMMENDATION 21: The Public Service occupational health and safety standards should be rigidly applied during both the preliminary and operational phases of the automated office.

RECOMMENDATION 22: Line managers should be educated in the health and safety issues related to office automation and in the policy options available to managers so that the manager can consider employees' needs in planning for change.

3.3.2 Privacy and Confidentiality: the problem of monitoring and loss of autonomy

The introduction of office automation is often rationalized by the expected improvement of management control systems. The increased integration of office automation with communications technology permits the collection of still more elaborate organizational performance data, such as performance records, meeting and travel schedules, sick leave, etc. However, many have voiced the fear that automated systems will depersonalize management communications, leading to alienation, obsessive monitoring and loss of privacy. As the office automation system becomes the vehicle for most work, the records automatically retained will represent a fairly complete picture of the individual's performance. For example, the connect time may be compared to the computer resources used for a profile of how much "work" the person accomplished. Although performance records such as these are controversial and have serious privacy implications, they are being maintained, particularly in word processing systems, and they may be an effective tool for monitoring productivity. (Uhlig, Farber and Bair, 1979).

3.3.2.1 Privacy and Productivity Measurements

According to most reports, obsessive monitoring is a source of stress to employees. Computerized switchboards can measure a telephone operator's work second by second: "the computer records when the operator begins work, when she stops, when she takes a break and for how long and how often. It has made an already boring and stressful job even more demanding and brain-numbing." (Mather et al., 1981, p.6). Computerized monitoring of productivity and performance in word processing and cashier jobs is also a source of anxiety (Menzies, 1981).

Occupational stress is raised by excessive monitoring and this in turn increases the level of job discontentment and fear of unemployment. In addition, monitoring measures can be misused as measures of output because the difficulty of given tasks is highly variable. Such misuse is threatening to employees.

In some countries, unions have successfully fought the collection of these types of detailed measurements of what a person does all day. Some unions in Canada have identified checking and monitoring of performance data as a threat, especially when used to substantiate decreases in work hours, releases and appraisals of employee performance (BMC, 1981).

There is apparently a trend to reject close and burdensome supervision by today's workers (Brown,1982). Brown states: "there is increasing evidence that one of the objectives most wanted by working men and women at all levels in our times is freedom from supervision". He also identifies a tendency for Americans to value occupations requiring minimal supervision which allow for more autonomy and greater participation in the design of work.

The causes and precise nature of the reaction of employees to excessive monitoring has yet to be empirically established. The following hypotheses have been generated by a review of literature. Stress and dissatisfaction may result when the system of monitoring employee performance is designed in such a way that:

1) it sets standards for the pace of work at an inhuman level, monitoring and controlling every minute of an individual's working day so that there is not room to behave autonomously or escape scrutiny;

2) the "objective" measurements produced are inaccurate assessments that do not take into account important aspects of the work itself (eg. its varying difficulty), thus imposing unreasonable demands for performance;

3) the employee feels threatened by the knowledge that performance is being automatically monitored and used to substantiate releases, while

at the same time being generally unaware of the scope of the data collected or the nature of its analysis;

4) access to performance records, feedback, and ability to correct errors or explain poor performance are denied the employee, resulting in a loss of control over the personal information supplied;

5) the machine demands constitute what would ordinarily be considered harassment, if analogous supervision were being administered by another person.

3.3.2.2 Measuring Productivity without Excessive Monitoring

Within the Public Service, an effective system of measuring productivity has been developed in one unit at Statistics Canada in consultation with employees. The old volume of work measures based on keystroke counting proved incapable of reflecting the varying difficulty of different jobs in terms of keying and coding. Straight comparisons of individual A to B were unfair and inaccurate because one person who had all the difficult jobs may have produced a lower volume of keystrokes, although in reality having done the best work.

Working groups of employees and managers determined a new system that would take all aspects of the job into consideration. In the new system, performance is measured in terms of what the operator does while she is signed on to the machine. This is exclusive of sign-off periods, which go into a separate assessment of percentage of production time. Employees know what is expected of them in terms of meeting standards (an earlier problem was the lack of an established method of feedback to employees on their performance). Each employee is familiar with the job performance reporting scheme, and can obtain a copy of their weekly performance report to determine their calculated level of effectiveness.

3.3.2.3 Alleviating Concerns about Monitoring and Invasion of Privacy

The major point to be made from the preceding discussion is that if the automation of supervision is to be successfully implemented without interfering with privacy and job satisfaction,

1) individual employees must be consulted, and must participate or be represented in negotiations concerning the manner in which personal data is to be collected, analyzed and interpreted.

Two other points may be made from the literature on privacy and computers. These are two basic principles that are reiterated as basic recommendations for the protection of personal privacy:

2) only pertinent personal information may be stored; and that collected for one purpose may not be used for another

3) individuals must be informed of the existence of such data, and will have the right to challenge or correct items they believe to be in error.

RECOMMENDATION 23: Employees at all levels should be consulted and be party to making the decision about the data collecting process to monitor their productivity, including the type of data collected and its use.

3.3.2.4 Privacy Legislation and Public Service Policies

Part IV of the Canadian Human Rights Act, designed to protect the privacy of individuals, established an individual's right to determine what records of personal information are used for administrative purposes by federal government departments and institutions, to ascertain the uses made of such information, and to examine these records and request correction. It is the administrative policy of the government to inform individuals of the purpose of information collection, to provide individuals with some control over the use of information concerning them, and to ensure rights of access of individuals to personal information concerning themselves, subject to the limitations imposed

by Part IV of the Canadian Human Rights Act(1). Chapter 415 of the Administrative Policy Manual states that it is the policy of the government that personal information used for administrative purposes be consistent with the reason for original collection. According to the Act, every individual is entitled to be consulted and must consent before personal information concerning that individual is used for any non-derivative use for an administrative purpose, unless that non-derivative use is authorized by law.

One particularly relevant policy directive in the Administrative Policy Manual states that in seeking consent for non-derivative use, government institutions shall clearly inform such individuals of the scope of the information in question, the particular uses for which consent is being sought, and the consequences of giving or withholding consent. The administrative policy directives and guidelines apply equally to employee information banks, a sub-class of an individual information bank which contains information about federal employees related to their status or capacity as federal employees, which is used for personnel and other administrative purposes.

Although there are laws and policies which relate to the privacy needs of employees, they do not necessarily resolve the specific issues that office automation raises in this regard. The requirement for consent would appear to extend only to those situations where non-derivative use is being made of information about the employees. If the original purpose of counting keystrokes and monitoring the operator's time-off and time-on the machine is to assess the employee's productivity, then the employee has the right to be informed of the fact that such use is being made of the data being generated. However, the employee does not have the right to be consulted about the manner of collecting

1 It is expected that Bill C-43, the new Privacy Act, which replaces Part IV of the Canadian Human Rights Act, will be proclaimed in 1983. This Act strengthens the privacy legislation by defining personal information and its uses and allowing for appeal to court for refusal of access to personal information held. In addition, the new Act provides that collection of information by federal government departments must be limited to that related to the programs of the department.

such data and the fairness of the measures. Neither is the consent of the employee required. So, although the employee may have the right to correct the information collected, there is nothing to ensure the right to correct the manner in which it is collected and analyzed, which, as demonstrated, may represent a lack of respect for an individual's privacy needs, resulting in the development of intolerable working conditions.

RECOMMENDATION 24: The Treasury Board should review its administrative policies relating to privacy of individuals in light of changing technology and office automation. Such a review should recognize the empirical validity of an individual's privacy needs as an important factor in the relative improvement or deterioration of the conditions of work.

3.3.3 Job Enrichment

At the level of the individual employee or the working unit, much could be done to enrich jobs by making opportunities for employees to learn a variety of tasks, to take initiative in some tasks. For example, one corporation encouraged employees to explore the potential of their advanced multi-functional office automation sytem. Considerable initiative was demonstrated by their staff, including secretaries, who began to develop programming skills. (Menzies, 1981). Such job enrichment programs are likely to increase job satisfaction and make employees better prepared to face changes in their jobs as automation proceeds.

RECOMMENDATION 25: Unit managers should be encouraged to provide opportunities for employee initiative and job enrichment in order to avoid specialized, single function jobs. This could be supported by government procurement policies which encourage the development of flexible, multi-function office automation systems. (see Recommendation 8)

3.3.4 Isolation and Alienation

Isolation refers to the separation of an individual from fellow workers or from people in general. This isolation can be social or physical or both.

Alienation, on the other hand, refers to separating workers from the end result of their work. Office automation, if it results in job functions that centralize work such as in a word-processing pool, has the potential of alienating people from the end result of their work. Isolation from fellow workers could be either increased or decreased by office automation, depending on how the work is organized within the group. Social communication could be enhanced by office communications networks. Bringing together employees with similar interests or complementary skills even if they are separated geographically, could provide psychological supports that were not available previously to employees.

Both isolation and alienation can have negative effects on productivity. Most employees are more productive if they work together with others. In the extreme, isolation can lead to many types of psychological problems for the employee, while alienation can lead to workers not caring about the quality of work they produce.

RECOMMENDATION 26: A study should be conducted of the potential for office automation to lead to social isolation and alienation or alternatively to new social contacts and new types of of social interactions for workers.

3.3.5 Special Interest Groups: Handicapped, Natives, Women, Francophones

While much emphasis has been placed on the negative impact which office automation may have on women, concern should also be given to other special interest groups in the Public Service.

The automated office, with its emphasis on intellectual abilities rather than brawn, will open the door to employment for many seriously physically disabled people. Opportunities for employment should increase for homebound disabled people.

RECOMMENDATION 27: Special measures should be taken to ensure that special interest groups are not disproportionately affected adversely by office automation and that they are given opportunities to benefit from it.

4. MANAGING THE PROCESS OF CHANGE: Introduction Strategies.

Any change introduced into the workplace could meet with resistance and frustration on the part of employees. At least some of the resistance is often associated with real concerns about loss of jobs, changes in reward schemes and changes in the quality of working life. It is generally recognized that the introduction of change is greatly facilitated by good planning involving a multi-disciplinary approach, and by meaningful consultation with employees at all levels. It is these two processes, planning and consultation, that are suggested as the important elements in a strategy for introduction of automation into the Public Service.

