COMMUNICATIONS AND THE HANDICAPPED

(An Edited Version)

FINAL REPORT

December, 1978

Paul S. Licker
Institute of Social Communications
St. Paul University
223 Main Street, Ottawa, Ontario

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FOREWORD

This text is an edited version, suitable for the non-specialized reader, of a longer and more technically worded report on Communications and the Handicapped prepared for the Department of Communications by Dr. Paul S. Licker of the Institute of Social Communications, St. Paul University, Ottawa. Complete copies of Dr. Licker's original report (consisting of about 100 pages of text and a number of appendices containing supporting detailed data and documentation) are available for viewing by the public at the following Department of Communications' locations throughout the country:

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INTRODUCTION

The Disabled, at first glance, seem to be the one group which can benefit most from telecommunications. Limited in their mobility, they should be prime beneficiaries from a technology which can shrink distances and eliminate barriers of all kinds to social intercourse. But first impressions can be as misleading as they are general. A more deliberate approach to this question should involve a precise examination of the Disabled's needs, as well as an exacting assessment of the ways in which the communications media meet, or can be shaped to meet, these needs.[1] Such a task also presupposes a systematic framework, and it is to this we shall now turn.

Blake and Haroldson (1975, p. 36) distinguish three major forms of communication contact: interpersonal communication, medio-communication, and mass communication. Though these categories may blur, they differ in the degree of equality between sender and receiver in their control over a message.

In interpersonal communication, the communicator is in the physical presence of others. If one can assume the same physical ability to communicate -- a significant assumption, given that our focus is upon the Disabled -- then our communicator will have the same control as the others over the content, pace and senses employed in the message. Characterized by mutuality, informality, identity, privacy and responsiveness, interpersonal communication is both the most satisfying and most threatening form of communication.

Medio communication requires "the presence of a technical instrument which is most often used under restricted conditions by identifiable participants",

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[1] For a more detailed report on this study, see Paul S. Licker, Communications and the Handicapped: Final Report, April, 1978. Available from the Department of Communications.

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according to Blake and Haroldson (1976, p. 32). These instruments -- ranging from the telephone to teletypes to closed-circuit TV -- may be costly and can require complex or specialized skills of the user. Interpersonal and medio communication also differ in that the latter may involve a certain formality, shared channels and a restriction on the senses employed. Medio communication, however, preserves much of the mutuality, identity, privacy, responsiveness and control of pace and content characteristic of interpersonal communication. But, because medio communication is more restricted and formalized, it is both less threatening and less satisfying than interpersonal communication.

Mass communication permits the listener or viewer considerably less control over the message. All aspects of the message are set in advance or scheduled. Its predictability, its elimination of the exercise of continuous choice and its limitations upon the type and degree of the listener's communication effort reduce and transform his personal involvement. In the case of children watching TV, that involvement can be little more than a trance-like stupor (Winn, 1976). Formality, anonymity and predictability -- rather than mutuality, privacy and responsiveness -- characterize mass communication.

This schema suggests a variety of hypotheses about the relationship between the handicapped and their communications environment. But, first, it will be necessary to consider some salient facts about the Disabled. For example, the term, "disability", means not just lack of an ability but also definite limitations upon how the Disabled can affect their environment. Thus, a lack of mobility refers not just to an inability to move freely; it also implies exclusion from certain buildings, a relationship of dependence with others and sometimes insuperable obstacles to meeting at self-chosen places and times. It follows that the Disabled are limited in their communication to contacts who do not present problems of accessibility. Hence, our first hypothesis:

(1) THE DISABLED HAVE A LIMITED VARIETY OF CONTACTS.

In other words, the disabled are less able to overcome obstacles to meeting new people and having new experiences.

Do the mass media provide adequate compensation for this lack of new experience? The answer may well be negative. Given the formality, anonymity and predictably of mass communication, one cannot help suspecting that the mass media are poorly suited to meeting a genuine human communication need. At the same time, it must not be forgotten that disability often means forced inactivity and a need for some way to occupy time. Thus, our second hypothesis:

(2) THE MASS MEDIA ARE TIME-FILLERS FOR THE DISABLED.

One wonders too whether the Disabled do not substitute watching TV or listening to the radio for the more demanding and threatening articulatory exercise involved in interpersonal communication. Thus, our third hypothesis is:

(3) THE DISABLED ARE ISOLATED BY THE MASS MEDIA.

The issue of isolation is complex. Its examination requires investigation of all the social interaction engaged in by the Disabled, as well as an understanding of how they use the mass media. One must also be cautious about applying sweeping generalizations to all the Disabled. Disability is no respecter of class or religious barriers. It is necessary, then, to look at the Disabled in their diversity, as well as in what they share.

Certainly they do share the experience of discrimination by the larger society, as many studies have indicated. Often, they accept the social stereotype of themselves as inferior. Physically and economically powerless, they are less able to demand equality of access to generally available services -- a circumstance which only reinforces the stereotype and their own helplessness.

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The label, "handicapped", may, then, become a prison in which diversity is all too often crushed. In addition, the Disabled tend less to act than be acted upon. This situation may extend to their communications environment. Thus, our fourth hypothesis:

(4) THE DISABLED RECEIVE MORE THAN THEY SEND.

Clearly, a concerted effort to destroy public stereotypes would remove one of the most damaging consequences of disability. The Disabled also need special services to reduce the problems arising from their lack of mobility. The media are well equipped to perform both these functions, but even a casual purview of their contents would seem to indicate little is being done. Thus, our final hypothesis:

(5) THE MEDIA DO NOT SERVE THE DISABLED WELL.

In this respect, it will be useful to investigate the relevance of devices for medio communication. More satisfying than mass communication in terms of permitting genuine human contact, medio communication may be a means of overcoming mobility problems and offering a form of contact less threatening than direct interpersonal communication.

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METHODOLOGY

The CHIP project proceeded in three phases. In 1976-77, pilot interviews with 104 Disabled were conducted, as well as interviews with 100 helpers, organizers and friends. The data from this preliminary effort provided the basis in 1977-78 for a more ambitious study involving interviews with 409 Disabled, and a small mail questionnaire for the profoundly deaf. Seventy people also attended in fall 1978 a workshop on how to ensure telecommunications systems serve the Disabled's needs.

Lengthy interview schedules were used in both surveys. These elicited information from the Disabled on: their access to and usage of the mass media; their difficulties with the mass media and suggestions for aids; their habits of interpersonal communication; their skills in communication and the use of mechanical devices; their level of mobility; their employment as communication material by the media; their daily activities; their demographic background; the adequacy and availability of special services; their preferences with regard to content; and their opinions on major issues pertaining to communications and the handicapped. The interview schedule was refined after the preliminary study.

Face-to-face interviews, lasting from 45 to 90 minutes, were held with all respondents. Within the sample, the blind and paralyzed were probably over-represented, while there were too few respondents with lung disorders. Difficulties in locating and interviewing the deaf meant that this group too was considerably under-represented. Because this group suffers, in fact, from a communications disability, further study of the deaf's needs is an obvious priority.[1]

It is possible to characterize the sample in a broad sense. All came from Ottawa or Montreal. All were known to an organization for the Disabled which asked them if they were willing to be interviewed. All were selected in part for their

[1] For a more detailed report on our survey of the Deaf, see Appendix VI in Licker, Final Report, April, 1978.

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articulateness. All had to be sufficiently well to participate in an interview.

One might argue there was considerable sampling bias, that our respondents were too urbanized, too organized, too articulate and too healthy to be fully representative of the Disabled across Canada. On the other hand, because our respondents lived in cities saturated by the communications media, their experience might well be the wave of the communications future for the Handicapped. Beyond this, given the reluctance of many Disabled to be studied, a random-sampling technique which ignored the organizations might only turn up after innumerable phone calls only those Disabled who were extremely willing to talk. In reality, no study of this nature can avoid being biased towards the relatively articulate and healthy. Such a bias has its advantages, in that it assures a richness of response which might otherwise be impossible.

Despite this bias, our sample is generally not highly educated, not commonly queried and not always eager to divulge information to strangers. Non-responses are not infrequent. Awareness of media offerings is often far from complete. In addition, the members of the sample were very diverse, not only in terms of background and socio-economic status, but also in terms of different degrees and types of disability. For this reason, summary statistics and aggregate means are not completely reliable. The data are much more useful as a guide to determining the relationships among different variables.

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THE RESPONDENTS

With a median age of 46, it is distressing that more of our respondents could not find jobs. As shown in Table 1, only one in six had full-time jobs; over three-quarters could be considered unemployed. One in six had never worked in their entire lives.

These grim figures are partly explained by our respondents' lack of skills. At the same time, it should be noted that 45 per cent had a high school degree and the median schooling for the entire sample was 10 or 11 years. One in six had professional skills, while one in eight had clerical skills (Table 2). In short, about half the sample probably had skills marketable in a large urban area. Unfortunately, there is far too little systematic effort to find them jobs.

Not surprisingly, it is the Disabled and their families who suffer most from the consequences of joblessness. The median income for our sample was $4,400. Even in Ottawa, where the Disabled were somewhat more affluent, only one in four had incomes which could be considered "comfortable". Given that a handicap usually means considerable additional expense, it is quite easy to substitute "acceptable" for "comfortable" in this context.

