

THE EFFECTS OF THE COMPRESSED WORK WEEK
ON EMPLOYEES' WORK AND HOME LIVES

by

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The Effects of the Compressed Work Week on Employees'

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ABSTRACT

This report has presented the results of a study of the impact of compressed work schedules on the work and home lives of 35 employees of the Computer Services Division of a Vancouver based integrated forest industry company. Employee responses to the questionnaire indicated enthusiasm, for the compressed schedule, similar to that found by authors of other current studies in this field. Specific benefits most frequently mentioned were; greater knowledge of other jobs in the work area, improved attitude towards the job, and an overall improvement in home life. Fatigue and greater difficulty in arranging meetings were perceived to be the most negative effects. The program discussed in this report was close to being an unqualified success. This favourable result came about, to a large extent, because of the high degree of staff involvement in all phases of the program, from conception to review 10 months after implementation.

To Dorothy,
Alan and Patrick

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CHAPTER I

INTRODUCTION

The compressed work week has been defined as "any arrangement of a work schedule that both reduces the number of days and increases the number of hours worked per day in any given cycle." For centuries after the dawn of civilization the work week proceeded from sunrise to sunset 6 days a week with the only relief coming on the Sabbath Sunday. Changes from this severe schedule were slow in coming. Those people who are over 40 years can recall when a 6 day week was not uncommon, notwithstanding a 5½ day week was usual. Riva Poor¹ reports that in 1929 only 5 percent of the United States labour force was on a 5 day week and no significant improvement took place until the mid 1950's. She also states that today, the 5 day week is, if not universal, the "standard" North American work week. Four and 3 day work weeks are the new vogue and while various writers have reported an accelerating rate of conversion to this shortened work week authoritative data to support these statements has not been found. However, the U.S. Department of Labor² estimates that in mid - 1974 about 2 percent of the full-time employees of U.S. firms were on a compressed work schedule.

According to the Goodale and Aagaard study,³ the past 10 years have seen an unprecedented change in the distribution of hours of work, which is some indication that management is focussing on accomplishments rather than the time required to achieve the accomplishment. This change in management priori-

ties has resulted in much publicity of compressed work weeks but there is a dearth of empirical research to examine its effects on employees' lives. Relatively few studies have been reported which actually surveyed the employees of firms which had adopted a compressed work week.

The past 10 years have also seen a dramatic change in management of hours of work. Traditionally the employer has established the work schedule with little if any consultation with employees. However, during the last decade of upward surge of worker independence, some employers have found it expedient to involve workers in determining the most desirable schedule from the worker viewpoint. This consultation has frequently led to a compressed work schedule but few organizations have requested feedback from workers with a view to ascertaining if, over time, their perception of the rearranged work week had remained constant, or conformed to their expectations. This study is an attempt to partially remedy this apparent deficiency.

CHAPTER II

LITERATURE SURVEY

A survey of literature indicates that during the last decade more than 300 articles, cases and books have been written in Canada, United States and other countries on the compressed work week. An equal number of authors have dealt at varying lengths on flexible or variable work hours. A perusal of these writings indicates that most of the literature concentrates on the results to business with little attention being given to the effect of compressed schedules on the work and home lives of employees.

The first survey to thoroughly examine employee reactions to the 4-day work week was conducted by Poor and Steele⁴ in 1970. They surveyed 168 employees (of whom 20 were managers) in 13 different firms, by means of a short questionnaire and open ended-interviews, some of which were tape recorded. The responses showed that the compressed work week had been well received by both employees and management. Ninety-two percent of employees indicated they were either pleased or very pleased about the compressed work week. All managers were pleased or very pleased with the way the re-arranged week was working out for him and his company. In contrast to the high positive responses, 14 percent of the employees cited fatigue as a disadvantage. A few of the managers indicated some concern over increased problems with work scheduling and impaired service to the public. The study also indicated positive effects on employees home lives,

with favourable reactions to aggregated leisure hours and changed leisure activities. While one-third of the sample reported spending more money since the change in the work schedule, most of these did not see this as a disadvantage.

During 1973 Nord and Costigan⁵ conducted an important study exploring employee reactions to the 4-day week. They collected questionnaire data from 59 non-union pharmaceutical employees at intervals of 6 weeks, 13 weeks, and 1 year after initiation of a 4-day, 40 hour week. The first questionnaire indicated 81 percent of this sample were highly favourable to the shortened work week and later responses were similar. However, some attitudes changed over time. To illustrate, after one year effects on home life were perceived as less positive than at first. The majority of the unfavourable reactions were concerned with home life rather than work.

Another significant study on the impact of the 4-day week was undertaken by Goodale and Aagaard in 1974. Questionnaires were distributed to all of the employees of a credit division of a large, multinational oil company. Approximately 90 percent of the employees had worked for the company before the 4-day week was instituted a year before the survey was conducted. The division was not unionized. Of the 474 respondents, 40 were supervisors and managers. Two questionnaires were administered. One questionnaire (which was distributed to all personnel, including supervisors and managers) collected general and specific attitudes toward the 4-day work week and changes in behaviour attri-

buted to it.

From responses to the questionnaires, the authors concluded that this re-arranged schedule had a profound and broad impact on employees' lives not quite consistent with other evidence or with the Poor and Steele study. As in other studies positive responses were received, from the majority of respondents, as to the benefits of the compressed schedule but a significant percentage of them mentioned increased difficulty in work-related interpersonal contact and scheduling. Also, 62 percent found their work more tiring and some expressed concern as to the quality of their service to the public and other departments.

The second questionnaire was administered only to supervisors and managers to obtain their perceptions of the work record of their units. Responses indicated their personal dissatisfaction with the 4-day work week. This attitude may have been the result of their undiminished hours of work and their disappointment with lower indexes of work performance. Only 14 percent took the extra day off regularly and 47 percent said they took the extra day off one-half of the time or less. Their responses to other questions were generally congruent with perceptions of all personnel except for work performance measures where there was some divergence of opinion.

The Research Branch, Ontario Ministry of Labour⁶ produced a report in August, 1974 on their survey of employee perceptions. The survey dealt with the effects of a compressed schedule on employee work and home life. The size of the ten establishments

surveyed varied from 17 to 1,100 employees, with a total employment of just under 2,600 people. The number working on compressed schedules ranged from 10 to 95 persons in each firm, amounting to a total of 472 employees or 18 percent of the aggregate labour force. Only in two firms did all personnel work on the compressed schedule. Four of the 10 firms were unionized. While occupations of the surveyed employees were diverse, almost two-thirds worked in production occupations. The remaining one-third were involved in clerical, drafting and other service related work. The length of experience of the employees with the compressed schedule varied, from less than six months to just over two years. Seventy-one percent of the respondents had been with their firms at the time of implementation.

Most employees were satisfied, to varying degrees, with their experiences under the compressed schedules. Satisfaction with the arrangement was most common among office employees, who usually worked fewer than 10 hours per day, and among those in the under 45 year age group. In total, only 11 percent of the workers were dissatisfied with the schedules. In comparison with their previous schedules, 21 percent of the office and 42 percent of the non-office employees reported that they were more tired as a result of working the compressed schedule.

Among employees who were more tired, 69 percent regarded increased fatigue as no problem or as only a slight one. However, 15 percent of those who were more tired (5 percent of all workers surveyed) considered fatigue to be a serious problem. Although it might be expected that serious fatigue effects would

be most prominent among employees working 12 hour shifts, this was not borne out by the study. Part of the explanation may have to do with the difference between the compressed schedule and the previous schedule. The difference was many of the persons working 12 hour shifts had previously worked irregular and more tiring schedules (in some instances consisting of work periods of seven consecutive days). This was changed to breaks every three days.

Thirty-one percent of the employees stated that their work attitudes had improved. Absenteeism and turnover rates improved, at least in the short run, in most firms where there had been a problem before conversion. Several employers reported that recruiting potential had improved since the schedule was introduced. A number of employees who had joined their firms since implementation of the compressed schedule reported that it had been an important factor in their decision to apply for their present job.