This section of the report considers the management of change associated with automation in the Public Service in general. In the following section, the ideas presented here will be addressed to the field trials of automation now being implemented within the federal government.

4.1 Planning for the Human and Social Issues arising from Office Automation

Before office automation is introduced into an area of the Public Service, planning should be done to outline the impact that the automation might have on the working unit regarding the human and social issues presented above. The planning should include a description of what is being done within the unit before the introduction of new technology, the human resources available in the unit, the expected level of automation, the time frame for introduction, the expected changes, and some strategies for dealing with the changes. The Employment Impact Statement presented in Appendix A lists some of the specific questions that might be asked during the planning.

RECOMMENDATION 28: In their human resource planning prior to the introduction of office technology, departments should take into consideration the impact of the introduction of technology on career progression and other human and social issues in order to minimize any negative impacts on employees and on particular occupational groups.

4.2 Consultation with Employees Regarding the Human and Social Issues Arising from Office Automation

Employee understanding, involvement and meaningful participation are important in order to ensure smooth implementation of the goals when a change is introduced.

The model for consultation provided by the Quality of Working Life Program in the Public Service was recognized by the committee as an effective structure for managing change in office automation.

The model consists of the following:

a) A senior Committee which has the functions of:

   1) hearing reports and recommendations and 2) providing support for innovative approaches to addressing issues.

b) An interdepartmental working group or groups representing participating organizations, which serves to bring the issues to the attention of the senior comittee.

c) An interbranch/interdivisional working group which serves to coordinate policy in different parts of the Public Service regarding the issues.

The Office Communications Program now has the committees in place which reflect this model. The senior committee is represented by the Users' Group, the interdepartmental working groups are represented by the subcommittees of the Users' Group and the interbranch working group has been put in place among participating field trial sites to deal with common issues.

This model of consultation should involve all of the stakeholders in an issue. In the Office Communications Systems program this is now true since the invitation was issued to unions to participate in the activities of the Users' Group.

The process of consultation should also include some briefings to those who will be directly affected. These orientation briefings can inform potential participants, listen to their concerns and enlist their cooperation. Such briefings could head off problems in the early stages. They will also be important to the process of planning and the development of policies both of which will assist unit managers in carrying out their responsibilities concerning the well-being of employees.

RECOMMENDATION 29: Representatives of employees at all levels should participate in the planning stages from the beginning of an office automation project.

RECOMMENDATION 30: The federal government should provide briefings for decision makers prior to their design of office automation systems. These briefings should include consideration of the human and social issues.

RECOMMENDATION 31: Orientation briefings should be given for all employees at all levels about the issues and implications of office automation at the time the decision to introduce office automation is made.

The process of consulting and briefing of employees of the Public Service as automation proceeds will tax the available resource of knowledgeable people unless the government addresses this as a separate training need.

RECOMMENDATION 32: The federal government should consider establishing a central resource centre of people who could conduct briefings on human and social factors in office automation.

5. FIELD TRIALS OF OFFICE AUTOMATION IN THE PUBLIC SERVICE

This section deals with what could be done in the office automation field trials now beginning in the federal government to explore the human and social issues and the policies that will lead to a better quality of working life for Public Servants.

The overall objective of the field trials is to facilitate market entry for a Canadian office automation industry through:

a) the production of system designs and functional product specifications to which Canadian industry can respond with product line systems and subsystems that can meet the needs identified;

b) experimentation with partial or full office automation systems and the testing of the functionality of these systems in terms of their impact on productivity, organizational adjustments, user acceptance, overall effectiveness and improved delivery of departmental services;

c) the development and application of general office systems methodology which will aid prospective users and industry in defining, planning and implementing integrated office information systems;

d) the provision of test beds in which research and analysis can be undertaken on the economic, social, and behavioural aspects of office automation.

It is suggested that the evaluation of the human and social issues of office automation in the field trials have the following objectives:

a) to investigate the extent to which the human and social issues, including those listed in this report and any others that might arise, occur during field trials of office communications systems;

b) to implement planning and consultation processes for the introduction of office automation and to investigate and describe the effectiveness of these processes;

c) to analyze the quality of working life of the employees concerned before and after the implementation of office automation;

d) to make specific policy recommendations based on the evidence from the above investigations aimed at alleviating problems or improving the quality of working life of employees in the Public Service as it is affected by office communications systems.

RECOMMENDATION 33: The field trials being designed under the Office Communications Systems program in the federal government should be used as testing grounds to investigate the human and social issues of office automation, to investigate implementation strategies and to recommend policies for the federal Public Service based on these investigations.

RECOMMENDATION 34: Studies undertaken by the federal government arising from this report on issues related to office automation should have management and union representation on the planning and implementation.

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TL 155-33, No. 3 March 19, 1982

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Calculation of Space Requirements, Chapter 120.22 March, 1980

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Office Furniture and Furnishing, Acquisition
Chapter 240.2.2 June, 1979

8. APPENDIX A

Employment Impact Statement

1. What is the kind of work that is being performed?

2. How is it being performed at the outset of a project? What hardware (if any is in place at the outset of a project, including how many machines and what kind of machines?

3. What are the employee profiles including occupational group and level, sex, official language status, handicapped, native, age and educational profiles?

4. What is the proposed or conceived organizational structure?

5. What strategies are proposed for training, retraining, redeployment?

9. APPENDIX B

Office Communications Systems Program
OCS Users' Group

Human and Social Impact of Office Automation Committee

TERMS OF REFERENCE

1. Introduction

The Committee recognizes that the development of office automation in government and industry has begun in Canada and will continue as the technology develops. The Committee will investigate ways in which the opportunities and benefits of office automation may be distributed equitably so that all sectors and groups in Canadian society may benefit. Recognizing that there are perceived and potential human and social benefits and problems arising as office automation proceeds, the Committee will search for ways to enhance benefits and rectify or minimize problems.

2. Issues

Office automation is the application of information technology including the use of computers and telecommunications to Canadian offices in government, industry, university or elsewhere to meet organizational objectives.

Arising from the introduction of technology are issues which concern the human user both at an individual level and at a broader social level. The

technology, the individual user, and the social/legal context must change and adjust to each other to reap the benefits and minimize the possible harmful effects of the introduction of technology.

A partial list of issues follows and may be further developed as the Committee's work proceeds.

2.1 Training and education programs.

2.2 Job classification and personnel management.

2.3 Strategies for introduction of technology to meet resistance and needs of employees.

2.4 Design of terminals, systems and environments to meet employees needs, including health and safety issues.

2.5 New career opportunities and potential for employment/unemployment.

2.6 Privacy and confidentiality needs of individuals.

2.7 Organizational structure changes to be expected.

2.8 Community and family life changes.

3. Structure

3.1 The Committee reports to the OCS Users' group and is under its general direction.

3.2 The Committee's chair is appointed by the Users' Group.

3.3 Membership on the Committee includes representatives of at least five departments of the federal government including Treasury Board, Public Service Commission and the Department of Communications.

3.4 Additional membership on the Committee will be at the discretion of the Chair.

3.5 The Committee will strike subcommittees as required. Subcommittees may invite the participation of any person from within or outside the federal government.

3.6 The Committee will continue as long as the OCS program continues unless otherwise advised by the Users' Group.

4. Responsibilities

4.1 The Committee will collect information about the human response to office automation both within and outside the federal government. The Committee will seek information and ideas about the issues it identifies and attempt to summarize the information for the Users' Group. Information may be collected by review of previously prepared reports, by field trips etc. and by receiving briefs and presentations from interested groups. Unions may be requested to present their points of view.

4.2 The Committee will comment on and bring to the attention of the Users' Group issues it feels to be important and will make recommendations wherever possible.

4.3 The Committee will encourage research on the issues arising from the human and social impact of office automation by identifying specific areas where research would advance knowledge.

4.4 The Committee will pay particular attention to the needs of women, handicapped, Canadian Native groups and francophones in the automation of federal government offices.

Treasury Board of Canada
Secretariat

Conseil du Trésor du Canada
Secrétariat

Ottawa, Canada
K1A 0R5

January 19, 1983

Dr. D.A. Phillips
Director
Behavioural Research and
Evaluation
Department of Communications
300 Slater Street
Ottawa, Ontario
K1A 0C8

Dear Dr. Phillips:

Re: Draft Report of the Human & Social Impact Sub-committee to the Users' Group, Office Communications Systems Program (OCS)

Thank you for providing us with a draft copy of the latest version of the above-noted report. We have had an opportunity of reviewing the content and recommendations of this report, and must first commend you and your Sub-committee on the time and effort which must have been expended in dealing with the many facets of this complex topic. Our detailed comments on the November 1982 draft report are attached.

By way of background information, Margaret Cottrell-Boyd wrote to Hugh Rodgers, Secretary of the OCS Users' Group on May 12, 1982, with comments and suggestions on your Sub-committee's April 1982 draft report. This version of the report was included, almost verbatim, with a draft Cabinet document being prepared at that time on the OCS Programme. We are also enclosing a copy of Mrs. Cottrell-Boyd's comments for your information, as we understand that some of them may not have found their way back to your Sub-committee, in light of postponement of the Cabinet document and Hugh Rodgers' departure to another job.

From a personnel management point of view, we are particularly concerned with the report's numerous recommendations which are based upon the assumption that the introduction of office technology will produce harmful results. Many of these assumptions are not supported in the report by the findings of any scientific investigation or documented fact.

Canada

We are surprised and appalled that health and safety issues of VDTs are still being raised after the considerable evidence available showing there is no danger. It would be most unfortunate if the report should have the negative effect of being perceived to create or even aggravate the anxiety in the work force which is being engendered through the media by various interested parties. In our opinion, it would be far more positive to emphasize the dispelling of perceived myths surrounding electronic office technology. For example, it should be clearly stated that, in accordance with all scientific evidence, there is no health hazard due to radiation from this equipment. Also, major studies have confirmed that there is no damage to eye sight from the use of VDTs.

We recognize that there are legitimate areas of concern which require the appropriate management attention outlined in the report. We can assure you that the Employer has a prime responsibility to do everything possible and practicable to ensure that the technology is introduced with the least dislocation or disruption to the level of service and to the work force.