The combination of low income and disability means most Disabled persons cannot live on their own. The majority -- 56 per cent -- of our respondents lived at home with their families. The next largest group -- 22 per cent -- lived in institutions (Table 1). Only 14 per cent lived alone and on their own.

Our sample included a wide range of disabilities, as is apparent from Table 5. In descending order of incidence, our respondents suffered from: blindness; multiple sclerosis; cerebral palsy; paralyzed or missing limbs;

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arthritis and rheumatism; hearing problems; lung problems; and muscular dystrophy. Most had had long experience of their disability. Almost a quarter were congenitally disabled. About two-thirds had been disabled for over 10 years (Table 6). Only four per cent had experienced a year or less of disability.

Their perception of their disability is quite interesting. As shown in Table 7, seven per cent saw themselves as totally disabled, while 38 per cent believed they were disabled "a lot". One wonders to what degree this perception of their level of disability derives from the opinions of others or the public image of the Disabled. That a person's perception of his degree of disability is in part subjective can be demonstrated by the fact that two per cent of our sample did not consider themselves disabled at all. It is also worth noting that almost one in five considered themselves disabled only a little. One cannot help but wonder what change in their life circumstances would bring them to the conclusion they had no disability at all.

A person's perception of the extent of his ability derives in part from what he sees as its effects upon his life. The most often mentioned consequences of disability were confinement and lack of choice or control in one's activities; as shown in Table 4, 29 per cent of the time respondents mentioned these consequences of disability. Next most frequently -- 22 per cent of the time -- respondents mentioned problems with transportation and access to buildings and activities. One wonders whether the communications media -- with their capacity to shrink distance, remove obstacles and improve access -- could not reduce the seriousness of these consequences of disability.

Interestingly, only five per cent of the respondents referred to the negative social effects of their disability. In short, they do not regard their disability as a social ailment. It may be, however, that the effects of their disability

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upon their social interaction is more indirect and subtle. No investigation of this question can, of course, ignore the dynamic interaction between improved communication and social interaction.

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THE RESULTS

1. The Social Interaction of the Disabled.

One stereotype attached to the Disabled is that they lack the skills or intelligence to participate in ordinary conversation. This proposition is emphatically untrue.

Over nine-tenths of our sample indicated they have few problems speaking, as shown in Table 8. The ear-mouth circuit necessary to face-to-face conversation and phoning seems to work quite well. So much for a lack of verbal and aural skills.

In relation to intelligence, it must be admitted that our sample has a considerably higher level of unemployment and less education than the able-bodied. But these may well both be consequences of a stereotype of inferiority and a general failure by society to find jobs or adapt the educational system so that it can be used by the Disabled. In this respect, it should be noted that, in our sample, the longer a person remains disabled, the less he perceives himself as disabled, (Table 9). In short, he adapts -- often ingeniously -- to his new situation. More important, our study reveals that there is no relationship at all between educational achievement and extent of disability. In other words, the tawdry old myth of a sick mind in a sick body is not supported by this study.

For this reason, it should come as no surprise that the Disabled do have daily face-to-face contact with other human beings. For a large proportion of our respondents, conversations with friends and relatives are a daily activity which occur on a relatively continuous basis (Table 10). Contact with other Disabled individuals occurs several times a week and, predictably, is much higher among the institutionalized -- $1\frac{1}{2}$ times a day (Table 11).

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The Disabled also make some use of the telephone, but employment of the mails is very infrequent (Table 10) because most of our sample had reduced eye-motor skills. Instead, they went to clubs several times a month, perhaps because a large proportion of our respondents live in institutions. Several times a year, they also participated in sports and recreation -- often a club-related activity -- and visited a physician because of their disability.

Few showed any liking for solitary activities. In one open-ended question, 37 per cent expressed an overwhelming preference for social over solitary pursuits. In fact, the social preferences outnumbered the solitary by a factor of $2\frac{1}{2}$ to one (Table 12). Such solitary activities as playing musical instruments, handicrafts and painting were relatively unpopular. The image of the isolated shut-in doing basket-weaving in the sunroom is clearly inappropriate.

Different types of disability do have different effects on interpersonal communication. The arthritic and blind have the most interpersonal contact, while the blind and congenital victims of cerebral palsy remain more independent of the helping professions (Table 13). Persons with cerebral palsy and lung problems also tend to have fewer interpersonal contacts. The hearing-impaired and persons with limb dysfunctions turn most frequently to the helping professions.

The degree to which a person believes himself disabled also affects the frequency with which he has interpersonal contacts. Beyond a certain threshold of disability -- "a lot" -- interpersonal contacts may fall -- as Table 13 demonstrates -- but the relationship is far from clear and will require further study.

Despite these variations, the overall picture is one of people who desire and enjoy social intercourse. When all forms of interpersonal contact -- everything

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from face-to-face contact to reading a letter -- but excluding contacts as a client or spectator -- are combined, our respondents had an estimated average of five interpersonal contacts a day (Table 14). Only one in 50 did not have at least one daily contact, while about 20 per cent had eight contacts or more daily. Contacts with the helping professions were much less frequent: about one every four days. Watching organized events occurred less than once a week. Clearly, the preponderance of our respondents' contacts involved communication with a small number of close friends and relatives in which the participants were equal in power and status -- in short, the most satisfying form of communication.

At the same time, it cannot be denied that the number of contacts are limited, and our first hypothesis is therefore supported. The Disabled do have a limited variety of contacts. This limitation is, in part, a result of unemployment; most of the Disabled lack a workplace where they can make new contacts. It is a consequence too of the public stereotypes which can both inhibit the Disabled in their dealings with the able-bodied and, more significantly, prevent the able-bodied from communicating with the Disabled.

Another factor is lack of mobility: the more disabled a person is, the less able he is to get out and meet new people. Table 9 shows that disability increases with age, as does difficulty in making new friends. In short, there is a vicious snowballing effect in which increasing age and disability interact to reduce mobility and condemn a person to an ever more absolute social isolation.

About 70 per cent of our respondents felt restricted in their mobility, as shown in Table 15. Only one in seven drove; the rest had to be driven by a friend or call a cab (which they couldn't afford) or be provided with some specialized transportation service. If they could get out, they mention entertainment and seeing friends as their most frequent activities (Table 16). But, for half of that 70 per cent, the contacts made could possess a wide variety --

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including everything from jobs and volunteer work to shopping. Even entertainment would involve at least one companion. In short, increased mobility could mean new social contacts.

It is possible, however, to exaggerate the benefits of more available specialized transportation. Without a car, a Disabled person would find most of his outings determined by the priorities of others. The reality now is all too often supervised outings -- potentially a demeaning and frustrating experience. It remains to be seen whether the communications media might present a solution to this impasse.

2. The Mass Media as Time Fillers.

There are significant variations in the degree to which the Disabled used different types of mass media. More significantly, they make considerably less use of print and film than of the electronic media.

For example, our respondents attended an average of less than one film a year. Table 17 reveals that over a third didn't read a newspaper regularly -- a much higher proportion than the Canadian average (Table 18). Over half didn't subscribe to a magazine. Almost half didn't begin one book a month (Table 17). Our respondents devoted an average of only about two hours a day to reading newspapers, books and magazines together (Table 19). A few did read more extensively. One in 10 read three or more newspapers regularly. One in six read three or more magazines regularly, and three or more books a month. But these are the exceptions which prove the rule.

In contrast, the electronic media -- radio and television -- are heavily used. The vast majority of our respondents had easy access to radio and television. On average, their homes contained 1.6 TV sets and 2.2 radios (Table 17). About every other residence had cable. The TV sets were generally in the living room and shared by the household, though second sets were located in bedrooms (Table 20). The radio, a cheaper and more personal instrument, was generally located in the bedroom.

Despite the administration of the survey during summer, it was likely one would encounter a member of our sample using the electronic mass media at any hour of the day. Mean television viewing rose from about half an hour in the morning to about an hour in the afternoon to over $2\frac{1}{2}$ hours in the evening (Table 21). Radio listening was more constant: $1\frac{3}{4}$ hours in the morning and an

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hour each in the afternoon and evening. Thus, about four hours every evening were spent using the electronic mass media.

Our respondents watched TV on average 3.5 hours a day, and listened to the radio 3.7 hours -- a significantly greater amount of time than most Canadians spend with these media (Table 22). If the number of hours spent listening to records and reading are added to this total, we discovered our respondents spent about 10 hours daily using the mass media (Table 23). Conceivably, these different activities might overlap. A generous estimate of this overlap would be two hours, leaving about eight hours of mass media usage every day. In other words, our sample spent half its waking hours or more using the mass media. One in 10 spent most, if not all, their waking hours in this way.

There were, however some variations within our sample in media use. For example, persons living in institutions consumed less radio and television, perhaps because of lack of privacy (Table 24). The elderly also used the mass media less (Table 25), as did those with lung problems and serious disabilities (Table 13) perhaps because of lack of energy. In contrast, victims of muscular dystrophy and multiple sclerosis tended to use the mass media more, essentially because these diseases do not limit energy but the range of activities in which one can participate. These variations, though significant, do not remove the fact that most of the Disabled consume mass media offerings during half of their waking hours.

Why do our respondents spend so much time using the mass media? Schrammn (1973) suggests four reasons: surveillance of the environment, education, management/manipulation (including advertising) and entertainment.
sample tuned in daily to TV and radio news (the latter several times a day), they expressed an overwhelming preference for entertainment on both media (Table 26).

