/ (1)

THE PUBLIC LOOKS AT COMPUTER SERVICES /

Industry Can

CANADIAN FACTS
CO. LIMITED

P
91
C655
S63
1972
v.3

THE PUBLIC LOOKS AT COMPUTER SERVICES

Industry Canada
LIBRARY
JUIL 2 0 1998
BIBLIOTHEQUE
Industrie Canada

Submitted to:

THE DEPARTMENT OF COMMUNICATIONS

GOVERNMENT OF CANADA

Submitted by:

THE SOCIAL SURVEY RESEARCH CENTRE

A subsidiary of
Canadian Facts Co. Limited

TORONTO, Ontario

March, 1972

COMMUNICATIONS CANADA
JAN 10 1979
LIBRARY - BIBLIOTHEQUE

DD 4901491
DL 4901537

P
91
C655
S63
1972
v.3 c.1

QA
76.9
C666
S62
v.1

TABLE OF CONTENTS

		Page
INTRODUCTION		
HIGHLIGHTS	.....	i
INTERPRETIVE ANALYSIS AND RECOMMENDATIONS	.....	1
A. QUALITATIVE PHASE		
PART I		
1.	Overall Reactions	7
2.	Perceived Benefits	8
3.	Concerns And Fears	10
4.	The Appeal Of Specific Services	12
5.	Who Should Provide The Service?	13
PART II		
1.	Overall Reactions	14
2.	Fears And Inhibitions	16
B. QUANTITATIVE PHASE		
1.	Awareness of Computer	22
2.	Perceptions of the Computer	25
3.	Effects of Computerization	30
	a) Benefits to Society	30
	b) Fears, Anxieties or Concerns	37
	c) Degree of Perceived Change	41

TABLE OF CONTENTS
(continued)

		Page
3.	The In-Home Computer Terminal	43
	a) Awareness and Attitudes	43
	b) Types of Services Desired	50
C.	FACTOR ANALYSIS AND AID ANALYSIS	
1.	Factor Analysis	53
2.	AID Analysis	57
	Factor 1	59
	Factor 6	63
	Factor 2	66
	Factor 3	70
	Factor 5	72
	Factor 4	74
APPENDIX		
A.	Research Methodology	
B.	Discussion Outline Qualitative Phase I	
C.	Discussion Outline Qualitative Phase II	
D.	Questionnaire Quantitative Phase	

INTRODUCTION

INTRODUCTION

PURPOSE

The computer is playing a larger role in industry, business and the home; therefore, an objective study was conducted to determine:

1. attitudes toward computers among the population of Canada as a whole, and within various subgroups of the population,

2. public receptivity to possible services which might be provided by new in-home computer/communications networks.

METHOD AND SAMPLE

The research was conducted in two phases:

Phase I Qualitative research

In order to determine the critical dimensions of the problem and provide background data for questionnaire design, an initial qualitative phase was conducted using the focus group technique. The technique allows a small group of individuals, usually 10, to discuss topic areas beginning with the very general and, directed by the moderator, focussing in on the very specific. Since the group discussion is relatively unstructured, it encourages a free flow of attitudes and opinions, and at the same time is flexible enough to elicit spontaneous comments.

GROUP COMPOSITION

Two group discussions (one with women and one with men, all "heads of households" between the ages of 25 and 45), were held in Toronto during the first week of October, 1970.

During November and December 1970, a second part of this qualitative research was carried out, partially in Toronto and also in the city of Montreal. Parallel to Part 1 in Toronto, two focus groups, (one with women and one with men, all "heads of households" aged 25-45) were held in Montreal. In addition, ten individual depth interviews (five each in Montreal and Toronto) were conducted with boys and girls between the ages of 16 and 21. Finally, in Toronto only, two boys (aged 8 and 13) were also interviewed individually.

Phase II Quantitative Research

In order to evaluate perceptions, feelings, and reactions toward the computer among a cross section of Canadians, a questionnaire was developed based on hypotheses resulting from the initial qualitative phase.

Then a quantitative survey was conducted among a total 1,030 respondents within a cross-section of communities throughout Canada during the month of June 1971.

The research methodology is described in detail in Appendix A.

HIGHLIGHTS

AND

RECOMMENDATIONS

HIGHLIGHTS AND RECOMMENDATIONS

I HIGHLIGHTS

The purpose of this section is to outline the major findings and implications of this research. In addition, recommendations are offered:

* Seventy-two percent of all respondents report having contact in their homes with "something" printed out by a computer. Bills are most readily identified as "computerized" by approximately 50% of the sample. Sixty-four percent report no experience with computer errors.

* Generally, awareness of computers and their print-outs is highest among socio-economically "mobile" people:
  - urban rather than rural dwellers
  - men rather than women
  - higher rather than lower income
  - those under 50 rather than over 50 years of age
  - professional/white collar rather than blue collar.

* While only 13% of the sample report having "direct contact" (subjectively defined) with a computer, 60% of all respondents perceive the computer as an efficient mathematical

machine--though only 45% agree that the computer is "extremely accurate and exact". Sixteen percent view it as an intelligent machine (though less than half of these feel it is more intelligent than the average person). About one in five respondents think of the computer as "another appliance".

* Young people (teenagers and even younger) tend, from a psychological viewpoint, to see the computer as "another appliance".

* Among some French-speaking respondents the computer appears to be perceived as some sort of "super machine","la savante", "machine idéale". At the same time the level of specific knowledge about computers is markedly lower in Montreal than Toronto.

* While only 16% of the sample impute "intelligence" to the computer, 53% feel there is almost no limit to what computers can do. Thirty-five percent feel that computers can make some important decisions better than people. Fourteen percent feel computers can think the way humans can. These findings may help explain why women and French Canadians in particular are concerned that the computer will interfere with their interpersonal relationships. Especially among women in Montreal, there is a feeling that the computer is a very impersonal machine.

* Generally, people recognize the scientific and technological contributions of the computer and the contributions it can make to society in a general way. In this regard, the computer is perceived basically as a "resource" tool: storing information, retrieving information and aiding in the solution of frustrating practical problems. However, respondents appear less committed to the "conceptualization" or "decision-making" ability of computers.

* While 73% of all respondents agree that computers will provide more leisure time, many are not convinced this is a benefit because of their inability to use leisure time constructively. Furthermore, only 47% of all respondents agree that computers will mean a higher standard of living. For example, 70% of respondents feel computers will be a cause of unemployment or that computers can cause serious errors because they do not take human factors into account. Forty percent believe, furthermore, that computers will make life more complex.

* Women are less positive than men regarding the benefits the computer will bring and are more fearful of potential harm.

* Because people generally believe the benefits of computers are "obvious" and "practical", these attitudes are reflected in the choice of services most wanted if supplied by an

in-home computer device. For instance, transportation details, such as road conditions, timetables, reservations, etc., are among the most popular.

* Where existing services of a dramatic nature are perceived to be inadequate, people feel the in-home computer might be an aid. For example, emergency medical service, crisis advice centre and diagnosis of illness before consulting physician are popular desired services.

* All the most desired services are those which cut across "lifestyle" boundaries and are not geared to "special" segments of the population.

* While about half of all respondents indicate awareness of the future potential of an in-home computer service, those services deemed desirable reflect a need to solve immediate problems rather than future ones.

* An equal number of respondents (two out of five) feel such a service should be provided by government as feel it should be provided by private enterprise. More than half of those who feel the service should be provided by private enterprise feel government should "regulate" it.

* There is no indication of any strong feeling that government participation in such a scheme smacks of "Big Brother"

interference. People seem to have confidence in the honesty and motives of their government; they only question its efficiency. Among French Canadians, however, references to "the government" tend to be associated with the provincial rather than the federal system.

* Problems resulting from increased computerization are perceived not only to affect society in general, but also people's personal lives.
  - 28% feel computers will take over personal lives
  - 43% agree that people are going to far in using computers
  - 62% agree that computers make you feel people are just becoming numbers
  - 55% agree that computers will make people think less
  - 28% feel that computers threaten family life
  - 37% agree that computers threaten personal privacy
  - 53% think that violation of confidentiality is likely to happen with the computer

* In addition, the qualitative research uncovered other anxieties regarding the computer:
  - further disintegration of the family unit
  - inability to "communicate" with the computer, especially among women
  - interfere with interpersonal relationships, especially man/wife, parent/child

- reduce parental authority
- usurp many of the housewife's functions.

* A factor analysis was conducted to determine whether or not attitudes toward the computer were interrelated. The variables included in the analysis produced seven stable factors which accounted for only 53% of the total variance. There was a large amount of information loss by "structuring" attitudes and beliefs regarding the computer.

* The seven factors are (in order of their contribution to total variance):

FACTOR NAME	PERCENT CONTRIBUTION TO TOTAL VARIANCE
1. Depersonalization/Loss of Control	17.4
2. Perceptions of Technological Benefits	9.7
3. Perceptions of "The Computer"	7.6
4. Perceived Impact of "Computerization"	5.5
5. Perceptions of Computer as "Supermachine"	4.5
6. Invasion of Privacy/Misuse of Personal Information	4.3
7. Experience with Computer Errors	4.0

* Having obtained these seven factors an AID analysis was conducted on six of the factors to determine those characterisctics of the people within each factor that best predict it.

it should be noted that AID was not performed on Factor 7 because it is an experiential factor rather than an attitudinal one.

* From the AID analysis it was apparent that of the six factors only three could be satisfactorily and logically explained. Those factors which could be analyzed assess attitudes of a personal nature, while those factors which could not be analyzed assess attitudes of a global nature.

* Factor 1: Depersonalization/Loss of Control--the group exhibiting the greatest fear can be characterized by being out of the mainstream of employment, convinced that children's lives will be greatly affected, and concerned about personal information leaks.

* Factor 6: Invasion of Privacy/Misuse of Personal Information--the group most concerned in this area can be defined as men in urban areas within Ontario and British Columbia.

* Factor 2: Perceptions of Technological Benefits--those who have the most positive attitude are outside the mainstream of employment, have not experienced computer errors and have an unrealistic view of the computer (intelligent machine or just another appliance).

* Generally, people feel that computerization will more dramatically affect the whole of society than it will individual lives, and that the impact on future generations will be even greater than the impact on the current adult generation.

II INTERPRETIVE ANALYSIS AND RECOMMENDATIONS

This research in its totality points to two major findings.

First, attitudes toward and response to the computer are based on its symbolic value. In the minds of most people, the computer is the overriding symbol of twentieth century technology and the degree of rapid change that technology has brought about. Little is actually known about the computer as a machine or the ways in which it functions.

Second, the overwhelming majority of people, to some degree, live with two sets of conflicting attitudes toward computer technology. On the cognitive level, most people can perceive, appreciate and accept the benefits to the whole of society resulting from scientific and technological progress. On the emotional or affective level, most people harbour fears and anxieties about what the results of this "progress" will mean to them personally and to their interpersonal relationships.

Throughout the course of the research, in the analysis of the qualitative findings, in the AID analysis of the quantitative data, people's ambivalence toward the computer and all that it represents became increasingly apparent.

The research strongly indicates that attitudes tend to be "crystallized" and definable when the perceived threat or benefit is immediate or personalized, and that attitudes tend to be vague and indefinable when the perceived effect is either distant or global.

The fact of relativity must be considered when assessing people's attitudes toward and perceptions of a little understood phenomenon. Just as one cannot gauge the speed of an object unless one knows one's own speed, so people cannot reasonably judge the impact on their own lives of "computerization" or technology because there exists no objective comparison--no measurable relativity. In a sense, the patient is being asked to diagnose his own illness; on the one hand to explore the pain and discomfort as they may be symptomatic of the illness, and on the other hand to ignore the effects of the distress as they may cloud objective diagnosis. We are faced with a subjective interpretation of a subjective experience--a double subjective--as potentially misleading as a double negative. Therefore, the research results can only be viewed as "frozen in time"--the period in which the research was conducted--and cannot be used to identify or predict trends or patterns within Canadian society in any absolute sense.

It appears then that the "computer" has become a complex and powerful symbol within Canadian society. It is reasonable to assume, that the relationship that exists between a person and the computer is psychologically-speaking an interpersonal one--which helps explain people's ambivalences. Perhaps this is the way the problem must be viewed. Any program undertaken to alter or influence the existing relationship should perhaps be considered a form of "therapy".

Probably the greatest conflict most people face is how to balance "trade-offs" and how to assign personal priorities. Given that most people feel powerless to control their own destinies (at least to a great degree) the conflict is reduced simply to how to face the inevitable. Generally, people recognize that the problems caused by science and technology will have to be solved by science and technology. While that may be a readily-made "intellectual" conclusion, many people obviously find it difficult (if not impossible) to live with emotionally. Can the hand that wounds, heal? To believe so requires a mountain of faith and this research clearly indicates that most people lack that resource. While "survival" hangs in the balance, the great majority of Canadians grapple with the more immediate problem of trade-offs and priorities.

The agonizing question to be resolved is; "How much do I want the creature comforts (including health and education) that modern technology can provide and what am I willing to pay for them"? "Am I willing to risk my wildest fears and anxieties (whatever they may be) becoming realities -- even more so for my children than for me -- in order to enjoy greater physical comfort and ease?" Beyond that, for some, comes the devasting realization that technological progress is inevitable and whatever price the individual must pay will be exacted. That survival of the species is more important than the survival of individual members of the species has long been an accepted biological (if not psychological) axiom. But, perhaps for the first time people are beginning to ponder the quality of the survival state.

The benefits derived from scientific and technological (computer) progress are generally more obvious and recognizable than are the liabilities. Perhaps the research has only revealed the tip of the iceberg in this regard. Many areas of concern have been identified but how complex they are or how deeply-rooted remains unknown. Like a remembered nightmare perhaps, these fears and anxieties can be elusive and sketchy yet real and gripping at the same time.

What inferences can be drawn from all this regarding acceptance of the in-home computer concept? Despite the emotional barriers that exist, despite the "lukewarm" reception given the concept by respondents, the argument can be made that all significant technological achievements (the automobile, the telephone--probably even the wheel) met with considerable resistance during their infancy. It can further be argued that in every case, scientific or technological breakthroughs suffered setbacks, caused some injuries, but nevertheless managed to gain acceptance--first as a luxury for the few, then as a necessity for the many. A priori, the computer--now in its infancy--will cover the same evolutionary ground and end as an essential aspect of people's lifestyles. It is possible--it is even probable--but it is not a foregone conclusion.

To the extent that fears and anxieties are the result of ignorance and misconception (like a prejudice) changes in attitudes can be affected; but to the extent that these fears and anxieties are indeed well-founded or deeply-rooted in the psyche, changes in attitudes probably cannot be accomplished.

QUALITATIVE PHASE

NOTE:

Because the sample in the qualitative study is quite small, the results of this part of the research should be regarded as only global indications of opinions of and attitudes toward the computer; and, therefore, the second phase of the research, the quantitative study, was conducted to reveal the national picture on this topic.

A. QUALITATIVE PHASE

PART 1

1. Overall Reactions

Neither men nor women appear to receive the idea of a home computer (or terminal) with very much enthusiasm. However, men and women have rather different reactions to the concept. Although they hesitate to show enthusiasm, men tend to be much more open to the possibility of computer technology being able to solve the problems which they find most frustrating, foreseeing few serious incumbent drawbacks. Women, on the other hand, appear much more negative to the idea, and seem to fear that extensive use of computer services would entail more disadvantages than advantages.

The lack of enthusiasm among men is not based on particular negative feelings, as is the case with the women, but rather seems to stem from their unwillingness to wholly endorse what is still essentially an unknown quantity. The men seem to refuse to believe that many of the advances they imagine will become reality within their lifetimes. More realistically, they are able to realize that whatever changes do

come into being will do so gradually, and they seem to feel genuine confidence in their ability to adjust to technological advances "one thing at a time".

There is indication that women do not like to even imagine what things will be like in the future, being so preoccupied with the problems facing them now. Furthermore, they do not readily perceive technology in any form as automatically helping to solve the problems which frustrate them at present. They tend to see individual, isolated benefits deriving from a home computer installation, but they seem to fear that, on the whole, the quality of their lives will be adversely affected by such a system. Their fears appear to derive, in part, from a feeling that technological advances are going to complicate rather than simplify their lives, that they are going to find it difficult to cope with the complexities they feel are implicit in the handling of as yet unknown machinery and mechanisms. The underlying reason for this fear appears to be that they do not seem to rationally envisage gradual change, but react emotionally to the concept as a fait accompli.