As you are aware, the Personnel Policy Branch of the Treasury Board has a very genuine and practical concern about any programme, such individual employees and bargaining agents, the relationship between unions and management, and the development and implementation of personnel policies. In this light, any report which produces information on the human and social concerns of changing and emerging technology to a senior interdepartmental committee, must provide a balanced and well-documented base, with recommendations which bear in mind the need to enhance the effectiveness of the organization and to improve the quality of life at work for its employees. Additionally, in the case of the OCS programme, there is an excellent opportunity to address more specifically the situation of the trial projects with a view to learning what particular problems and solutions may apply to the Public Service generally.

Personnel Policy Branch now has two representatives on your Sub-committee, namely Barbara Fenton from the Staff Relations and Compensation Division and Lucie Brunet from the newly formed Human Resources Division. The Staff Relations and Compensation Division has primary responsibility for Employer-employee relations, for compensation policy and for bargaining collectively on behalf of the government as provided for under the Public Service Staff Relations Act (PSSRA). The new Human Resources Division amalgamates the areas of Human Resources Planning, Training, QWL, Affirmative Action and Equal Employment Opportunities, as well as general issues related to the introduction of new technologies. It is our opinion, that these two representatives will be able to provide assistance to your Sub-committee in making those changes to your report which we feel are required prior to broader distribution within the Public Service.

The attached detailed comments have been prepared by the various divisions of Personnel Policy Branch, and our representatives would be happy to discuss these with you at length as required. We would ask that the report be amended to cover the key concerns and if this is not possible then this letter with our detailed comments should be attached to the report and forwarded to the Users' Group. Margaret Cottrell-Boyd will speak to this at the next Users' Group meeting. Please note that we are copying to Dr. P. Meyboom.

Yours sincerely,

F.R. Drummie

Fred R. Drummie
Deputy Secretary
Personnel Policy Branch

COMMENTS OF THE PERSONNEL POLICY BRANCH, TREASURY BOARD SECRETARIAT ON THE DRAFT REPORT OF THE HUMAN AND SOCIAL IMPACT SUB-COMMITTEE, NOVEMBER 1982

The report itself reads well and contains a good range of issues and topics. There are, however, many substantive and editorial suggestions which, if incorporated could make the report more balanced, and, as a result, more meaningful to the Users' Group.

First, a few editorial and structural suggestions. The report should include a statement about the mandate of the Sub-Committee on Human and Social Issues. It should also indicate precisely what the objective of the report is vis-à-vis the Users' Group. Additionally, the method(s) used in researching and compiling the recommendations should be detailed together with the list of representatives from departments who actually participated. There is likely a distinction to be made between those committee members who participated as individual employees and those who officially represented their respective departments or agencies. At the working level of this particular type of Sub-Committee, there is often a need to recognize that input can be unofficial as well as official. Thus, a resulting report may not represent the views of the represented departments but more accurately those of the participating employees.

Second, a comment about the tone and scope of the report. The report states that it "takes the point of view of the employee" (p. ~~1~~ 6 *). This appears to be an unsubstantiated claim as only a small number of employees actually participated; no sample or other means was used to determine an employee perspective; and there is no existing document which could have been used to reference the "viewpoint of the employee" in the Public Service as no such research on this topic has as yet taken place. This comment is particularly unfortunate inasmuch as it seems to set an adversarial note to the rest of the report. Human and social issues are very important to the employer, to departments and to managers throughout the Public Service as well as to the individual employee. The Human and Social Issues Sub-committee has a responsibility to the Users' Group to examine and present evidence outlining problems and issues as they affect the OCS program, and particularly the field trials. All perspectives, especially if they differ substantively, should be presented.

Third, the comment about the report emphasizing problems "because there appear to be many problems and much has been written about them" (p. ~~19~~ 24) followed by the remark "most of the expected benefits from the employer's point of view are thought to be related to productivity," indicate a rather shallow investigation of benefits and problems. As most communications experts will quickly point out, the number of negative responses to a particular program on TV or radio is used as a barometer of the positive response, since it is a well-observed phenomenon that people respond with greater force to the things they don't like than they do to the things they do like.

* Note. Edited Page numbers refer to the January 25/1983 edition of this report.

Fourth, there is a general absence in the report of an overview or discussion of existing mechanisms, processes of consultation, policy formulation and development, etc. This is particularly relevant in light of several of the recommendations which tend to fall flat because the comment or point being made is already well-entrenched in existing policy or procedures. This type of thing reduces the overall credibility of the entire paper. By removing this type of recommendation, together with the somewhat vague "motherhood" statements, it would be possible to tighten up the whole document and give much greater impetus to the recommendations which are relevant and actionable.

Fifth, as a final point on the introductory paragraphs and the paper generally, the report purports to analyze human and social issues on three levels: societal, organizational and individual/small group. This is likely too broad an approach for the purpose of providing concrete information and recommendations to the OCS Users' Group.

2. Context

The use of the Quality of Work Life, (QWL) introduction is interesting and relevant; however, much of the material presented could be cut without loss to the report. Now, since the Treasury Board has approved the QWL policy (see attached), it would be simpler and more meaningful to point out the goals of this policy, together with the handful of other dominant policies which "set the scene", for example: the Workforce Adjustment Policy, the Training

Policy, the Part Time Policy, the Transfer of Pregnant Employees and Video Display Terminals (VDT) Policy, the Health and Safety Policy. Considerable attention is given to the development of policies which guarantee certain rights for workers. Principles of "fair play" and mutual co-operation are well-entrenched in the formal processes of management. The Treasury Board, as employer, takes its responsibility as the largest employer in Canada very seriously, and as is evident in some of more recent policy developments, the rights of employees are of paramount concern. This is part of the context which is just not presented in the report at all.

3. Expected Changes with Office Automation: Issues, Problems, Worries

(pp. ~~23/24~~ 29/30)

The QWL movement has resulted in a growing awareness rather than a growing concern. With awareness comes recognition that the "work life" of individuals can be controlled to a certain extent; also that certain changes will produce improvements and others will create more problems or a reduced quality of working life. From this latter recognition comes concern.

3.1.1 Employment Levels and 3.1.2 Job Displacement (pp. ~~24/25~~ 3/)

There are numerous reports available on the subject of employment levels and changes anticipated from the introduction of micro-electronics to the modern office environment. Also, various countries have approached this particular topic from different angles. Since only a few rather pessimistic documents are cited in the bibliography, you may not be aware of the existence of some of the others. We would be happy to provide further background on this item.

From a staff relations point of view, the emphasizing of the concern about unemployment followed by the comment that there is "no conclusive evidence that total employment will decrease", would tend to aggravate employees' concerns about job security and also to provide the unions an opportunity to use this as an example of the Employer's seeming lack of concern over an issue as sensitive as job loss. The same is true of statements concerning "displacement of workers as some jobs become obsolete because of technological change". Phrases such as "major dislocations" (p. 25) do little to allay employees' fears over unemployment.

The policy of the Public Service with respect to changes in the demand for resources is governed by the Work Force Adjustment Policy. In brief, the purpose of this policy is to ensure that the employees identified as surplus because of work force adjustment are dealt with in a fair and equitable manner through minimum disruption of their employment in the Public Service. Properly carried out in a positive frame of mind by both managers and affected employees, this policy can lead to alternative career opportunities for affected employees, and more efficient and effective utilization of available human resources. While job security is not a guarantee to any employee in the Public Service, such policies as this provide the mechanisms for a good deal of employment security.

A key factor in evaluating the impact of technological change is the recognition that impacts tend to be more pronounced when change is introduced too rapidly. Changing systems and procedures requires the build-up of transitional agents, for instance in the planning for problem solution such as training and re-training. If the transitional agents are not in place and change occurs rapidly, then the impacts would more likely be negative and severe. A factor which some of the "proponents of doom" seem to avoid is that it is possible to introduce new technologies at a rate conducive to smooth transition. While we talk of "technology push" and "sweeping

innovations" in the office, the bottom line is that the individual manager must determine the technology, justify the technology, plan for the change, budget for the costs, and still get his or her work done. There is much in the system which provides for a natural "braking" action when things start going wrong. For the simple reasons that individuals do start to "brake" when things start going wrong, and because managers do have the responsibility and authority to manage the introduction of new technologies in a fashion which allows for the smooth transition and continuing productivity of the organization, we do not expect any massive employment disruptions in the near future. Localized disruptions can be adequately handled using the Workforce Adjustment Policy.

3.1.3 Women and Employment (p. ~~25~~ 31)

Equal Employment Opportunities (EEO) and Affirmative Action (AA) policies in the Public Service address these and other issues related to the impact of structural and technological change on women. There are, however, a number of phenomena which are complicating the "level of employment" generally, and in particular in the case of women. Some of these would be the effects of the "baby boom" group in the work force, the increasing participation rate of women, a growth in the demand

for office and clerical workers since the Second World War, a growth in the demand for persons with communications and service skills, again since the Second World War.

3.1.4 Public Service Practices (p. ~~26~~ 32).

Despite all the prognostications about the impact of automation, paper use and generation has probably actually increased since the advent of the computer. While new information technologies will provide an opportunity to reduce the "paper burden", such an evolution will likely take many years. Where technology is introduced in a conventional way -- to replace or to substitute for an existing procedure -- the impact will be foreseeable, direct, and probably avoidable if one chooses. From an examination of historical trends in the Public Service, it is evident that automation as a phenomenon caused only minor localized disruptions of specific occupations such as comptometer operators. On the other hand, large demand was, at the same time, generated for the new skills. The most recently observed effect of the the new technologies is again similar to this. At Canadian Pacific, for example, there has been a noticeable negative impact on the demand for tape handlers working in the computer centre as disc storage becomes commonplace.

The report states that "Attrition has been used widely within the Public Service to avoid layoffs during the introduction of word processing." (p. ~~26~~ 32). Attrition is not a policy or a procedure of government. While it is true that in time of economic restraint there is pressure not to fill positions vacated by natural turnover of the workforce, the implications that attrition is "used to avoid layoffs" is illogical. The policy of the employer is to ensure that employees who have been declared surplus are given every opportunity to compete for other available positions. That an existing incumbent of a surplus position is able to move into a position vacated through natural turnover, is one way in which the human resources planning and job security of the Public Service are demonstrably present.