In the majority of establishments, employers felt that productivity had increased but found it difficult to relate this increase exclusively to the new schedule. Moreover, they had little firm documentation as to whether such improvement had indeed actually occurred.

CHAPTER III

METHODOLOGY OF THE STUDY

Data, necessary to achieve the objectives of this study, were collected by distributing a questionnaire to a group of white-collar office workers. Details of pertinent variables and procedures followed are discussed in subsequent sections of this chapter.

The Sample

The sample chosen for this study included all of the employees, numbering 48, of the Computer Services Division of a Vancouver based integrated forest products company, which asked it remain anonymous. None of the employees were unionized. Eighty-five percent of the employees had worked in the division before the compressed work schedule was instituted, which was 10 months before the survey was done. Of the sample, 6 were managers and supervisors. The remainder were predominantly clerical and administrative staff including 7 programmers and analysts.

Planning and Implementation

The compressed work week for the employees surveyed originated as a result of their request to divisional management that a compressed schedule be instituted. Management reacted promptly by conducting a review of pertinent literature and discussing the topic with other firms that had already implemented an altered schedule. Approval was then obtained from senior

corporate management to continue planning. This process included determination of a work schedule which would best utilize the company's resources (i.e. plant, equipment and employees), satisfy each employee and meet the needs of the users' of the division's product (i.e. computer service).

The next requirements prior to implementation of the compressed work schedule was to obtain provincial government and corporate approval. British Columbia legislation requires that all employers who wish to institute a compressed work schedule must first obtain the concurrence of their employees and the joint application must be approved by the B.C. Department of Labour. Government and corporate approvals of the request were given without problems.

Work Schedule

Work Schedules were adjusted with the conversion to a compressed work week. The most readily obvious consequences of the revision were to increase the weekly hours of service to the users of computer services and alter the distribution of employees work and leisure hours. A more detailed analysis of these consequences appears in Chapter IV. To assist in identifying the changes both schedules are shown below in comparative form.

	<u>Before Conversion</u>	<u>Upon Conversion</u>
Period of computer services to users	Daily - 7am to 11pm - 16 hours	Daily - 7am to 3am - 20 hours
	Weekly - Mon. to Fri. - 80 hours	Weekly - Mon. to Fri. - 100 hours (1)

	<u>Before Conversion</u>	<u>Upon Conversion</u>
Shifts (2)		
- number	2	2
- Length in hours	8	10
Description -		
- Day shift	7 am to 3 pm	7 am to 5 pm
- Afternoon shift	3 pm to 11 pm	5 pm to 3 am
Number of Personnel - Total		
	48	48
Number of Personnel on each shift		
- Managers and Supervisors	3	2 or 3
- Computer operators	2	2
- Other administrative and clerical	19	15
Hours of work		
- Managers and Supervisors	5 day, 37½ hour week	Alternating 4 day, 5 day week - 33 and 1/3 hours and 41 and 2/3 hours respectively.
- Computer operators	5 day, 37½ hour week	3 day, 37½ hour week
- Other administrative and clerical	5 day, 37½ hour week	4 day, 37½ hour week
Daily breaks		
- Meals	1 @ 30 minutes	1 @ 42 minutes
- coffee	2 @ 15 minutes	2 @ 15 minutes
Extra Days off		
- Supervisory Personnel	N/A	(3) please see notes on page 11
- Computer operators	N/A	(4) please see notes on page 11
- Other administrative and clerical	N/A	(5) please see notes on page 12

Notes to Work Schedule

- (1) Period of computer services to users - This period did not include Saturdays when computer operators worked one shift of 12½ hours. No service was given to users on Saturdays.
- (2) Shifts - As stated earlier each day (Monday to Friday, inclusive) was divided into 2 shifts. However, computer operators and supervisory personnel did not adhere to the timing of these shifts. Computer operations were conducted 6 days each week (Monday to Saturday, inclusive) for 12½ hours each day. Each computer operator worked three, 12½ hour days each week. Commencement time of a computer shift was the decision of the operator provided that once begun the operation was continuous and was completed during that day's designated work hours. Supervisory personnel did not adhere to shift schedules, although it was understood at least one supervisor must be on the premises during working hours (i.e. 5 days a week, Monday to Friday, inclusive. Supervision was not a requirement for Saturday computer operators).
- (3) Extra day off, supervisory personnel - Inasmuch as only one manager or supervisor was required to be on the premises during work hours, it was not necessary to have a rotational day-off schedule. Each of the 6 supervisory persons was allowed a 3-day week-end every second week. The decision as to whether the extra day-off was Monday or Friday was arranged by mutual agreement.
- (4) Extra day off, computer operators - Work days were standardized over a 7 day cycle. Two of the 4 computer operators worked Monday, Tuesday and Wednesday and had the other 4 days of the week off. The other two computer operators worked Thursday, Friday and Saturday and

had the balance of the week off. Days off were not automatically rotated.

- (5) Extra days off - Other administrative and clerical - A forward rotating day-off schedule was in force. In this respect the employee had a different day off each week, with the days off following in sequence over a 5-week cycle. Every fifth week the employee had a 4-day weekend as the "Friday off" and the "Monday off" follow in sequence.

The Questionnaires

The 2 questionnaires, which were used, are enclosed at the end of this report as Appendix 1. They were designed to assist in determining how longer periods of work and leisure time affects the employees work and leisure time and how they feel about these effects. Most questions were structured using a five-point scale. One questionnaire, which contained 175 questions, collected information from all personnel on demographic and other factors, attitudes toward the compressed work week and changes in work and home life attributed to it. An additional questionnaire concerning perceptions of work related changes resulting from the compressed work week was given to managers and supervisors. It contained 26 questions.

The author and the management each posted on the staff bulletin board an open letter (copies of which are enclosed as Appendix II), to all personnel advising them of the forthcoming survey. Ten days later questionnaires were distributed to each of the 48 employees at a meeting in the divisional office. Management representatives and the author were present at the

meeting, at which time the employees were requested to complete the questionnaires within the next few days, and, at their discretion, during working hours.

The reasons for the survey were explained to all participants. This discussion included the frank acknowledgement that the firm's primary motivation was "economic" but it was felt that higher productivity could more readily be achieved with satisfied employees. Therefore, the goals of the firm and the employees were similar and attainment of these goals was dependent on a high level of cooperation between both parties.

Confidentiality of the response was emphasized by requesting the questionnaires be mailed to Simon Fraser University in the addressed, stamped envelopes which were also distributed at that time. Three weeks after the distribution supervisors reminded all staff of the importance of completing and returning the questionnaire. This reminder increased the response rate by about 15 percent. The final response rate was 73 percent of all personnel. A detailed analysis of the sub-category distribution of responses is provided in Chapter IV.

Considerable effort was made to compare employee perceptions, as indicated by their responses to questionnaires, with company records. However, because of the inadequacy (for this purpose) of records, it was possible to obtain only minimal information through this source. Findings will be discussed under the respective topic in Chapter IV.

CHAPTER IV
ANALYSIS AND CONCLUSIONS

Analysis

As indicated in Chapter III the overall response rate was 73 percent. Also, there was a close correlation between proportions of the various sub-categories of the sample and the respondent group of 35. Females made up 64 percent of the sample and 60 percent of the respondents, respectively. Eighty-five percent of the employees in the sample were employed in the division before the compressed work schedule was instituted, as compared to 83 percent of respondents with the same minimum employment. While all supervisory personnel responded to the questionnaire, this sub-category represented 12.5 percent of the sample and 17 percent of respondents.

Upon return of the precoded questionnaires, responses were key-punched for computer assisted analysis. Percentages of individual responses (e.g. much easier, easier, no change, more difficult and much more difficult) were calculated by computer and categorized, manually, as positive, no change and negative in accordance with the intent of the question. With a view to clear presentation of descriptive analysis Tables I to IV (which appear later in this chapter) were prepared from key questionnaire responses. The response percentages are shown in two columns to facilitate comparison of answers in this study and the Goodale and Aagaard study. The columns are labelled G. & A. and B.C. respectively. Because of this study's small sample (N=35), it was decided to replicate the Goodale and Aagaard study

(N=474). In this way it was hoped to obtain the greater generality that is associated with a larger sample. The extent of conformity between the two survey responses was determined by computing Spearman's rank order coefficient. The rationale of the replication and the results of the correlation analyses are discussed later in this chapter. The tables were designed to show employee and management perceptions of the effects of the compressed work week on their work and leisure activities. While the responses will be discussed in more detail as the tables are introduced, global questions generally prompted positive answers but a more intensive search unearthed a few problem areas.