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Books, magazines, records and movies were also expected to be entertaining. Newspapers were the exception, but such non-news features as entertainment sections, advice columns, sports and specialized reports accounted for about half the expressed favourites. Thus, the Disabled's long hours of media usage would seem to reflect a desire to immerse themselves, perhaps even lose themselves, in a flood of media fantasy. In Schramm's words, the Disabled are not "content seekers" but "media seekers".

Again, it is necessary to ask why. The answer may lie in the difference between the Disabled and the ordinary able-bodied Canadian. In 1973, Overs and Healy suggested four basic values which define the social identity of most Canadians. The most basic is work: a man must spend his day on the job, while a woman must do housework and care for children. Secondly, one must maintain the rigidity of one's values at all times. Thirdly, keeping up appearances is more important than solving problems. Fourthly, dependence upon others is undesirable, "even in reciprocal circumstances". Marcella Davis (1973, p. 11) suggests that the "multitude of (one's) social experiences" and a "well" body are equally vital to social identity.

Disability may well render it impossible to live up to any of these values. Unemployment, an inability to do housework, the impossibility of keeping up appearances, a relationship of dependence with others, a sick body and a loss of mobility which limits the variety of one's social experience are all consequences of disability. If the original set of values are adhered to rigidly, the trauma of disability can be cataclysmic.

Even after time has passed and some adaptation has occurred, the problem of filling a day can remain awesome. More suitable housing for the Disabled may be located far from friends in the suburbs, where there are no steps to be climbed.

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In the case of elderly stroke victims, their children may have moved away long before (Davis, p. 95). Much of the time previously spent with a wide variety of friends and relatives, travelling back and forth to work, working, and talking to work acquaintances, neighbours and one's children's friends must be filled. It is this yawning vaccuum in the day which is filled by the mass media. In short, our second hypothesis is correct: the media are essentially time-fillers for the Disabled.

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3. The Media and Social Interaction.

Our third hypothesis was that the mass media would tend to isolate the Disabled. It seems unlikely that this hypothesis is correct. It has already been shown that our sample, despite its many hours of media use, had many interpersonal contacts, though these were limited in variety.

In order to explore this question further, we attempted to discover whether there was any statistical relationship between our respondents' levels of interpersonal contact and mass media consumption. No relationship, negative or positive, existed (Table 27). In other words, all those hours using the mass media did not prevent our respondents from contacting other people -- whether friends or relatives, Disabled or able-bodied. Strangely enough, we also discovered that there was a slight positive relationship between our respondents' getting out of their homes and mass media consumption (Table 11). In short, getting out would seem to have slightly stimulated mass media consumption, perhaps because the time alone at home seemed even emptier after enjoying some convivial company. It would seem, then, that there is little support for the proposition that the media tend to isolate the Disabled.

But the lack of any relationship between levels of interpersonal contact and media consumption has a second corollary. Simply put, this lack of relationship means that, though the media do not isolate the Disabled, the media are also not doing much to enhance the social interaction of the Disabled. In one sense, this conclusion is not surprising. Media fantasies hardly constitute manuals upon how to construct a social network.

Schramm (1973) has suggested in general terms how the media could perform such a function. Rather than providing entertainment, they could survey the Disabled's environment, or perform a "social radar" function. Radio and TV

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certainly do not perform this function. The little information they convey describes the environment of the able-bodied. Theirs is not an environment containing buildings one can't enter, relationships of dependence with almost everyone, stereotypes of inferiority, and so on. In short, neither radio nor television offer much in the way of specialized programming aimed at the Disabled. Only about half our respondents had seen any broadcasts aimed at a Disabled audience (Table 28).

The print media, which by their nature are more oriented towards conveying hard information, should, at least in theory, be more effective as a social radar for the Disabled. In fact, the print media do cover matters important to the Disabled. Newspapers, in particular, carry daily articles on the Disabled, though these are usually human-interest stories which are rarely of practical use to the Disabled. Occasionally, a useful article on a new service appears, but usually there is no follow-up and the reporters are unavailable. More often than not, the newspaper is also the last to find out about such organizations.

Even when the paper is well informed, it is generally not read by the Disabled, anyway, as has already been shown. There are many reasons why so many in our sample do not read newspapers regularly. One quarter rated their eyesight as poor or worse, while one half said it was only fair or worse (Table 8). One third categorized their reading ability as fair or worse.

This failure by the mass media to carry relevant information in an accessible format even further impoverish the lives of the Disabled. Only a small proportion of our sample was aware of and used library services (Table 28). Only a third had used a special transportation service for the Disabled.

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How did our sample become aware of the existence of these services? Friends and relatives notified about a quarter of the users of these services (Table 29). Therapists told another 13 per cent. The most important information source -- for 31 per cent of users -- was an organization for the Disabled. Only 11 per cent of users discovered the existence of these services through the media. Given that most of the Disabled use the mass media during half or more of their waking hours, these figures are appalling.

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4. The Disabled as Passive Receivers.

As has already been shown, the Disabled spend about half their waking hours using the mass media. Because of the nature of the mass media, these are hours of passive involvement rather than active participation. In other words, like most Canadians, the Disabled, in their relationship to the mass media, receive much more than they send. But the Disabled suffer more than the able-bodied from this imbalanced communication relationship, essentially because most media offerings are aimed at the able-bodied mainstream. As has already been emphasized, disability can result in a shattering questioning of those values which are central to the mainstream experience in North America. In other words, as receivers, the Disabled are not getting what they need.

With a less centralized production system and therefore more room for diversity, one might expect the film industry to be more sensitive to the needs of the Disabled. In fact, there have been at least 150 films with Disabled characters since 1950. But, as has already been noted, few of the Disabled attend films. The reason is lack of transportation, poor access to theatres and a shortage of fellow film-goers (Table 31). The expense is another obstacle, as is the "poor taste" exhibited by most films and the physical stamina required to get to and sit through a film.

Despite these problems, 74 per cent of our sample had seen at least one film on the Disabled or with main characters who were handicapped (Table 32). Most could not remember the names of these films, but the response was overwhelmingly favourable by a factor of three to one. "Les Exclus", shown on Radio-Canada TV, and the documentary on the Handicapped Olympics were particularly memorable (Table 33), though only a small proportion saw either of these films. In all cases, the Disabled valued these films, not because of what they learned about themselves, but because they felt the films were getting their message across to the general public.

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There are, of course, some special-purpose publications for the Disabled, sometimes even produced by the Disabled themselves. These include: Feux Verts, a Montreal monthly; Paraquad, a Montreal monthly; Le Lien, a Montreal news bulletin for the Disabled; Bulletin, a Montreal monthly; Presence, a Montreal monthly; Le Cristallin, a Montreal monthly; Caliper, a Toronto monthly; Mainstream, a Kingston publication; The Canadian Sunshine Friend, a Toronto publication; Our Future, a Windsor publication; ALPHA Action Reporter, a London publication; New Stand, an Ottawa monthly; and Reporter, a Toronto publication. Most of these are published by organizations and are not provided to non-members. None have the slick and effective journalism appearing in Accent on Living, published in Bloomington, Illinois. This well laid out magazine is intended to give the Disabled practical upbeat information on Disabled lifestyles, problems and opportunities. In this endeavour, it succeeds admirably.

There are extremely few television or radio programs produced by the Disabled themselves. DisAbility in Ottawa produced such programs for a while, but no longer. Access to community cable channels, as well as the necessary equipment and personnel, might render programming by the Disabled feasible. But the obstacles are formidable. The Disabled are largely unorganized and therefore lack the protection which an organization can provide, as well as the necessary resources and audience. In these circumstances, only the most dedicated Disabled individual will be able to function effectively. The Disabled also lack the necessary skills, both organizational and specialized, and have difficulties attracting skilled assistance. Thus, in many communication enterprises involving the Disabled, a few skilled, motivated people do all the work, and end up discouraged and over-worked.

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These, then, are some of the reasons why the Disabled remain receivers rather than senders in their relation to the mass media. They also tend to be receivers rather than senders in almost all their interactions, as a glance at Table 10 easily demonstrates. Perhaps the only device which casts them in a sender role is the telephone. Phoning is second only to talking face-to-face to friends and relatives as an activity which the Disabled engage. Even then, with a call made and received every other day, telephone use by the Disabled is quite low in comparison to its employment by the general population.

In fact, life seems to cast the Disabled in the role of a receiver -- a receiver of care, a receiver of assistance and a receiver of visitors. It is this lack of power and control inherent in this role which is the strongest argument against the continuation of the existing situation.

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5. The Failure and Potential of the Communications Media

During the course of this study, the Disabled were asked what their greatest problems were. Lack of money was most frequently mentioned, (Table 34), and next came lack of mobility. The third problem was the able-bodied, or, more precisely, their stereotyping of the Disabled as inferior and the consequent difficulties the Disabled encounter in becoming integrated into the larger society.

The mass media do not respond in any significant way to these problems. Entertainment fantasies do not create jobs or provide money for the Disabled. The formality, predictability and anonymity of the mass communication experience means the mass media cannot bridge interpersonal distance nearly as effectively as they shrink physical distance. Studies (for example, Klapper, 1960) have shown that the mass media tend to reinforce rather than change existing values and attitudes. In short, the mass media are doing little to change existing public towards the Disabled. Indeed, until a major transformation occurs in Canadian media offerings, the mass media are not going to respond effectively to the needs of the Disabled.