Automated files of qualified personnel have existed in the government for well over twelve years. The Public Service Commission would be able to provide detailed comments as to how new technologies are being applied to the inventory, matching and screening processes.

3.1.5 Recommendations Regarding Employment Levels Concerns (pp. ~~26/27~~ 32/33)

Recommendation 1 (p. ~~26~~ 32) is a general statement on areas for which policies already exist (e.g. human resources planning, training and development). It is currently an integral part of the process of managing organizational change to include all of these factors. While the concern for women, which is expressed in parts 2) and 3) is understood, the same concerns apply to all employees.

In any case, it is our understanding that the OCS Programme Office has already prepared guidelines for use by departments which are considering undertaking field trials. Furthermore, Recommendation 1 does not indicate who should be responsible for development of these "guidelines".

Recommendation 2 (p. ~~27~~ 33) does not specify who should be responsible for actively exploring the provision of new information-based government services using micro-electronics technology. Apart from this, groups in the OCS Programme (such as the Technology Sub-committee) and in other government departments (i.e. MSERD's paper on Micro-electronics and Information Technology; ACIS - Advisory Committee Information Systems (DSS); TAC - Telecommunications Advisory Committee; and Office of the Auditor-General) are also studying this area.

We are in agreement with Recommendation 3 that such monitoring should continue; however, since this is part of on-going mandates at TB (demand) and PSC (supply) why waste a recommendation here?

3.2 Organizational Level Changes Expected (Departments and Agencies)
(p. ~~27~~ 33)

Regarding concerns over potential decreases in employment levels, job displacement or job loss due to office automation, the Sub-committee may be interested to know that 31 collective agreements contain Articles on "Technological Change". The relevant article from the Data Processing Group (DA) contract is shown below for your information.

ARTICLE 9

TECHNOLOGICAL CHANGE

9.01 Both parties recognize the overall advantages of technological change. Both parties will, therefore, encourage and promote technological change and improvements in the data processing field.

9.02 The Employee agrees to provide as much advance written notice as is practicable but not less than three (3) months' notice to the Alliance of any major technological change in equipment which would result in changes in the employment status or working conditions of employees as provided for in this Agreement. In addition, the Employer agrees to consult with the Alliance with a view to resolving problems which may arise as a result of the introduction of such technological change.

This language is common to the affected Public Service collective agreements. As you will note, any changes resulting from the OCS programme, would have to be communicated in advance, to the bargaining agent, with follow-up consultation on problems arising from technological change.

3.2.1 Hierarchical Changes and the Manager's Role (pp. ~~27/28~~ 33/34)

The report's statements concerning expected changes in organizational work and hierarchy appear to be assumptions as, in the report's own words, "there is no evidence yet that it actually takes place." In the absence of any empirical evidence concerning the relationship of technological changes to organizational structures and the manager's roles, we refer you to our comments on unemployment levels and job displacement.

Both Recommendations 4 and 5 give no indication of who should be responsible for the conduct of the proposed studies. However, it should be noted that the OCS Field Trial Participation Guidelines (Volume 1) advocate testing "the functionality of these systems in terms of their impact on productivity, organizational adjustments, user acceptance, overall effectiveness and improved delivery of departmental services". Why not simply recommend that each field trial design include in their plans a study of the effects on organizational hierarchy?

The Public Service systems of organizational analysis and design, currently in place, have the capacity to identify and assess these changes. It will, however, be necessary to involve the appropriate specialists from the beginning.

3.2.2 Centralized or Decentralized Organizational Structures (p. ~~28~~ 34)

The text states that operators in word-processing units are dissatisfied "because of the limitations imposed on the development of additional skills which could enhance alternative "employment opportunities". While we are aware of bridging problems which have existed in the support groups due to specialization, educational levels of employees and attrition levels, experiments in QWL have shown that many such problems can be overcome. Also, there is some evidence in the literature of the enhancements to employment opportunities. We refer you to the paper prepared by the Bureau of Management Consulting entitled "The Electronic Office - Organizational and Human Factors," November 1981.

Recommendation 6 (p. ~~29~~ 35) again does not indicate who should be responsible for the conduct of the proposed study. In any case, the OCS Field Trial Guidelines suggest feasibility studies during the planning phase of a field trial, which would undoubtedly include comparisons of costs and benefits of

the proposed project. It may be quite difficult to compare centralized versus decentralized physical organizations in the context of distributed processing, and communicating word processing systems. However, this should likely be built in to at least one of the field trials.

3.2.3 Job Classification

Changes in the tasks performed by those working in automated environments can result in changes in job classification. Job descriptions for all positions must be updated to recognize the skills required in using the technology when changes of a more or less permanent nature are made to job responsibilities. In addition, because some tasks would be performed more efficiently, it must be recognized that in some instances, time would be created to take on other tasks, thereby again requiring the updating of job descriptions. For example, because the manager would then be able to complete more work, the secretary would not be short of the additional tasks required to fill the time. In some cases, technological change would result in the redistribution of tasks between employees. The classification standards for certain occupational groups would have to be modified to accommodate the change in demands made on employees occasioned by the technology. This would include a review of the standard in question to ensure

its continued capability to measure significant degrees of position responsibilities, and the updating of bench-marks, notes to raters, etc., to ensure consistent application across the Public Service in recognizing, measuring and ultimately compensating the changes brought to existing work packages as a result of significant technological change.

We are in agreement that the impact on job classification be a vital part of any feasibility study, prior to the implementation of an office automation project. It is hoped that the systems of job classification and organizational analysis and design, which are currently functioning as a normal part of personnel management in the Public Service, will be able to identify and deal with any problems which may arise.

As you may be aware, the requirement to define job content and assign duties and responsibilities is a normal management function. Our current policy on job classification (PMM 505-3) dictates that, wherever there is a significant change in job duties (as may be occasioned by the introduction of office technology), the position description should be revised. Departments are also expected to maintain a systematic review of all job descriptions within certain time frames (i.e. every two years, for positions in which the duties are

more susceptible to change; and every five years, for those less susceptible). In this way, our current system of job classification is able to react to changes in job content, and to remunerate employees accordingly.

3.2.4 Bridging the Skills Gap (p. ~~29~~ 35)

Apart from one reference to a "trend in that direction", there is scant evidence that technology will create a widening skills gap between the upper and lower levels of organizational hierarchies. Statements such as "the widening gap can shut clerical workers off from upward mobility" are volatile and only serve as fuel to the union's claims over restrictions to employees' career progressions.

The primary objective of human resources planning is to ensure that sufficient numbers of qualified people are available to meet ongoing operational requirements in order to achieve the goals and objectives of government programmes. While the current Public Service policy for human resources planning (PMM 100-3) does provide a framework for the realization of individual career aspirations, individual employees are responsible for their own personal development and for preparing themselves for future career opportunities (PMM 110-1).

With respect to Recommendation 8, there is a requirement for all Public Service managers in the spending of tax dollars to provide value for money, and to achieve their respective goals. Where it is to the advantage of delivery of programme goals, or where compliance with certain personnel policies provides constraints or additional considerations, these must be weighed. However, the administrative policies in this regard are fairly explicit and perhaps the recommendation should address itself to the development of guidelines.

3.2.5 Training and Education (pp. ~~30/31~~ 36/37)

The point of the first section seems to be lost by Recommendation 9. It might be more forceful to recommend that specific modules be developed and tested through the departmental field trials.

3.2.5.1 Guidelines for Developing Effective Training (p. ~~31~~ 37)

A recommendation concerning the inclusion of these training guidelines to the OCS Field Trial Guidelines is missing.

3.2.5.2 Responsibility for Training in the Public Service (p. ~~31/32~~ 38/39)

This section is accurate. Recommendation 10 should perhaps suggest that this be a priority issue of the Staff Training Council in order that training demands introduced during the trials can be speedily dealt with.

The report states that the current policy and guidelines for training in the Public Service are "adequate to meet the training needs for office automation" (p. ~~32~~ 39). We see no reason to disagree with this statement.

3.2.6 Alternative Work Sites (pp. ~~33/35~~ 39/40)

The report makes reference to the positive effect of several Public Service policies recently introduced (e.g. maternity/paternity/parental leave) which tend to facilitate working couples in meeting family responsibilities and retaining connections with the work force (refer to PMM Chapter 520-2 "Leave for Family Responsibilities). In the case of the "homework" concept, there are both problems and benefits foreseen by the special interest communities, as indicated in the report. There are additionally a number of major employer concerns. The terms and conditions of employment would of course continue to apply whether an employee worked from home

or other location. However, the legal liability of the employer with regards workman's compensation, remuneration in lieu of office space, pick-up and delivery of work and productivity or quality control are undetermined at this time.

Recommendations 11, 12 and 13 should be consolidated and directed perhaps to the departmental field trials to see if a project could be conducted as part of a field trial to test some of the hypotheses.

Since these recommendations have major staff relations implications and, as such, would require development of policy and political decisions, TB would want to be involved in the design and planning of such a project.

3.3 Individual Level Changes Expected (The Working Unit) (p. ~~35~~ 42)

Health and Safety is a major issue in the context of new technologies. From a labour relations point of view, it is important to note that:

a) it is a bargainable item, in that many collective agreements have articles on "Safety and Health": eg. from CR contract:

ARTICLE 38

SAFETY AND HEALTH

38.01 The Employer shall continue to make all reasonable provisions for the occupational safety and health of employees. The employer will welcome suggestions on the subject from the Alliance, and the parties undertake to consult with a view to adopting and expeditiously carrying out reasonable procedures and techniques designed or intended to prevent or reduce the risk of employment injury.

b) it is a consultative issue, as the contract language stipulates that the parties will consult.

c) it is a National Joint Council (NJC) item; refer to terms of reference of the NJC's Physical Working Conditions Committee below:

PHYSICAL WORKING CONDITIONS COMMITTEE

Terms of Reference

"To review and, where necessary, to make recommendations to the National Joint Council in respect of present and proposed Public Service policies and standards dealing with physical working conditions and directly related subjects, including particularly occupational health and safety, working accommodations and facilities, eating facilities, parking facilities and the distribution and location of medical services and facilities; and to provide interpretation of policy intent upon request."