Employee Perceptions - Work Activities

Table I (Pages 16 and 17) presents data of employee perceptions of job related changes attributed to the compressed work week. Visual inspection indicates a close correlation between perceptions in this and the Goodale and Aagaard studies.

Moonlighting (item 1)

Moonlighting was reported to be non-existent which might indicate that leisure lost because of additional work was considered by the employee to have greater value than the extra money that could be earned from a second job. This cost benefit relationship might also have been adversely affected by the irregularity of most employee work schedules, resulting in different days off from one week to another.

Absenteeism (item 2)

Absenteeism was reported as reduced by 56 percent of employees, while none reported an increase, which is consistent with

Table 1
Job-Related Changes Attributed to Compressed Work Week -
All Employees

Item Number	Item Content	Response	Percent- age of Sample (G.&A.)	Percent- age of Sample (B.C.)
1	Moonlighting on extra time off work	Yes	1.7	0.0
		*No	98.3(1)	100.0(1)
2	Absent from work without reason	More often	.9	0.0
		*Less often	26.8(5)	55.9(3)
3	Late for work without reason	More often	11.3	11.8
		*Less often	5.7(14)	17.6(14)
4	Tiring effect of daily work	More tiring	62.2	42.9
		*Less tiring	3.2(17)	20.0(12)
5	Slowdown toward end of day	More	33.2	22.8
		*Less	5.3(15)	14.3(15.5)
6	Effort required to complete daily work	More	37.2	22.9
		*Less	3.5(16)	20.0(12)
7	Watching the clock during work hours	More	32.9	31.4
		*Less	5.9(13)	20.0(12)
8	Willingness to work overtime	*More willing	7.7(12)	8.6(17)
		Less willing	57.1	37.1
9	Ability to contact other personnel on work related matters	*Easier	1.6(18)	2.9(18)
		More difficult	48.8	34.3
10	Ability to sche- dule weekly work	*Easier	15.7(10)	20.6(10)
		More difficult	33.8	23.5
11	Ability to com- plete lengthy tasks during day	*Easier	50.0(2)	57.1(2)
		More difficult	9.8	0.0

Table 1 (continued)
 Job-Related Changes Attributed to Compressed Work Week -
 All Employees

Item Number	Item Content	Response	Percent- age of Sample (G.&A.)	Percent- age of Sample (B.C.)
12	Amount of work completed during week	*More	30.1(4)	52.9(4)
		Less	11.5	8.8
13	Productivity during first two hours of the work period	*Greater	20.3(7)	14.3(15.5)
		Less	12.1	22.9
14	Service to other departments or to customers	*Better	10.3(11)	23.5(9)
		Poorer	17.0	5.9
15	Quality of work output	*Better	17.3(8)	25.7(8)
		Poorer	9.0	5.7
16	Feelings of independence regarding work and job related decisions	*More	16.5(9)	48.6(5)
		Less	7.5	2.9
17	Knowledge regarding other jobs in work area	*More	38.0(3)	40.0(7)
		Less	3.6	2.9
18	Attitude towards job	*Improved	20.7(6)	48.2(6)
		Worsened	10.9	5.7

Figures in brackets indicate rank order of positive responses.

Asterisk (*) indicates positive response

Spearman Rho $r = .82$, 17 df, $p < 0.05$.

literature and management perceptions. However, an examination of company records showed only minimal decrease in absences since introduction of the compressed work week.

Lateness (item 3)

Only 18 percent of respondents perceived that tardiness had been reduced by the changed work week. No record of reporting times was maintained, and this laissez-faire attitude may have had an effect on the actual and perceived performance.

Effects of the longer day (items 4-8)

The most important finding from these items was that worker fatigue often exists when the work day is extended. Forty-three percent reported tiredness (item 4) with a significant percentage (23 percent) indicating slowdown toward the end of the day (item 5). These responses are not altogether consistent with the response to "Effort required to complete daily work" (item 6). Twenty-three percent reported more effort, while twenty percent reported less effort resulting in a nearly equal division of opinion. Resolution might be found in item 12 "amount of work completed during week" to which 53 percent responded "more" as compared to 9 percent who reported "less" which could indicate the degree of tiredness. As none of the jobs carried out by employees were machine paced it seems doubtful that more work would be accomplished if the degree of fatigue was serious. To further support this line of reasoning, the report of the Ontario Ministry of Labour indicated that of 107 persons feeling greater fatigue from the compressed schedule, only 15 percent considered it to be a serious problem. Thirty-one percent reported an increase in

clock watching (item 7) and only 37 percent indicated willingness to work overtime, greater than before the conversion, (item 8) despite the attraction of "time and a half". Overtime during the 10 months since institution of the compressed work schedule was about 20 percent less than the preceding 10 months. Company records did not show the reason for this decline but since company policy regarding overtime had not changed and volume had been maintained at an even level, worker unwillingness to work overtime is a possible reason.

Work coordination (items 9 and 10)

Liaising with other personnel was thought to be more difficult. Thirty-four percent said it was more difficult to contact other personnel on work related matters as opposed to 3 percent who said it was easier (item 9). Such results are understandable when co-workers have different day-off schedules. This problem did not seem to have a linear relationship to scheduling of work, however, as 21 percent indicated scheduling was easier as compared to 23 percent who indicated increased difficulties (item 10).

While the author was not able to determine the specific reasons for this apparent contradiction, an explanation could be that some persons resolved the apparent communication problem with innovative organizational methods. Cooperation appeared to prevail throughout all levels of the organization which extended to informal methods of communicating such as off-duty employees contacting co-workers to relay messages. More structured methods of transmitting general information and instructions were also in use. Inter-office memoranda were used extensively and staff meet-

ings were called as required to discuss planning of future work activities and other matters of mutual interest.

Productivity (items 11-15)

Responses to questions relating to amount and quality of output were generally positive. Fifty-seven percent of employees felt it was easier to complete lengthy tasks during the day and no one considered this type of assignment to be more difficult to accomplish (item 11). Fifty-three percent reported more work being completed during the week as opposed to 9 percent who said they completed less work during the week (item 12). Twenty-three percent of employees perceived a reduction of productivity during the first two hours of the work period (item 13). Service to the public and quality of work output were said to have improved by over 20 percent of respondents (items 14 and 15). Employee perceptions of the foregoing productivity factors generally coincided with management opinions shown in Table II which in turn were by and large substantiated by company records. In this latter connection the company had, for two years, maintained graphs relating to volume and quality of work performed. These were not sufficiently precise to accurately determine comparative changes but in general it appeared productivity had increased slightly during the ten months since implementation of the compressed work schedule. Quality had remained constant. Apart from the rescheduling of work hours no significant re-organization of duties, or change of equipment had taken place in the past 18 months. During this period there had been no change of management and other staff turnover only amounted to 27 percent.

The foregoing comments relative to productivity may appear

inconclusive. They are so intended. Businessmen and academicians have a multiplicity of opinions as to how productivity can be accurately measured. A divergence of opinion is also evident within the aforementioned groups when they consider a definition of productivity. Both of these uncertainties hamper the accurate measurement of productivity and should be resolved before this area of a research project is commenced.

Job attitudes and job development (item numbers 16-18)

Knowledge of other jobs, a feeling of independence and attitude are very much interlated and it was not surprising, therefore, that perceptions in all three categories were similar (items 16 to 18). As the favourable trend is consistent with compressed work week literature, the positive net response was not unexpected but the magnitude (ranging from 37 to 46 percent) was an unanticipated benefit. In particular the improvement in employees attitude towards their job may have contributed to the favourable reactions as generally indicated throughout the questionnaire.