Perhaps other types of media can perform this function. In our study, we investigated the effectiveness of the telephone, a medium of medio communication. Nearly our entire sample had easy access to a telephone. For this reason, we tried to discover whether there was any relationship between levels of telephone use, personal mobility and interpersonal contact.

Surprisingly, we discovered there was a fairly strong positive relationship between telephone use and personal mobility (Table 11). The more a person used the telephone, the more times he left his home for outings. It may be, of course, that our respondents met people during their excursions and as a result exchanged telephone calls with them. It is difficult, however, to dismiss so casually

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the importance of the telephone because there was an even higher positive correlation between levels of telephone use and interpersonal contact (Table 11). In fact, the half of our sample which frequently used the telephone had twice the level of interpersonal contact as the others (Table 35). A similar increase in mobility for roughly half our sample produced only about a 25 per cent increase in interpersonal contacts. In short, even in comparison to improved mobility, the telephone enhances interpersonal communication.

There are problems, though, with the telephone. Because the deaf were under-represented in our sample, more of our respondents than members of the general Disabled population could make use of the telephone. In 1968, Sullivan, Frieden and Cordery (p. 7) stated that there was little correlation between diagnostic categories and the types of telephone equipment useable by Disabled persons with upper-extremity dysfunctions. In short, because of the many individual variations in disability, an attempt to remove physical obstacles to telephone use would have to be aimed at specific individuals rather than diagnostic categories.

Davis, in her study, illuminated difficulties in the communication relationship inherent in telephone use. While the radio presupposes no real relationship and only one agent -- the Disabled person himself -- the telephone requires a genuine relationship and two agents: the Disabled person and some friend or relative.

Unfortunately, disability often attenuates such relationships. Davis, (p.p. 21,22) described a female patient who had little to discuss over the phone with friends and relatives but the static fact of her disability. Eventually, communication ceased, and neither she nor her friends and relatives attempted to break through this silence and withdrawal. Soon, she ceased going out for

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fear of "being mistaken for a 'drunk'". Except for weekly visits to the clinic, she saw virtually no one and began to think of suicide. She did not, however, act on this thought because she kept two telephone numbers available: that of a local Suicide Centre, and of a radio announcer who broadcast through the night and received calls from the "lonely". Thus, the telephone still retained a useful function, if only as an ultimate recourse.

Our workshop and our data indicate the telephone could be used for considerably more than just a medium of ultimate recourse. Though it seems doubtful that the telephone is very useful in initiating contact, it could serve as an excellent means of maintaining existing relationships and contacting persons whom Disabled persons know share their interests -- in short, as a means of secondary contact. In fact, the telephone could be a key instrument in creating a community of the Disabled. Certainly, the telephone does not perform that function now. Our data indicate the Disabled use the telephone with relative infrequency in comparison to the general population, and perhaps rely excessively on face-to-face communication. In other words, the telephone is drastically under-utilized.

Only a determined educational effort can assure effective use of the telephone by the Disabled. But the initiative must come ultimately from the Disabled themselves. In this respect, Davis suggests the fostering of telephone use, through "informal supportive social networks": self-help groups; patient-patient phone networks; informal registries of who needs help, who will visit, etc.; clubs and recreation centres; respite care networks for the relief of other family members; and neighbourhood and tenant associations. In other words, the encouragement of more effective telephone use by the Disabled is both a means and an end in the effort to give the Disabled more control over their lives.

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New telecommunications systems, services and devices could also be of considerable benefit to the Disabled. For obvious reasons, most of our sample knew little of these services. But there can be little doubt that the more specialized and personalized content forms promised by recent developments in communications technology could assure that the special needs of the Disabled were more easily met. Video-cassettes, video-discs, cable-converter services, closed captioning, video teleconferencing, two-way television and information retrieval, tailored newspapers, slow-scan TV and dedicated SCMO services all promise a greater flexibility in meeting the Disabled's needs. The SDI (selective dissemination of information) services offered by the National Library and the Canadian Institute for Scientific and Technical Information also offer a means of keeping the Disabled informed effortlessly, efficiently and powerfully. One Canadian organization for the Disabled has already set up a computerized data bank on disability. The American magazine for the Disabled, Accent on Living, also operates a computerized information retrieval service. In terms of reaching large numbers of the Disabled, information retrieval services using the telephone and two-way cable systems are probably the wave of the future. Already, Carleton University in Ottawa is conducting such an experiment with a commercial cable system.

Despite the promise of these services, none of them will be of real assistance to the Disabled unless they are cheap. Our sample, with a median income of $4,400, is hardly in a position to benefit without assistance from expensive new technologies. In addition, it is vital that these devices be simple to use. Only 37 per cent of our sample could use a typewriter; 27 per cent, a pocket calculator; six per cent, a CB radio; and five per cent, a ham radio and computer terminal (Table 36). Unfamiliarity may explain, in part, these

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low figures, rendering instruction in these devices a partial solution. But it should not be forgotten that, because of disabilities, complexity will inevitably reduce use of a device. Poor reading and writing skills -- particularly among the blind -- means that some devices will be quite useless. Indeed, this fact and the wide variation in disabilities underline the imperative need for more research into the combination of new services best suited to each category of disability and, ultimately, to each Disabled individual.

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DISCUSSION

During this study, we attempted statistically to discover what factors played the most important role in determining our respondents' daily activities. The results were intriguing (Table 3). Interpersonal communication was the most important single factor in determining how our respondents would spend their time. Next in significance was the acquisition of information. Far down the list was their role as a client with a disability. In fact, their habits of interpersonal communication were many times more important as a predictor than their mass media usage or their activities as a client or a person with a disability.

The implications of this analysis are fundamental. First of all, the Disabled see themselves as more affected by interpersonal communication than their use of the mass media. Secondly, the quest for more and better information is a fairly significant influence upon their lifestyles. Third, those activities traditionally associated with disability and institutionalization are unimportant in characterizing the individual members of our sample. In short, the Disabled do not define themselves in terms of their disability; only the able-bodied do that.

Beyond this, it would seem that each of these factors acts independently. Interpersonal communication occurs independently of efforts to acquire information; both occur independently of activities resulting from their disabilities. In short, the disabilities of the Disabled do not determine the course of their lives. They are whole people involved in the complete spectrum of human activity, not predictable automata moving down a single irremediable track.

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Their frustrations and despairs arise less from the fact of their disability than from external forces in their environment which force them into a humiliating and impotent role as receivers of assistance, visitors and care. A primary objective of this study has been to explore how the Disabled, in the area of communication, can regain control over their lives.

An obvious first step would be to lessen in intensity and importance the Disabled's role as receivers. It follows that there is little use in rendering TV and radio more available without ensuring their contents are more relevant and less a pacifying mish-mash of thrillers, variety and fantasy. The best way to meet this objective is to give the Disabled a larger sending role -- as producers, critics, scriptwriters, and so on.

Such a change will not occur overnight. In many cases, serious physical barriers exist to the Disableds' even entering buildings where they can perform these roles. These will probably only be removed by legislation. But more damaging are the psychological barriers. Even now, the Disabled are not accepted as full members of Western society, despite a few advances in Europe (Lippman, 1972). The present emphasis on rehabilitation and institutionalization resembles in some ways the treatment of criminals. But, the Disabled have the same capabilities as the able-bodied, except when these have been lessened by the denial of jobs, education and entertainment. In short, the correctional approach to the problems of the Disabled must end.

The alternative is enchancement of the human capabilities of the Disabled. But enhancement will only occur as the Disabled begin to gain more control over their lives. Control implies organization if any more than a few courageous individuals are to shatter the barriers of financial impotence and bureaucratic indifference, which so limit the Disabled. The telephone

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should become an important catalyst for such organization if the Disabled, through self-help groups and other organizations, can learn to use it effectively. The imminent emergence of more personalized media better able to serve special-interest groups could well assure that, with good organization, the Disabled begin to produce and transmit information which meets their own needs. Indeed, with more of the Disabled active in program-production, it might well be possible to eliminate many of the destructive stereotpyes which have afflicted the Disabled for so long.

Simultaneously, the development of new communications aides and devices may give the Disabled more control over their environment. Already, with four telephone calls, a Disabled person can request information, arrange a visit, purchase an article, and "attend" a meeting -- all without leaving his own home. Closed captioning can be viewed as a method of giving the deaf a "bionic" ear. But why should these captions be no more than literal or liberal lexical transliterations? Captions are digital information which which is both storable and transmittable. Perhaps other types of information could appear in other formats than subtitles or super-titles. The future may lie with the digital games and computers already selling for home use at anywhere from $100 to $2,000. Digital telephony promises almost unlimited conferencing, store-and-forward message services, repertoire dialing and, ultimately, remote sensing. Such services would not just compensate for disabilities; they would enhance abilities.

There is no reason, unfortunately, to assume the Disabled will benefit from these advances in communications technology. Much of Canadian communications technology is imported, and its designers and developers are usually ignorant of and unconcerned with the needs of the Disabled. Often the

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Disabled themselves are unaware of new communications developments. Even when they are aware, they are usually unable to exert any influence over research and development. On the few occasions when the Disabled are able to bring about some change, it is usually after a bitter struggle and the result is minor modification introduced as an afterthought. For all these reasons, it is desperately important that there be Disabled persons with the technical knowledge to monitor research and development, and suggest how new advances in communications technology can be shaped in the interest of the Disabled.