2. Perceived Benefits (Overall)

Both men and women can perceive and appreciate the fact that technological advances in many areas - in education,

for example, in communications, as well as the as yet mystical device for the home - could be of tremendous benefit in many, many ways. They see it, positively, as being able to eliminate many of the tiresome, routine chores that seem to require so much time presently. For example, when people think of how they would like to be helped to cope with managing their lives, both men and women tend, at first, to think in terms of physical rather than mental aids. Women seem to imagine a robot-like machine which could polish their floors or do their ironing. Men talk in terms of a machine which could mow the lawn or shovel the snow -- mechanically or electronically. Even when they begin to think in terms of a mental aid, they seem to be able to appreciate the benefits, in a general way, of being able to get information quickly and accurately that they might otherwise take hours or days to get -- or might never get at all.

Thus, whether seeing the new home computer facility as a physical or mental aid, people generally recognize that it will serve to save time, and in turn increase their free time. But the prospect of increased leisure time does not appear to be rosy to women.

People tend to see the real and ultimate benefit of increased use of computer services as lying with their children. They feel that children are the natural inheritors of these technological advances. The educational applications of computer installations are the only ones which are endorsed and appreciated by all.

3. Concerns And Fears

There is some fear with regard to home computer services as a mental aid, that thinking and reasoning power might be usurped. Both men and women seem to harbour these fears, although only the women express them explicitly. Even among those who realize that a machine cannot really do one's thinking for him, there is some concern that people could lose their ability to learn and perhaps even to remember things, especially if they can get any information they want instantly at the touch of a button.

Paradoxically, there also seems to be an expectation that a great deal of technological, scientific skill, or at least sophistication, will be required in order to successfully manage the computerized world of the future. Because of their inability to foresee gradual change, women especially fear that they will not be able to keep up with all of these technological advances, and thus that life will be more complex. Perhaps they foresee the ultimate frustration in having all these services and devices available, and not knowing how to use them, or at least not knowing how to use them intelligently.

Both men and women tend to be aware of potential difficulties in masses of people having a great deal of free time, and particularly in their ability to use this time intelligently and creatively. Men seem relatively optimistic about the solution of this problem, feeling fairly confident that people will develop outside interests

and hobbies. But, women appear more pessimistic in this regard. For one thing, they are fully aware of the many labour-saving devices they have in their homes which their mothers did not have, and yet they do not feel they really have any more "free time".

There is widespread (although undoubtedly unconscious) feeling that the worth of a woman is expressed in the effort--and time--she expends in carrying out household activities. Thus, it well may be that women do not really want their labour-saving devices to become time-saving devices. They may purposely (although unconsciously) fill their potential leisure time with a multitude of seemingly essential activities in order to feel that they are really worthwhile to their families.

But the free time dilemma is not the only way in which the home computer concept comes into conflict with women's conception of their traditional role. They also tend to feel threatened by such a device because they can foresee it performing or regulating many of the household activities which are presently their own responsibility.

Generally, women perceive that the quality of interpersonal relationships is going to deteriorate in the future, and there seems to be a deep concern that technological advancements are going to have a negative influence in this area.

Men, too, seem to be aware of the fact that the computer device in the home could alter interpersonal relationships, but they see the danger more in terms of social relations with "outsiders" rather than within the family. They foresee the possibility that extensive use of in-home computer services could negate the necessity of leaving one's own home at all, since people would no longer have to deal with each other on a face-to-face basis (perhaps not at all) for most of their needs. However, they seem to believe that people will make a definite effort to join groups and activities in which they have an interest, and will be able to cultivate these and spend the time on them that they cannot today.

Somewhat surprisingly, there tends to be little fear based on invasion of privacy connected with the more extensive use of computer services. Many realize that all basic information about them is already available through credit rating bureaux, income tax and social security records, etc., so they do not feel that the advent of home computers is going to make any significant difference in this regard.

4. The Appeal Of Specific Services

The following services were spontaneously mentioned as possibilities for the home computer device:

- access to all library materials stored at a nearby university
- instructions for do-it-yourself repairs to car, appliances, etc.

- teleshopping
- maintaining a check on other household appliances in order to detect potential breakdowns
- menu preparation
- home surveillance to guard against prowlers, etc.
- babysitting.

There is some hesitation in accepting the idea of teleshopping. While some people obviously feel it would be a real boon, others fear that they can only judge a product in person, and that there would be too much opportunity for merchants to misrepresent their merchandise if the only sensing device were a television screen.

5. Who Should Provide the Service?

There is general agreement that a home computer device which could supply a variety of services would be most efficiently provided by a group of independent companies working together in co-operation, not by the government, which is deemed "too inefficient". However, there is a widespread desire for the government to exercise control over the service in order to ensure impartiality and accuracy. There is absolutely no indication of any feeling that government participation in such a scheme smacks of "Big Brother" interference. People seem to have confidence in the honesty and motives of their government; they only suspect its efficiency.

PART II

1. Overall Reactions

In Montreal the concept of a home computer arouses various concerns among people of all ages. These seem to stem from the belief that such a service would have a dehumanizing effect on life. However, unlike Toronto, the concept is initially grasped in a broader sense as possessing the power to profoundly affect the management of life.

Younger people in Toronto, although less able to understand the broader philosophy of such a concept, apparently are better attuned psychologically to acceptance of it.

Primarily, this younger group seem mentally stimulated by such a concept and tend to view it unemotionally. They welcome its (perceived) efficiency and hope they will benefit from any innovations it may bring, although they are not much more imaginative as to how this will work out than are the older people. The computer is perceived as just another useful appliance like the kitchen stove or an automatic clothes drier.

Women react more negatively than do men to such a service. They demonstrate insecurity in the face of what appears to them as a potential usurper of their usefulness (particularly as housewives). They appear almost to consider it a "rival", which, in addition, they vaguely fear will be able to "communicate" with the men and children of their families. This threat of alienation in their very homes is particularly menacing for them.

Not surprisingly, men are better able to imagine how this machine might be utilized. In this respect, the younger men in Toronto went furthest in this direction because they were emotionally able to consider these possibilities calmly, without feeling threatened.

However, there are grounds for believing that in Montreal more imagination exists towards the concept if the psychological barriers could first be overcome. At present, their influence is inhibitive even in areas which are otherwise positive.

Overall there is genuine desire for simplification in life. In Montreal especially there are indications that some young people feel that the only way to escape the complexities of life today is a "return to nature". Consequently, a computer does not readily suggest itself as appropriate for their desires.

However, it is equally true that many of these same people are not really anxious to take up the "pioneer" life, and that in reality they know that they are part of the technological scene.

What they need is the psychological impetus to enter this new era with confidence and belief that they can control the speed and direction of progress to suit their individual needs.

2. Fears and Inhibitions

In Montreal it seems that home computer services raise many of the same fears that emerged in the Toronto phase of the research:

- fears that the mind may atrophy from lack of exercise
- fears about being able to stay on top of technological progress
- the problems about using increasing leisure effectively

- the dilemma of the evolving role of women
- the possibility of alienation and loneliness
- the overall fear of man being taken over by "robots".

It should be noted that many people in Montreal, particularly the younger ones, experience extreme difficulty in relating this concept to the Federal Government. In fact, it is relevant as background to this research to note that it was conducted in Montreal at the height of the recent FLQ kidnappings, and it is evident that when these people talk of "the government", it is their own Provincial Government, and not the Federal one to which they refer.

There are concerns that automation will result in a hard core of educated, unemployed individuals, holding university degrees, whom, it is said, will form a group of determined revolutionaries.

This "cultural" orientation lends significance to various aspects of the computer service concept. It leads to an assumption that such a computer would have to act very much as a trusted family member and not just as some impersonal machine. Consequently, it should fit into the furnishings.

Women in Montreal appear worried about the future of the family. They fear that the family as a unit may be disintegrating and that there is increasing need for maintaining dialogue with the people close to them. Thus, they tend to feel threatened by a machine which they fear could replace the talking back and forth in their homes. Because of a computer's scientific associations, women seem to believe that maybe only their better-educated (than themselves) children, and their husbands, will be able to communicate with this "thing", which is a doubly-threatening fear.

Moreover, it appears to be a fear accompanied by feelings of inadequacy about their potential lack of aptitude in this area. It should be noted that this inadequacy is not particularly related to an inability to handle the machine, but to lack of comprehension of its "language".

The computer concept also represents another modern technique which could take care of household chores to a point where it is feared the housewife could become redundant. Probably because many women sense that their children will not share their computer "hang-ups", they regard this machine as a potential threat to parental authority.

In fact, in Montreal especially, the computer is perceived as some sort of "supreme being", "la savante", "machine idéale" and the implications are formidable among a people, many of whom traditionally have responded to a supremacy such as is represented by the Pope.

Men, too, share this intimidation in face of the "supreme being" of the computer and talk of their need to adjust to this superstructure.

As already mentioned, the whole area of knowledge and information is a sensitive one in Montreal. Similar to Toronto the computer is at once recognized as a resource tool. Possibly because historically in the province of Quebec, higher education has often been financially unattainable for poor (and large) families, there are indications that although a computer is seen as capable of placing education in the home, it is believed that it will be too expensive to own, except for the rich. Unconsciously, of course, this gives rise to hostilities and frustrations of a sociological nature, but which manifest themselves as blame for the concept.

However, the desire for culture is paramount. This may well be responsible for French Montrealers appreciating a home computer's greater potential advantages, rather than just its practical ones (like polishing floors).

But for women, (of all ages, and even in Toronto, but to a smaller degree) this information AVAILABLE IN THE HOME, is yet another problem to be resolved in their current struggle for identity. In short, it is perceived to be part of this conflict.

Furthermore, this computer provides "instant" information. If a woman is not especially intellectually inclined, it makes more sense for "knowledge" to be difficult to acquire. This, in fact, gives her "permission" to opt out -- it is beyond her capabilities.

There is also a feeling that, in any case, knowledge that is hard to come by in some way is more valuable. It is akin to a second language which is "picked up" on the spot. This mastery may actually be superior, but some people feel that because the "rules" have not been painfully learned in a classroom situation, somehow their knowledge is downgraded in quality and value.

Furthermore, a computer is perceived to provide "unbiased" information. This feeling, of course, arises from the impersonal image of the machine and makes it possible mentally to exclude the bias of the (unseen) programmer. Moreover, this "unbiased" information places them in the unwanted position of decision-making.

And finally, the onus is also on them to "tune in" to this information. In any case, the computer is seen as a potential threat to individuality, especially with children. A computer is perceived as being capable of robbing a person of "spiritual independence", the very essence of which is sacred to a committed Québecois.

As in Toronto, the whole problem of using leisure effectively is a touchy one. Furthermore, in Montreal it is compounded by emotionalism in face of unemployment and the negatives of enforced idleness.

To sum up, it appears that the greatest inhibiting factor to this concept is a "closed mind" attitude. There is indication that people in Montreal feel overwhelmed by this omnipotent machine on their horizon, and therefore instead of viewing it as a new piece of the scenery of the future, to be enjoyed and more important, to be developed by them, they tend to react with fear and its attendant negatives.

Thus, the positives, particularly the "cultural" ones previously mentioned, tend to be swamped by the negatives which are more psychological than real, and consequently will require understanding if they are to be overcome.

QUANTITATIVE PHASE

QUANTITATIVE PHASE

B. QUANTITATIVE PHASE

1. Awareness of Computer

Of those Canadians interviewed, 72% report having contact in their homes with something printed out by a computer. Bills of some form are most readily identifiable as "computerized" by approximately 50% of the total sample. Furthermore, while interpretation of the term "direct computer contact" was subjective, 13% of those interviewed report having had such contact.

Another indicator of awareness of computers is that about half of all respondents can correctly name, on an unaided basis, a computer manufacturer. Awareness in general appears to be greater among:

- urban rather than rural dwellers
- men rather than women
- higher income rather than lower income
- people under 50 rather than over 50
- professional/white collar rather than blue collar.

These indicators described above seem to demonstrate that computers have become part of the Canadian scene and that the utilization of computers has reached into the homes of most Canadians in some form. It remains to examine the attitudes of Canadians toward this technological phenomenon.

AWARENESS OF COMPUTER

	TOTAL RESPONDENTS (1030)	TOTAL URBAN (780)	TOTAL RURAL (250)	MALE				FEMALE			
				TOTAL MALE (489)	UNDER 30 (72)	30-49 (232)	50 OVER (185)	TOTAL FEMALE (541)	UNDER 30 (107)	30-49 (237)	50 OVER (196)
	%	%	%	%	%	%	%	%	%	%	%
A. CONTACT WITH COMPUTER											
Direct Contact With Computer a/	13	13	12	18	19	21	14	8	11	10	2
Indirect Contact: (In Home) b/	72	73	68	75	83	77	70	69	64	73	68
For Example: Utility Bills c/	50	40	10	25	4	12	8	25	4	12	9
B. AWARENESS OF COMPUTER MANUFACTURER											
Name One or More Computer Manufacturer	52	57	40	59	78	62	47	47	53	54	34
IBM	48	52	36	55	74	58	44	42	49	50	29
Other	23	27	11	28	38	28	23	19	21	21	15
None	48	43	60	41	22	38	53	53	47	46	66

a/ Based on Question 1 a. Do you have any contact directly with the computer, or with anything a computer prints out?
b/ Based on Question 1 b. Do any of these things that a computer prints out ever come into your home?
c/ Based on Question 1 c. Can you name some of these please?

(See TABLES 1-1, 3-1, 4-1, 5-1)

AWARENESS OF COMPUTER (CONTINUED)

	FAMILY INCOME					OCCUPATION			
	UNDER $5,000 (223)	$5,000-$7,499 (258)	$7,500-$9,999 (229)	$10,000-$11,999 (129)	$12,000 or more (126)	Professional /Managerial (213)	Other White Collar (143)	Blue Collar (404)	Other (270)
	%	%	%	%	%	%	%	%	%
A. CONTACT WITH COMPUTER									
Direct Contact With Computer a/	3	7	15	26	20	22	16	13	3
Indirect Contact: (In Home) b/	59	75	73	80	78	74	74	73	68
For Example: Utility Bills c/	8	12	12	7	7	10	7	20	13
B. AWARENESS OF COMPUTER MANUFACTURER									
Name One or More Computer Manufacturer	31	42	65	62	74	67	63	53	35
IBM	27	38	60	57	71	64	58	48	31
Other	11	17	19	35	47	34	34	20	14
None	69	58	35	38	26	33	37	47	65

a/ Based on Question 1 a. Do you have any contact directly with the computer, or with anything a computer prints out?
b/ Based on Question 1 b. Do any of these things that a computer prints out ever come into your home?
c/ Based on Question 1 c. Can you name some of these please?

(See TABLES: 11-1, 13-1, 14-1, 15-1)

2. Perceptions of the Computer

People generally perceive the computer as being a very efficient mathematical machine (60% of all respondents.) Even so, when queried directly about the computer's "touted" accuracy and exactness, 45% agree with this assessment and an equal number disagree, a surprising finding in light of the fact that a clear majority (64%) indicate that they have not experienced any difficulties with computer errors on "print-outs" coming into the home. While 16% of the respondents consider the computer to be an intelligent machine, less than half of these people feel that it is more intelligent than the average person. About one in five think of the computer as just another appliance.

There is a greater tendency on the part of women than men to think of the computer as just another appliance.

Perceptions of the computer appear to vary with occupation; generally professional/managerial people view the computer as an efficient mathematical machine while there is a greater tendency among blue collar workers to place the computer into the category of just another appliance.

IMAGE OF COMPUTER

	TOTAL (1030) %	TOTAL MALE (489) %	TOTAL FEMALE (541) %	OCCUPATION: PROFESSIONAL /MANAGERIAL (213) %	OTHER WHITE COLLAR (143) %	BLUE COLLAR (404) %	OTHER (270) %
Computers Are:							
Very Efficient Mathematical Machines	60	65	56	71	66	58	53
Another Appliance	19	14	23	12	13	21	24
Intelligent Machine	16	18	13	10	19	17	16
No Opinion	5	3	8	7	2	4	7

(See TABLES 50-1, 51-1)

PERCEIVED INTELLIGENCE OF COMPUTER

	Total Perceiving Computer As Intelligent Machine (160) %	Total Sample (1030) %
Computers Are:		
More Intelligent than average person	47	7
About the same	31	5
Less Intelligent than average person	13	2
No Opinion	9	1

(See TABLE 47-1)

COMPUTERS ARE EXTREMELY ACCURATE AND EXACT

	Total Respondents (1030) %	
Strongly Agree	39	45
Agree	6	
Disagree	37	45
Strongly Disagree	8	
No Opinion	10	

(See TABLE 18-6)

EXPERIENCE COMPUTER ERRORS

	Total Respondents (1030) %
Yes	29
No	64
Not Sure	7

(See TABLE 27-1)

In spite of the fact that only 7% of all respondents think that the computer is more intelligent than the average person, a far greater proportion attribute more than just simple efficiency to the computer. For example: more than half of all respondents think there is almost no limit to what computers can do; about a third feel a computer can make some important decisions better than people; and 14% feel that computers can think the way humans can.