Supervisory Reactions - Work Activities

Table II (Page 22) shows supervisory reactions to the compressed work week. These questions were also posed to supervisory personnel who participated in the Goodale and Aagaard survey and similar questions were sometimes addressed to all employees whose reactions are also the subject of this study. Similarity and divergence of the relative responses form a part of the following commentary.

Table II
Supervisory Reactions to Compressed Work Week

Item Number	Item Content	Response	Percentage of Sample (G.&A.)	Percentage of Sample (B.C.)
1	Productivity	*Higher Lower	12.5(8) 45.0	33.3(8.5) 0.0
2	Efficient use of space and machinery	*More efficient Less efficient	40.0(4) 2.5	0.0(11) 0.0
3	Quality of Work	*Better Poorer	7.5(10.5) 35.0	0.0(11) 0.0
4	Service to those outside work area	*Better Poorer	10.3(9) 53.9	50.0(7) 33.3
5	Overtime	Higher *Lower	42.5 20.0(6)	16.7 66.7(4)
6	Coordination of work within office	*Better Poorer	7.5(10.5) 60.0	33.3(8.5) 33.3
7	Organizing meetings of staff and other supervisors	*Easier More difficult	0.0(12) 85.0	0.0(11) 83.3
8	Staff motivation	*Improved Poorer	27.5(5) 15.0	66.7(4) 0.0
9	Staff familiarity of other jobs	*Improved Worse	62.5(1) 12.5	83.4(1) 0.0
10	Absenteeism	More *Less	2.5 45.0(3)	0.0 66.7(4)
11	How often do you take your own extra day off	*Regularly *Most of the Time About ½ of the Time Rarely Never; I Work More Hours Now	13.9 38.9 (2) 22.2 13.9 11.1	66.7(4) 0.0 0.0 0.0 33.3
12	How has the 4-day work week affected your area of responsibility	*Beneficial effect Detrimental effect	17.9(7) 51.3	66.7(4) 16.7

Figures in brackets indicate rank order of positive responses.

Asterisk (*) indicates positive response
Spearman Rho $r = .73$, 11 df, $p < 0.05$.

Productivity (items 1-4)

Thirty-three percent of respondents reported an increase in productivity and the remainder considered no change had taken place (item 1). There was unanimity that there had been no change in the utilization level of capital assets (item 2) or the quality of work (item 3). Fifty percent of management personnel reported that better service was provided to those outside of the work area as opposed to 33 percent who considered service was poorer (item 4). Perceptions shown in items 1, 3 and 4 are fairly consistent with perceptions of all employees shown in Table I, items 11-15. As employees were not asked for an opinion as to the utilization level of capital assets, this question does not appear in Table I. However, management responses of the subject company are not consistent with the credit division management responses provided in the Goodale and Aagaard report, (items 1 to 4). No specific reasons could be found for these discrepancies but as the credit division management perceptions were less favourable than those revealed in this report, that division might have experienced some organizational problems. These presumed problems did not, however, extend to utilization level of capital assets (item 2) as 40 percent of credit division management perceived more efficiency in this area as opposed to only 2 percent perceiving less efficiency.

Overtime (item 5)

Seventeen percent reported higher overtime as opposed to 67 percent reporting lower overtime which is a reversal of

perceptions reported in the Goodale and Aagaard study. However, the majority perception of this study's sample appears to be close to actuality. As mentioned on page 19 of this report, overtime during the 10 months since institution of the compressed schedule was about 20 percent less than the preceding 10 months.

Work coordination (items 6 and 7)

Opinion of coordination of work within the office was evenly distributed among managers who perceived it to be better, poorer and unchanged (item 6). These perceptions are similar to those of all employees (this sample) shown in Table I, item 10. The Goodale and Aagaard study showed that 60 percent of respondents considered work coordination to be poorer (item 6). No explanation was found for the divergence of opinions. Eighty-three percent considered organization of meetings to be more difficult (item 7). This opinion is congruent with the findings of Goodale and Aagaard and the impressions of all employees (Table I, item 9).

Staff motivation (item 8)

Sixty-seven percent reported staff were more motivated and no one considered staff were less motivated. The improvement in motivation was more marked than that shown in the Goodale and Aagaard study which reported that 27 percent perceived greater motivation as opposed to 15 percent who perceived less motivation.

Staff familiarity of other jobs (item 9)

Eighty-three percent reported increased staff knowledge of

other jobs. This response is similar to the findings of Goodale and Aagaard, which indicated that 62 percent of respondents considered that staff knowledge had improved. Perceptions of all personnel were positive, but less so than others mentioned above, inasmuch as only 40 percent (Table I, item 17) perceived greater knowledge of other jobs.

Absenteeism (item 10)

Responses to questions relating to absenteeism indicated a general accord that absences were reduced as a result of the compressed work week. Sixty-seven percent and 45 percent of supervisory personnel participating in this and the Goodale and Aagaard studies, respectively reported reduced absences. Fifty-six percent of all employees surveyed in this study said they were absent from work less often.

Extra day off (item 11)

Sixty-seven percent reported they took the extra day off regularly, while 33 percent said they never had the additional holiday and worked more than in the past. The Goodale and Aagaard survey revealed that 53 percent of supervisory personnel were able to take their extra day off regularly or most of the time and 47 percent managed to get away one-half of the time or less.

Effect of compressed work week on responsibility area (item 12)

Contrary to most contemporary literature, including the Goodale and Aagaard findings, 67 percent said the compressed work schedule had a beneficial effect on their area of responsibility, while only 17 percent reported a detrimental effect.

Eighteen percent of the supervisors surveyed by Goodale and Aagaard considered the compressed work week had a beneficial effect as opposed to 51 percent who perceived a detrimental effect.

Employee Perceptions - Leisure Activities

Table III (Page 27) presents data relevant to employee perceptions of leisure-related changes attributed to the compressed work week. Results are generally very similar to the Goodale and Aagaard findings.

Effect on leisure time activities (items 1-7)

Eighty-six percent of employees considered the revision of work hours had increased their leisure time (item 1), and 77 percent felt they made better use of this leisure time (item 2). This high level of positive responses emphasizes the often expressed belief that the compressed schedule creates more leisure time and these larger blocks of free time can be used to the satisfaction of the employee. It is recognized of course, that total weekly leisure hours have not changed except for the saving in commuting time, which is often important particularly in large urban centres. Not only does the worker travel to and from work fewer times on the compressed schedule, but since the schedule increases the number of hours worked per day, he also makes at least one trip during off-peak commuting periods. Nevertheless the change in the arrangement of hours is important and this change may be the main reason for the perception that leisure time has increased. Sixty-nine percent perceived shop-

Table III
Leisure-related Changes Attributed to Compressed Work Week -
All Employees

Item Number	Item Content	Response	Percent- age of Sample (G.&A.)	Percent- age of Sample (B.C.)
1	Amount of leisure time available	*More Less	65.0(3) 16.0	85.8(1) 5.7
2	Better use of leisure time	*Yes No	62.7(4) 37.3	77.1(3) 22.9
3	Ease of shopping	*Easier More difficult	66.4(2) 5.7	68.6(4) 8.6
4	Better use of recreational facilities	*Yes No	32.7(7) 67.3	65.8(6) 34.2
5	Effect on marriage	*Beneficial Detrimental	25.4(8) 9.6	47.8(8) 0.0
6	Effect on Social life	*Beneficial Detrimental	21.8(9) 16.3	22.9(9) 5.7
7	Satisfaction with changes in activities	*Satisfied Dissatisfied	59.2(5) 15.4	67.6(5) 2.9
8	Changes in spending habits	*Save more Spend more	4.3(10) 34.0	8.8(10) 17.6
9	Budget altered to accommodate changes in spending habits	Yes *No	21.6 78.4(1)	20.0 80.0(2)
10	Satisfaction with changes in spending habits	*Satisfied Dissatisfied	52.2(6) 8.8	57.1(7) 8.6

Figures in brackets indicate rank order of positive responses.