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RECOMMENDATIONS

The Department of Communications can do much to assure that telecommunications in Canada serves the Disabled as well as the able-bodied. For example, there is still a dearth of information about the communications needs of the Disabled.

More specifically, there is little in the way of summary statistics on the incidence, severity and effects of disability in Canada. Such data could come from the 1981 Census; various groups are trying to assure more adequate coverage of disability in this census and subsequent ones. Detailed data on disability and leisure pursuits are available from the Canada Health Survey (See Abelson, 1977) which collects data on a monthly basis right across Canada. The analysis of these data must be a necessary prelude to any well conceived attempt to respond to the communications needs of the Disabled.

In addition, too little information exists on the communications needs of the deaf and the devices which could best serve them. Defined by their inability to communicate, the deaf are an obvious priority for the Department of Communications.

At the present time, it is difficult to foresee except in a general way how emerging communications technologies will affect the Disabled. The developers of these new technologies are usually ignorant of the Disabled's needs, while the Disabled themselves for the most part know little about the technologies. The Department of Communications should bridge this communication gap and at the same time supply itself information vital to its own effort to respond to the communications needs of the Disabled. More specifically, the department

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should examine, or sponsor a study assessing, the possible educational and vocational opportunities for the Disabled arising from these new technologies.

These three areas of study form the basis for our first recommendation:

1. THE DEPARTMENT OF COMMUNICATIONS SHOULD UNDERTAKE, OR FUND OTHERS TO UNDERTAKE:

   (A) AN ANALYSIS OF STATISTICAL DATA FROM THE 1981 CENSUS AND THE ONGOING CANADA HEALTH SURVEY RELATING TO COMMUNICATIONS AND DISABILITY;

   (B) A COLLECTION OF INFORMATION TO RELATE EXISTING AND FUTURE COMMUNICATIONS TECHNOLOGY TO THE VOCATIONAL AND INFORMATION NEEDS OF THE DISABLED;

   (C) A STUDY OF THE COMMUNICATIONS NEEDS, AND THE MEANS TO MEET THOSE NEEDS, OF THE DEAF AND HARD-OF-HEARING OF CANADA.

The Disabled not only lack information about future communications technologies. Our study has shown they also know very little about even existing technologies which might have a substantial impact on their lives. Thus, it is our recommendation that:

2. THE DEPARTMENT OF COMMUNICATIONS SHOULD ACT AS A BROKER BETWEEN THE DISABLED AND THOSE PROVIDING EXISTING TELECOMMUNICATION SERVICES, DEVICES AND SYSTEMS SO AS TO ENSURE THAT SUPPLIERS ARE MATCHED WITH POTENTIAL USER GROUPS.

Such a brokerage function would not involve the marketing, selling or promotion of any specific technology, though it would be an active rather than a reactive role for the Department. The sponsoring of widely circulated newsletters on new technologies, seminars to inform the Disabled and the helping community about these technologies, and a conference involving communications researchers, manufacturers of telecommunications equipment, the disabled and the helping community could all be aspects of this brokerage function.

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If the Department of Communications is to perform this brokerage function effectively, it must be receptive to the proposals of the Disabled themselves. It is not sufficient just to perform studies and then formulate policies in isolation. The Department must ensure that the Disabled and the organizations representing them are actually able to play some role in the policy-making process. To this end and at the risk of adding another layer of bureaucracy, we recommend:

3. THE DEPARTMENT OF COMMUNICATIONS, IN ORDER TO ENSURE THAT COMMUNICATIONS TECHNOLOGY IS USED TO THE DISABLED'S ADVANTAGE, MUST:

   (A) DESIGNATE A DEPARTMENTAL OFFICIAL AS A PERMANENT ENTRY-POINT FOR IDEAS, CONCERNS AND PROPOSALS FOR THE DISABLED, AND

   (B) PROVIDE ORGANIZATIONAL EXPERTISE TO CHANNEL THESE IDEAS, CONCERNS AND PROPOSALS TO THOSE WITHIN DOC -- AND ELSEWHERE IN THE GOVERNMENT -- FOR FURTHER ACTION, BACKED BY THE TECHNICAL EXPERTISE OF DOC IN TELECOMMUNICATIONS.

The creation in the Department of a brokerage function and an entry-point for the Disabled's concerns must be viewed as only the first step. Ultimately,

4. THE DEPARTMENT OF COMMUNICATIONS MUST FIND WAYS OF INVOLVING THE DISABLED IN THE DECISION-MAKING PROCESS WHEN SUCH DECISIONS MIGHT AFFECT THEIR USE OF A MEDIUM FOR WHICH DOC (OR CRTC) IS RESPONSIBLE.

Obviously, if the Disabled are to participate effectively in this process, they must become much more aware of the problems and opportunities presented by the media. Such awareness will only flow from better organization. At the present time, no grass-roots organization cutting across all disabilities exists. For this reason, the Department of Communications should work closely with existing groups, particularly those with a broad-based appeal and some sophistication about the media. Through the performance of the brokerage function and a receptiveness to information on the Disabled's needs and concerns,

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the Department should be able to create an environment in which the Disabled can exercise a meaningful influence over the decisions affecting them.

A basic principle which should govern those decisions is that the present receiver role of the Disabled should be lessened as much as possible. In other words,

5. THE DEPARTMENT OF COMMUNICATIONS SHOULD PLACE PRIORITY UPON DEVELOPING TELECOMMUNICATIONS SYSTEMS, SERVICES AND DEVICES WHICH WOULD INCREASE THE ACTIVE PARTICIPATION OF THE DISABLED IN MEDIA ACTIVITIES.

The development of such technologies will, of course, be useless unless the Disabled can take advantage of them. To this end, the Department of Communications should encourage, and the CRTC should require, the removal of the many technical and economic barriers to effective exploitation of the media by the Disabled. The department should also fund media workshops for the Disabled. Ultimately, such workshops should become continuing exercises and should focus, not only on broadcasting, but also on: public relations and publicity; advertising; phone techniques; organization for media production; letter-writing; critique and content analysis; and review writing.

The Department should encourage the development of devices, systems and services which would permit active participation by persons lacking mobility. These include everything from two-way cable to communication-based job-sharing schemes to tele-education to tele-conferencing. Within certain limits, it might be better if these devices offer the Disabled an opportunity for a learning experience. For example, a keyboard system is probably better than one employing abbreviated, preprogrammed instructions because the former permits the Disabled to acquire a valuable communications skill. In fact, new communications technologies should attempt to enhance the abilities of the Disabled rather than

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compensate for their disabilities. More specifically, these new technologies should enhance the abilities of the disabled by encouraging their participation in community development and creating improved educational and vocational opportunities for them. Hence our final recommendation:

6. THE DEPARTMENT OF COMMUNICATIONS SHOULD ENCOURAGE TECHNOLOGIES WHICH ENHANCE THE DISABLED'S SKILLS -- RATHER THAN COMPENSATING FOR THEIR DISABILITIES -- ESPECIALLY WHERE THESE MIGHT BE USEFUL IN ENCOURAGING COMMUNITY DEVELOPMENT AND IMPROVED EDUCATIONAL AND VOCATIONAL OPPORTUNITIES AMONG THE DISABLED.

In short, such technologies must encourage the Disabled to help themselves. Any system, service or device which renders the Disabled dependent upon others will only perpetuate the problems of passivity and helplessness which this study has amply demonstrated. New communications services should demand participation of the Disabled. New systems should ideally be maintained and operated by the Disabled themselves, and a Disabled person should be able to operate a new communications device without help from others. Only if new communications technology for the Disabled meets these requirements will the Disabled be able, finally, to exercise the same control over their communications environment as any able-bodied Canadian.

APPENDIX: TABLES

Age	M	O	T
15 & less	2	1	1
16-24	17	13	15
25-39	26	20	23
40-64	37	53	44
65 & over	19	14	17

Living Arrangements	M	O	T
Alone	10	17	14
With Family	51	62	56
Share	5	12	8
Institution - Alone	15	8	12
Institution - Share	18	1	10
(Institution - Total	33	9	22)
DK/NA	1	1	1

Status	M	O	T
Head of House	28	50	38
Not Head	55	47	51
DK/NA	17	3	11

Last Year of Education	M	O	T
None	7	1	4
Elem & less	24	18	21
Some H.S.	29	28	28
H.S. Degree	17	16	16
Some Post-Secondary	4	16	9
Tech/Voc. Degree	8	4	6
University	12	12	12
Post-Grad.	-	5	2
(Post-Second. Total	24	27	29)
Other	-	1	nil
DK/NA	1	1	1

Frequency of Paid Employment	M	O	T
Full-time	14	20	17
Part-time	5	8	6
Occasional	1	6	3
Unemployed	79	66	72
DK/NA	1	1	1

Annual Family Income	M	O	T
Under $2000	21	6	14
$2000-$5999	63	32	48
$6000-$9999	9	13	11
$10000-$14999	4	16	10
$15000 & More	2	25	13
DK/NA	2	9	5

Language(s)	M	O	T
English only	20	60	39
French only	40	1	20
English & French	40	39	40