THERE IS ALMOST NO LIMIT
TO WHAT COMPUTERS CAN DO

	Total Respondents (1030)	
	%	
Strongly Agree	9	54
Agree	45	
Disagree	29	30
Strongly Disagree	1	
No Opinion	16	

(See TABLE 18-5, 18-6)

COMPUTERS CAN MAKE SOME IMPORTANT DECISIONS BETTER THAN PEOPLE

	Total Respondents (1030) %	
Strongly Agree	3	35
Agree	32	
Disagree	42	50
Strongly Disagree	8	
No Opinion	15	

(See TABLE 18-6)

COMPUTERS CAN THINK THE WAY HUMANS CAN

	Total Respondents (1030) %	
Strongly Agree	2	14
Agree	12	
Disagree	61	77
Strongly Disagree	16	
No Opinion	9	

(See TABLE 18-3)

3. Effects of Computerization

Attitudes toward the ways in which computers affect or influence society fall into three broad categories:

a) benefits to society

b) fears, anxieties or concerns

c) degree of perceived change.

a) Benefits to Society

An overwhelming majority of the respondents recognize the computer's potential to make important contributions in the areas of scientific research (86%) and information availability (85%). Respondents also recognize the possible use of the computer in the conceptual area -- in enabling government and business to make better decisions (53%) and improving the quality of education (58%). However, respondents appear somewhat less committed to the conceptual or decision-making ability of the computer than they are to its more rote functions of data retrieval and factual compilations.

Certain trends become evident when taking an over-view of the "benefits to society". There is a greater tendency to recognize the contributions the computer can make in these areas among the following subgroups:

- men rather than women
- higher income rather than lower income
- urban rather than rural.

COMPUTERS ARE IMPORTANT IN SCIENTIFIC RESEARCH

	TOTAL RESPONDENTS (1030)	TOTAL URBAN (780)	TOTAL RURAL (250)	TOTAL MALE (489)	TOTAL FEMALE (541)	UNDER $5,000 (223)	$5,000-$7,499 (258)	$7,500-$9,999 (229)	$10,000-$11,999 (129)	$12,000 OR MORE (126)
	%	%	%	%	%	%	%	%	%	%
Strongly Agree	28	29	23	31	24	16	22	35	38	37
Agree	58	58	60	58	59	61	62	56	54	51
Disagree	4	5	2	2	5	3	5	2	3	6
Strongly Disagree	2	2	2	3	1	3	2	1	3	2
No Opinion	8	6	13	6	11	17	9	6	2	4

(See TABLES: 17-2, 22-2, 23-2)

COMPUTERS WILL MAKE INFORMATION MORE EASILY AVAILABLE

	TOTAL RESPONDENTS (1030)	TOTAL URBAN (780)	TOTAL RURAL (250)	TOTAL MALE (489)	TOTAL FEMALE (541)	UNDER $5,000 (223)	$5,000-$7,499 (258)	$7,500-$9,999 (229)	$10,000-$11,999 (129)	$12,000 OR MORE (126)
	%	%	%	%	%	%	%	%	%	%
Strongly Agree	17	19	12	20	15	12	13	22	22	23
Agree	68	67	71	68	68	61	70	69	75	67
Disagree	6	7	5	5	8	8	10	3	2	6
Strongly Disagree	1	1	-	1	-	1	1	-	-	-
No Opinion	8	6	12	6	9	18	6	5	1	4
Not Stated	-	-	-	-	-	-	-	1	-	-

(See TABLES: 17-7, 22-7, 23-7)

COMPUTERS WILL ENABLE GOVERNMENT AND BUSINESS TO MAKE BETTER DECISIONS

	TOTAL RESPONDENTS (1030)	TOTAL URBAN (780)	TOTAL RURAL (250)	TOTAL MALE (489)	TOTAL FEMALE (541)	UNDER $5,000 (223)	$5,000-$7,499 (258)	$7,500-$9,999 (229)	$10,000-$11,999 (129)	$12,000 OR MORE (126)
	%	%	%	%	%	%	%	%	%	%
Strongly Agree	7	7	5	9	4	5	6	5	10	8
Agree	46 (53)	48 (55)	39 (44)	50 (59)	43 (47)	34 (39)	44 (50)	50 (55)	51 (61)	64 (72)
Disagree	28	27	30	24	31	26	30	29	26	21
Strongly Disagree	3 (31)	3 (30)	4 (34)	5 (29)	2 (33)	5 (31)	3 (33)	2 (31)	2 (28)	2 (23)
No Opinion	16	15	22	12	20	30	17	14	11	5

(See TABLES: 17-7, 22-7, 23-7)

COMPUTERS WILL IMPROVE QUALITY OF EDUCATION

Strongly Agree	8	10	4	11	5	7	6	11	8	11
Agree	50 (58)	50 (60)	51 (55)	53 (64)	48 (53)	45 (52)	45 (51)	55 (66)	57 (65)	52 (63)
Disagree	26	24	29	23	27	25	29	19	23	30
Strongly Disagree	2 (28)	3 (27)	1 (30)	2 (25)	3 (30)	1 (26)	4 (33)	2 (21)	4 (27)	- (30)
No Opinion	14	13	15	11	17	22	16	13	7	7
Not Stated	-	-	-	-	-	-	-	-	1	-

(See TABLES 17-5, 22-5, 23-5)

Although there is a great tendency among respondents to agree with the statement "computers will give us more leisure time" (73%), they do not necessarily associate this additional leisure time with a higher standard of living. Only 47% agree that computers will raise the standard of living while an additional 35% disagree.

COMPUTERS WILL MEAN A HIGHER STANDARD OF LIVING

	Total Respondents (1030) %	
Strongly Agree	7	47
Agree	40	
Disagree	32	35
Strongly Disagree	3	
No Opinion	18	

(See TABLE 17-1, 17-2)

COMPUTERS WILL GIVE MORE LEISURE TIME

	Total Respondents (1030) %	
Strongly Agree	9	73
Agree	64	
Disagree	14	18
Strongly Disagree	4	
No Opinion	9	

(See TABLE 17-1)

A possible explanation for the reluctance to attribute "higher standard of living" to increased computerization may abide in the potential problems associated with this increase. For example, seven out of ten respondents seem to think that computers will be a cause of unemployment. Virtually the same number believe that computers can cause serious errors because they do not take human factors into account. Opinion on complexity of life as a result of computers is divided (40% agree while 47% disagree). These three responses indicate a prophesying of fairly global problems for society as a result of computerization. There appears to be greater concern for these problems among females than among males. Professional/managerial respondents seem to be less preoccupied with these possibilities than are other occupational groups.

COMPUTERS WILL CAUSE UNEMPLOYMENT

	TOTAL RESPONDENTS (1030)	TOTAL URBAN (780)	TOTAL RURAL (250)	TOTAL MALE (489)	TOTAL FEMALE (541)	PROFESSIONAL /MANAGERIAL (213)	OTHER WHITE COLLAR (143)	BLUE COLLAR (404)	OTHER (270)
	%	%	%	%	%	%	%	%	%
Strongly Agree	22	22	20	17	25	20	24	23	20
Agree	49	46	56	45	53	40	44	51	55
	71	68	76	62	78	60	68	74	75
Disagree	22	24	15	29	16	32	25	20	16
Strongly Disagree	2	3	1	3	1	3	3	2	1
	24	27	16	32	17	35	28	22	17
No Opinion	5	5	8	6	5	5	4	4	8

(See TABLES: 17-2, 22-2, 24-2)

COMPUTERS CAN CAUSE SERIOUS ERRORS BECAUSE THEY DON'T TAKE HUMAN FACTORS INTO ACCOUNT

Strongly Agree	12	14	5	11	12	15	7	13	8
Agree	57	56	60	56	59	51	58	57	62
	69	70	65	67	71	66	65	70	70
Disagree	16	17	15	20	15	22	22	16	12
Strongly Disagree	3	3	2	4	1	3	3	2	3
	19	20	17	24	16	25	25	18	15
No Opinion	12	10	18	9	13	9	10	12	15

(See TABLES: 17-3, 24-3, 22-3)

COMPUTERS WILL MAKE LIFE MORE COMPLICATED

	TOTAL RESPONDENTS (1030)	TOTAL URBAN (780)	TOTAL RURAL (250)	TOTAL MALE (489)	TOTAL FEMALE (541)	PROFESSIONAL /MANAGERIAL (213)	OTHER WHITE COLLAR (143)	BLUE COLLAR (404)	OTHER (270)
	%	%	%	%	%	%	%	%	%
Strongly Agree	4	4	3	4	4	2	6	5	3
	40	42	33	36	43	36	38	39	4
Agree	36	38	30	32	39	34	32	34	41
Disagree	45	44	47	52	39	50	55	45	36
	47	47	47	55	41	53	56	48	3
Strongly Disagree	2	3	-	3	2	3	1	3	2
No Opinion	13	11	20	9	16	10	6	13	18
Not Stated	-	-	-	-	-	1	-	-	-

(See TABLES: 17-7, 22-7, 24-7)

b) Fears, Anxieties or Concerns

Problems resulting from increased computerization are perceived not only to affect society in general, but also people's personal lives. The following responses will elucidate the extent of such feelings.

More than one quarter (28%) of all respondents indicate a fear of computers taking over their personal lives, and almost half (43%) think that people are going too far in using computers. This perhaps indicates a fear of depersonalization and loss of individual control resulting from a computerized society.

COMPUTERS WILL TAKE OVER OUR PERSONAL LIVES

	Total Respondents (1030) %	
Strongly Agree	4	28
Agree	24	
Disagree	55	60
Strongly Disagree	5	
No Opinion	11	
Not Stated	1	

(See TABLE 19-4)

PEOPLE ARE GOING TOO FAR IN USING COMPUTERS

	Total Respondents (1030) %	
Strongly Agree	5	43
Agree	38	
Disagree	35	38
Strongly Disagree	3	
No Opinion	19	

(See TABLE 17-6)

Another expression of such fear is revealed by six out of ten respondents agreeing with the statement: "Individuals are just becoming numbers." More than half (55%) seem to think that the computer will usurp their cognitive functions.

COMPUTERS MAKE YOU THINK INDIVIDUALS ARE JUST BECOMING NUMBERS

	Total Respondents (1030) %	
Strongly Agree	13	62
Agree	49	
Disagree	25	29
Strongly Disagree	4	
No Opinion	9	

(See TABLE 18-2)

COMPUTERS WILL MAKE PEOPLE THINK LESS

	Total Respondents (1030) %	
Strongly Agree	10	55
Agree	45	
Disagree	35	38
Strongly Disagree	3	
No Opinion	7	

(See TABLE 17-5)

Further indication of the overall fear of "man" being taken over by "machine" is evidenced by the fact that 28% of the respondents seem to think that the computer poses a threat to family life and 37% feel that the computer is a threat to personal privacy. When asked more directly about the possible violation of confidentiality through the computer, more than half (53%) thought that an "information leak" was likely to happen.

COMPUTERS THREATEN FAMILY LIFE

	Total Respondents (1030) %	
Strongly Agree	5	28
Agree	23	
Disagree	51	57
Strongly Disagree	6	
No Opinion	15	

(See TABLE 17-1)

COMPUTERS THREATEN OUR PERSONAL PRIVACY

	Total Respondents (1030) %	
Strongly Agree	5	37
Agree	32	
Disagree	44	48
Strongly Disagree	4	
No Opinion	15	

(See TABLE 17-3)

COMPUTERS WILL CAUSE VIOLATION OF CONFIDENTIALITY

	Total Respondents (1030) %
Likely to Happen	53
Not Likely to Happen	36
No Opinion	11

(See TABLE 27-1)

Overall, there appears to be somewhat less fear of computerization among the following subgroups:

- French Canada
- males
- higher income
- professional/managerial

These differences within subgroups will be discussed in more detail in the AID analysis.

c. Degree of Perceived Change

Despite expressed fear of the computer's effects on the individual and society, respondents seem to think that the age of computerization is a reality of the future. Thus they

predict that their lives will change very little, if at all, (84%); but, the lives of children today will be affected dramatically (50%) or at least in some way (36%).

In addition, respondents indicate that whatever change does occur in the future, will have more impact on society (36%) than on the individual (11%).

CHANGE THROUGH COMPUTERIZATION

DEGREE OF CHANGE:	Own Life (1030) %		Future Lives (1030) %		Society (1030) %	
Entirely	3	11	11	50	6	36
A Great Deal	8		39		30	
Somewhat	39	84	36	43	46	57
Not at All	45		7		11	
No Opinion	5		7		7	

(See TABLE 34-1, 42-1, 27-1)

4. The In-Home Computer Terminal

a) Awareness and Attitudes

One half of the respondents express awareness of the concept of in-home computer terminals. An equal number are unaware of this idea. The majority of respondents recognize the possibility of individual families having such a connection in their homes (having gained awareness of its feasibility.) Awareness and acceptance of in-home terminals are greater within the following subgroups:

- males
- professional/managerial
- younger respondents
- respondents interested in gadgets.

While more English (53%) than French respondents (51%) claim awareness of the concept, fewer English (52%) than French (60%) seem prepared to accept it as a future reality.

AWARENESS OF IN-HOME TERMINAL

AWARE OF TERMINALS	TOTAL (1030)	MALE				FEMALE			
		TOTAL MALE (489)	UNDER 30 (72)	30 - 49 (232)	50 AND OVER (185)	TOTAL FEMALE (541)	UNDER 30 (107)	30 - 49 (237)	50 AND OVER (196)
	%	%	%	%	%	%	%	%	%
YES	50	55	66	55	51	45	56	50	33
NO	50	45	34	45	49	54	44	49	66
NOT STATED	-	-	-	-	-	1	-	1	1

AWARE OF TERMINALS	OCCUPATION				LANGUAGE		INTEREST IN GADGETS	
	PROFESSIONAL /MANAGERIAL (213)	OTHER WHITE COLLAR (143)	BLUE COLLAR (404)	OTHER (270)	FRENCH QUEBEC (229)	REST OF CANADA (801)	LOWER HALF (565)	UPPER HALF (454)
	%	%	%	%	%	%	%	%
YES	63	58	47	39	41	53	44	57
NO	37	41	53	60	59	47	56	42
NOT STATED	-	1	-	1	-	-	-	1

(See TABLES 55-1, 56-1, 57-1, 58-1)

ACTUAL CONNECTION OF IN-HOME TERMINAL

WILL INDIVIDUAL FAMILY EVER HAVE THEM?	TOTAL (1030)	MALE				FEMALE			
		TOTAL MALE (489)	UNDER 30 (72)	30 - 49 (232)	50 AND OVER (185)	TOTAL FEMALE (541)	UNDER 30 (107)	30-- 49 (237)	50 AND OVER (196)
	%	%	%	%	%	%	%	%	%
YES	54	62	80	64	53	46	62	50	33
NO	34	30	17	29	37	38	25	36	48
NO OPINION	12	8	3	7	9	16	13	14	19
NOT STATED	-	-	-	-	1	-	-	-	-

	OCCUPATION				LANGUAGE		INTEREST IN GADGETS	
	PROFESSIONAL /MANAGERIAL (213)	OTHER WHITE COLLAR (143)	BLUE COLLAR (404)	OTHER (270)	FRENCH QUEBEC (229)	REST OF CANADA (801)	LOWER HALF (565)	UPPER HALF (454)
	%	%	%	%	%	%	%	%
YES	62	54	55	46	60	52	48	61
NO	30	31	32	43	24	37	40	28
NO OPINION	8	14	13	11	15	11	12	11
NOT STATED	-	1	-	-	1	-	-	-

(See TABLES 55-1, 56-1, 57-1, 58-1)

Opinion is divided on who should provide computer services. Within the total sample 39% believe that the government should provide such services, while 40% feel that the service should be the responsibility of the private business sector. One in five could offer no opinion on the matter.