Asterisk (*) indicates positive response
Spearman Rho $r = .93$, 9 df, $p < .05$.

ping to be easier (item 3), and 66 percent reported they made better use of recreational facilities (item 4). Both of the latter comments are readily understandable inasmuch as the respondents could make use of shopping and recreational facilities on their extra day-off when the majority of people are at work. Item 5 indicates 48 percent of employees considered the altered work week had a beneficial effect on their marriage and 23 percent said the revision had a beneficial effect on their social life (item 6). Sixty-eight percent were satisfied with changes in these leisure activities (item 7). This expressed overall satisfaction might have had an influence on other positive perceptions discussed above.

Financial complications (items 8-10)

Eighteen percent of the respondents reported spending more money (item 8), which conforms fairly closely to the percentages of persons who altered their budget (item 9) and were more willing to work overtime (Table I, item 5); 20 percent and 9 percent respectively. Fifty-seven percent said they were satisfied with changes in spending habits and only 9 percent reported dissatisfaction (item 10).

Employee Satisfaction - Leisure Activities

Table IV (Page 29) provides data for the evaluation of employee satisfaction with the compressed schedule. As in Table III, results are generally very similar to the Goodale and Aagaard findings.

Table IV
Satisfaction with Compressed Schedule - All Employees

Item Number	Item Content	Response	Percent- age of Sample (G.&A.)	Percent- age of Sample (B.C.)
1	Administration of the plan	*Fairly admini- stered	85.9(1)	62.3(5)
		Unfairly administered	6.0	2.9
2	Compressed work week style preferred	*Present system	28.8(6)	42.8(6)
		Other	71.2	57.2
3	Wish to return to 5-day schedule	Yes	22.1	9.1
		*No	77.9(2)	90.9(1)
4	Enthusiasm for Compressed Week	*Enthusiastic	69.9(4)	88.6(2)
		Unenthusiastic	17.8	8.6
5	Compressed week is a benefit <u>from</u> the company	*Yes	31.0(5)	77.1(3)
		No	69.0	22.9
6	Compressed week is a benefit <u>to</u> the company	*Yes	73.4(3)	70.6(4)
		No	26.6	29.4

Figures in brackets indicate rank order of positive responses.

Asterisk (*) indicates positive response
Spearman Rho $r = .26$, 5 df, $p < 0.05$.

Overall Satisfaction (items 1-6)

Item 1 shows that 62 percent of employees considered the plan to be fairly administered as opposed to only 3 percent who considered it to be unfairly administered. As indicated by item 2, forty-three percent stated a preference for the existing system of the compressed work week and 57 percent said they would prefer some other system. It would seem the responses to these questions could be properly interpreted as a criticism of the plan, as instituted, but it is interesting to note that this criticism was not sufficiently severe that any significant proportion of employees wished to return to the 5-day schedule. Ninety-one percent of responses favoured retention of a compressed work week (item 3). This answer is congruent with the response shown in item 4 which indicates 89 percent were enthusiastic about the new schedule. Items 5 and 6 disclose that 77 percent of employees believed the reduced work week is a benefit from the company, and 71 percent felt it to be a benefit to the company. This high proportion of employees who consider the compressed work week to be a benefit from the company is not in accordance with the perceptions of employees surveyed by Goodale and Aagaard or with a large segment of organized labour as represented by the Canadian Labour Congress. The Goodale and Aagaard study revealed that only 31 percent of employees considered the compressed week is a benefit from the company. In an address to the Conference Board in Canada,⁷ Canadian Labour Congress representative Russell Bell argued that the compressed

work week represents a way by which management can maximize profits at the expense of its workers. It is interesting that there was a close correlation between responses in this study (71 percent) and the Goodale and Aagaard study (73 percent) relative to compressed week benefits to the company.

Comparison to Goodale and Aagaard Study

As previously mentioned the sample chosen for this study was 48 white-collar office employees of a computer services division of a forest industry company. Eighty-three percent of the respondents had worked in the division before the compressed work schedule was instituted, which was 10 months before the survey was done. None of the employees were unionized. Of the respondents 6 (17 percent) were managers and supervisors. Critical characteristics were assumed to be type of employment, length of employment on the compressed work week, Canadian or American, non-union and proportion of supervisory personnel to total employees. The total population of workers with these characteristics was not ascertained because of my limited resources. However, a review of current literature on the compressed work week indicated the population would amount to many thousands. Statistical researchers have stated that the larger the sample, the more representative it will be. Some researchers have suggested that 10 percent of a total population should be representative of the population. However, I was unable to meet this criterion because the available sample was finite and it was not possible to determine population size because of the aforementioned reasons. Replication of the recent Goodale and

Aagaard study was determined to be a possible solution to the problem. As previously discussed their study reported the results of a survey of all of the employees of a credit division of a large Ontario oil company. Of the 474 respondents, 90 percent had worked in the division before the 4-day work schedule was instituted, which was one year before the survey was done. None of the employees were unionized. Of the respondents, 40 (8.4 percent) were managers or supervisors. A perusal of the information relative to both firms indicated a close similarity between what I have described as critical characteristics. Questionnaires used in this study were virtually identical to those used by Goodale and Aagaard. Administration of the questionnaires also followed a similar pattern.

What remained was to ascertain the extent of a correlation between the responses of this study and the study which was replicated. The null hypothesis to be tested was:

There is no significant difference between the responses of the two samples ($N=474$ and $N=35$), except such differences as may be due purely to chance.

The level of significance was arbitrarily specified at 5 percent. That is, the probability of making an error or rejecting an hypothesis when it is true is 5 percent. In other words, one could be about 95 percent confident of making a correct decision. Rank correlation was determined to be the best method of testing the foregoing null hypothesis for the following reasons:

1. The shape of the distribution of the variables (res-

ponses) was not known, and

2. The data was obtained from responses which could not be exactly measured (i.e. responses were based on subjective opinions).

Positive responses to both questionnaires were then ranked as indicated in Tables I to IV. Spearman's formula

$$r_k = 1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

was used to determine the rank order coefficient of the positive responses of the two samples. These are detailed in Table V.

Table V

Results of Comparison of Two
Questionnaire Responses, (G.&A. N=474 and B.C. N=35)

Table	Degrees of Freedom	Rank Order Correlation Coefficient	Critical Values - *	
			0.05	0.01
I	17	.822	.399	.564
II	11	.729	.506	.712
III	9	.927	.564	.746
IV	5	.257	.829	.943

As indicated in Table V, all coefficients of rank correlation of comparative data (shown in Tables I to IV), were found to be positive. Inasmuch as the coefficient, of data appearing

* R. Clay Sprowls Elementary Statistics, McGraw-Hill Book Company, Inc., Toronto, Ontario, 1955, pp. 378.

in Tables I to III, exceed critical values, level of significance of 0.05, the null hypothesis should not be rejected as it refers to these tables. Moreover it is interesting to note that as the coefficients of data appearing in Tables I to III exceed critical values, level of significance of 0.01, the null hypothesis should not be rejected at that level of significance either, as it refers to these three tables. The tests indicated that the rank order correlation coefficient of data appearing in Table IV was lower than the critical value, level of significance of 0.05. Therefore, the null hypothesis should be rejected as it refers to data in this table but it does not negate the existence of a positive relationship. In these circumstances, Table IV responses from the smaller B.C. sample (N=35) are considered without special emphasis as to any correlation to the Goodale and Aagaard results (N=474).

Conclusions

The small size of the sample and the uniformity of occupations (i.e. all were white-collar office workers) reduced the generalizability and resultant value of this study of employee perceptions of the effects of the compressed work week on their home and work life. The author's limited resources made it impossible to eliminate these deficiencies but replication of the Goodale and Aagaard study (sample size of 474) did achieve some benefits. Observations from the latter research were discerned under conditions comparable to those existing in this study thereby increasing reliability of similar findings dis-

cussed earlier in this paper. The high correlation of responses from the two samples which were surveyed provides additional evidence that the compressed work week has a profound and broad impact on employees' lives.