Sex	M	O	T
Male	42	45	43
Female	58	55	57

Vocation Class	M	O	T
Clerk/Secretary	7	18	12
Skilled Manual	9	7	8
Unskilled Man'l	17	8	13
Professional	16	20	18
Other White Collar	1	7	4
Farmer	1	1	1
Student	9	3	6
Never Employed	26	7	17
Other	13	24	18
DK/NA	1	7	3

Table 1. Social-Economic Demographics by % of Respondants for each City (M=Montreal, O=Ottawa, T=Total)

Family Income/Yr.	Sex of R		Head of Household	
	Male	Female	Yes	No
Under $2000	13	16	7	22
$2000-$6000	50	52	52	45
$6000-$10000	13	10	17	8
$10000-$15000	12	9	14	8
Over $15000	12	14	10	17
	2		2	
	F=2.57 n.s.		F=20.04 $p < .001$	
Last Employed as	M	F	Yes	No
Clerk/Secretary	4	20	10	16
Manual-Skilled	15	4	12	5
Manual-Unskilled	15	12	14	12
Professional	27	12	28	10
Other White Collar	5	3	4	4
Farmer	1	-	1	-
Student	6	7	1	11
Other, unclassed	15	22	22	17
Never Employed	15	21	8	25
	2		2	
	F=49.76 $p < .001$		F=54.32 $p < .001$	
Head of Household	M	F		
Yes	59	30		
No	41	70		
	2			
	F=29.63 $p < .001$			

Table 2. Crosstabulation of Three Economic Variables (Family Income, Last Employment (Vocation Class), and Status as Head of Household)

Extent	M.S.	C.P.	Paralysis	Arthr./ Rhemua.	Lung	Blindness	Hearing	M.D.	Other & Mult.	Total
None	3	–	–	–	–	–	11	–	3	2
A Little	9	27	27	7	11	16	–	13	17	17
To an Extent	25	39	-35-	37	22	35	44	-63-	-40-	36
A Lot	-53-	29	31	44	-67-	40	44	25	35	38
Totally	10	5	6	12	–	8	–	–	5	7
Number of R's =	(59)	(59)	(55)	(43)	(9)	(62)	(9)	(8)	(87)	(387)

Table 3. Extent of Disability by Disability
(by % within Each Disability)
(Approximate Median Underscored)

Effect										
Access to Transportation	27	19	28	13	21	25	–	25	22	22
Confinement, Lack of choice	34	15	31	45	43	20	22	25	27	29
Lack of Socializing	5	3	4	1	7	4	11	8	2	4
Can't Shop	–	–	1	3	–	4	–	–	–	1
Dependency	11	16	9	14	14	9	11	17	16	12
Unemployment	7	13	10	9	–	5	–	–	16	10
Architectural Barriers	–	–	3	–	–	–	–	–	2	1
Lack of Friends	1	3	–	–	–	1	–	8	–	1
Other, Diverse	15	30	15	9	14	31	55	17	17	20
Number of Effects =	(94)	(67)	(80)	(69)	(14)	(93)	(9)	(12)	(116)	(554)
N Reporting	62	59	55	44	9	62	10	8	90	399

Table 4. Effects of Specific Disability by % of Reported Effects

Disability	M	O	T
Multiple Sclerosis	9	23	16
Cerebral Palsy	19	10	15
"plegia"[1]	17	10	14
Arthritis, Rheumatism	7	16	11
Lung Problems	1	4	2
Blindness	18	13	16
Hearing Impaired[2]	4	1	3
Muscular Dystrophy	2	2	2
Other[3]	24	21	23

Notes: 1. Includes amputees, Para- and Quadraplegics, hemiplegics and others who have paralyzed or missing limbs

2. Exclusive of the small sample of twenty profoundly deaf individuals who responded to a mail survey in Ottawa

3. Includes multiple-handicapped individuals, those with unknown diagnoses and other categories of illness and disability.

Table 5. Breakdown of Disabilities by City (by % of Respondants)

Length	M	O	T
Under 1 yr.	5	3	4
1-5 yrs.	12	20	16
6-10 yrs.	16	18	17
11-15 yrs.	8	9	8
16 & - yrs.	27	31	29
From Birth	30	17	24
DK/NA	2	2	3
Median	16	16	16

Table 6. Length of Disability by City (by % of Respondants)

Extent	M	O	T
None	2	2	2
A Little	18	15	17
To an Extent	43	27	35
A Lot	33	43	38
Totally	2	12	7
DK/NA	2	1	2

Table 7. Extent of Disability by City (by % of Respondants

S K I L L

	Reading	Writing	Eyesight	Hearing	Speaking
DK/NA	1	1	1	1	4
Unable	9	13	11	1	2
Poor	13	19	13	2	3
Fair	11	18	18	11	13
Good	67	50	57	86	77

Table 8. Cognitive and Communicative Skills by % of Respondants

	Level of Education	Freq.[1] of Employment	Family Income	Length of Disability	Extent of Disability
Age	.085*	-.200**	-.022	-.405**	.228**
Education		.163**	.254**	-.158**	.077
Employment			.151**	.050	-.237**
Income				-.050	.108*
Length					-.105*

*-- p .05
**-- p .01

[1] This scale has been inverted to increasing frequency to correspond to the other orders.

Table 9. Correlation (Pearson's R) between Disability and Vocational Demographis

Activity	FREQUENCY									
	Never	Yearly	Sev./ Year	Monthly	Sev./ Month	Weekly	Sev./ Week	Daily	Sev./ Day	DK/NA
INTERPERSONAL										
Speak to Friends, etc.	1	1	1	1	5	6	21	21	41	4
Interact with Disabled	7	2	2	4	13	10	20	12	30	1
Interact with Club Memb.	20	2	7	6	26	22	11	2	3	3
Participate in Sports	66	1	5	1	9	7	7	1	1	5
Attend Sporting Event	55	5	10	3	10	2	12	1	nil	4
Attend Classes	65	2	1	1	4	6	11	6	3	2
Attend Civic Meetings	66	4	9	6	4	3	3	1	1	6
See Counsellor	68	5	9	4	5	3	3	1	-	4
See Physiotherapist	61	3	7	1	5	5	9	4	nil	6
See Physician	5	14	40	19	10	6	2	1	nil	3
Speak to Clergy	22	4	11	10	19	19	12	1	1	2
Do Volunteer Work	56	1	6	4	12	3	8	6	4	2
MEDIO COMMUNICATION										
Place Phone Call	6	1	2	3	11	5	23	15	33	1
Receive Phone Call	9	1	3	3	7	4	27	11	36	1
Send Letter	24	5	24	11	20	5	6	1	1	5
Receive Letter	13	4	29	9	24	6	8	2	1	5
MASS COMMUNICATION										
Listen to Radio News	9	1	2	1	1	1	8	24	53	2
Watch TV News	8	1	1	1	2	2	11	33	41	1
Pick up Mag. to Read	34	1	8	6	12	10	16	8	4	3
Pick up Book to Read	28	1	5	4	10	6	17	19	9	2
Go to Film	50	9	24	8	5	1	1	-	-	2
Attend Play, Concert	44	8	30	6	4	1	1	-	-	6
SOLITARY ACTIVITY										
Play Musical Instrum't.	74	1	5	1	5	2	4	2	-	6
Sculpt, Paint, Draw	71	1	4	2	5	4	5	1	1	6
Do Crafts or Sewing	42	nil	5	3	11	5	15	9	8	5
MOBILITY	2	1	2	3	12	11	27	23	17	2

Table 10. Activities by % of Respondants Reporting Frequency of Engagement (Approximate Median Underlined)

	Interpersonal Index	Disabled Contact	Getting Out	Phone Utilization
Mass Media Consumption	.041 (n.s.)	.026 (n.s.)	.091*	.062 (n.s.)
Interpersonal Index	-	.587**	.257**	.696**
Disabled Contact	-	-	.100*	.108*
Getting Out	-	-		.188**

*--p. $\leq$ .05
**--p $\leq$ .001

Table 11. Pearson R Correlation Coefficients among Five Communication and Mobility Variables

Another Important Activity	No.	% of N. (R=185)
Cards, crosswords, chess, checkers, bingo, other games	25	6
Sports, exercise, recreation	20	5
Housework, family chores	18	4
Clubs, church organizations	14	3
Volunteer work	13	3
Arts & Crafts, flowers (not sewing)	12	3
Dancing, singing, folk dancing	11	3
Travel, outings, camping (organized or individual)	11	3
Dress-making, designing, sewing	6	1
Music (playing, composing)	6	1
Employment, professional activities	6	1
Gardening	5	1
Seeing friends, visiting, being visited	4	1
Boyfriend, girlfriend	4	1
Writing, editing	3	1
CB Radio	2	nil
Ham Radio	2	nil
Studying, library work	2	nil
Walking	2	nil
Sitting and watching, sunning	2	nil
Retreats	2	nil
Photography	2	nil
Electrical hobby	1	nil
Cooking	1	nil
Baby-sitting	1	nil
Model building	1	nil
Other, unclear description	9	2

Classification of "Other" Activities	No.	% of N.	% of R.
Social			69 (Social)
Active (sports, travel, etc.)	60	15	32
Sedentary (games, visiting, etc.)	33	8	18
Other (clubs, job, volunteer)	35	9	19
Solitary			25 (Solitary)
Active (arts & crafts, hobbies)	36	9	19
Sedentary	7	2	4
Other	5	1	3
Other			5 (Other)
Unclassifiable	9	2	
Sum: Active	96	24	52
Sedentary	40	10	22
Other	49	12	26