PROVISION OF COMPUTER SERVICES

	Total Respondents (1030) %
Should be Provided by Government	39
Should be Provided by Business	40
No Opinion	21

(See TABLE 81-1)

Even among those who agree that the service should be provided by business, 58% feel that business should be regulated by government. Of those favouring private enterprise, 81% indicate that the business should be Canadian owned.

GOVERNMENT REGULATION OF PRIVATE ENTERPRISE

	Total Favouring Business as Provider of Computer Service (408) %
Regulation by Government:	
Yes	58
No	33
No Opinion	9

(See TABLE 87-1)

OWNERSHIP OF COMPUTER SERVICE BUSINESS

	Total Favouring Business as Provider of Computer Service (408) %
Ownership Should Be:	
Canadian	81
American	1
Doesn't Matter	16
Not Stated	2

(See TABLE 87-1)

The major reason volunteered by those who felt that computer services should be provided by the government is that it

could provide such a service at a more reasonable cost than business (30%). One in five indicate that the government would prove more reliable and could exercise better control. Another 15% feel that there would be less exploitation if the computer service were controlled by the government.

Among those who thought that computer services should be provided by business, better service (23%) and better price (20%) were the main reasons offered. Seventeen percent indicated that they did not believe in government control and 15% felt that "the government cannot do everything".

Among those who did not express an opinion about the source of control, 13% mentioned that they did not know enough to offer an opinion and an additional 58% could not state an opinion.

REASONS VOLUNTEERED FOR CHOICE OF PROVIDER

	Respondents Who Chose		
	Government (404) %	Business (408) %	No Opinion (218) %
Reasons Volunteered:			
Wouldn't Cost as Much if Provided by Government	30		
Government More Reliable /Better Control	21		
Less Exploitation with Government	15		
Business would give Better Service		23	
Better Price from Business		20	
Don't Believe in Government Control		17	
Government Can't Do Everything		15	
Don't Know Enough About it			13
Not Stated			58

(See TABLE 85-1)

b) Types of Services Desired

Presented with a list of 52 possible in-home computer services (with some cost implied) 30% rejected all. Among these services, only two reached a 40% level in the "strongly want" * category. (Traffic and road conditions, 42%, and Emergency medical service, 41%). Of the remaining 50 services, the following reached about the 30% level of strongly want.

TRANSPORTATION	PERCENT
. Travel advice--maps and routes--the computer would be connected with a TV-like screen which could be used to show the map and routes required.	34
. Transportation timetables--the computer would display upon demand the current timetables of the trip being considered ...	30
. Reservations for plane, boat, train etc.--the computer would allow the person to arrange for his own reservation from his home..	30
MEDICAL SERVICE	
. Crisis advice centre--alcohol, drugs, suicide, etc.-- the best qualified specialists' advice would become available through telephone-computer hook-ups.	33
. Diagnosis of illness before consulting doctor--computer would make initial diagnosis through questions and answers	27

* The "Strongly want" measurement was felt to be the most accurate indicator of types of services desired.

ENTERTAINMENT	PERCENT
. A large selection of movies to be seen on TV screen--the computer would provide a means of selecting a movie from a TV movie library to be shown on your home TV set.	31
. Music and cultural events--the computer would treat such events as live TV with a wide selection to the individual in his home.	28
DETAILS OF DAILY LIVING	
. Income tax calculation.	30
. Catalogue of products with comparative prices--the home computer would be instructed to search the files of product supplies for a match to the product required, giving prices.	29

(See TABLES 59-1 through 59-11)

The services chosen with greatest frequency are geared to ease present problems and situations as opposed to satisfying future needs. The services which have the most universal appeal are ones that touch on common needs and are not linked to any particular lifestyle. In addition, many have the characteristic of being labour-saving and capable of reducing or eliminating many tedious tasks of everyday life. For instance. road and traffic conditions, travel advice and reservations from home would enable people to move from place to place more easily within the current transportation structure. Income

tax calculation and comparative catalogue shopping are examples of necessary and time-consuming details that could be assumed by the computer. The category of "Medical Service" was singled out as an area in which people recognize the computer's capacity for immediate service. The strength of this response also indicates a feeling of insufficiency with the current situation.

The concepts of an in-home movie library for use on television screens, and live music and cultural events are well received. This is probably closely related to the high use of television as an entertainment form.

Respondents were asked to evaluate the monthly cost for the total number of in-home computer services for which they had indicated a strong desire. It must be noted that the number of services "strongly wanted" varied from respondent to respondent. Consequently, the cost estimates are not based on a constant number of services nor on the relative complexity of the services chosen. The majority of the sample (71%) suggested a monthly cost of between $1 and $24 for in-home services. Only one in ten felt that the services would be worth $50.00 or more per month.

FACTOR ANALYSIS
AND
AID ANALYSIS

FACTOR ANALYSIS AND
AID ANALYSIS

C. FACTOR ANALYSIS AND AID ANALYSIS

1. Factor Analysis

A number of attitudinal questions concerning the computer were asked of respondents. These questions were used as variables in a factor analysis which was conducted to determine whether or not, and to what extent, these attitudes were interrelated.

It must be noted, at this point, that the 27 variables included in the analysis produced seven stable factors which accounted for only 53% of the total variance. That is, a large amount of information loss resulted from structuring attitudes and beliefs concerning the computer. This indicates that while structure can be obtained, the attitudes do not form a sharply focused pattern. This, in essence, can be attributed to both sampling error and confusion among the public concerning computers.

The seven factors that emerged from the analysis were given:

1) basic names
2) actual descriptions.

The factors are listed in order of their contributions to the explanation of the original set of 27 variables. Within factors, items are listed in order of importance to the explanation of the factor.

Description of Factors

FACTOR 1. Depersonalization/Loss of Control

Percent Contribution to Total Variance: 17.4

Composition of Factor 1:	Loading
. People are going too far with computers	+.63
. Will cause unemployment	+.62
. Will make people think less	+.59
. Will take over personal lives	+.56
. Individuals are just becoming numbers	+.56
. Computers threaten family life	+.55
. Will make life more complicated	+.54
. Serious mistakes because computers don't take human factors into account	+.41
. Awareness of computer companies	-.34

FACTOR 2. Perceptions of Technological Benefits

Percent Contribution to Total Variance: 9.7

Composition of Factor 2:	Loading
. Information more easily available	+.59
. Important in scientific research	+.56
. Higher standard of living	+.43
. Quality of education improved	+.39

FACTOR 3. Perceptions of "The Computer"

Percent Contribution to Total Variance: 7.6

Composition of Factor 3:	Loading
. Impression of Computer	+.90
. Estimate of Computer Intelligence	+.80

FACTOR 4. Perceived Impact of "Computerization"

Percent Contribution to Total Variance: 5.5

Composition of Factor 4:	Loading
. Impact on society	+.63
. Impact on lives of children	+.62
. Impact on individual's life	+.57

FACTOR 5. Perceptions of Computer as "Supermachine"

Percent Contribution to Total Variance: 4.5

Composition of Factor 5:	Loading
. Computers can make some important decisions better than people	+.58
. Better decisions for government and business	+.48
. Computers are extremely accurate and exact	+.37
. There is almost no limit to what computers can do	+.28
. Computers think the way humans can	+.27

FACTOR 6. Invasion of Privacy/Misuse of Personal Information

Percent Contribution to Total Variance: 4.3

Composition of Factor 6	Loading
. Likelihood of the wrong persons getting information from computer storage	+.49
. Computers threaten own personal privacy	+.43

FACTOR 7. Experience with Computer Errors

Percent Contribution to Total Variance: 4.0

Composition of Factor 7	Loading
. Individual problems with computer errors	+.37

2. AID Analysis

Having obtained these seven factors an AID analysis was conducted on six of the factors to determine those characteristics of the people within each factor that best predict it. It should be noted that AID was not performed on Factor 7 because it is an experiential factor rather than an attitudinal one.

From the AID analysis, it became apparent that of the six factors, only three could be satisfactorily explained, only three contained an "internal consistency" with a thread of "logic" running through it. An overview of the six factors, however, allows for a meaningful interpretation in itself. Thus:

Interpretable Factors:

1. Depersonalization/Loss of Control
6. Invasion of Privacy/Misuse of Personal Information
2. Perceptions of Technological Benefits

Uninterpretable Factors:

3. Perceptions of "The Computer"
5. Perceptions of Computer as "Supermachine"
4. Perceived Impact of "Computerization"

First, the interpretable factors are those which assess attitudes of a personal nature (vis-à-vis the computer) and the uninterpretable factors are those which assess attitudes of a global nature (vis-à-vis the computer).

Expressed differently, the interpretable factors are those which call for a "gut" reaction while the others call for a "cognitive" response. Taking the population at large, there is greater consistency of response to the first group of factors because they effect "me" personally and immediately so that opinions and attitudes are "crystallized" to a good degree. The second group of factors are more distant and more general or global so that attitudes and opinions are divergent, confused, ambivalent, paradoxical -- or perhaps not even formulated.

Finally, regarding the factors that cannot be interpreted, there are probably three limitations that bring about this condition. One, it is likely that there are "trigger" variables that the research, as designed, did not collect (only 53% of the variance is accounted for by existing data). Two, as mentioned, individual opinions are so divergent that no meaningful pattern emerges. Three, while carefully controlled, some sampling errors could have influenced the AID data.

An analysis of the three interpretable factors follows.

FACTOR 1: Depersonalization/Loss of Control

The first parent group is Factor 1, Depersonalization/Loss of Control. The mean ($\bar{x}$) for this parent group has been normalized at 0.0. (This procedure was followed for every parent group.) As the mean increases positively, fear of depersonalization increases; as the mean increases negatively, fear decreases. These are two extremes of a negative scale.

-		+
Decreasing Fear	0.0 Normalized Average	Increasing Fear

In investigating Factor 1, the most important variable that splits the population on degree of fear is the perception of leaks in personal information from computer data banks.

-.28		+.23
information leak not likely to happen decreasing fear	0.0	information leak likely to happen increasing fear

Approximately one-third of the sample feel personal information leaks are not likely to happen and they are less fearful than those who feel they are likely to happen or those who will not offer an opinion. Among those who are fearful, their fear is compounded by their occupation and their strong perception that children's lives will be entirely or greatly changed in a computerized environment. This describes the group which expresses the greatest fear.

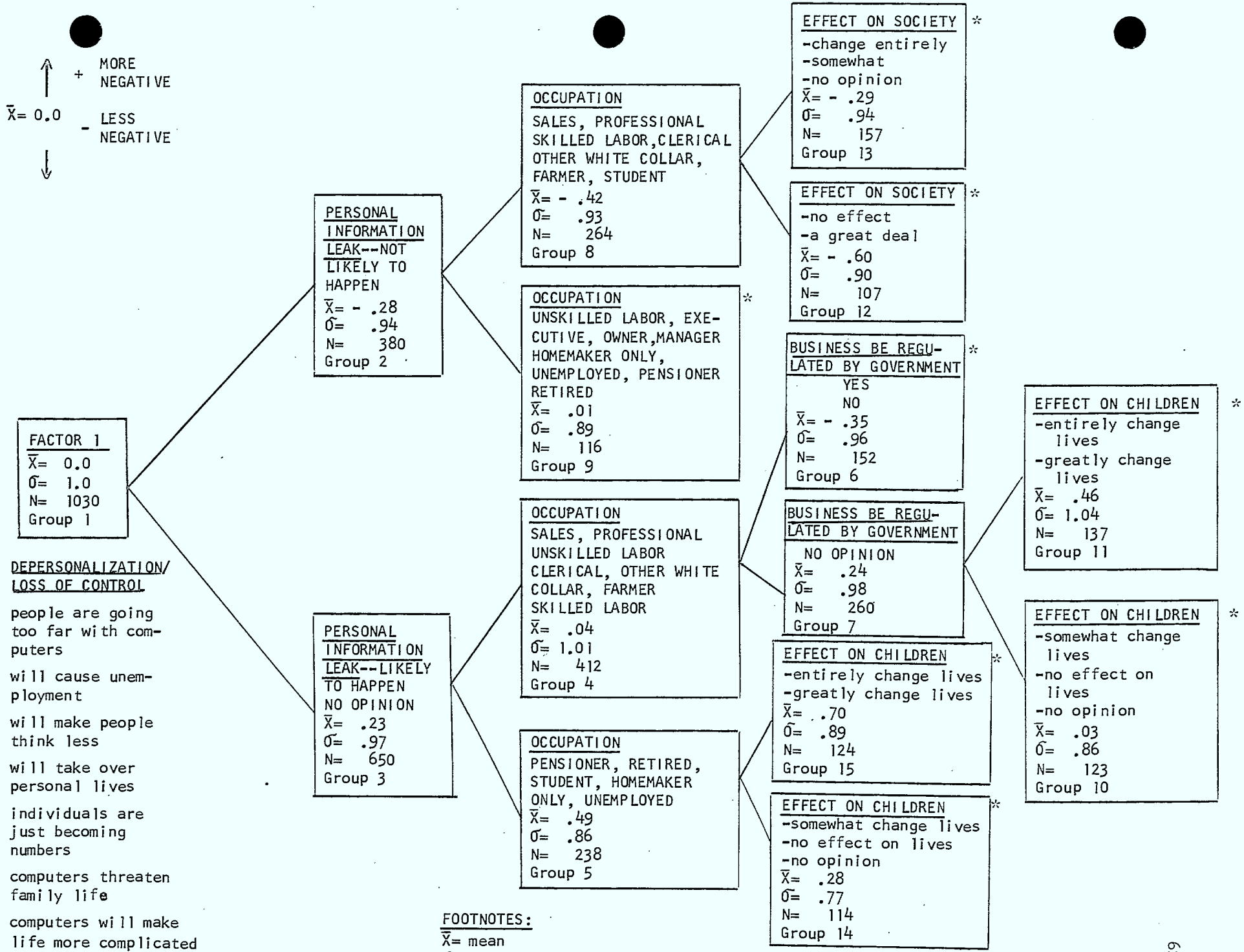
Interestingly, these people are characterized by being out of the "mainstream" of employeds (ex: pensioner/retired, student, homemaker, unemployed) and perhaps have the least contact or familiarity with computers. Based on the qualitative research and the quantitative data, it is likely that this segment of the population, having a rather "restricted" view of the world, is most fearful of future change including that change brought about by the computer. In the case of homemakers, anxiety over the effects of technology on the lives of children is likely to influence their perceptions of the computer. Perhaps fearful of their own inability to cope with future change, these people "transfer" that fear to children. In addition, the qualitative research indicates a strong concern regarding the effects of a computerized society on interpersonal relationships.

Further, among those who are fearful, fear tends to be "neutralized" as a function of occupation (not specific occupational group but the fact of employment itself) so it is possible that the security of the "pay cheque" may be a deterrent to fear. Anxiety becomes less intense with the feeling that government, business or a combination will provide and regulate computer services, whereas it increases among those who have no opinion. Those who have no opinion regarding regulation become even more apprehensive if they

feel computerization will dramatically affect children's lives, but "normalize" in their feelings if children are not seen to be greatly affected.

Regarding that population segment that feels personal information leaks are not likely to happen (those who are less fearful of depersonalization than the average), their concern further decreases within the following occupations: sales, professional, skilled labour, clerical, other white collar, farmer, student. Fear of depersonalization approaches the average among unskilled labourers, executives, owners, managers, homemakers only, unemployeds, and pensioners/retireds.

The former occupational grouping may perceive the computer less of a personal threat than the latter grouping. If, in addition, they perceive the computer to bring less than absolute change to society, their fear is further minimized. However, if they perceive an "entire" change being brought about by the computer, they return to the same degree of anxiety they held as part of the second group (the variable on which they first split).



DEPERSONALIZATION/ LOSS OF CONTROL

people are going too far with computers

will cause unemployment

will make people think less

will take over personal lives

individuals are just becoming numbers

computers threaten family life

computers will make life more complicated

serious mistakes because computers don't take human factors into account.

awareness of computer company

FOOTNOTES:

X̄= mean

σ= standard deviation

N= sample size

* end of splitting

FACTOR 6: Invasion of Privacy/Misuse of Personal Information

Factor 6, labelled "Invasion of Privacy/Misuse of Personal Information" is also a negative factor. That is, as the positive mean value increases, threat of such an invasion increases; as the negative mean value increases, the level of perceived threat decreases.