The degree of the impact on home life should be further explored by a survey of employees' spouses, asking the same questions that are listed in Table III. This survey should be administered concurrently with but independently from the employee survey. It might be difficult to maintain a separation between the two surveys but a separation would reduce the possibility of one spouse's perceptions being influenced by the other spouse.

Reference is made in the introduction that there is a dearth of empirical research on the effect of the compressed work week on employees' lives. It is suggested that, when possible, future research should be directed to larger groups. The increase in knowledge gained by surveying a larger sample would be more than linear. Not only would one gain from the greater reliability associated with a larger sample but an adequate size would permit a meaningful comparison of perceptions between various sub-groups. These sub-groups are many and varied but those that should be included are: age, sex, level of salary, level of education and type of work. An interesting comparison would also be to determine differences of perceptions, if any, of those persons who work day shifts as opposed to those who work other shifts.

Fatigue is a generally accepted consequence of a compressed work schedule but a review of literature indicates the only published research as to the seriousness of the problem was done by the Ontario Ministry of Labour. The author's experience indicates that many people complain of fatigue, some for psychosomatic reasons that may have little to do with the length of their working hours. In any event, actual or fancied fatigue is considered of particular importance and additional exploration in this area would be worthwhile.

Current literature illustrates the importance of a thorough diagnosis before implementation of a revised work schedule, together with staff involvement throughout the process. Of their own volition the staff of the subject division requested an altered work week and participated in establishment of shift schedules. As indicated by the high response rate in the survey which formed the basis of this report they continued to show a keen interest in the program. It is argued, therefore, that the success of the program was, to a large extent, the result of a high degree of staff involvement in all phases of the program, from conception to review 10 months after implementation.

APPENDIX I

Questionnaires

GENERAL INSTRUCTIONS
FOR COMPLETING THE QUESTIONNAIRE

- Please read each question carefully and mark the one response that you believe best indicates your attitude or what changes you have experienced since starting on the compressed week. (mark with an "X" or a "✓".)
- There are no right or wrong answers. The questions are asking for your opinion concerning what you have experienced.
- Please do not discuss your answers with others while filling out the questionnaire. I would like your opinion.
- Do not sign your name.
- Please offer any further comments you may wish to make concerning the compressed work week. (Use any space available).

PLEASE MARK THE ANSWER THAT BEST INDICATES YOUR OPINION
OR THAT BEST MATCHES WHAT YOU HAVE EXPERIENCED AFTER
YOUR DEPARTMENT SWITCHED TO THE COMPRESSED WEEK

- 1-1 What schedule do you work now? 3 day (12½ hr. shift)
 4 day (9 hr. 20 min. shift)
 5 day (7½ hr. shift)
- 1-2 Do you think the compressed week will spread throughout the country? Yes
 No
 Don't Know
- 1-3 Do your friends think you are fortunate to work on a compressed work week basis? Yes
 No
 Don't know
- 1-4 Do you feel that you really have more leisure time now, on the compressed week schedule? Much more leisure time
 More leisure time
 No change
 Less leisure time
 Much less leisure time
- 1-5 Do you feel that you make better use of your leisure time now, as compared to when you were on the 5-day week? Definitely yes
 Yes
 No
 Definitely no
- 1-6 What change has occurred in your normal bedtime as a result of the compressed week? Later
 No change
 ½ hour earlier
 1 hour earlier
 1½ or more hours earlier

- 1-7 Do you find shopping is easier now as compared to when you were on the 5-day schedule?
 - Much easier
 - Easier
 - No change
 - More difficult
 - Much more difficult

- 1-8 Do you make better use of recreational facilities now than you did on a 5-day schedule?
 - Definitely yes
 - Yes
 - No
 - Definitely no

- 1-9 Do you belong to a car pool?
 - Yes
 - No

- 1-10 If you belong to a car pool, what is the effect of the compressed week on the arranging of the car pool schedule?
 - Much easier to arrange
 - Easier to arrange
 - No change
 - More difficult to arrange
 - Much more difficult to arrange

- 1-11 Do you work at a part-time job on your extra day off?
 - Yes
 - No

- 1-12 How has the compressed week affected your spending and saving habits in general?
 - Save much more
 - Save more
 - No change
 - Spend more
 - Spend much more

- 1-13 If you are married and your spouse works elsewhere, have you encountered difficulties with the following:
 - 1-14 Transportation to work? Yes No
 - 1-15 Getting away on the long weekends Yes No
 - 1-16 Day care arrangements for children? Yes No

- 1-17 If you have school are children, how does their school schedule interfere with your going away for long weekends?
 - Very often
 - Often
 - No change from 5-day week
 - Occasionally
 - Never

- 1-18 If you are married, how has the compressed week affected your marriage relationship in general?
 - Beneficial
 - No change
 - Detrimental

- 1-19 How has the compressed week affected your social life in general?
 - Beneficial
 - No change
 - Detrimental

- 1-20 How often do you take time off from work now, for reasons other than illness, as compared to when you were on the 5-day week? e.g. doctor, dental appointments.
 - Much more often
 - More often
 - No change
 - Less often
 - Much less often

- 1-21 How often are you late for work now, compared to working on the 5-day week?
 - Much more often
 - More often
 - No change
 - Less often
 - Much less often

- 1-22 How much do you "watch the clock" now, as compared to working on the 5-day week?
 - Much more
 - More
 - No change
 - Less
 - Much less

- 1-23 How do you feel about working overtime now, compared to when you were on the 5-day week?
- Much more willing
 More willing
 No change
 Less willing
 Much less willing
- 1-24 How much do you slow down in your work towards the end of the work period now, compared to when you were on the 5-day week?
- Slow down much more
 Slow down more
 No change
 Slow down less
 Slow down much less
- 1-25 How is it now to contact computer services personnel for information you need to complete your work, as compared to when you were on a 5-day week?
- Much easier
 Easier
 No change
 More difficult
 Much more difficult
- 1-26 How easy is it to complete lengthy tasks during the day now, compared to working on a 5-day week?
- Much easier
 Easier
 No change
 More difficult
 Much more difficult
- 1-27 Was the compressed week one of the reasons you applied to Computer Services?
- Already working when compressed week began
 Definitely Yes
 Yes
 No
 Definitely No

- 1-28 Would you recommend that someone apply for a job scheduled on a compressed week?
- _____ Definitely Yes
 _____ Yes
 _____ No
 _____ Definitely No
- 1-29 Generally, how do you feel the compressed plan is being administered?
- _____ Very fairly
 _____ Fairly
 _____ Don't know
 _____ Unfairly
 _____ Very unfairly
- 1-30 How long a lunch break would you prefer?
- _____ ½ hour
 _____ ¾ hour
 _____ 1 hour
- 1-31 Do you buy more refreshments during working hours compared to when you were on a 5-day week?
- _____ Much more refreshments
 _____ More food
 _____ No change
 _____ Less food
 _____ Much less food
- 1-32 What form of compressed week do you prefer - list in order of preference, i.e. place the No. 1 by your first choice. No. 2 by your second, etc.
- _____ Alternate 4/day/
 2 day weekends
 _____ 3 day weekends
 every Monday off
 _____ 3 day weekends
 every Friday off
 _____ 2 day weekend
 plus mid week
 day off
 _____ 3 day week (12½
 hours shift)
- 1-33 If on the compressed week, would you like to return to the 5-day week?
- _____ Definitely yes
 _____ Yes
 _____ No
 _____ Definitely No

1-34 How would you rate your enthusiasm for the compressed week?

- Very enthusiastic
- Enthusiastic
- Don't care
- Unenthusiastic
- Very unenthusiastic

1-35 Has the compressed week affected your attitude towards your job?

- Much improved my attitude
- Improved my attitude
- No change
- Made my attitude worse
- Made my attitude much worse

1-36 Do you consider working on a compressed week to be a benefit given to you by the company?

- Yes
- No

1-37 Do you feel that the compressed week is a benefit to the company?

- Yes
- No

1-38 Would you want all your friends and the community as a whole to be on a compressed week?

- Yes
- No
- No opinion

How much time do you spend in the following activities now, compared to when you were on the 5-day week?