Table 12. Classification of "Other Important Activities" by Proportion of Interviewees (N=401) and those Responding to Question (R=185)

Variable (Value)	Derived Communication Indices: Mass Media	Interpersonal	Helper/Client
Handicap	(Hrs./Day)	(Cont./Day)	(Cont./Yr.)
M.S.	10.66	5.15	94.92
C.P.	9.37	4.29	62.93
Paralysis	8.65	5.27	159.26
Arthr./Rh.	9.50	5.86	90.48
Lung	5.83	2.22	77.78
Blindness	7.28	5.49	43.45
Hearing	6.67	4.89	144.45
M.D.	11.81	5.25	75.00
Other	9.67	4.80	80.46
F	4.551*	2.902*	2.616*
			* $p < .01$
Extent			
None	11.50	4.43	85.50
A Little	9.83	5.42	96.92
To an Extent	8.90	5.58	78.92
A Lot	8.98	3.81	91.61
Totally	8.37	4.38	90.38
F	3.980*	3.707*	0.231(n.s.)
Extent x Handicap			
F	0.647(n.s.)	1.300(n.s.)	0.701(n.s.)
Grand Mean =	9.11	5.02	87.60

Table 13. Means and Analysis of Variance for Three Measures of Communication Behaviour by Handicap and Extent of Disability

Total Interpersonal Contacts Daily	%
Less than 1	2
1	14
2	11
3	12
4	9
5	14
6	10
7	10
8	7
9	6
10	2
more than10	6
Mean:	5/day
Median:	4.7/day
Std.:	3.2

Helping Context Interpersonal Contacts/Yr.	%
Fewer than 10	7
10-20	16
20-30	7
30-40	10
40-50	10
50-60	6
60-70	13
70-100	5
100-150	9
150-200	7
200-350	5
over 350	6
Mean:	77.4/yr.
Median:	45.5/yr.
Std.:	92.6

Spectating Context Interpersonal Contacts/Yr.	%
Fewer than 10	35
10-20	25
20-30	7
30-40	11
40-50	4
50-60	2
60-70	2
70-100	nil
100-150	
over 150	
Mean:	31.7/yr.
Median:	11.2/yr.
Std.:	49.7

Table 14. Distributions of Interpersonal Contacts for All, Helping Context, and Spectating Context Indices by % of Respondants

Desire to Get Out More Often (% of R)	
Yes	71
No	27
DK/NA	2

Do You Drive? (% of R)	
Yes	13
No	84
DK/NA	3

What to do if Got Out More Often (% of "Yes")	
Visit Friends	13
Entertainment	28
Shopping	6
Travel	6
Volunteer Work	4
Paid Employment	2
Exercise	10
Other	13
DK/NA	18

What Prevents Getting Out More Often (% of "Yes")	
Lack of Transportation	35
Lack of Companion(s)	16
Few Places to Go to	2
Expense	14
Weather	2
Architectural Barriers	4
Limited Strength, lack of energy, pain	6
Other	9
DK/NA	12

Table 15. Limitations on Mobility

	← FREQUENCY →									
Activity	Never	Yearly	Sev./ Year	Monthly	Sev./ Month	Weekly	Sev./ Week	Daily	Sev./ Day	DK/NA
Get out of Dwelling	2	1	2	3	12	11	27	23	17	2
See Counsellor	68	5	9	4	5	3	3	1	-	4
See Physiotherapist	61	3	7	1	5	5	9	4	nil	6
See Physician	5	14	40	19	10	6	3	1	nil	3
Speak to Clergy	22	4	11	10	19	19	12	1	1	2
Do Volunteer Work	56	1	6	4	12	3	8	6	4	2
Sports Participation	66	1	5	1	9	7	7	1	1	5
Attend Classes	65	2	1	1	4	6	11	6	3	2
Spectator at Sports	55	5	10	3	10	2	12	1	nil	4
Attend Civic Meetings	66	4	9	6	4	3	3	1	1	6
Attend Play, Concert	44	8	30	6	4	1	1	-	-	6

Table 16. Activities Requiring Mobility by % of Respondants Reporting Frequency of Engagement (Approximate Median Underlined)

	TV	Radio	HiFi	Phone	Newspap[1]	Mags.[2]	Cable[3]	Books[4]
None	3	4	32	6	37	51	46	43
1	51	38	45	61	38	18	46	20
2	34	25	14	24	16	14	6	13
3	10	16	6	8	7	6	1	7
4 & +	2	17	3	1	3	10	*	8
Mean	1.6	2.2	1.1	1.4	1.0	1.2	0.6	1.7

1. Read regularly
2. Read regularly
3. Connections
4. Begun monthly

* - Less than 1%

Table 17. Access to Media (Number of Devices, Items) (by % of Respondants)

	Number Read Daily			
	0	1	2	3&+
Ontario	8	69	19	4
Quebec (Fr.)	19	61	15	5
Quebec (Eng.)	8	52	29	11
Our Sample	37	38	16	9

Table 18. Newspaper Reading Comparison Figures by % of Population (Source: Television Basics 1977/78; Television Bureau of Canada.[1] Data are rounded to whole numbers.)

1. These figures are in turn derived from the Davey Commission Report (1970).

Time	TV	Radio	Newsp.	Books & Mags.	HiFi
Less than 1 hr.	11	18	45	40	53
1 hr.	8	9	49	45	33
2 hrs.	22	21	2	9	9
3 hrs.	17	13	1	6	5
4 hrs.	9	7	–	*	–
5 hrs.	16	14	–	–	–
6 hrs.	8	4	–	–	–
7 hrs.	1	2	–	–	–
8 hrs.	4	2	–	–	–
9& hrs.	4	12	–	–	–
means	3.5	3.7	1.0	1.2	1.1
std.	2.6	2.7	0.6	0.8	0.8

*-Less than 1%

Table 19. Mass Media Consumption (Hrs./day) by % of Respondants for Each Medium

Location	Television	Radio	HiFi	Telephone
Bedroom	33(23)	48(50)	34(41)	22(15)
Kitchen	7(8)	18(12)	3(1)	22(22)
Living Room	47(56)	27(28)	49(34)	24(27)
Study, Den, Family Room --	6(3)	2(-)	4(1)	4(1)
Hallway, Foyer	-(*)	-	1(*)	10(10)
Bathroom	-	-	1(*)	-(*)
Basement	4(2)	1	4(1)	2(1)
Other Locations	3(2)	3(1)	6(4)	5(5)
Devices Reported	562	600	348	491
Total 1st & 2nd	570	620	366	510

Table 20. Location of Communication Devices by % of Reported Devices

(% of Respondants having 1 Device in Parentheses)

	Television			Radio		
	Morn	Aft	Eve	Morn	Aft	Eve
Less than ½ hr.	63	47	8	21	32	39
½ hr.	6	7	5	16	12	11
1 hr.	15	16	11	28	20	18
1½ hrs.	4	7	7	5	8	7
2 hrs.	5	12	18	10	8	9
2½ hrs.	1	3	8	3	5	6
3 hrs.	2	4	29	3	5	6
constant	2	3	14	1	1	*
DK/NA	3	2	3	3	3	4

Table 21. Radio and Television Consumption (½ hr. units) by Period of Day by % of Respondants

Adult Media Consumption
(Hrs./day)

	Television	Radio
All Canadians	3.3	3.3*
All men	3.1	3.0
All women	3.5	3.6
Our Sample	3.5	3.7

Table 22. Television and Radio Consumption Comparison Figures (Source: Television Bureau of Canada.)

* indicates derived figure.

Consumption	%	Cum. %*
Less than 1½ hrs.	2	2
1½ hrs.	3	5
3 hrs.	6	10
4½ hrs.	9	19
6 hrs.	9	28
7½ hrs.	17	45
9 hrs.	14	58
10½ hrs.	13	71
12 hrs.	10	81
13½ hrs.	5	86
15 hrs.	5	90
16½ hrs.	4	95
18 hrs. & +	5	100
Mean	9.5 hrs.	
Std.	4.9 hrs.	
Median	8.8 hrs.	

*--% is rounded to nearest whole number; Cum. % is not computed from the rounded % figures; this will show up as an anomaly in the chart but is not due to faulty addition.

Table 23. Total Mass Media Consumption (TV+Radio+Newsp+Book & Mags.+HiFi) in Hrs./Day by % of Respondants.

	TV Total	N	Radio Total
Age			
Under 15	2.80	5	2.80
16-24	3.56	59	3.63
25-39	3.54	91	3.75
40-64	3.88	176	4.15
65 & +	2.73	67	2.52
F	2.519*		2.841*
Sex			
Male	3.61	172	3.74
Female	3.49	225	3.65
F	0.199 (n.s.)		0.065 (n.s.)
Living			
Alone	3.98	53	4.11
With Family	3.48	224	3.81
Sharing	3.78	32	4.31
Institution, Alone	2.77	47	3.40
Institution, Share	3.98	40	2.30
F	1.831 (n.s.)		2.251 (n.s.)
City			
Ottawa	3.47	183	4.03
Montreal	3.61	216	3.39
F	0.319 (n.s.)		3.482 (n.s.)
First Language			
English	3.35	281	3.95
French	3.97	116	3.03
F	4.799*		5.893*

*--p < .05

Table 24. Breakdowns for Broadcast Media Consumption by Five Demographic Variables, in Hrs./day.