3 42/43
2.3.1.1 Radiation (p. ~~35/36~~)

This issue will continue to be one of concern if committees such as this one do not accept the documented evidence of all reputable scientific investigations. To continue to propose recommendations for on-going studies of potential radiation effects is to refuse to face the facts and to continue to raise fears about this equipment.

The recommendation that these studies be conducted by "an independent credible research organization funded in such a way that its credibility cannot be questioned" is to discredit the professional ethics of world renowned and qualified scientists and is detrimental to the reputation of the Radiation Protection Bureau, the integrity of which has world-wide acknowledgement.

The transfer of pregnant employees is not based on any health and safety experience or factors, but rather on employer/employee relations considerations in response to the concerns expressed by some VDT operators. The Canadian Labour Congress (CLC) study was not able to identify any increase in adverse reproductive outcomes in VDT operators. In the absence of any scientific evidence, it would be inconsistent to assure pregnant employees who prefer not to work on this equipment

that they would continue to be employed "without penalty" (presumably at full pay even if alternative work was unavailable).

In any case, the "survey" recently undertaken by the Canadian Labour Congress was, in fact, more a one-time questionnaire, than a scientifically conducted survey. It was subjective in nature, (in that all participants were unionized employees) and incomplete (as no questions on smoking habits or lifestyles were included). In addition, this questionnaire comprised only 2,330 returns, not 10,000 as stated in the sub-committee's report (p. ~~37~~ 42).

3.3.1.2 Stress (p. ~~36/37~~ 43/44)

The Sub-committee recommends (No. 16) that a study "be undertaken of the empirical evidence relating to stress and stress-related disorders that might be expected to arise from office automation". It would be more appropriate to recommend actions to minimize those stressors affecting VDT operators, that is, those related to improperly-applied ergonomics and poor locally controllable environmental conditions. There are numerous studies already completed regarding stress levels in various groups of employees. These have found that job satisfaction is closely related to educational levels, as well as a multitude of other variables. For example, a study

conducted by the Clarke Institute of Psychiatry found that clerical and support staff of Transport Canada experienced higher stress levels than Air Traffic Controllers who work under considerable pressures related to this type of work and in front of a VDT-type screen.

3.3.1.3 Other Physical Effects of Office Automation and

3.3.1.4 Usability as a Requirement for Functional Specifications

(pp. ~~37-39~~ 45-46)

The recent talk by Dr. Marriott at the Canadian Public Personnel Management Association (CPPMA) December meeting details the specific requirements of equipment, work-station and environmental conditions that are recommended. A summary of that talk is attached. These issues are being addressed by the Treasury Board's Administrative Policy Branch and the Department of Supply and Services (DSS) with a view to developing standards in these areas.

During the planning stage of an office automation project, it may be necessary to discuss with employees the individual work station design or general office layout. However, issues relating to organizational design are normally considered to be a management responsibility.

The two most frequently identified physical effects of VDT work are eye strain and muscular/skeletal aches and strains. The recent 5-year Laval University Hospital study conducted by the Quebec Association of Ophthalmologists did not find any evidence of eye damage in VDT operators other than those changes occuring through normal aging experienced by the general population. Muscular aches are often caused by the failure to apply known ergonomic principles.

To suggest that the Treasury Board monitor negative physical effects on VDT operators assumes that there are unknown negative physical effects which have not yet been identified which could be caused by exposure to this equipment.

3.3.1.5 Public Service Policies Related to Health and Safety Issues

(pp. ~~39/40~~ 4/6)

It is a basic requirement of Treasury Board policy that departments apply all of the T.B. health and safety standards in the workplace, and the formation and operation of joint health and safety committees is mandatory. However, to include or refer to radiation as an identifiable hazard is completely inappropriate and not borne out by scientific fact. There are, of course, comfort and well-being factors which facilitate good working conditions and employee comfort and

efficiency. It is acknowledged that in some cases, optimum comfort and well-being requirements do not exist to the extent required, but this lack does not in itself, create occupational illness or injury.

Insinuations that the automated office is in such a potentially hazardous state as to require the "rigid application" of the standards is, perhaps, an unnecessary view of a situation which, in terms of a documented hazard, does not exist.

In actuality, the health and safety issues related to office automation, while important, may be less dramatic and less traumatic than described here. This is not intended, in any way, to detract from the great importance of proper ergonomic design and the application of good work station plans and the accompanying furnishings, fixtures and hardware in respect of each individual situation.

3.3.2 Privacy and Confidentiality (p. ~~40~~ 47)

While some writers have hypothesized "that automated systems will depersonalize management communication, lead to alienation, obsessive monitoring and loss of privacy" there is little empirical evidence to either prove or disprove such a contention. From a labour relations point of view, statements of this nature are alarmist and only serve to create fears in the minds of employees, where none may have existed.

Concerning the report's alleged fears of "excessive monitoring" of employee performance and productivity (p. ~~40~~ 47 and 42), the Sub-committee should be aware that the federal Public Service has a policy on employee Performance Review and Appraisal. (We refer you to PMM Chapter 115 - 10). The basic principle of this policy is assessment of work performance through the establishment of goals and objectives between supervisor and subordinate. This principle has existed since the late 1960's and, in our opinion, will continue to be applicable to situations involving the introduction of office technology. Under the current system, both the supervisor and the employee actively participate in the performance reviews and appraisal process. This includes a discussion of the duties assigned, resultant performance and/or achievement expected, results actually being achieved and how performance can be improved. Two-way communication between the supervisor and employee is encouraged. In this way, employees are able to clarify what is expected of them in terms of duties and goals, and the means through which these will be achieved. We therefore suggest that the position taken by the Sub-committee with respect to "excessive monitoring of productivity" to be extreme in nature and unsubstantiated in fact.

3.3.2.4 Privacy Legislation and Public Service Policies (pp. ~~43/44~~ 50/51)

It is interesting to note that this section of the report fails to make reference to the new Privacy Act which will be introduced in the Spring of 1983. We have been advised by the TB's Task Force on Access to Information and Privacy, that the new act will replace Part IV of the Canadian Human Rights Act (CHRA). Furthermore, it appears that the report's statement concerning "what records of personal information are used for administrative purposes" (p. ~~43~~ 50) is erroneous. Since the new Privacy Act will afford more extensive protection for the individual, this section of the report would benefit from a review with this consideration in mind.

3.3.3 Job Enrichment and

3.3.4 Isolation and Alienation

Both Recommendations 25 and 26 should be worded in such a way as to provide for inclusion in a field trial.

3.3.5 Special Interest Groups (p. ~~46~~ 53)

The Employer's existing policy (Workforce Adjustment) of transferring or finding alternative employment for employees who become redundant has been extremely effective. There is

every reason to believe that this policy will accommodate problems which may arise from office automation. In fact, the BMC study (November 1981) indicates that jobs will not only be more numerous, but also enriched.

Additionally, through such policies as EEO and the pilot AA efforts in the Public Service, considerable attention has been focussed on the needs, rights and problems of the Special Interest Groups.

The governmental Task Force which produced the Obstacles report included recommendations about technology and the handicapped, and it is worth noting that action has already been reported on many of those recommendations.

3.2 Consultation with Employees Regarding the Human and Social Issues Arising from Office Automation

While the model for consultation provided by the Quality of Working Life Program in the Public Service may be "an effective structure for managing change in office automation" at the departmental level, it should be noted that a mechanism for consultation between the Employer and employee representatives already exists, as established through the process of collective bargaining. Please refer to our comments on Recommendation 3 (Technological

Change). Furthermore, the Sub-committee is reminded of the existence of the National Joint Council, which provides an informal milieu for representatives of management and unions to discuss and resolve problems away from the pressures of the bargaining table.

While it would be entirely appropriate for bargaining agents to be consulted at certain points of the planning process, and their views solicited, the decisions must ultimately be taken by management.

Our remarks on Recommendations 1, 4 and 5, also relate to Recommendation 30. With respect to Recommendation 31, we are in full agreement that orientation briefings should be given to all employees who may be affected by the introduction of office technology; however, representatives of the bargaining agents should also be included.

CPPMA

On Wednesday, December 15, 1982 the Ottawa - Hull Chapter of the Canadian Public Personnel Management Association had as its guest speaker Dr. Ian Marriott, Senior Public Service Health Consultant of Health and Welfare Canada. Dr. Marriott spoke on the Health and Safety Factors Relating to Video Display Terminals.

Dr. Marriott briefly described the increased use of microtechnology and its different applications. Engineers use it as an information/ conversation source, airline staff use it to confirm reservations, word-processors are in use everywhere, data entry and data extraction are other common uses of this technology. Dr. Marriott indicated that in certain environments the Video Display Terminal is seen as the negative symbol of the effects of technological change. These effects he described as an emotional response to the anxieties certain groups may experience due to concern over their lack of qualifications to use this equipment, or the loss of control by the VDT operator in a man-machine system or fear of unemployment. He said that on those concerns over health and safety, there was a message to get across and that he was pleased to have been invited to address this issue.

On the frequently quoted health and safety hazards associated with VDTs, Dr. Marriott stated that many reputable scientific studies of this equipment, including those performed by Health and Welfare Canada's Radiation Protection Bureau confirmed that there were no X-Ray radiations, no microwaves or components capable of producing microwaves in the VDT, and that the extremely low level and radio frequency radiation levels are well

below the most restrictive standards in the world. Dr. Marriott said there was more of this type of radiation from electric kitchen mixers and electric razors.

The two health effects said to be most often experienced by VDT operators are eyestrain and muscular skeletal aches and pains. These effects, however, can be largely eliminated by giving some thought and planning to specific equipment features, work station design and environmental conditions prior to installing new equipment.

Desirable VDT screen features and adjustments that can ease operator eyestrain and visual fatigue are:

- size, shape, design and spacing of characters;
- sharpness of focus at all light levels;
- adjustability of brightness and contrast;
- image clarity.