Much More No Less Much
Time Time Change Time Time

1-39	Drinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-40	Reading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-41	Loafing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-42	Hobbies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-43	Evening activities during week	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-44	School/University courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-45	Spending time with family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-46	Moonlighting (part-time job)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-47	Travelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		<u>Much</u>			<u>Less</u>	<u>Much</u>
		<u>More</u>	<u>More</u>	<u>No</u>	<u>Time</u>	<u>Less</u>
		<u>Time</u>	<u>Time</u>	<u>Change</u>	<u>Time</u>	<u>Time</u>
1-48	Working around the house/apartment/ cottage	_____	_____	_____	_____	_____
1-49	Watching television	_____	_____	_____	_____	_____
1-50	Going to the movies	_____	_____	_____	_____	_____
2-1	Going to the theatre	_____	_____	_____	_____	_____
2-2	Spending time with non-company friends	_____	_____	_____	_____	_____
2-3	Spending time with in-company friends	_____	_____	_____	_____	_____
2-4	Participating in sports activities	_____	_____	_____	_____	_____
2-5	Watching live athletic activities	_____	_____	_____	_____	_____
2-6	Doing volunteer work in community	_____	_____	_____	_____	_____
2-7	In general, how do you feel about these changes? - activities	_____	_____	_____	_____	_____
				_____	Very satisfied	
				_____	Satisfied	
				_____	Neutral	
				_____	Dissatisfied	
				_____	Very dissatisfied	
	How much more money do you spend on the following now, compared to when you were on a 5-day week?	<u>Much</u>		<u>No</u>		<u>Much</u>
		<u>More</u>	<u>More</u>	<u>Change</u>	<u>Less</u>	<u>Less</u>
2-8	Transportation to work	_____	_____	_____	_____	_____
2-9	Lunches at work	_____	_____	_____	_____	_____
2-10	Week-end travel	_____	_____	_____	_____	_____
2-11	Sports equipment	_____	_____	_____	_____	_____
2-12	Hobbies	_____	_____	_____	_____	_____
2-13	Courses at schools/universities	_____	_____	_____	_____	_____
2-14	Entertainment	_____	_____	_____	_____	_____
2-15	Entertaining costs	_____	_____	_____	_____	_____
2-16	Liquor and beer	_____	_____	_____	_____	_____
2-17	Groceries	_____	_____	_____	_____	_____
2-18	Another car	_____	_____	_____	_____	_____

		<u>Much</u>	<u>No</u>	<u>Much</u>
		<u>More</u>	<u>Change</u>	<u>Less</u>
		<u>More</u>	<u>Less</u>	<u>Less</u>
2-19	New cottage	_____	_____	_____
2-20	Books and magazines	_____	_____	_____
2-21	House repairs	_____	_____	_____
2-22	Refreshments at work	_____	_____	_____
2-23	Clothes or similar items	_____	_____	_____
2-24	Stereo equipment, etc.	_____	_____	_____
2-25	In general, how do you feel about these changes? - costs	_____	Very satisfied	
		_____	Satisfied	
		_____	Neutral	
		_____	Dissatisfied	
		_____	Very dissatisfied	
2-26	Have you had to re-arrange your weekly budget to accommodate changes in your activities?	_____	Yes	
		_____	No	

Please estimate what change has occurred with regard to your work, due to the compressed week for each of the following questions, and indicate the importance that you personally attach to the change.

		<u>What is the change</u>	<u>How important is the change to you</u>
2-27	Do you work more overtime now, compared to when you were on the 5-day week?	_____ Much more	_____ Very important
2-28		_____ More	_____ Important
		_____ No change	_____ Undecided
		_____ Less	_____ Unimportant
		_____ Much less	_____ Very Unimportant
2-29	How accurate is your work now, compared to when you were on the 5-day week?	_____ Much more accurate	_____ Very important
2-30		_____ More accurate	_____ Important
		_____ No change	_____ Undecided
		_____ Less accurate	_____ Unimportant
		_____ Much less accurate	_____ Very unimportant

		<u>What is the change</u>	<u>How important is the change to you</u>
2-31	Do you complete more work during the week now, compared to when you were on the 5-day week?	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
2-32		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant
2-33	How tiring do you find your work now compared to when you were on the 5-day week?	<input type="checkbox"/> Much more tiring	<input type="checkbox"/> Very important
2-34		<input type="checkbox"/> More tiring	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less tiring	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less tiring	<input type="checkbox"/> Very unimportant
2-35	How easy is it to arrange or schedule your weekly work now, compared to when you were on a 5-day week?	<input type="checkbox"/> Much easier	<input type="checkbox"/> Very important
2-36		<input type="checkbox"/> Easier	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> More Difficult	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much more difficult	<input type="checkbox"/> Very unimportant
2-37	How productive are you in the first two hours of the work period compared to when you were working on 5-day week?	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
2-38		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant
2-39	How productive are you in the last two hours of the work period compared to when you were working on 5-day week?	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
2-40		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant

		<u>What is the change</u>	<u>How important is the change to you</u>
2-41	How satisfying is your job now, compared to when you were working a 5-day week?	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
2-42		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant
2-43	How much more independent do you feel now in doing your work and making job-related decisions, compared to when you were on the 5-day week?	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
2-44		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant
2-45	Are you now making more decisions that formerly were made by your Supervisor?	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
2-46		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant
2-47	How often is your work delayed because the Supervisor or other key person is unavailable to make a decision?	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
2-48		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant
2-49	How is the quality of your work output now, as compared to when you were on the 5-day week?	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
2-50		<input type="checkbox"/> Better	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Poorer	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much Poorer	<input type="checkbox"/> Very unimportant

		<u>What is the change</u>	<u>How important is the change to you</u>
3-1	How much effort is required to complete your weekly work now, as compared to when you worked a 5-day week?	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
3-2		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant
3-3	How much of a work backlog (if any) do you find after your long weekends?	<input type="checkbox"/> Large backlog	<input type="checkbox"/> Very important
3-4		<input type="checkbox"/> Little backlog	<input type="checkbox"/> Important
		<input type="checkbox"/> No backlog	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Don't take long weekends	<input type="checkbox"/> Unimportant <input type="checkbox"/> Very unimportant
3-5	What kind of service are you giving to other departments, and other contacts now, compared to when you were on a 5-day week?	<input type="checkbox"/> Much better	<input type="checkbox"/> Very important
3-6		<input type="checkbox"/> Better	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Poorer	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much poorer	<input type="checkbox"/> Very unimportant
3-7	Do you know more about other people's jobs in your area now, compared to when you were on a 5-day week?	<input type="checkbox"/> Know much more	<input type="checkbox"/> Very important
3-8		<input type="checkbox"/> Know more	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Know less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Know much less	<input type="checkbox"/> Very unimportant
3-9	How do you find travel to work now, compared to working on the 5-day week?	<input type="checkbox"/> Much easier	<input type="checkbox"/> Very important
3-10		<input type="checkbox"/> Easier	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> More difficult	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much more difficult	<input type="checkbox"/> Very unimportant

PLEASE COMPLETE THE FOLLOWING INFORMATION AS ACCURATELY AS POSSIBLE

- 4-1 Male _____ Female _____
- 4-2 Age: Years _____ over 45
 _____ 35 to 44
 _____ 25 to 34
 _____ under 25
- 4-3 Marital Status: Married _____ Single _____
- 4-4 If married, does spouse work? Yes _____ No _____
- 4-5 If spouse works, does he/she work on a compressed week? Yes _____ No _____
- 4-6 Do you have any children? Yes _____ No _____
- 4-7 If so, in what age ranges: _____ over 16
 _____ 12 to 16
 _____ 6 to 11
 _____ under 6
- 4-8 Type of job: _____ Data conversion
 _____ Data control and other clerical
 _____ Computer operator
 _____ Programmers and Analysts
 _____ Managers and Supervisors
- 4-9 Years of service with Computer Services: Years _____
- 4-10 Formal Education: (Check highest level completed)
- _____ Did not complete high school
- _____ High school graduate
- _____ Some university or post secondary school
- _____ R.I.A., C.G.A., B.C.I.T. graduation,
 or equivalent
- _____ Bachelor's degree or higher
- _____ Other education e.g. night school
 (Please specify)
- _____