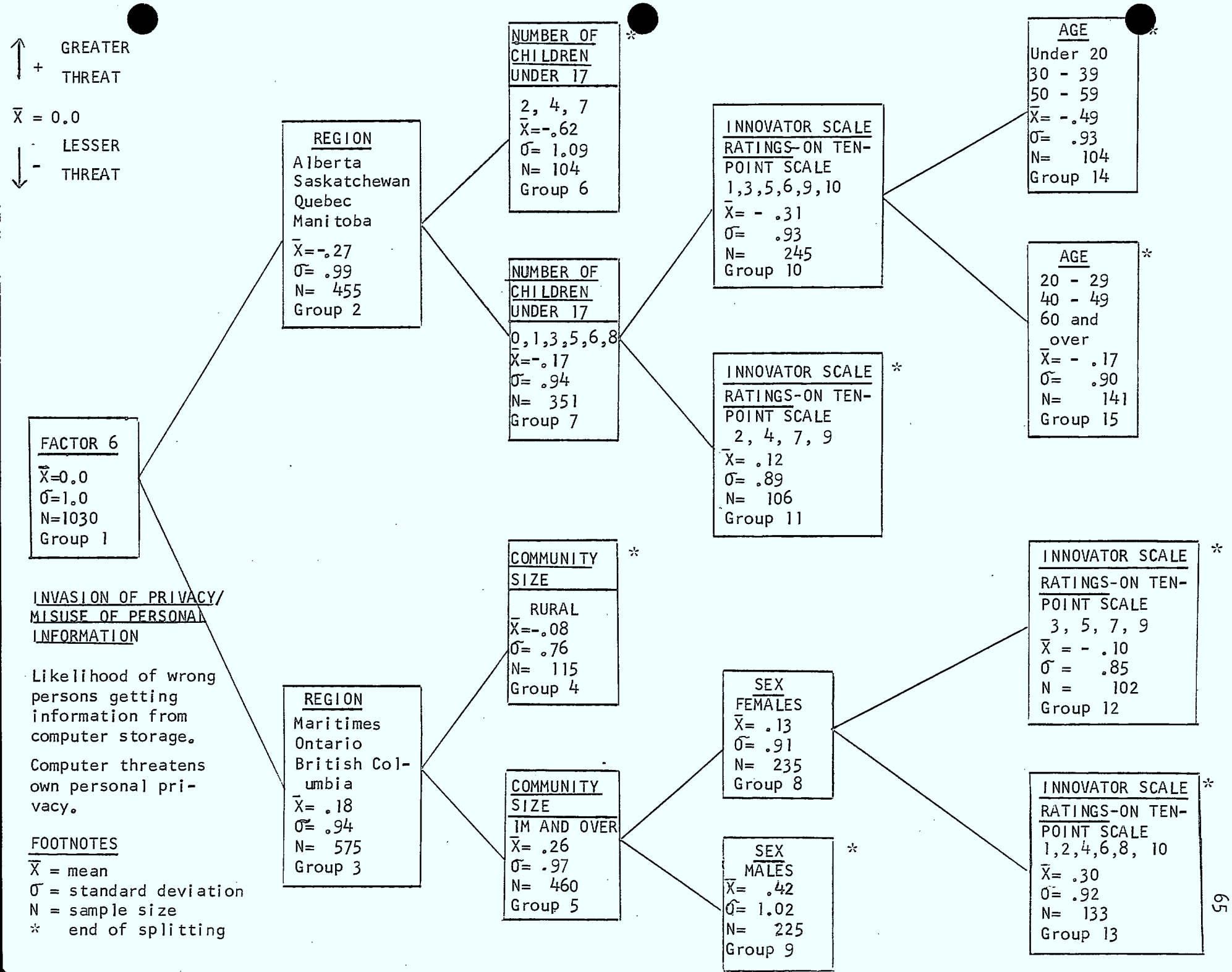
In assessing Factor 6, the first characteristic that splits the sample is region. Respondents from the Prairies and Quebec (about two-fifths of the sample) are less fearful of an invasion of their privacy than are respondents from the Maritimes, Ontario and British Columbia (about three-fifths of the sample). The large majority of respondents in the latter group are from Ontario and British Columbia. One would expect that residents of these regions, areas that are among the major financial/industrial centres of Canada, would have more exposure to and contact with the computer. In addition, the "lifestyle" of many people in these areas is likely to include considerable use of credit opportunities. With more frequent use of credit there is a greater likelihood of encountering problems resulting from (and greater familiarity with) improper handling of credit cards, "computerized" bills, credit ratings, etc.

It is probable that rural dwellers would be less aware and less fearful of the potential hazards of credit and of the subsequent computer threat to privacy.

Within urban centres there is a break by sex. Males, who have traditionally handled the family's finances, would have greater exposure to the intricacies of credit and would therefore feel more threatened by a potential misuse of credit information. In fact, men in urban centres comprise the group that is most fearful in this regard.

While more fearful than the average, women in urban areas (within Ontario and British Columbia) break on the "innovator" scale. This scale is a self-definition of degree of innovation based on the tendency to be among the first or last on their block to get something new. (The lower the number, the less innovative; the higher the number, the more innovative.) The great majority of women (172 out of 235) rank themselves on the lower half of the scale -- not very innovative. Among those women who think of themselves as quite innovative (63), three-quarters gain a sharp increase in fear of invasion of privacy while the rest are less fearful than the average. There may be a trend therefore, among women who think of themselves as innovative consumers to be more concerned with the issue of privacy.

Another factor to consider is that, by regional break, community size break, and innovator scale break, there may be an interrelationship between concern over invasion of privacy and income. The higher the income the greater the concern.


GREATER + THREAT
$\bar{X}$ = 0.0
LESSER - THREAT
FACTOR 6
$\bar{X}$=0.0
σ=1.0
N=1030
Group 1
INVASION OF PRIVACY/ MISUSE OF PERSONAL INFORMATION
Likelihood of wrong persons getting information from computer storage.
Computer threatens own personal privacy.
FOOTNOTES
$\bar{X}$ = mean
σ = standard deviation
N = sample size
* end of splitting
REGION
Alberta
Saskatchewan
Quebec
Manitoba
$\bar{X}$=-.27
σ= .99
N= 455
Group 2
REGION
Maritimes
Ontario
British Columbia
$\bar{X}$= .18
σ= .94
N= 575
Group 3
NUMBER OF CHILDREN UNDER 17
2, 4, 7
$\bar{X}$=-.62
σ= 1.09
N= 104
Group 6
NUMBER OF CHILDREN UNDER 17
0,1,3,5,6,8
$\bar{X}$=-.17
σ= .94
N= 351
Group 7
COMMUNITY SIZE
RURAL
$\bar{X}$=-.08
σ= .76
N= 115
Group 4
COMMUNITY SIZE
1M AND OVER
$\bar{X}$= .26
σ= .97
N= 460
Group 5
INNOVATOR SCALE RATINGS-ON TEN-POINT SCALE
1,3,5,6,9,10
$\bar{X}$= - .31
σ= .93
N= 245
Group 10
INNOVATOR SCALE RATINGS-ON TEN-POINT SCALE
2, 4, 7, 9
$\bar{X}$= .12
σ= .89
N= 106
Group 11
SEX FEMALES
$\bar{X}$= .13
σ= .91
N= 235
Group 8
SEX MALES
$\bar{X}$= .42
σ= 1.02
N= 225
Group 9
AGE
Under 20
30 - 39
50 - 59
$\bar{X}$= -.49
σ= .93
N= 104
Group 14
AGE
20 - 29
40 - 49
60 and over
$\bar{X}$= - .17
σ= .90
N= 141
Group 15
INNOVATOR SCALE RATINGS-ON TEN-POINT SCALE
3, 5, 7, 9
$\bar{X}$ = - .10
σ = .85
N = 102
Group 12
INNOVATOR SCALE RATINGS-ON TEN-POINT SCALE
1,2,4,6,8, 10
$\bar{X}$= .30
σ= .92
N= 133
Group 13

Among that segment of the sample (455 respondents) that is less threatened by computerized invasion of privacy than the average, no discernible pattern of characteristics emerges. Likely, this is a function of their relative lack of concern. The issue is not an "active" one in their minds and no well-structured set of attitudes exists.

FACTOR 2: Perceptions of Technological Benefits

The third parent group is Factor 2, Perceptions of Technological Benefits. As the mean increases positively, positive perceptions of technological benefits increase; as the mean increases negatively, perceptions are less positive. These, then, are two extremes of a positive scale.

-		+
Decreasing Positively	0.0 Normalized Average	Increasing Positively

In investigating Factor 2, the most important variable that splits the population on perceptions of technological benefits is whether or not people have a "realistic" appraisal of the computer. Those who have an "unrealistic" view of the computer, either imputing intelligence to it or shrugging it off as "just another appliance" (about two-fifths of the sample) are more positive about the technological benefits that the computer will bring. Those who see the computer more realistically

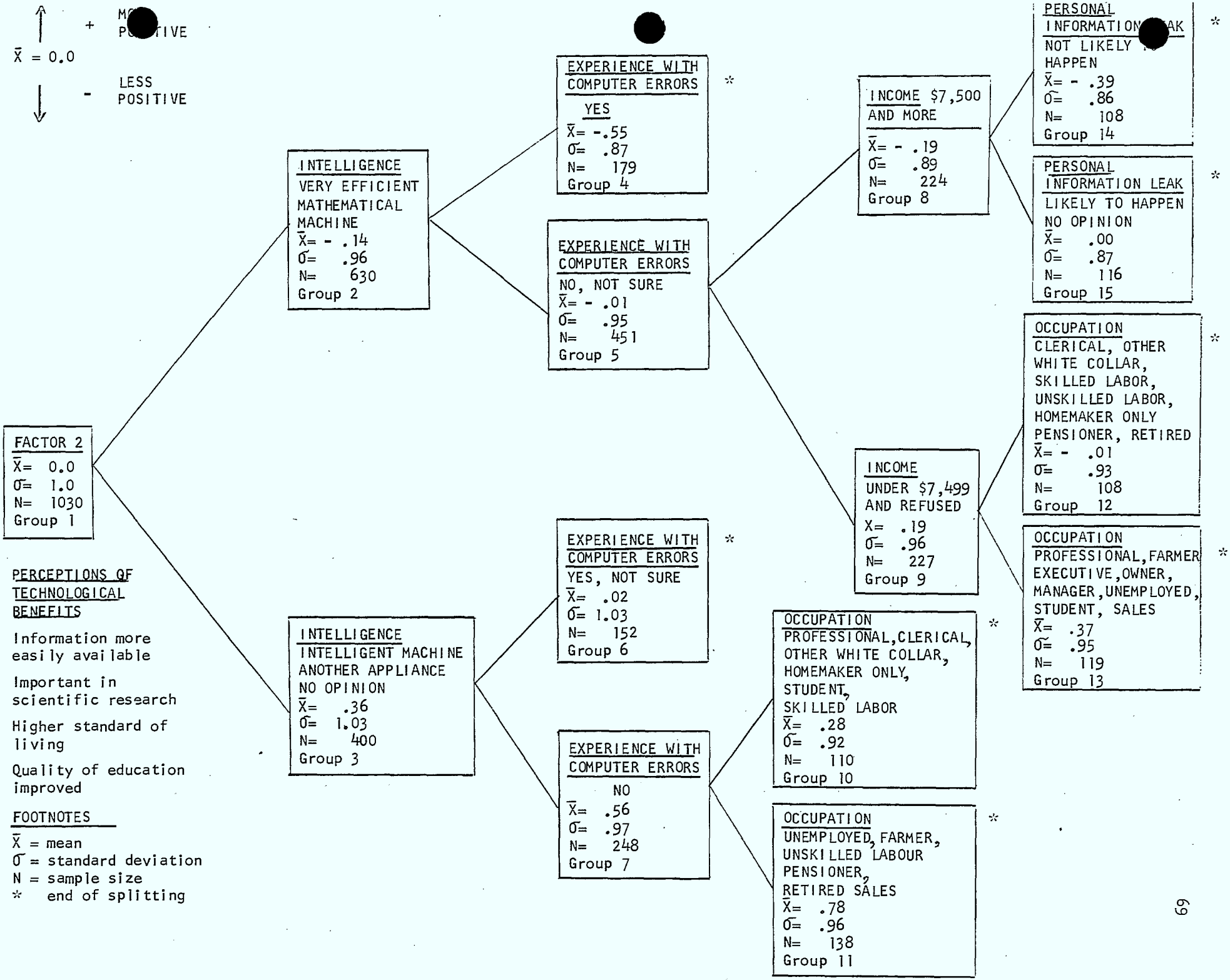
as an efficient mathematical machine (about three-fifths of sample) are less convinced. The majority of those who view the computer unrealistically perceive it as "another appliance" yet are quite convinced of its technological benefits. This apparent conflict might be explained by a desire to "force" the computer into a familiar "product category" (along with television, refrigerators, toasters, etc.) as a way of coping with it. Those who perceive the computer as an "intelligent" machine may feel that its intelligence will be responsible for beneficial technological advances. Experience with computer errors for both groups appreciably reduces the strength of their positive position. No experience with computer errors has the opposite effect. Those who are least convinced of the computer's technological benefits are those who have high expectations (very efficient mathematical machine) but have been disappointed by experience with computer errors.

Among those who have an unrealistic view of the computer and have had no experience with computer errors, occupation affects the degree of positive response. Those who are out of the labour mainstream (unemployed, farmer, unskilled labour, pensioner/retireds, etc.) and therefore have less contact with computers, are most positive about technological capabilities.

These same people, who are probably least familiar with computers and who are basically outside the labour market, appear to suffer from a kind of "computer prejudice". They tend to view the computer from an emotional rather than a rational position that may have its basis in ignorance and misconception. As a result, where they feel personally threatened they are far more negative than the average (Factor 1, and 6), and where they do not feel personal threat (Factor 2), they tend to be considerably more positive than the average. In both cases, whether negative or positive, it appears to be a subjective judgement rather than one based on fact or knowledge.

Income is a determinant of attitude toward technological efficacy among those who have not experienced computer errors (Groups 8 and 9). People with incomes of $7,500 or more are less certain of technological benefits than are people with incomes under $7,500.

For the higher income group, possibility of personal information leaks is a determining variable. Those who are willing to accept this as a by-product of the computer's ability to make a greater amount of information more available appear to be more convinced of the computer's technological efficacy


+ MORE POSITIVE
$\bar{X}$ = 0.0
- LESS POSITIVE
FACTOR 2
$\bar{X}$= 0.0
σ= 1.0
N= 1030
Group 1
INTELLIGENCE
VERY EFFICIENT MATHEMATICAL MACHINE
$\bar{X}$= - .14
σ= .96
N= 630
Group 2
INTELLIGENCE
INTELLIGENT MACHINE ANOTHER APPLIANCE
NO OPINION
$\bar{X}$= .36
σ= 1.03
N= 400
Group 3
EXPERIENCE WITH COMPUTER ERRORS
YES
$\bar{X}$= -.55
σ= .87
N= 179
Group 4
EXPERIENCE WITH COMPUTER ERRORS
NO, NOT SURE
$\bar{X}$= - .01
σ= .95
N= 451
Group 5
EXPERIENCE WITH COMPUTER ERRORS
YES, NOT SURE
$\bar{X}$= .02
σ= 1.03
N= 152
Group 6
EXPERIENCE WITH COMPUTER ERRORS
NO
$\bar{X}$= .56
σ= .97
N= 248
Group 7
INCOME $7,500 AND MORE
$\bar{X}$= - .19
σ= .89
N= 224
Group 8
INCOME
UNDER $7,499 AND REFUSED
X= .19
σ= .96
N= 227
Group 9
OCCUPATION
PROFESSIONAL, CLERICAL, OTHER WHITE COLLAR, HOMEMAKER ONLY, STUDENT, SKILLED LABOR
$\bar{X}$= .28
σ= .92
N= 110
Group 10
OCCUPATION
UNEMPLOYED, FARMER, UNSKILLED LABOUR PENSIONER, RETIRED SALES
$\bar{X}$= .78
σ= .96
N= 138
Group 11
PERSONAL INFORMATION LEAK
NOT LIKELY TO HAPPEN
$\bar{X}$= - .39
σ= .86
N= 108
Group 14
PERSONAL INFORMATION LEAK
LIKELY TO HAPPEN
NO OPINION
$\bar{X}$= .00
σ= .87
N= 116
Group 15
OCCUPATION
CLERICAL, OTHER WHITE COLLAR, SKILLED LABOR, UNSKILLED LABOR, HOMEMAKER ONLY PENSIONER, RETIRED
$\bar{X}$= - .01
σ= .93
N= 108
Group 12
OCCUPATION
PROFESSIONAL, FARMER EXECUTIVE, OWNER, MANAGER, UNEMPLOYED, STUDENT, SALES
$\bar{X}$= .37
σ= .95
N= 119
Group 13
PERCEPTIONS OF TECHNOLOGICAL BENEFITS
Information more easily available
Important in scientific research
Higher standard of living
Quality of education improved
FOOTNOTES
$\bar{X}$ = mean
σ = standard deviation
N = sample size
* end of splitting

than those who are not. This is perceived by many to be already happening, but is not seen as an intolerable invasion of privacy.