Similarly, desirable VDT equipment features and accessories that can lessen potential VDT operator muscular-skeletal aches and pain are:

- adjustable seat height and back rest, five-legged chair with adjustability controls adjustable by operator while seated;
- separate key board from VDT screen;
- key board should be thin with flat matte keys;
- screen placed on adjustable stand that rotates and tilts;
- adjustable foot rests for short people;
- desks wide enough to place all equipment on;
- pull out table that can keep the keyboard at an appropriate height for operator comfort which means the operator's lower arms should be at right angles to the spinal column.

... 3

Other than equipment and work station design and features, an important factor in ensuring operator comfort relates to local environmental conditions. Lighting conditions are a most difficult factor to control since individual operators may work best under widely differing lighting situations. Insofar as possible, the recommended lighting features are:

- indirect overhead lighting;
- individual task lighting where necessary;
- window coverings to control exterior light that may cause screen reflection.

In certain worksites where there may be a number of these machines in a concentrated location, heat produced by the machines may increase the temperature to uncomfortable levels. Therefore consideration should be given to the placing of these machines where adequate air circulation and temperatures can be maintained. Insofar as possible, noise in the VDT worksite should be controlled through the use of covers for the printers and other equipment that may require noise control.
One important eyestrain consideration for all VDT operators is that which is related to an uncorrected visual problem which an operator may have and not be aware of. There is no evidence of cataract formation due to VDT work. VDT operators, including those who wear glasses, should advise their ophthalmologists during their check-ups that they work with VDTs and describe the type of work they do. This will ensure that any corrective lenses prescribed are designed to provide the best correction possible for the VDT operator.

In summary, there already exists a vast body of knowledge on VDT design, work station design and environmental conditions which are the most

... 4

suitable for VDT work. All that is lacking is the foresight and motivation to apply that knowledge in the planning stages of technological change in the workplace. It is difficult, if not impossible to prepare an overall work station design or plan that will respond to the variable individual requirements of each operator or work situation. Different uses of the VDT by a variety of occupational groups, be they engineers, librarians, or word-processing staff, require individual and particularized application of this existing knowledge and technology.

Government of Canada / Gouvernement du Canada

MEMORANDUM NOTE DE SERVICE

MARG COPY

TO / A: Mr. H. Rodgers,
Secretary,
OCS Users' Group.

FROM / DE: T.M. Cottrell-Boyd

SECURITY - CLASSIFICATION - DE SÉCURITÉ:

OUR FILE / NOTRE RÉFÉRENCE:

YOUR FILE / VOTRE RÉFÉRENCE:

DATE: May 12, 1982.

SUBJECT / OBJET: Review of, and comments on, draft report of OCS Users' Group

I have circulated the draft report to other areas of PPB and I am forwarding their comments along with my own.

1. In general the report needs some considerable shortening and tightening up. It is too long for the DM level to read and the danger is that they will miss the important parts through the frustration of having to go through the rest. It would also benefit from an Executive Summary, but I presumed that you had left the preparation of that until the body of the report is finalized.

2. There is very little in the report to suggest that the employer has in place a process to ensure that the effects of technology on staff be fully considered, including the rewriting of policies and/or creation of new policies as necessary, retraining of employees, etc. We would be glad to supply some paragraphs if you would let us know where in the report you would prefer they be inserted.

3. Because the Alliance have a copy of the report, the Staff Relations Division expect that sections of it could well be used both on the bargaining table and publicly, to put the Employer in a bad light. The Staff Relations Division have prepared an analysis of the impact of the report on the PM/AS demands and on the Personnel Policy Branch. This is available if you would care to have a copy. Wherever possible, I have addressed their points by suggesting changes in the report.

4. I would suggest that Dr. Marriott, Senior Consultant, Public Service Health, and Dr. Letourneau, Director of the Radiation Protection Bureau of Health and Welfare, be asked to comment on or approve the next draft of the Health and Safety chapter. That way we would be assured that when the report is released, there will be no public disagreement by experts with this chapter.

. . . 2

5. Page 1 Background

The paragraph stating "the Council for the Status" and the one beneath it are not examples of the "points in common of all communications". Perhaps the sentence stating: "All communications on the matter have a number of points in common" should be eliminated and the "For example" moved to the end of paragraph one.

6. Page 1 Background

" - the Council for the Status ... according to Heather Menzies, author of Women and the Chip, this technological revolution has placed 55,000 government employees (mostly female) on the brink of unemployment." I think the reference to H. Menzies' work should be deleted. There is little documentation to support such an extreme stand as she makes. The government only has to adopt the technology as quickly as it sees fit and there are many things that will be done to ensure the Menzies' scenario does not happen. To include the quote may panic some of the readers.

7. Page 1 Background

" - a further problem . . .". This paragraph should be re-phrased to indicate that "there is concern that the use of VDTs could pose" rather than "VDTs may pose...".

8. Page 4 - top paragraph - line 4

Should be changed to "central agency which must give consideration along with PPB of Treasury Board to the establishment of any training program which may be required ..." Another sentence should be added to this paragraph as follows: "Additionally, the PSC would be required to carry out any such centralised programs." (My section has the responsibility for deciding training policy and what central training programs are necessary. In this, we are given general guidance by the Staff Training Council. SDB of PSC are responsible, as directed by TB, for developing centralized programs and for carrying them out.)

9. Page 5 (a) (b) (c)

All of these should be changed to indicate that work is continuing, i.e., instead of "has investigated" should be "is investigating" - instead of "have studied" should be "is studying" - instead of "has evaluated" should be "is evaluating". To date, I have seen little evidence that either the Human and Social Impact Sub-group or the Office Productivity Sub-group have done any real research. They have reviewed a great deal of literature, but the report should be careful to not give a false impression. (In fact, it could generate requests for studies and put us in an embarrassing position if we could not fill them.)

10. Page 7: 2.7(b)

I have problems with this recommendation. I can see the real need for such coordination but I am not sure that the Users' Group is the appropriate forum. It is too large to be anything but a body for exchange of information, however, some of the key players from the group might serve the function you are talking about.

Page 7: 2.7(c)

I am not sure that the Users' Group can provide the foundation on which policies can be built. Rather, this will be provided by the pilots (and is the reason why PPB must have close links to each of the pilots).

11. Page 8: 3.1 - Market Forecasts

"There is, therefore ...". Delete "therefore".

12. Page 9: Paragraph 3

"There is some hope for Canadian industry". This is a little extreme, perhaps: "The emerging electronic office market provides increased trade opportunity for Canada" or some such thing.

13. Page 12 (ii)

Last 2 lines should read "... the adjustment of old, or development of appropriate new, public service policies at a later date." Should also include a statement to the effect that PPB will be working closely with each of the test managers to ensure that the human resource implications are fully considered, as well as to gather sufficient information to develop the appropriate policies.

14. Page 13: Paragraph 2

"The model for consultation and structure provided by the Quality of Working Life Program in the Public Service was approved in principle by the sub-group on Human and Social Impacts". Was approved in principle period, or to be applied to the pilots? There is an important distinction which should be made.

15. Page 13

1 and 2 are not appropriate recommendations since the Users' Group already provides this function. It could be confusing to readers to see recommendations relating to establishment of committees when committees which can fill such functions are already in place. This section should be rewritten to deal with the current situation; to perhaps explain the role that the Users' Committee could carry out and to propose a steering committee (if that is desired.) The link between the "model" and the present is not well done in this version.

16. Page 14 and Page 15

It should be clear what the recommendations are. Some appear to be suggestions and others recommendations but it is not definitive since after a couple of suggestions it reads: "In addition to supportive suggestions being in place, other recommendations ..."

For recommendations the active form should be used, i.e., It is recommended:

(i)
(ii)
(iii)

17. Pages 11, 12, 13, 14, 15

From the bottom of page 11, much of the content appears to deal with human and social impacts but on page 14 there is a heading HUMAN AND SOCIAL IMPACTS; the organization needs to be looked at.

18. Page 15: 5.1, Paragraph 1

"... that fewer employees will be required to deliver ...". This is jumping to a conclusion - experience to date indicates that automation does not result in fewer employees but that their functions change. Some of the literature speaks of considerable surplus people, other indicates not to expect such changes. Given this, the quoted sentence should be made less definitive. Perhaps "... fewer employees could be required to deliver".

19. Page 16: 5.1.1

Once again, I think the recommendations should come out more clearly: "It is recommended that:

(i) policy directives and guidelines be promulgated."

20. Page 16: 5.5(a)

Last paragraph should just be "training requirements". "Government education" as a prefix adds nothing

21. Page 17, Page 18: 5.2: 5.2.1

The section 5.2 Stress, Health and Safety, and 5.2.1 Health and Safety recommendations do not have a sufficiently clear structure, and there is a lumping together of many important issues in 5.2. The word "stress" should likely be deleted from the heading since in this context it is somewhat vague and undefined. While it is true that all of the factors listed in the first paragraph of 5.2 could have an effect on the health and safety of the employee, the general broad statements are not appropriate. We should be specific and if we cannot be, should not make a formal statement.

. . . 5

22. Page 17: 5.2 - Paragraph 1 - Occupational Stressors

"Occupational Stressors" - what are they? What are their causes? In this context, in which branch of knowledge/speciality does the appropriate response lie? (For example, management training - employee training - improving the ventilation system - controlling noise, light - accommodation, work space, planning, etc.) In those matters that have a direct bearing on health and safety of employees, there are Public Service health and safety standards or procedures designed to prevent or eliminate exposure to these specific occupational hazards.

23. "Ergonomics" (human interaction with work) is a very important aspect of new technology implementation and should be dealt with separately from Health and Safety.

24. Page 17: 5.2 - Paragraph 2

"Detailed studies ..." What detailed studies were undertaken? While the Committee refers to these I have seen little indication of considerable work. We should be assured that good reliable studies were done if we are going to refer to them. Reference to the CLC questionnaire survey should be deleted, since the release of the survey report has been delayed till late fall of 1982. Why mention something that no one has seen and which is not a scientific study, but a survey questionnaire?

25. Page 17: 5.2 - Paragraph 3

This paragraph relates very much to ergonomics and the potential results of poorly implemented office technology on the employee. Ergonomics and/or organizational and managerial problems should not be included under Health and Safety.