- 4-11 Salary Range: _____ under \$850 per month
 _____ \$851 to \$1,250 per month
 _____ \$1,251 to \$1,650 per month
 _____ Over \$1,650 per month
- 4-12 Own a house? Yes _____ No _____
- 4-13 Rent an apartment or house? Yes _____ No _____
- 4-14 Own a car? Yes _____ No _____
- 4-15 Own or have regular use of an out-of-town cabin?
 Yes _____ No _____
- 4-16 Own or have regular use of a boat? Yes _____ No _____
- 4-17 Own or have regular use of a camper or trailer?
 Yes _____ No _____
- 4-18 Length of time on a compressed schedule: Months _____
- 4-19 Were you working at the Computer Services
 office before the compressed week was introduced? Yes _____
 No _____
- 4-20 Were you working on your present job before the
 compressed week was introduced? Yes _____
 No _____
- 4-21 Which of the following most closely matches your
 body rhythm:
 If you have a choice do you prefer "early
 to bed, early to rise" rather than keep
 late hours? Yes _____ No _____
- 4-22 Do you wake up and become active
 quickly? Yes _____ No _____
- 4-23 Do you like regular meal hours rather
 than eating on the "fly"? Yes _____ No _____
- 4-24 Are time changes, such as changing
 shifts or flying to Europe difficult
 for you to adapt to? Yes _____ No _____
- 4-25 Do you consider yourself to be a "day
 person" rather than a "night owl"? Yes _____ No _____

SUPERVISORS AND MANAGERS

How would you estimate the effect of the compressed week with regard to following, as it pertains to your area of direct responsibility, and how important is the change (if any)

		<u>What is the change?</u>	<u>If there has been a change how important is it?</u>
3-11	Productivity	<input type="checkbox"/> Much more productive	<input type="checkbox"/> Very important
3-12		<input type="checkbox"/> More productive	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less productive	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less productive	<input type="checkbox"/> Very unimportant
3-13	Overtime	<input type="checkbox"/> Much more overtime	<input type="checkbox"/> Very important
3-14		<input type="checkbox"/> More overtime	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less overtime	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less overtime	<input type="checkbox"/> Very unimportant
3-15	Service to those outside work area	<input type="checkbox"/> Much better service	<input type="checkbox"/> Very important
3-16		<input type="checkbox"/> Better service	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Poorer service	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much poorer service	<input type="checkbox"/> Very unimportant
3-17	Co-ordination or work within the office	<input type="checkbox"/> Much better co-ordination	<input type="checkbox"/> Very important
3-18		<input type="checkbox"/> Better co-ordination	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Poorer co-ordination	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much poorer co-ordination	<input type="checkbox"/> Very unimportant

		<u>What is the change?</u>	<u>If there has been a change how important is it?</u>
3-19 3-20	Staff motivation	<input type="checkbox"/> Much Improved	<input type="checkbox"/> Very important
		<input type="checkbox"/> Improved	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Poorer	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much Poorer	<input type="checkbox"/> Very unimportant
3-21 3-22	Absenteeism	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant
3-23 3-24	Lateness	<input type="checkbox"/> Much more	<input type="checkbox"/> Very important
		<input type="checkbox"/> More	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Less	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much less	<input type="checkbox"/> Very unimportant
3-25 3-26	Ease of organizing meetings with staff or other supervisors	<input type="checkbox"/> Much easier	<input type="checkbox"/> Very important
		<input type="checkbox"/> Easier	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> More difficult	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much more difficult	<input type="checkbox"/> Very unimportant
3-27 3-28	Staff familiar with more than just their own jobs, i.e. back-up facility	<input type="checkbox"/> Much improved	<input type="checkbox"/> Very important
		<input type="checkbox"/> Improved	<input type="checkbox"/> Important
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided
		<input type="checkbox"/> Worse	<input type="checkbox"/> Unimportant
		<input type="checkbox"/> Much worse	<input type="checkbox"/> Very unimportant

		<u>What is the change?</u>	<u>If there has been a change how important is it?</u>	
3-29	Efficient use of desk space and office or other machinery	<input type="checkbox"/> Much more efficient	<input type="checkbox"/> Very important	
3-30		<input type="checkbox"/> More efficient	<input type="checkbox"/> Important	
		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided	
		<input type="checkbox"/> Less efficient	<input type="checkbox"/> Unimportant	
		<input type="checkbox"/> Much less efficient	<input type="checkbox"/> Very unimportant	
		<input type="checkbox"/> Much better quality	<input type="checkbox"/> Very important	
3-31	Quality of work produced in work area	<input type="checkbox"/> Better quality	<input type="checkbox"/> Important	
3-32		<input type="checkbox"/> No change	<input type="checkbox"/> Undecided	
		<input type="checkbox"/> Poorer	<input type="checkbox"/> Unimportant	
		<input type="checkbox"/> Much poorer quality	<input type="checkbox"/> Very unimportant	
		<input type="checkbox"/> Regularly	<input type="checkbox"/> Very important	
		<input type="checkbox"/> Most of the time	<input type="checkbox"/> Important	
3-33	How often do you take your own extra day off?	<input type="checkbox"/> About $\frac{1}{2}$ of the time	<input type="checkbox"/> Undecided	
		<input type="checkbox"/> Rarely	<input type="checkbox"/> Unimportant	
		<input type="checkbox"/> Never - I work more hours now.	<input type="checkbox"/> Very unimportant	
		<input type="checkbox"/> Beneficial effect	<input type="checkbox"/> Very important	
3-35		Generally, how has the week affected your area of responsibility?	<input type="checkbox"/> No change	<input type="checkbox"/> Important
3-36			<input type="checkbox"/> Detrimental effect	<input type="checkbox"/> Undecided
	<input type="checkbox"/> Unimportant		<input type="checkbox"/> Unimportant	
	<input type="checkbox"/> Very unimportant		<input type="checkbox"/> Very unimportant	

APPENDIX II

Letters Accompanying Questionnaires

July 16, 1975

TO: Computer Services Staff

The steps we would like you to follow are:

- 1) Read each question carefully, then check the answer which most closely matches your situation, or your point of view based on your experience.
- 2) When you have completed the questionnaire, don't sign it; tear off this letter, and mail the questionnaire to Lloyd Grove in the attached stamped self-addressed envelope.

This will ensure you an opportunity to express your opinions frankly and in confidence. Your name is written on this note only to ensure that each member of Computer Services gets a copy of the questionnaire.

Your answers will be read and analyzed by Lloyd Grove at S.F.U. -- no one will be able to relate specific answers to an individual or an individual questionnaire.

If you have other comments, or opinions that are not covered by the questions, please feel free to write them in the space at the bottom of the pages or on a separate sheet.

Manager, Personnel Research & Planning.

Attachments

July 16, 1975

Employees - Computer Services

I believe you and I have a mutual interest, i.e. determining the advantages and disadvantages to you, the employee of the compressed work week.

With the foregoing thought in mind, would you please complete the enclosed questionnaire (instructions attached) and return it to Simon Fraser University, for my attention, in the enclosed self-addressed envelope.

My part will be to analyse the results of the questionnaire, which will then form the basis of my thesis which is one of the requirements necessary for me to attain the degree of Master of Business Administration from Simon Fraser University. The findings of this report will ultimately be available to you.

Some of you may be aware I have had discussions re this project with your management. However, it is understood that your individual responses will be kept confidential. This is your opportunity to let your employer know your collective thoughts and perhaps initiate change.

Your co-operation is appreciated.

Yours truly

Lloyd Grove

Enclosure

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- 4 Poor, Riva, and Steele, J.L. "Work and Leisure: The Reactions of People at 4-Day Firms," In R. Poor (Editor), 4-Days, 40 Hours, New American Library, Scarborough, Ontario, 1973, pp. 69-92.
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