The lower income group splits on occupation, but the split does not provide any logical inferences.

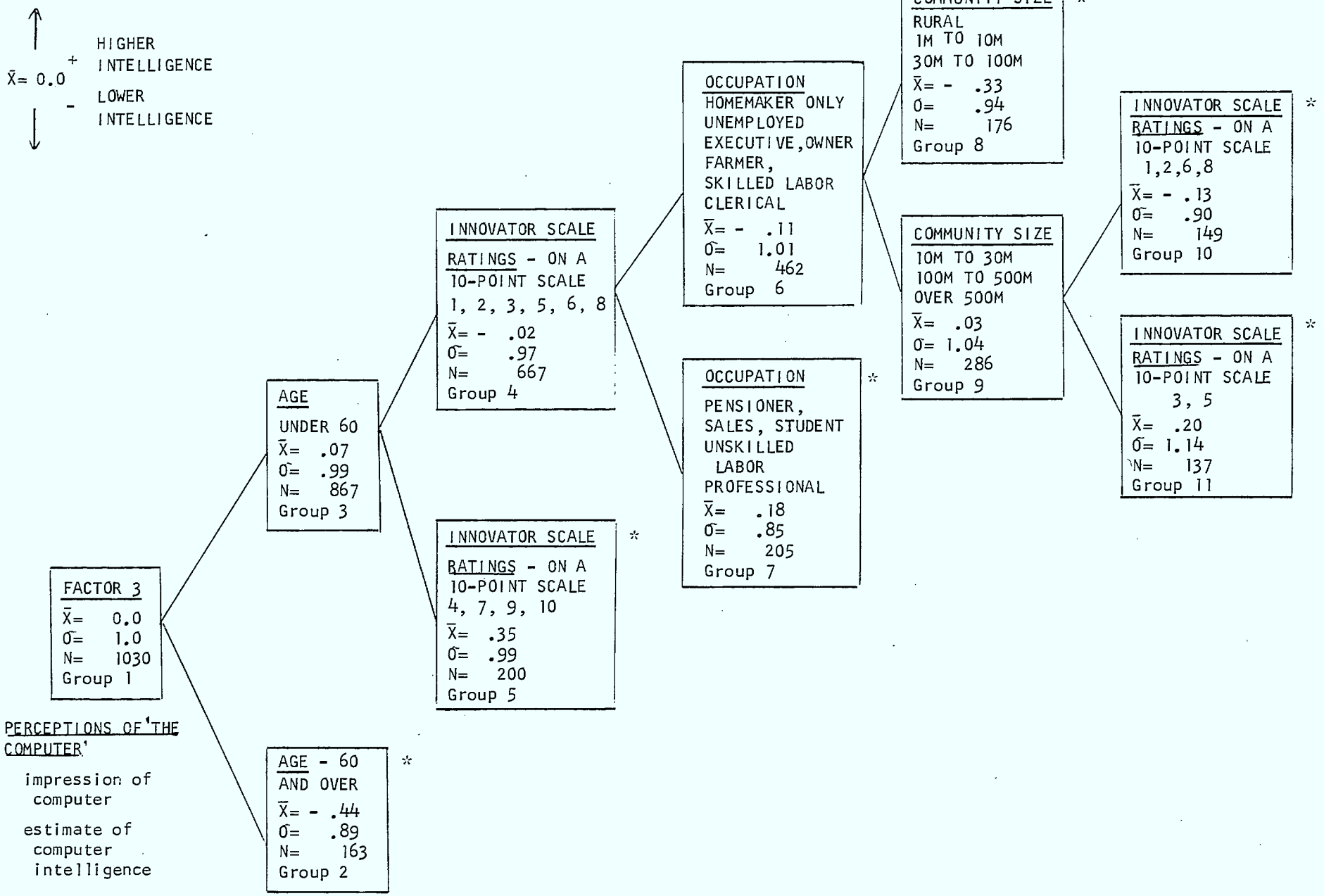
Having examined the three interpretable factors, it remains only to consider briefly the four uninterpretable factors.

FACTOR 3: Perceptions of "The Computer"

This factor is based on degree of perceived intelligence. The higher the positive mean value, the greater the perception of intelligence; the higher the negative mean value, the lesser the perception of intelligence.

The group that achieves the highest positive mean is characterized by high ratings on the innovator scale among people under 60. In a gross way, these people are more receptive to change than the average, probably less threatened by the computer than most, and may tend to approach the computer with a sense of "awe".

Additional breaks do not reveal any meaningful explanations.



PERCEPTIONS OF 'THE COMPUTER'

impression of computer

estimate of computer intelligence

FOOTNOTES:

$\bar{X}$ = mean

σ = standard deviation

N = sample size

* end of splitting

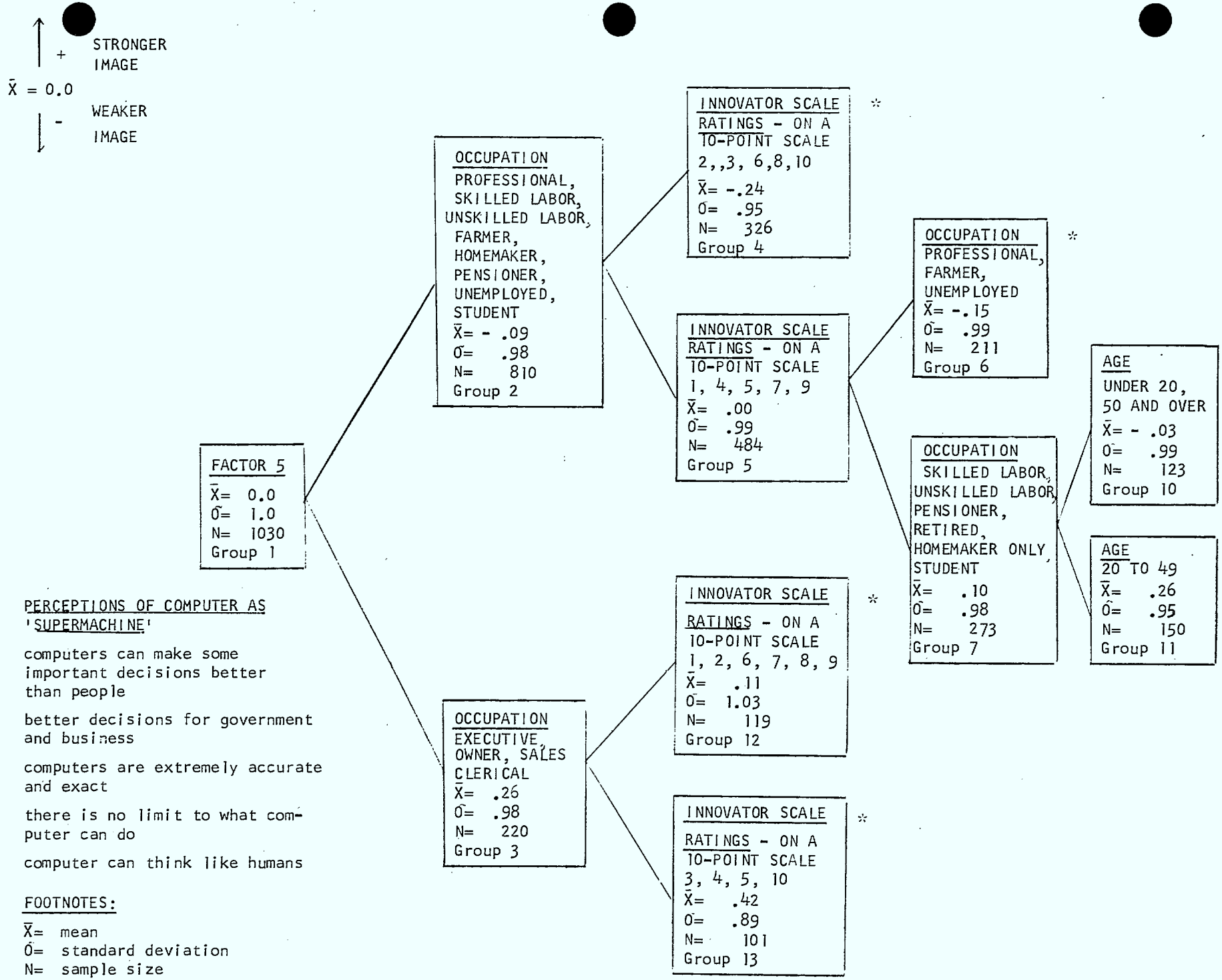
FACTOR 5: Perceptions of Computer as "Supermachine"

This factor is based on a number of "emotionally-charged" items. For example:

1) computers can THINK LIKE HUMANS
2) NO LIMIT to what computers can do
3) computers can make some important decisions BETTER THAN PEOPLE

The difference between this factor and Factors 1 and 6 is that, while equally threatening, the source of threat lies on a "conceptual" level rather than on a personal one. In other words, Factors 1 and 6 reflect an "interface" type of threat -- "what the computer will do to me" -- whereas Factor 5 has not been "personalized" in that way. Since it is a threat on an "intellectual" level, the AID analysis provides patterns which probably reflect the confusion and divergence of opinion that exists.

When looking at the table for this factor, it should be kept in mind that as the mean increases positively, perceptions of the computer as "supermachine" grow stronger; as the mean increases negatively, these same perceptions weaken.



PERCEPTIONS OF COMPUTER AS 'SUPERMACHINE'

computers can make some important decisions better than people

better decisions for government and business

computers are extremely accurate and exact

there is no limit to what computer can do

computer can think like humans

FOOTNOTES:

$\bar{X}$= mean
Ó= standard deviation
N= sample size
* end of splitting

FACTOR 4: Perceived Impact of "Computerization"

Factor 4 is comprised of items which require respondents to predict the degree of impact of the computer on society, the individual respondent, and the lives of children. The kind of knowledge and objectivity required to make such predictions meaningful is lacking, quite obviously, in most people. Consequently, a "subjective" prediction based on a complex of attitudes and opinions emerges. This is reflected in the AID analysis.

Nevertheless, there appear to be several interesting findings resulting from the AID analysis. Keep in mind that the higher the positive mean, the stronger the perception of impact; the higher the negative mean, the closer to a "no impact" perception.

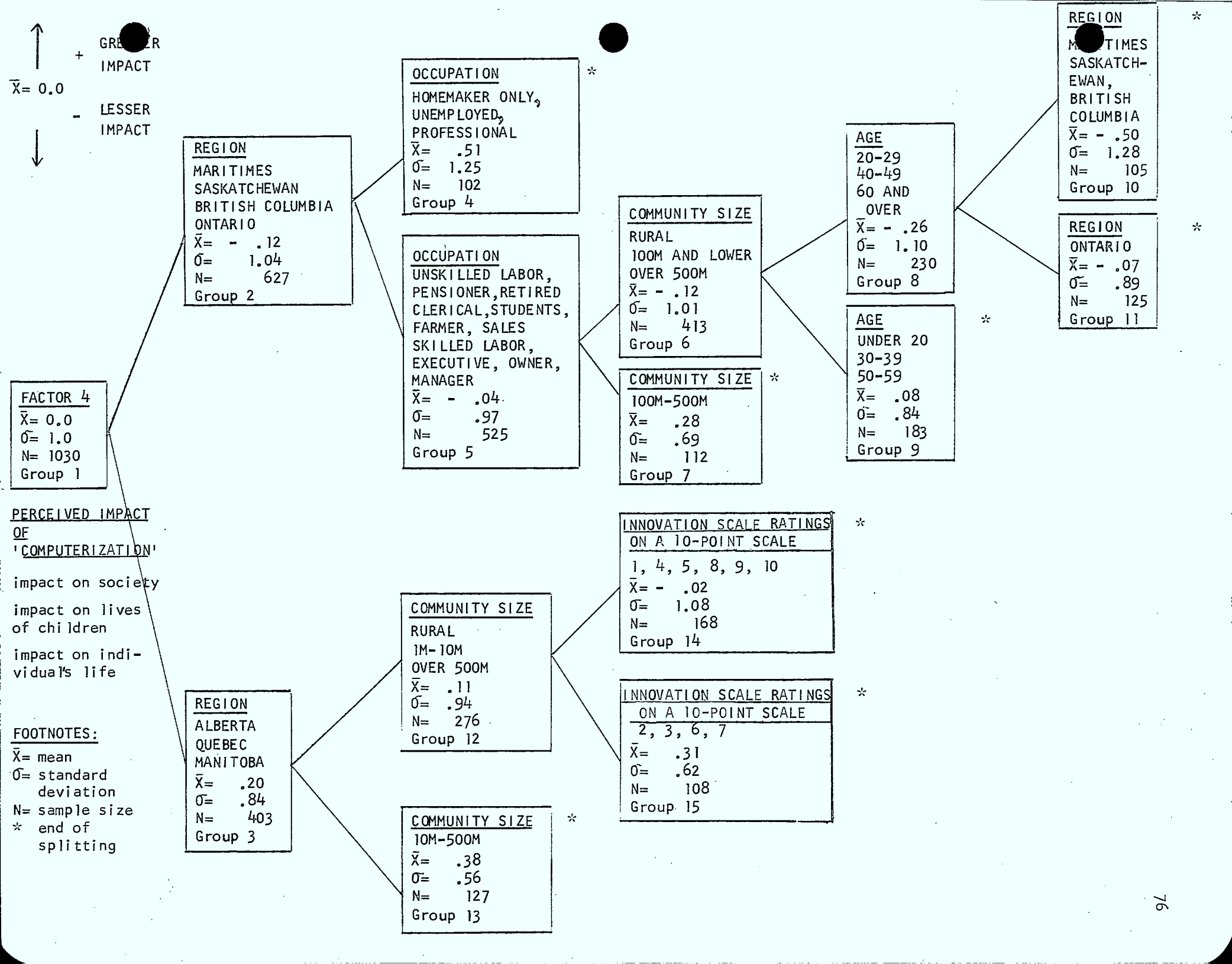
As in Factor 6, the first characteristic that splits the sample is region. The group predominated by residents of British Columbia and Ontario predict less impact than the average, while residents of Quebec, Manitoba and Alberta predict considerably more impact than the average.

Those people who predict the least impact (or who perhaps are least willing to accept the inevitable influences on society) are predominantly unemployeds and homemakers only,

within British Columbia and Ontario primarily. The great mass of employed people in these regions are average in their response to impact.

Those who predict the greatest impact of computerization live in communities of 10,000 - 500,000 people, within Alberta, Quebec and Manitoba. In effect, the influence of people in Montreal would appear in Group 12 where response was considerably closer to the average.

It should be borne in mind that much of the intrepretation stemming from the AID analysis is inferential; that is, based on qualitative insights and tab data as well as the AID data itself. Nevertheless, many valuable findings resulted from the AID analysis which influenced the substance of the "Highlights and Recommendations" sections of this report.