26. Page 17: 5.2 Paragraph 4

The first sentence is stated in a negative manner. There is more than enough evidence to reassure VDT operators about their safety from radiation. (See attached Health and Welfare report.) There is, according to Health and Welfare, no evidence of high rates of miscarriages among VDT operators. There has been, however, wide media coverage of isolated instances of this occurrence among certain groups of VDT operators. As happened in the Toronto Star case, media reporting of the eventual results of the study clearly demonstrated that there was no connection to VDT radiation. It was never thoroughly reported that no link was found between VTDs and users and, that in two of the four cases, other reasons. for the defects were established. We are not aware of any organization that has agreed to move pregnant women on the basis of "existing evidence", since there is no existing evidence of radiation. Certain organizations have, however, given pregnant VDT operators the option of moving to other available work, upon request. The Health and Safety staff know of no situation where any employee was given this option in respect of "planning to become pregnant in the near future", as quoted in the report.

. . . 6

27. Page 17: 5.2 - Paragraph 5

The unsubstantiated fear of health hazards may continue to preoccupy employees when reassurance, as to the safety of the equipment, is not given or is negatively stated. This report should, perhaps, take a more positive tone in stressing the conclusive evidence of the safety of the equipment. Statement (a) should be deleted. It is not at all constructive and negates the very valuable research and studies which have been carried out on this equipment.

28. Page 18: 5.2 - Paragraph 1

"... regardless of the lack of studies and evidence" should be deleted as there are many studies that have or are being done.

29. Page 18: 5.2.1 Recommendations

Section (a). There are Public Service health and safety standards that respond to specific health and safety issues, such as radiation emitting devices, electrical equipment, noise, dangerous substances, use and occupancy of buildings, etc.

30. The rest of the recommendations in sections (b) to (g) are not health and safety related. While they may need to be addressed, they should not be included here. Once again, I prefer the more direct recommendation set-up.

31. You may be aware that there is now a policy on employees and VDTs. It is not consistent with the recommendations in the report and the writer of this section may (or may not) wish to reconsider the recommendations. The approved policy is to transfer, at the request of the employee and with proper medical evidence, a pregnant employee temporarily away to another position if one is available. If no other position is available and the employee insists on being away from the VDT terminals, LWOP will be granted.

32. Page 22 - First paragraph

There is a spacing problem.

I hope that you will find these comments useful. While, of necessity, I have dealt with the areas that should be reviewed and changed, much of the report is well done. I think that the final version will be a most useful document and will likely be in wide demand. It is for these reasons that we should make every effort to make it as accurate and factual as possible.

Attachment.

Lenore Attrell-Boyd

Radiation Protection Bureau

Information On

Radiation Emissions from Video Display Terminals (VDTs)

1. A large number of reputable scientific surveys of radiation emissions from VDTs have been carried out all over the world. Collectively these surveys have encompassed virtually every make and model of VDT and have included emission measurements for x-ray, microwave, radiofrequency (RF), ultraviolet, infrared and visible radiations.
2. Of these radiations only microwaves and x-rays can penetrate the body and are potentially capable of causing birth defects or miscarriages. Ultraviolet, infrared and visible radiation are heavily absorbed at the skin surface. Radiofrequency radiation passes through the body without being absorbed and thus causes no damage.
3. VDTs have no componenets that can generate microwave radiation and none has ever been detected.
4. Measurements of VDTs for x-ray emissions have repeatedly shown none detectable above natural background levels.
5. The Radiation Protection Bureau has carried out x-ray measurements on over 250 VDTs, comprising 150 different models. No x-radiation above background was detected.
6. To assess the validity of claims that VDTs might be emitting x-rays below the background level, 30 different models were measured in the RPB low-level counting facility. This facility can detect low energy x-rays at emission levels 500,000 times lower than the mandatory standard for VDTs (0.5 mR/h). No x-ray emission was detected.
7. Visible light is produced in a VDT and is necessary for it to function. However, the level is very low--some 200 times lower than the light level outdoors on a cloudy day and about 100 times lower than occupational exposure limits.

8. Ultraviolet and infrared radiations have either been non-detectable or some 10,000 times below occupational radiation exposure limits.

9. Some radiofrequency radiation has been detected very close to the surface of some VDTs. However, the levels are so low and fall off so rapidly with distance from the surface that they are some 100 times lower than the most restrictive standard in the world (Czechoslovakia).

10. In summary:

(1) Radiation emissions from VDTs are either non-existent or are so low that no standard exists in the world that is so conservative that these emissions can be considered a cause for concern.

(2) There is no reason for any person, male or female, young or old, pregnant or not, to be concerned about radiation health effects from VDTs.

Typical References on VDT Studies

1. C.E. Moss, W.E. Murray, W.H. Parr, J. Messite, G.J. Karches, "A Report on Electromagnetic Radiation Surveys of Video Display Terminals". National Institutes of Occupational Safety and Health, Report DHEW (NIOSH) No.78-129, NIOSH, Cincinnati, Ohio. Dec. 1977.

2. "Potential Health Hazards of Video Display Terminals". USDH HS, NIOSH Cincinnati, Ohio 45226. Publication No.81-129.

3. "An Evaluation of Radiation Emission from Video Display Terminals" U.S.H.H.S Publication FDA 81-8153.

4. T. Teppana, F. Merluzzi and E. Guidici "Electromagnetic radiations emitted by visual display units" in Ergonomic Aspects of Visual Display Terminals, E. Grandjean and E. Vigliani editors. London, Taylor and Francis Ltd., 1980 pp 13-21.

5. E.A. Cox, "Radiation Emissions from Visual Display Units", in Health Hazards of VDUs 1, Papers presented at a One Day Conference, The HUSAT Research Group, Loughborough, England. Dec. 11, 1980. pp 25-38, 1980.

6. L. Elinson, L. Rosenbaum, Y. Hancock and G. Caplan. "Health Effects of Video Display Terminals". A report of the Health Advocacy Unit of the Dept. of Public Health, City of Toronto, July 29, 1980.

7. B.G. Phillips. "Video Display Terminals - An Alberta View". Presented at the meeting of the Canadian Radiation Protection Association. May 5th & 6th, 1981.

8. Hans J. Tjomm "Report of Facial Rashes Among VDU Operators In Norway". Presented at a One Day Conference Health Hazards of VDUs? December 11, 1980, at Loughborough University of Technology.

TITLE Vol. HUMAN RESOURCE USAGE Chap. QUALITY OF WORKLIFE	TITRE Vol. UTILISATION DES RESSOURCES HUMAINES Chap. QUALITÉ DE LA VIE AU TRAVAIL

1 PURPOSE

The changing character of the Canadian workforce and, in particular, the attitudes and expectations of workers concerning their employment, is a major concern of most employers. Experience in recent years in other countries has indicated that innovative Quality of Worklife (QWL) approaches to the organization of work that stress increased participation of employees, can lead to increased organizational effectiveness, improved productivity and greater job satisfaction. Similar Quality of Worklife arrangements are being initiated by many Canadian private sector companies with positive results. Certain areas of the federal Public Service also have been actively engaged in QWL experiments.

This chapter provides departments with a brief description of the Quality of Worklife approach as well as the status of Quality of Worklife programs in the federal government. It also provides guidance for the initiation of further QWL programs.

2 QUALITY OF WORKLIFE

Quality of Worklife is a process for work organizations that enables employees to actively participate in shaping the organization's environment, methods and achievements. This process is aimed toward meeting the twin goals

1 OBJET

La majorité des employeurs s'intéressent beaucoup à l'évolution constante de la main-d'oeuvre canadienne et, en particulier, aux attitudes et aux attentes des travailleurs face è leur emploi. Les expériences effectuées au cours des dernières années dans d'autres pays indiquent que l'application, à l'organisation du travail, de programmes innovateurs de qualité de la vie au travail (QVT) qui mettent l'accent sur la participation des employés, peut permettre d'accroître tant l'efficacité de l'organisation que la productivité et la satisfaction professionnelle du personnel. De nombreuses entreprises canadiennes ont obtenu des résultats encourageants à la suite de la mise en oeuvre de programmes de QVT semblables. Certains secteurs de la Fonction publique fédérale se sont aussi engagés activement dans des expériences dans ce domaine.

Le présent chapitre fournit aux ministères une courte description de la notion de la qualité de la vie au travail et les renseigne sur l'état d'avancement des programmes de QVT du gouvernement fédéral. Il contient aussi des conseils sur la création d'autres programmes de ce genre.

2 QUALITÉ DE LA VIE AU TRAVAIL

La qualité de la vie au travail est un mode d'organisation du travail qui permet aux employés de participer activement à la détermination du milieu et des méthodes de travail ainsi que des résultats de leur organisation. Ce

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2 QUALITY OF WORKLIFE (QWL) (cont'd)

of enhanced effectiveness of the organization and improved quality of life at work for its employees.

Quality of Worklife proponents believe that there are two equally important interacting systems at work in organizations. The "technical" system takes in the work itself as well as the methods and equipment required to do it. The "social" system includes the people, their relationships to one another at all levels, and to the workplace and design of jobs. It is considered that by finding the best match between people and their jobs, organizations will be more effective and productive, and people will be more satisfied and motivated.

3 QUALITY OF WORKLIFE IN THE PUBLIC SERVICE

To test the applicability of Quality of Worklife activities in various Public Service work environments, three pilot programs at Revenue Canada (Taxation), Secretary of State, and Statistics Canada were established in 1976. The results indicated that benefits did accrue to both employees and management, and that improvements in the quality of service to clients were also realized.

2 QUALITÉ DE LA VIE AU TRAVAIL (QVT) (suite)

processus a pour but d'améliorer à la fois l'efficacité de l'organisation et les conditions de travail de ses employés.

Les défenseurs de la QVT distinguent deux systèmes inter-reliés d'égale importance au sein des organisations: le système "technique", qui comprend le travail en soi ainsi que les méthodes et le matériel nécessaires à son exécution, et le système "social", qui comprend les personnes et leurs interrelations ainsi que leurs rôles face au milieu de travail et à la conception des emplois. Ils estiment que, en confiant à leurs employés les postes qui leur conviennent le mieux, les organisations accroissent leur efficacité et leur productivité, tout en favorisant la satisfaction professionnelle et la motivation de leur personnel.