Mass Media Consumption (Hrs./Day;
Index Based on TV-Radio-HiFi-Books
& Mags-Newspapers)

Age	Male	Female	Total (N)
15 & - yrs.	*	*	8.40 (5)
16-24 yrs.	9.75	9.30	9.56 (56)
25-39 yrs.	8.85	9.75	9.35 (90)
40-64 yrs.	10.05	9.45	9.74 (171)
65 & yrs.	6.15	6.90	6.71 (66)
Total (N)	9.05(170)	9.12(218)	9.09 (388)

$F_{age}(4,386) - 7.432 \quad p < 0.01$

$F_{sex}(1,386) - 0.571$; n.s.

$F_{age \times sex}(4,386) - 0.348$ n.s.

Table 25. Effects of Age and Sex
on Mass Media Consumption

*--cell size under 10

TV Show Preferences	
DK/NA	8
Games	5
News, Pub. Aff.	18
Comedy	10
Variety	12
Drama, Medical	18
Sports	9
Soap Operas	3
Education	4
Other	17

Newspaper Feature	
DK/NA	32
Front Pg., Nat'l., Internat'l.	25
Business, Stocks	1
Sports	4
Entertainment, Art, Film	7
Want Ads, Obits, Personals	1
Editorials	7
Local News	2
Dear Abbey, Advice	9
Other	14

Book Type Preference	
DK/NA	44
Fiction, Short Story	12
Non-Fiction, Essays	7
Biographies	10
Love-stories	3
Religious	5
Social Science, Psychology	3
Medicine, health	1
Other	17

Magazine Preference	
DK/NA	50
Confession, Movie	2
News	10
Reader's Digest	12
Religious	2
Hobby, gardening, HiFi, decorating	6
Medical, disability	1
Sex	2
Other	16

Film Type Preference	
DK/NA	35
Comedy	9
Action, adventure, drama	27
Science Fiction	2
Biography	1
Historical adventure	2
Serious drama	4
Romance	5
True Stories	2
Other	13

Table 26 Mass Media Content Preferences by % of Respondants

	Radio Listening	Mass Media Index	Interpersonal Index	Clienting Index	Spectating Index	
TV	-.062	.513**	-.052	-.035	-.011	
Radio		.709**	-.009	.047	-.033	
Mass Media		.041	.041	.034	.005	**-- p<.01
Interpersonal				.246**	.190**	
Client					.131**	

Table 27. Correlation (Pearson's R) between Mass Media Consumption and Several Communication Indices

Service Awareness	Publications			TV Programming			Library Services			Transpo
	Ottawa	Montreal	Total	Ottawa	Montreal	Total	Ottawa	Montreal	Total	Total
Unaware	31	53	43	53	16	33	21	67	46	17
Heard of & Don't Use	18	11	14	20	5	12	61	14	35	38
Used at least once	16	4	10	17	17	17	6	3	4	7
Use Regularly	33	32	32	10	57	35	12	12	12	28
DK/NA	1	1	1	-	6	3	2	4	3	10

Table 28. Use of Special Services for the Disabled by City by Percentage of Respondants

Source of Info About Transpo Service	%
Friend	14
Relative	11
Organization of Disabled	31
Media	11
At Work	nil
Therpist	13
Researcher, survey	2
In Residence	4
Other	6
DK/NA	8

Table 29. Source of Information on Transpo Service by % of Aware Respondants

Kind of Contact with Other Disabled Individuals	%
None at all	3
Friends and Relatives	13
Organization Meetings	41
At School	3
By Phone	2
Daily at Home (Prob. Relatives)	6
In Institution or Residence	22
Volunteer Work	2
Other	5
DK/NA	3

Table 30. Kind of Contact with other Disabled Individuals by % of Respondants

Difficulty in Attending Films	%
Weakness, tiredness, illness	13
No access to cinema	7
Poor taste, bad quality	13
Can't afford	15
No time	2
No transportation	15
No one to go with	7
TV is good enough	6
Other	22
R's Expressing Difficulties	274(68%)
Number of Difficulties	347

Possible Aids in Attending Films	%
Transportation	25
Architectural improvements	7
Help in Seeing	2
More relevant content	8
Lower prices	15
Companions	10
Other	14
DK/NA	19

Table 31. Expressed Difficulties in Cinema Viewing and Possible Aids by % of Respondants Expressing Difficulties

Opinion on Films about the Handicapped	%
Helpful to the Disabled	18
Gets the Message across	47
Total Positive Opinions = 65%	
No Opinion, Indifferent	4
Harmful to the Disabled	1
Implies a False Message, Impression	3
Should be more Realistic	11
Depressing to the Disabled	3
Total Negative Opinions = 18%	
Other, diverse	3
DK/NA (possibly "No Opinion")	10
Proportion of Respondants having viewed a film about Handicapped	74

Table 32. Attitudes towards Film about Disability or the Disabled

Film Title or Topic	No.
"Les Exclus" (in French only)	27
Handicapped Olympics (Toronto, 1976)	28
"The Other Side of the Mountain"	14
"Walk A While in My Shoes" (NFB)	11
Films on Specific Disabilities	13
"The Miracle Worker"	5
"This Is Sondra Diamond" (NFB)	4
"A Patch of Blue"	2
"The Men"	3
"Jules le Magnifique"	5
On Sexuality and Disability	3
Other (1 each)	20
Total Reported (R)	135

Table 33. Films Reported by Respondants as Viewed, Concerning Disability or about Disabled People

"Most Important Problem Facing the Disabled"	Ottawa	Montreal	Total
Isolation, Lack of Interaction	26(10)	34(12)	60(13)
Lack of Mobility	41(15)	43(15)	84(18)
Poverty, Money, Unemployment	32(12)	63(22)	95(21)
Attitude, Reaction of Public	49(18)	32(11)	81(18)
Integration into Society	22(8)	45(16)	67(15)
Self-Image	32(12)	15(5)	47(10)
Building and Service Access	18(7)	11(4)	29(6)
Dependence upon Others	21(8)	26(9)	47(10)
Other Problems	30(11)	20(7)	50(11)
R =	171	289	460

Table 34. Most Important Problems Facing the Disabled, by City and by Proportion of Total Responses

Variable	N	(MM) Mass Media Consumption (Hrs./day)	(II) Interpersonal Index (Contacts/day)	(CD) Contact with the Disabled (Contacts/yr.)
Getting Out (FO)				
Less than weekly	88	8.85	4.65	346.45
Weekly-Daily	156	9.33	4.52	253.48
At least Daily	160	9.69	5.70	300.59
F		0.875 (n.s.)	6.46**	2.63 (n.s.)
Telephoning (FT)				
Less than weekly	87	8.30	2.76	276.87
Weekly-Daily	120	9.60	3.43	245.08
At least Daily	194	9.69	7.01	329.21
F		2.756 (n.s.)	122.60**	2.907 (n.s.)
Living Status (LS)				
Alone, sharing	85	10.16	5.32	274.16
With family	224	9.68	4.54	299.66
Institutionalized	87	8.01	6.07	558.16
F		4.17*	6.223**	35.90**

* $p < .01$
** $p < .001$

Table 35. Analysis of Variance: The Effects of Getting out of Dwelling, Telephoning and Living Status on Mass Media Consumption, Interpersonal Contact Index and Contact with the Disabled

	Camera	Tape Recorder	Portable Calculator	Ham Radio	CB Radio	Computer Terminal	Type-Writer
DK/NA	11	13	34	38	39	39	8
Unable	32	23	33	57	56	56	41
Poor	10	6	5	*	1	1	14
Fair	13	10	5	1	1	1	17
Good	34	48	22	4	4	4	20
Own?	32	34	16	2	3	*	30

* -- Less than 1%

Table 36. Device Skill Level and Ownership by % of Respondents

Factor 1 (27.6% of Variance) "Formal Interpersonal"

Send Letter (.86)
Receiver letter (.56)
Do volunteer work (.31)
Interact with club members (.30)

Factor 2 (14.5% of Variance) "Informal Interpersonal"

Receive phone call (.88)
Place phone call (.86)
Do volunteer work (.23)
Speak to friends (.23)
Pick up book to read (.21)

Factor 3 (12.1% of Variance) "Informing"

Listen to radio news (.67)
Attend classes (-.47)
Watch TV news (.45)

Factor 4 (10.2% of Variance) "Print media"

Pick up book to read (.69)
Pick up magazine to read (.58)
See physician (.22)
Send letter (.21)

Factor 5 (8.9% of Variance) "Being a client"

See counsellor (.62)
See physiotherapist (.51)
See physician (.31)
Attend civic meeting (.21)

Factor 6 (8.5% of Variance) "Being Disabled"

Interact with disabled (.59)
Speak to friends (.56)
Do volunteer work (.41)
Interact with club members (.40)
Speak to clergy (.31)
Do crafts or sewing (.29)
Sculpt, paint, draw (.23)

Factor 7 (7.5% of Variance) "Planned Activities"

Participate in sports (.68)
Go to film (.49)
Do crafts or sewing (.20)

Table 37. Results of Factor Analysis on Twenty-six Activities (Seven Factors Account for 89.4% of the Total Sample Variance on the Twenty-six Activities)

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