+ GREATER IMPACT
X̄= 0.0
- LESSER IMPACT
FACTOR 4
X̄= 0.0
σ= 1.0
N= 1030
Group 1
REGION
MARITIMES
SASKATCHEWAN
BRITISH COLUMBIA
ONTARIO
X̄= - .12
σ= 1.04
N= 627
Group 2
OCCUPATION
HOMEMAKER ONLY, UNEMPLOYED, PROFESSIONAL
X̄= .51
σ= 1.25
N= 102
Group 4
OCCUPATION
UNSKILLED LABOR, PENSIONER, RETIRED CLERICAL, STUDENTS, FARMER, SALES SKILLED LABOR, EXECUTIVE, OWNER, MANAGER
X̄= - .04
σ= .97
N= 525
Group 5
COMMUNITY SIZE
RURAL
100M AND LOWER OVER 500M
X̄= - .12
σ= 1.01
N= 413
Group 6
COMMUNITY SIZE
100M-500M
X̄= .28
σ= .69
N= 112
Group 7
AGE
20-29
40-49
60 AND OVER
X̄= - .26
σ= 1.10
N= 230
Group 8
AGE
UNDER 20
30-39
50-59
X̄= .08
σ= .84
N= 183
Group 9
REGION
MARITIMES
SASKATCHEWAN
BRITISH COLUMBIA
X̄= - .50
σ= 1.28
N= 105
Group 10
REGION
ONTARIO
X̄= - .07
σ= .89
N= 125
Group 11
PERCEIVED IMPACT OF 'COMPUTERIZATION'
impact on society
impact on lives of children
impact on individual's life
FOOTNOTES:
X̄= mean
σ= standard deviation
N= sample size
* end of splitting
REGION
ALBERTA
QUEBEC
MANITOBA
X̄= .20
σ= .84
N= 403
Group 3
COMMUNITY SIZE
RURAL
1M-10M
OVER 500M
X̄= .11
σ= .94
N= 276
Group 12
COMMUNITY SIZE
10M-500M
X̄= .38
σ= .56
N= 127
Group 13
INNOVATION SCALE RATINGS ON A 10-POINT SCALE
1, 4, 5, 8, 9, 10
X̄= - .02
σ= 1.08
N= 168
Group 14
INNOVATION SCALE RATINGS ON A 10-POINT SCALE
2, 3, 6, 7
X̄= .31
σ= .62
N= 108
Group 15

APPENDIX

A. RESEARCH METHODOLOGY

B. DISCUSSION OUTLINE
QUALITATIVE PHASE I

C. DISCUSSION OUTLINE
QUALITATIVE PHASE II

D. QUESTIONNAIRE
QUANTITATIVE PHASE

APPENDIX A RESEARCH METHODOLOGY

a) PHASE I QUALITATIVE INVESTIGATION

Part 1

In October 1970, on behalf of The Social Survey Research Centre, Dimensions Unlimited (a division of Canadian Facts) conducted a small-scale study in depth for the Department of Communications of the Federal Government. This research provided an interpretive assessment of initial reactions in Toronto both to the concept of an in-home computer and, more generally, to "life" in times of increasing computer/communications systems usage.

Two group discussions (one with women and one with men, all "heads of households" between the ages of 25 and 45), were held in Toronto during the first week of October, 1970. Both discussions began with the assumption (stated in the moderator's introduction) that life in the modern world is complex, and that people sometimes find it difficult to cope with the problems of managing their homes and even their lives. The respondents were then encouraged to project themselves ten years into the future (to 1980) in order to imagine (a) what their lives might be like, and (b) what a device, which could help them deal with the complex world, might be like.

Finally, an early segment of the film '1999' (about 12 minutes) was shown in order to crystallize people's concept of the new device; and reactions to the device as depicted in the film were obtained. A copy of the discussion outline (which was followed extremely flexibly and freely) is appended to this report.

Although this study involved only fifteen respondents, it is likely that the ideas derived from them are, to a large degree, representative of middle class urban dwellers in English Canada. What it cannot reveal, of course, is the extent to which Canadians of other classes, other regions, other centres, other ethnic origins are likely to have the same feelings and reactions. These still required investigation in order for the research to represent the national picture on this topic, and this why Phase II, the quantitative study, was conducted.

Part 2

During November and December 1970, a second part of this qualitative research was carried out, partially in Toronto, and partially in Montreal. The objectives at this time were:

- to detect the similarities and the differences in perceptions between French and English Canadians to this concept
- to gain, in addition, meaningful information and insight, especially from some young people, on a one-to-one basis
- to assess in particular, in view of previous findings, potential hostilities (especially in Montreal), and the extent of perceived fears about alienation.

Parallel to Part 1 in Toronto, two focus groups, (one with women and one with men, all "heads of households" aged 25-45) were held in Montreal.

Again, the discussions were set in motion after the moderator had led off with an introductory statement about the complexities and frustrations of modern life (see Investigation Guide appended). At this point, the focus group participants were asked to "project" themselves into an Orwellian aura of the 1980's and to "imagine" some technological device such an environment might conceivably produce to simplify life for the man-in-the-street.

In addition, ten individual depth interviews (five each in Montreal and Toronto) were conducted with boys and girls between the ages of 16 and 21. It was felt that young people of this age would respond more freely on an individual basis, rather than in a group situation, because of the prevailing degree of peer group pressure and peer group concern that exists among them.

Finally, in Toronto only, two boys (aged 8 and 13) were also interviewed individually on the assumption that these younger persons may relate more "naturally" to computerization, and indeed, may even accept it as a matter of course, in contrast to the fears sometimes expressed by older people.

In conclusion, as pointed out in the initial part of this qualitative research, the findings reflect much that is typically representative of middle-class urban attitudes.

In addition of course, this part adds similarities and differences of opinion about this concept from Montreal.

However, because of the sophistication and complexity of this subject, there remained a need to evaluate feelings and reactions among Canadians of other classes, centres and ethnic origins before a national picture of this topic could be effectively analyzed.

b) PHASE II QUANTITATIVE INVESTIGATION

Part 1

In order to evaluate perceptions, feelings and reactions toward the computer among a cross-section of Canadians, a questionnaire was developed based on hypotheses resulting from the initial qualitative phases. (A copy of the Questionnaire is appended.)

A total of 1,030 personal in-home interviews were conducted within a cross-section of communities throughout Canada during the month of June, 1971. Both male and female household heads were interviewed, but one only per household.

A modified probability sample was used, in which every dwelling unit in the defined universe had a known probability of being selected in the sample. The Politz-Simmons method of weighting was used for not-at-homes. In brief, this means that if a person has been at home only one of the four evenings at the time the interviewer happened to call, she is only getting one-fourth of such people, and each such one should have a weight of four in the sample.

Conversely, if a person says that he has been at home all four nights during this time period, then the sample has 100% of such types, and this grouping should have a weight of just one.

For all percentages reported on this base of 1,030 completed interviews, the statistical error (at a two sigma level) is 3.1%. This means that if 100 such surveys were undertaken simultaneously, and a figure from a particular one turned out to be 50%, in 95 of the 100, the figure would be within 3.1 percentage units of that, ranging from a possible low of 46.9% to a possible high of 53.1%.

Part 2 Factor Analysis/AID Analysis

a) Factor Analysis

A number of attitudinal questions concerning the computer were asked of respondents. These questions were used as variables in a factor analysis which was conducted to determine whether or not, and to what extent, these attitudes were interrelated. The variables included in the analysis produced seven stable factors, which are:

FACTOR 1. Depersonalization/Loss of Control

FACTOR 2. Perceptions of Technological Benefits

FACTOR 3. Perceptions of "The Computer"

FACTOR 4. Perceived Impact of "Computerization"

FACTOR 5. Perceptions of Computer as "Supermachine"

FACTOR 6. Invasion of Privacy/Misuse of Personal Information

FACTOR 7. Experience with Computer Errors

It must be noted that these seven factors accounted for only 53% of the total variance; that is, there was a large amount of information loss by structuring the attitudes and beliefs concerning the computer. This indicates that while structure can be obtained, the attitudes in most cases do not form a sharply focused pattern. This, in essence, can be attributed both to sampling error and confusion concerning computers among the public.

b) AID Analysis

An AID analysis (Automatic Interaction Device) was conducted to determine those characteristics of the people within each factor that best predict it.
(AID was not performed on Factor 7 because it was experiential rather than attitudinal.) Below is a general description of AID.

For a given dependent variable (a variable which is to be predicted from other variables) for example, "depersonalization/ loss of individual control", it is necessary to find those independent variables in the population (variables which help predict levels of the dependent variable) that are the best predictors of variations in the dependent variable.

To accomplish this, the AID program forms a parent group containing the average of the dependent variable for the whole sample and splits it into two subgroups based on that particular population dimension (in this case "information leak") which is the strongest predictor of the dependent variable "depersonalization/loss of control".

This splitting process continues on the first two subgroups formed. The process ends when:

a) a subgroup cannot be split because it is too homogeneous,
b) a proposed split does not carry enough of the total variation in the total sample,
c) population contained in the subgroup is less than or equal to 100 (a recommended group size to give reasonable statistical accuracy),
d) 90 subgroups have been formed (a not unreasonable programming restriction).

When employing the AID technique, specific numerical levels (of values pertaining to constraints a and b above) are used to initiate "branching" (the formation of subgroupings). These levels may be adjusted, producing, in effect, more or less constraint on:

(i) the initial ease of the first split, and
(ii) the total subsequent branching.

If the first numerical levels must be reduced to begin splitting, then this indicates a weakness of the available dimensions' ability to explain variations in the dependent variable.

APPENDIX B

DISCUSSION OUTLINE - QUALITATIVE PHASE I

1. Introduction: I think we would all agree that life in the modern world is pretty complex. Many things that happen are hard for us to understand. In some ways, we find it difficult to cope with the problems of managing our homes and even our lives. We've probably all had the experience of being thrown into situations we weren't prepared for, or having to make decisions without knowing all we felt we should. In other ways, we may feel that we are not in control of decisions which affect our lives...

   Let's try to think ten years into the future - to 1980 - and imagine what life is going to be like then. Do you think life is going to be more or less complex? What sorts of problems do you imagine that you'll have to cope with? Do you think it will be easier or more difficult to cope with these problems?...Why?

2. Still thinking about what life will be like in 1980...let's suppose that you could have an instrument - a little machine - in your home that could help you by providing - almost instantaneously - the information and other services that you require to make life a little easier, more interesting, and more worthwhile. Just like most people today don't really know how a television or telephone really works, but they make good use of these instruments, we don't know exactly how this instrument-of-the-future would work, but let's just suppose that it <u>does</u> work, that it can do anything to help you that you would like it to.

   (a) --what do you suppose it would look like...what instruments that we have now would it be most like
   --where in the house would it be found...why think that
   --how would you like it to be able to help you...what kind of information or services would you want from it...why
   --suppose it could provide information and services that you presently have to leave your home to get...what sort would you like to get in this way? (library, doctor, theatre tickets, school, bank)
   --how could it improve the information and services you now do receive in your home? (mail, newspaper delivery)
   --how could it improve on the instruments we now have at our disposal (telephone, television, telegraph, typewriter, tape recorder, cameras..) where they fall short of providing you the help you need

2. (b) --now, thinking about the other members of your family, in what ways could they use this amazing new instrument...
--who in the family would make the most use out of it...why?
--how do you think they would feel about an instrument like this...why?

(c) --what sort of people do you think would be most likely to have this instrument...why?

(d) --how do you suppose people would obtain the services of this instrument...who would provide it...(private co., government - which branch)...why?
--how would it be paid for (buy, rent, lease, taxes...)
--how much do you think people will be willing to pay for it?

(e) --what would you call this instrument...why...is there a better name.

3. Now I'd like to show you part of a film which might help to give you a better idea of what this instrument-of-the-future might be like. (10-MINUTE SEGMENT OF FILM SHOWN. EXPLAIN IT'S TOO LONG TO SHOW THE WHOLE THING)

--spontaneous reactions to film: what did you think of that? why?
--what do you think it will be like to have an instrument like that... will you like it...in what ways...why/why not
--do you think the instrument would make you feel more or less in control of the things that affect your life than you do now... why
--what sort of people do you think will be dead set against having something like that in their homes...why...what would bother them about it.

APPENDIX C

DISCUSSION OUTLINE - QUALITATIVE PHASE II

1. Introduction: I think we would all agree that life in the modern world is pretty complex. Many things that happen are hard for us to understand. In some ways, we find it difficult to cope with the problems of managing our homes and even our lives. We've probably all had the experience of being thrown into situations we weren't prepared for, or having to make decisions without knowing all we felt we should. In other ways, we may feel that we are not in control of decisions which affect our lives...

   Let's try to think ten years into the future - to 1980 - and imagine what life is going to be like then. Do you think life is going to be more or less complex? What sorts of problems do you imagine that you'll have to cope with? Do you think it will be easier or more difficult to cope with these problems?...Why?

2. Still thinking about what life will be like in 1980... let's suppose that you could have an instrument - a little machine - in your home that could help you by providing - almost instantaneously - the information and other services that you require to make life a little easier, more interesting, and more worthwhile. Just like most people today don't really know how a television or telephone really works, but they make good use of these instruments, we don't know exactly how this instrument-of-the future would work, but let's just suppose that it does work, that it can do anything to help you that you would like it to.

   (a) -- what do you suppose it would look like...what instruments that we have now would it be most like
   -- where in the house would it be found...why think that
   -- how would you like it to be able to help you ...what kind of information or services would you want from it...why
   -- suppose it could provide information and services that you presently have to leave your home to get ...what sort would you like to get in this way? (library, doctor, theatre tickets, school, bank)
   -- how could it improve the information and services you now do receive in your home? (mail, newspaper delivery)

2(a) -- how could it improve on the instruments we now have at our disposal (telephone, television, telegraph, typewriter, tape recorder, cameras) ...where they fall short of providing you the help you need

(b) -- now, thinking about the other members of your family, in what ways could they use this amazing new instrument...
-- who in the family would make the most use out of it?...why?
-- how do you think they would feel about an instrument like this...why?

(c) -- what sort of people do you think would be most likely to have this instrument...why?

(d) -- how do you suppose people would obtain the services of this instrument...who would provide it...(private co., government - which branch)...why?
-- how would it be paid for (buy, rent, lease, taxes..)
-- how much do you think people will be willing to pay for it.

(e) -- what would you call this instrument...why...is there a better name.

(f) -- how about handling such a machine...would it need to be taught...degree of confidence/not about this?

3. ...would there be any disadvantages...why...what nature ...for whom specifically (watch for hostility/alientation pertinent to the Montreal scene).

4. One last thing. As the years go by, all of us are working for a shorter number of hours at our regular jobs. How do you feel about this? How will you go about adjusting to more "leisure" time? Is "leisure" an appropriate description? How does this sort of computer fit it, this trend in society? What are its advantages/disadvantages. Who might especially benefit?

QUESTIONNAIRE

APPENDIX 'D'

Canadian Facts Co. Limited
Toronto - Montreal

Study S0321

INTRODUCTION: Hello. I'm from Canadian Facts. We're making a study of how people feel about computers, and I'd like to ask you a few questions.

1. First, let's take you, yourself.

-a) Do you have any contact directly with the computer, or with anything a computer prints out?

DIRECT COMPUTER CONTACT..... 10-1 PRINT OUT SHEETS ONLY..... 2

NEITHER 3

-b) Do any of these things that a computer prints out ever come into your home?

YES .. 11-1 (ASK Q. 1-c) NO .. 2 NOT SURE.. 3 (GO TO Q. 2)

-c) Can you name some of these, please? (DO NOT READ LIST; CIRCLE APPROPRIATE CODES)

UTILITY BILLS 12-Y

BILLS X

DIRECT MAIL ADVERTISEMENTS 0

MAGAZINE SUBSCRIPTION LABELS 1

CHILDREN'S REPORT CARDS 2

BANK STATEMENT 3

CANNOT NAME ANY 4

OTHER (SPECIFY) _____

2. Do your children ever have any contact with a computer, or with anything a computer prints out?

CONTACT WITH COMPUTER ..... 13-1 CONTACT WITH COMPUTER PRINT OUTS ... 2

NEITHER ..... 3 NO CHILDREN 4

3. How many companies that manufacture computers can you name? (DO NOT READ) CHECK IBM IF MENTIONED. DO NOT RECORD NAMES OF OTHER COMPANIES, CIRCLE CODE FOR OTHER AND WRITE TOTAL NUMBER NAMED, INCLUDING IBM.