3 QUALITÉ DE LA VIE AU TRAVAIL DANS LA FONCTION PUBLIQUE

Afin de vérifier la pertinence de l'application de la QVT à divers secteurs professionnels de la Fonction publique, on a mis sur pied, en 1976, trois programmes pilotes appliqués respectivement par Revenu Canada (Impôt), le Secrétariat d'État et Statistique Canada. Les responsables ont conclu que ces programmes avaient été avantageux tant pour les employés que pour l'administration, et qu'ils avaient permis d'améliorer la qualité des services fournis à la clientèle.

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3 QUALITY OF WORKLIFE IN THE PUBLIC SERVICE (cont'd)

In May 1979, new initiatives were started at the Canadian International Development Agency and the National Capital Commission to test alternative implementation methods along the lines of "socio-technical systems analysis and design".

Other federal departments have been researching and developing approaches adapted to the particular work systems, organizational goals and the needs of the individuals that make up those organizations. It is generally accepted that organizations are open systems, ... subject to both external and internal pressures. Because organizations are subjected to so many complex pressures, innovative approaches to the organization of work are desirable.

4 POLICY

It is premature to consider applying any particular model of Quality of Worklife across the Public Service. However, the Treasury Board supports the basic concept of QWL and encourages departments which wish to initiate their own QWL program to do so.

3 QUALITÉ DE LA VIE AU TRAVAIL DANS LA FONCTION PUBLIQUE (suite)

En mai 1979, l'Agence canadienne de développement international et la Commission de la capitale nationale ont lancé de nouveaux programmes en vue de mettre à l'essai des méthodes de mise en oeuvre tenant compte de "l'analyse et de la conception des systèmes socio-techniques".

D'autres ministères fédéraux ont fait des recherches dans ce domaine et élaboré des structures adaptées à leurs propres systèmes de travail, à leurs objectifs et aux besoins de leur personnel. Il est généralement admis qu'une organisation est un système ouvert qui fait l'objet de pressions tant externes qu'internes. En raison des nombreuses pressions complexes exercées sur les organisations, il est souhaitable de leur appliquer des modes innovateurs d'organisation du travail.

4 POLITIQUE

Il est trop tôt pour envisager l'application d'un modèle particulier de la QVT au sein de la Fonction publique. Cependant, le Conseil du Trésor appuie le principe de base de la QVT et encourage les ministères qui le désirent à mettre sur pied leur propre programme.

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5 DEVELOPING AND ADMINISTERING A QWL PROGRAM

5.1 Treasury Board Secretariat

The Treasury Board Secretariat facilitates the development of QWL programs by:

- providing briefings to departmental personnel;

- providing information about Quality of Worklife and other related innovations in the workplace;

- monitoring the implementation of QWL programs in departments in order to identify the impact on personnel policies;

- providing secretariat services to the Joint Senior Committee and Joint Core Group on QWL; and

- providing consultant support to participating departments and advice to departments who wish to initiate QWL programs.

5.2 Public Service Commission

The Public Service Commission facilitates the development of QWL programs by:

5 ÉLABORATION ET EXÉCUTION DES PROGRAMMES DE QVT

5.1 Secrétariat du Conseil du Trésor

Afin de faciliter l'élaboration de programmes de QVT, le Secrétariat du Conseil du Trésor:

- organise des séances d'information à l'intention du personnel des ministères;

- fournit des renseignements au sujet de la qualité de la vie au travail et d'autres innovations connexes dans le milieu de travail;

- surveille la mise en oeuvre des programmes de QVT au sein des ministères en vue de déterminer leur portée sur les politiques concernant le personnel;

- fournit des services de secrétariat au Comité supérieur mixte et au Groupe central mixte de la qualité de la vie au travail;

- offre des services de conseillers aux ministères qui ont mis sur pied des programmes de QVT et donne des conseils à ceux qui désirent faire de même.

5.2 Commission de la Fonction publique

Afin de faciliter l'élaboration de programmes de QVT, la Commission de la Fonction publique:

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5.2 Public Service Commission (Cont'd)

- monitoring the implementation of QWL programs in departments in order to identify the impact on those personnel practices which fall under their jurisdiction, and;

- establishing training programs as required.

5.3 Joint Senior Committee on Quality of Worklife

This Committee is composed of the Deputy Secretary, Personnel Policy Branch, Treasury Board Secretariat, a Commissioner of the Public Service Commission, the Deputy Minister, Labour Canada, Presidents of Public Service unions and the deputy heads of participating departments.

The Joint Senior Committee is responsible for monitoring the QWL programs for their impact on existing service-wide policies, for providing support for departmental initiatives and for identifying resources and occasions for diffusion of QWL programs.

5.4 Joint Core Group on Quality of Worklife

This group is composed of representatives of the Personnel Policy Branch of the Treasury Board Secretariat, the Public Service Commission, Labour Canada, participating unions and departments.

5.2 Commission de la Fonction publique (suite)

- surveille la mise en oeuvre de programmes de QVT au sein des ministères en vue de déterminer leur portée sur les pratiques relatives au personnel dont ils ont la responsabilité; et

- met sur pied des programmes de formation selon les besoins.

5.3 Comité supérieur mixte sur la qualité de la vie au travail

Ce comité est composé du sous-secrétaire, Direction de la politique du personnel, Secrétariat du Conseil du Trésor, d'un commissaire de la Commission de la Fonction publique, du sous-ministre de Travail Canada, des présidents de syndicats de la Fonction publique et des sous-chefs des ministères intéressés.

Le Comité supérieur mixte est chargé de surveiller les répercussions des programmes de QVT sur les politiques actuelles appliquées à l'échelle de la Fonction publique, d'aider les ministères à mener à bien leurs initiatives et de déterminer les ressources ainsi que les occasions permettant la diffusion des programmes de QVT.

5.4 Groupe central mixte de la qualité de la vie au travail

Ce groupe est composé de représentants de la Direction de la politique du personnel du Secrétariat du Conseil du Trésor, de la Commission de la Fonction publique, de Travail Canada et des syndicats et ministères intéressés.

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5.4 Joint Core Group on Quality of Worklife (cont'd)

The Joint Core Group is responsible for advising departments on the appropriateness of their QWL proposals; responding to requests for policy direction; acting as a QWL information source; reporting progress and making recommendations to the Joint Senior Committee on Quality of Worklife; examining the problems of introducing QWL into the Public Service, proposing solutions, and initiating educational programs on QWL.

5.5 Departments

Departments who initiate QWL programs at selected sites within their organizations are requested to notify the QWL Unit, Treasury Board Secretariat, of the impact on other personnel or administrative policies of the employer. In implementing QWL programs, departments are requested to ensure that the legal and policy framework (including collective agreements) of the Treasury Board Secretariat and Public Sector bargaining agents for the effective management of human resources in the federal Public Service is respected.

5.4 Groupe central mixte de la qualité de la vie au travail (suite)

Le Groupe central mixte est chargé de conseiller les ministères sur la pertinence de leurs propositions concernant la QVT; de fournir des orientations de politique et des renseignements sur la QVT; de faire rapport sur les progrès accomplis et de formuler des recommandations au Comité supérieur mixte sur la qualité de la vie au travail; d'étudier les problèmes, soulevés par la création de programmes de QVT dans la Fonction publique, de proposer des solutions et de mettre sur pied des cours d'introduction à la QVT.

5.5 Ministères

Le Groupe de la qualité de la vie au travail du Secrétariat du Conseil du Trésor demande aux ministères qui mettent sur pied des programmes dans des secteurs choisis de leur organisation de les informer de leurs répercussions sur d'autres politiques de l'employeur concernant le personnel ou l'administration. On demande aussi aux ministères de s'assurer, au cours de la mise en oeuvre de leurs programmes de QVT, qu'ils respectent le cadre des lois et des politiques (y compris les conventions collectives) établi par les agents négociateurs du Secrétariat du Conseil du Trésor et du secteur public afin de permettre une gestion efficace des ressources humaines dans la Fonction publique fédérale.

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6 PARTICIPATING PUBLIC SERVICE UNIONS

The following unions actively participate in the development of QWL initiatives:

- Public Service Alliance of Canada (PSAC);
- Professional Institute of the Public Service (PIPS); and
- Canadian Union of Professional and Technical Employees (CUPTE)

6 SYNDICATS DE LA FONCTION PUBLIQUE INTÉRESSÉS

Les trois syndicats ci-dessous participent activement à l'élaboration d'activités concernant la QVT:

- L'Alliance de la Fonction publique du Canada (AFPC);
- L'Institut professionnel du service public du Canada (IPSP); et
- le Syndicat canadien des employés professionnels et techniques (SCEPT).

7 MONITORING QUALITY OF WORKLIFE PROGRAMS

The Treasury Board Secretariat, the Public Service Commission, departments and the Public Sector unions have all actively participated in facilitating the experimentation and development of a QWL program. These same parties are responsible for monitoring the impact of Quality of Worklife programs on their respective laws, regulations, policies and directives. The Joint Senior Committee and the Joint Core Group have active monitoring and advisory roles.

7 SURVEILLANCE DES PROGRAMMES DE QUALITÉ DE LA VIE AU TRAVAIL

Le Secrétariat du Conseil du Trésor, la Commission de la Fonction publique, les ministères et les syndicats du secteur public ont tous contribué activement à faciliter la mise à l'essai de l'élaboration d'un programme de QVT. Ces mêmes organisations se chargent de surveiller les répercussions des programmes de qualité de la vie au travail sur leurs lois, leurs règlements, leurs politiques et leurs directives respectives. Le Comité supérieur mixte et le Groupe central mixte exercent une surveillance active et prodiguent des conseils.

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8 ENQUIRIES

Enquiries should be directed to:

Quality of Worklife Unit
Developmental Personnel Policies
and Activities Division
Personnel Policy Branch
Treasury Board Secretariat
222 Nepean Street
Ottawa, Ontario
K1A OR5
(Tel: 593-7783)

8 DEMANDES DE RENSEIGNEMENTS

Adresser les demandes de renseignements à:

Section de la qualité de la vie au travail
Division des politiques et activités innovatrices en matière de personnel
Direction de la politique du personnel
Secrétariat du Conseil du Trésor
222, rue Nepean
Ottawa (Ontario)
K1A OR5
(tél: 593-7783)

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