IBM ..... 14-X NONE ..... Y

OTHER 0

TOTAL NUMBER NAMED _____ 15-

4. Some people think that in the long run, computers have advantages for mankind. Some do not. As I read each statement--some are favourable, some are unfavourable about computers--please look at this card and tell me how you feel about the statement. (HAND CARD)

	STRONGLY DISAGREE		DISAGREE		NO OPINION		AGREE		STRONGLY AGREE	
COMPUTERS WILL GIVE US MORE LEISURE TIME.....	16-Y	.....	X	.....	0	...	1	.....	2	3
COMPUTERS THREATEN FAMILY LIFE.....	4	.....	5	.....	6	...	7	.....	8	9
COMPUTERS WILL MEAN A HIGHER STANDARD OF LIVING.....	17-Y	.....	X	.....	0	...	1	.....	2	3
COMPUTERS ARE IMPORTANT IN SCIENTIFIC RESEARCH.....	4	.....	5	.....	6	...	7	.....	8	9
COMPUTERS MAKE YOU THINK INDIVIDUALS ARE JUST BECOMING NUMBERS.....	18-Y	.....	X	.....	0	...	1	.....	2	3
COMPUTERS WILL CAUSE UNEMPLOYMENT.....	4	.....	5	.....	6	...	7	.....	8	9
COMPUTERS CAN THINK THE WAY HUMANS CAN.....	19-Y	.....	X	.....	0	...	1	.....	2	3
COMPUTERS THREATEN OUR PERSONAL PRIVACY.....	4	.....	5	.....	6	...	7	.....	8	9
COMPUTERS CAN CAUSE SERIOUS MISTAKES BECAUSE THEY DON'T TAKE HUMAN FACTORS INTO ACCOUNT.....	20-Y	.....	X	.....	0	...	1	.....	2	3
COMPUTERS WILL TAKE OVER OUR PERSONAL LIVES.....	4	.....	5	.....	6	...	7	.....	8	9
COMPUTERS WILL IMPROVE THE QUALITY OF EDUCATION.....	21-Y	.....	X	.....	0	...	1	.....	2	3
COMPUTERS WILL MAKE PEOPLE THINK LESS.....	4	.....	5	.....	6	...	7	.....	8	9
THERE IS ALMOST NO LIMIT TO WHAT COMPUTERS CAN DO.....	22-Y	.....	X	.....	0	...	1	.....	2	3
COMPUTERS ARE EXTREMELY ACCURATE AND EXACT.....	4	.....	5	.....	6	...	7	.....	8	9
COMPUTERS CAN MAKE SOME IMPORTANT DECISIONS BETTER THAN PEOPLE.....	23-Y	.....	X	.....	0	...	1	.....	2	3
PEOPLE ARE GOING TOO FAR IN USING COMPUTERS.....	4	.....	5	.....	6	...	7	.....	8	9
COMPUTERS WILL MAKE LIFE MORE COMPLICATED.....	24-Y	.....	X	.....	0	...	1	.....	2	3
COMPUTERS WILL MAKE INFORMATION MORE EASILY AVAILABLE.....	4	.....	5	.....	6	...	7	.....	8	9
COMPUTERS WILL ENABLE GOVERNMENT AND BUSINESS TO MAKE BETTER DECISIONS.....	25-1	.....	2	.....	3	...	4	.....	5	6

5. Some people are afraid that storing of information about people in computer files may cause personal information about their affairs to get to those who have no right to it. Do you think this is likely to happen or not?

LIKELY TO HAPPEN.....	26-Y	
NOT LIKELY TO HAPPEN.....	X	
NO OPINION.....	0	1

6. Have you or anyone in your immediate family had trouble with errors in bills, subscriptions, credit, etc., due to computer errors?

YES.....	2	
NO.....	3	
NOT SURE.....	4	5

7. In your opinion, what effect do you think computers will have on society as we know it today. (READ CHOICES AND CIRCLE APPROPRIATE CODE)

Computers will change society entirely.....	27-Y	
Computers will change society a great deal.....	X	
Computers will change society somewhat.....	0	
Computers will have no effect on society.....	1	
NO OPINION.....	2	3

8. In your opinion, what effect do you think computers will have on your own life? (READ CHOICES AND CIRCLE APPROPRIATE CODE)

Computers will change my own life entirely.....	4	
Computers will change my own life a great deal..	5	
Computers will change my own life somewhat.....	6	
Computers will have no effect on my life.....	7	
NO OPINION.....	8	9

9. In your opinion, what effect do you think computers will have on the lives of those who are children today? (READ CHOICES AND CIRCLE APPROPRIATE CODE)

Computers will entirely change the lives of those who are children today.....	28-1	
Computers will greatly change the lives of those who are children today.....	2	
Computers will somewhat change the lives of those who are children today.....	3	
Computers will have no effect on the lives of those who are children today.....	4	
NO OPINION.....	5	

10-a) What is your impression of the computer? Is it an intelligent machine, a very efficient mathematical machine, or just another appliance? (CIRCLE ONE)

INTELLIGENT MACHINE.....	29-Y	(ASK Q.10-b)
VERY EFFICIENT MATHEMATICAL MACHINE..	X	
ANOTHER APPLIANCE.....	0	(GO TO Q.11)
NO OPINION.....	1	

-b) Is the computer more intelligent than the average person, about the same, or less intelligent?

MORE INTELLIGENT.....	2
ABOUT THE SAME.....	3
LESS INTELLIGENT.....	4
NO OPINION.....	5
	6

11-a) Have you ever heard of the idea that people may one day have a computer service available to them through a connection in their home?

YES.....	30-Y	
NO.....	X	0

-b) Do you think that the individual family will ever have a computer connection in their home?

YES.....	1	
NO.....	2	
NO OPINION.....	3	4

12. Actually, many experts believe that sometime in the next ten or fifteen years, it will be possible for you to have a connection to a computer in your home. This could offer you many different kinds of services. There would be a monthly charge for the computer, and it would depend on the number and types of services you choose to have.

This may sound like something 'way off in the future' but we'd like you to use your imagination.

Exactly how this type of service would work, and what type of appliance or attachment you would need to operate we don't know. But let's assume that it will be something as simple as pushing a button in your home.

Now, assuming that all of these following services would be available, (HAND RESPONDENT THE 5 PAGES THAT LIST THE SERVICES) will you read each one and tell me how strongly you would want it.

If there is one that you don't understand, skip it and go on to the next one.

12-a) (cont'd)

	Q. 12-a) STRONGLY WANT	WOULD WANT SOMEWHAT	WOULD NOT WANT	FOR OFFICE USE	Q. 12-d) 5 MOST WANTED
ENTERTAINMENT					
Ticket reservation service--the computer would indicate what shows are available at what time and place. Next a reservation could be made for a seat for that show selected.	31-Y	X	0	1	35-Y
A large selection of movies to be seen on TV screen--the computer would provide a means of selecting a movie from a TV movie library to be shown on your home TV set.	2	3	4	5	X
Music and cultural events--the computer would treat such events as live TV with a wide selection to the individual in his home.	6	7	8	9	0
Dating services.	32-Y	X	0	1	1
A service to find a sports partner.	2	3	4	5	2
RECREATION					
Recreational courses--gardening, pottery, sewing, etc.--the computer would handle this as an educational program using a TV library.	6	7	8	9	3
Games with the computer--an example here would be given by a computer acting as the opponent in a game of chess.	33-Y	X	0	1	4
TRANSPORTATION					
Transportation timetables--the computer would display upon demand the current timetables of the trip being considered	2	3	4	5	5
Reservations for plane, boat, train etc.--the computer would allow the person to arrange for his own reservation from his home.	6	7	8	9	6
Travel advice--maps and routes--the computer would be connected with a TV-like screen which could be used to show the map and routes required.	34-Y	X	0	1	7
Traffic and road conditions--the travel conditions could be combined with travel advice to help you select the best route.	2	3	4	5	8

12-a) (cont'd)

	Q. 12-a) STRONGLY WANT	WOULD WANT SOMEWHAT	WOULD NOT WANT	FOR OFFICE USE	Q. 12-d) 5 MOST WANTED
GENERAL INFORMATION					
All examples here represent basically the same thing ie., they are presently in the form of written information. A computer and telephone connection would allow the appropriate library or other source location to be connected to a TV set for checking or copying.					
Encyclopedia	36-Y	X	0	1	40-Y
Library catalogue	2	3	4	5	X
Selected newspaper and magazine articles	6	7	8	9	0
List of recent publications on a particular subject	37-Y	X	0	1	1
Book reviews	2	3	4	5	2
Want ads	6	7	8	9	3
HOUSEHOLD					
Recipe file--and menus.	38-Y	X	0	1	4
Address list--Christmas or other special lists--the computer would be used in the same way as a filing cabinet is used now.	2	3	4	5	5
Meter reading--this would require a connection between the home telephone and the meter(s) to be read. The service company computer would scan once a month for automatic meter readings.	6	7	8	9	6
Reports from a consumer product testing service	39-Y	X	0	1	7
Household hints and home repair suggestions--the home computer would display the information required.	2	3	4	5	8
Catalogue of products with comparative prices--the home computer would be instructed to search the files of product supplies for a match to the product required giving prices.	6	7	8	9	9

12-a) (cont'd)

Household (cont'd)	Q. 12-a) STRONGLY WANT	WOULD WANT SOMEWHAT	WOULD NOT WANT	FOR OFFICE USE	Q. 12-d) 5 MOST WANTED
A TV connection to retail stores would show merchandise and prices	41-Y	X	0	1	45-Y
Answering service--a recorder would be connected to the telephone to either playback where a person will be or to make a record of a call for later follow-up.	2	3	4	5	X
A service would watch over your home by TV from a central location	6	7	8	9	0
A duplicate letter would be obtained at your post office from a letter in another post office at a very low cost.	42-Y	X	0	1	1
WORK AT HOME					
Access to work files at home--the data which an office worker uses at work, would be stored on computer files and linked to a home computer, these files can then be reviewed and processed at home	2	3	4	5	2
Secretarial services--memos, letters and reports can be dictated over a telephone for typing and later checking for revisions via a telephone computer hook-up.	6	7	8	9	3
A manager would be connected to his office to converse directly with his staff and he could use diagrams to clarify the discussion.	43-Y	X	0	1	4
FINANCIAL SERVICES					
Banking from home--instead of writing a cheque to pay bills the home computer will instruct the bank computer to transfer funds from your account	2	3	4	5	5
Automatic bill payment--here the seller of goods and services as e.g., a telephone company would automatically have the bills paid without further direct instruction.	6	7	8	9	6
Income Tax calculation.	44-Y	X	0	1	7
Instant cash and loans--a line of credit would be developed with a bank which would be made available at any computer terminal through dialing and connecting to the computerized bank account records.	2	3	4	5	8
Stock quotations--these are already available in broker's offices and this service would be accessible through a home computer.	6	7	8	9	9

12-a) (cont'd)

	Q. 12-a) STRONGLY WANT	WOULD WANT SOMEWHAT	WOULD NOT WANT	FOR OFFICE USE	Q. 12-d) 5 MOST WANTED
Purchase and sale of securities--again a central computer would maintain a market of all bid and sell orders in securities which would be accessible to the home computer along with controls to arrange a purchase or sale order	46-Y	X	0	1	49-Y
Stock Market analysis--the work of Stock Market analysts using computers would become accessible via the home computer	2	3	4	5	X
Household budgeting	6	7	8	9	0
SOCIAL SERVICES					
Information on social services and agencies; taxation information; legal information--this information when stored on a central computer would be retrieved through the home computer as though from a computer library file	47-Y	X	0	1	1
Advice on personal and family problems--the home computer could be used to search for these social services and their location	2	3	4	5	2
MEDICAL SERVICE					
Diagnosis of illness before consulting doctor--computer would make initial diagnosis through questions and answers	6	7	8	9	3
Emergency medical service--the advice of medical specialists with TV screens and telephone could be used to give emergency medical service.	48-Y	X	0	1	4
Crisis advice centre--alcohol, drugs, suicide, etc.,--again, the best qualified specialists' advice would become available through telephone-computer hook-ups	2	3	4	5	5

12-a) (cont'd)

	STRONGLY WANT	WOULD WANT SOMEWHAT	WOULD NOT WANT	FOR OFFICE USE	Q. 12-d) 5 MOST WANTED
EDUCATION					
All education and training will be accessible through computer assisted instruction courses. The further use of TV hook-ups would provide a direct students-teacher relationship					
High school courses	50-Y	X	0	1	53-Y
University courses	2	3	4	5	X
Adult education courses	6	7	8	9	0
Occupational retraining	51-Y	X	0	1	1
Language courses	2	3	4	5	2
Special instruction subjects	6	7	8	9	3
POLITICS					
Voting on local issues--voting on national issues--a program and hook-up with TV and computer would allow a choice to be made on voting issues. These choices would be computer-tabulated as a means of totalling the vote.					
Voting on local issues	52-Y	X	0	1	4
Voting on national issues	2	3	4	5	5
Information on laws and by-laws	6	7	8	9	6

54-

-b) Are there any other services you can think of that would be appealing to you?

NONE 55-Y

_____

_____ 55-

_____

-c) Now, let me tell you briefly what you have selected in the way of services you would strongly want. (READ OFF EACH ITEM CHOSEN). That is a total of (MENTION NUMBER) _____ of services. About how much monthly do you think you would be willing to pay for such services? (IF DON'T KNOW, ASK FOR A GUESS; TRY NOT TO ACCEPT A DON'T KNOW ANSWER)

$ _____ 56-
(ROUND OFF TO NEAREST WHOLE DOLLAR) 57-
58-

-d) Suppose that for this amount you could have only 5 services. Which five would you select? (READ ALL ITEMS "STRONGLY WANT" AND CHECK THE FIVE NOW SELECTED--IN APPROPRIATE SPACES UNDER COLUMN 12-d) ON PAGES 5,6, 7, 8, 9.

13-a) If computer services of this sort were made available to people in Canada, do you think that they should be provided by government or by business?

GOVERNMENT..... 59-Y

BUSINESS..... X

NO OPINION..... 0

-b) Why do you say that? (PROBE) _____

_____ 60-

_____

-c) (ASK IF BUSINESS) Should such a business be regulated by government?

YES..... 61-Y NO..... X NO OPINION..... 0

-d) (ASK IF BUSINESS) Should such a business be Canadian-owned and controlled, American-owned and controlled, or doesn't it matter to you?

CANADIAN..... 1

AMERICAN..... 2

DOESN'T MATTER..... 3 4

BASIC DATA

14. Would you say that the head of the household is a gadgeteer--that is, he likes gadgets? If you would rate him high on this compared with other people, you'd score him 10. If you rated him lower than almost everyone else, you'd rate him a 1. If he was about average, you'd rate him 5 or 6. The other numbers are for in-between ratings. Now, where would you rate him as a gadgeteer from a low of 1, to a high of 10?

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 62-

15. Now, rate your family on the same sort of scale as to whether you tend to be first on the block to get something new, or last. A 10 means you're more likely than almost anyone to be first with something new.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 63-

IF INTERVIEWING MONDAY TO FRIDAY, SAY:

16. We are also interested in finding out how often people are at home on weekdays at about this time. I am not interested in Saturdays and Sundays, only weekdays.

	AT HOME	NOT HOME	CAN'T REMEMBER/ DON'T KNOW
-a) Did you happen to be at home yesterday (or last preceding weekday) at about this time? _____ (WRITE IN NAME OF DAY)	64-Y	X	0
-b) How about _____? (SAY AND WRITE IN WEEKDAY BEFORE)	1	2	3
-c) How about _____? (SAY AND WRITE IN WEEKDAY BEFORE)	4	5	6

NOTE: WORK BACK THROUGH 3 PRECEDING WEEKDAYS

BUT

IF INTERVIEWING ON SATURDAY, SAY INSTEAD:

	YES	NO	CAN'T REMEMBER/ DON'T KNOW
-a) We are also interested in finding out how often people are at home on Saturday at about this time. For instance, did you happen to be at home last Saturday at about this time?	Y	X	0
-b) How about Saturday before that, at about this time?	1	2	3

17. SEX: (DO NOT ASK)

MALE 65-Y
FEMALE X

18. What age group should I check you in:

Under 20 years?..... 0
20 to 29 years?..... 1
30 to 39 years?..... 2
40 to 49 years?..... 3
50 to 59 years?..... 4
60 years and over? 5

19. Approximately what is your total family income?

Under $5,000 66-1
$5,000 to $7,499 2
$7,500 to $9,999 3
$10,000 to $11,999 4
$12,000 or more 5

20-a) What is the occupation of the head of the household?

_____ IN _____ 67-
(TYPE OF JOB) (TYPE OF COMPANY)

-b) (IF RESPONDENT NOT HOUSEHOLD HEAD) Are you, personally, employed outside the home?

YES ..... 68-1 NO 2

21. How many children, under 17, are there in your family? _____ 69-

22. Type of dwelling (OBSERVE, DO NOT ASK)

Apartment 70-1
Duplex or semi-detached.... 2
Single family house 3

NAME: MR. / MRS. / MISS _____ PHONE: _____ NONE...☐

ADDRESS: _____ TOWN: _____ PROVINCE: _____

DATE: _____ INTERVIEWER'S SIGNATURE: _____
EMPLOYEE NO.: _____

INTERVIEW NO.: _____ ON LOCATION NO.: _____

CACC / CCAC
38737

THE SOCIAL SURVEY RESEARCH CENTRE.
--THE PUBLIC LOOKS AT COMPUTER SERVICES.

P
91
C655
S63
1972
v.3

Date Due

FORM 109

P
91
C655
S63
1972
v.3