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# MOTIVES, ATTITUDES, AND LONG DISTANCE CALLS



SURVEY RESEARCH CENTER—UNIVERSITY OF MICHIGAN

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## Table of Contents

<u>Chapter</u>	<u>Page Number</u>
I. Introduction . . . . .	1
II. Summary . . . . .	5
III. The Approach . . . . .	8
IV. Socio-Economic Factors . . . . .	11
V. Attitudes Toward the Phone . . . . .	17
VI. Personality Factors . . . . .	41
VII. Attitudes Toward Rates . . . . .	64
VIII. The Three Minute Limit . . . . .	73
IX. The Number and Location of Phone . . . . .	81
Appendix A. The Sample . . . . .	A-1
B. The Questionnaire . . . . .	A-3
C. The Free Call . . . . .	A-12
D. The Frequency of Long Distance Calling as Shown by Company Records . . . . .	A-24
E. Respondents' Reports and Company Records of the Frequency of Calling . . . . .	A-30
F. Regression Analysis . . . . .	A-33

## I. Introduction

### Purposes of the Study

Why do some people make a large number of long distance calls for social purposes while others do not? What are the factors which influence social long distance calling? Previous research and experience have indicated that a large number of factors influence calling behavior. The general question breaks down into at least three specific questions:

1. What social and economic factors influence the number of social long distance calls a person will make?
2. What feelings and attitudes about the telephone influence social long distance calling?
3. What personality characteristics influence social long distance calling

This study is directed primarily toward answering these three questions.

### Influence of Previous Studies

In this study it was not possible to assess the influence on long distance calling of all possible socio-economic factors or all possible attitudes or personality characteristics. It was necessary to make some selection. The attempt was made to select those factors which seemed most likely to show some relationship to calling behavior. This selection was based upon studies which have already been done concerning phoning, among them a pilot study done by this organization in the spring of 1955. The selection was also influenced by the experience of executives in the telephone industry, and the judgment of the investigators based on knowledge of theory and of other research in the social sciences.

### Design of This Study

In planning this study the decision was made to study intensively two distinct groups: people who make a large number of long distance calls and people who make almost no calls at all. This design has real advantages for some purposes and equally real disadvantages for others. On the one hand it maximizes the likelihood of detecting those factors which differentiate high from low callers. This feature is particularly desirable when the behavior under study is influenced by many factors so that it is often difficult to detect the impact of a single one. On the other hand, with this design it is not possible to tell how frequently a particular event is likely to occur in the general population. For example, in the sample interviewed, 49 percent of the respondents attempted to limit their calls to three minutes. Because of the way in which the sample was selected, it is not possible to generalize this finding to the population at large.

A second decision was to study households as units. The pilot study had indicated that making a long distance call is a social act, often involving joint decisions. Calling may be influenced by the personality characteristics and attitudes of more than one member of the family.

The criterion groups: These decisions have meant that most of the analysis consists of comparisons of low callers with high callers. These two groups are described as follows:

Low callers: This group consists of respondents for whom the Company record indicates no long distance calls to places over 50 miles away for a three-month period.

High callers: This group consists of respondents for whom the records show six or more calls in three months to places 50 miles or more away.

For purposes of more detailed analyses, these two groups have been further subdivided as follows:

Low callers: a) Long distance phone bill under \$.50 for six months  
b) Long distance bill between \$.50 and \$6.50 for a six month period.

High callers: a) Long distance phone bill between \$6.51 and \$49.50  
b) Long distance phone bill \$49.51 or more for a six month period.

The amounts are the total bill for calls from these phones. Some business calls may be included, especially for self-employed persons.

A total of 400 interviews were taken. Of these, 340 were taken in households where both husband and wife were present and were interviewed.

The research instrument: Four kinds of devices were used during the interview period. The first, most frequently used, consisted of questions. The respondents supplied the answers, which were recorded verbatim by the interviewer. The responses were coded or classified into meaningful categories in the office. Some of the questions were of the indirect type; the respondent was asked to describe a third party, or to predict how another person would respond.

The second device consisted of modifications of projective tests which are in common use in social science research. The respondents were asked to tell a story, in response to pictures which the interviewer showed them. The measures of need for affiliation and underlying orientation toward money were of this sort.

The third device consisted of attitude scales. The respondent was given a series of statements, and was asked to indicate whether he agreed or disagreed with the statement. From his responses it was possible to determine how favorable or unfavorable he felt toward an object. In this study scales were used to measure respondents' concern about ease of phoning and the extent to which phoning satisfied affiliative needs. A modified form of this kind of device was the measure of security-insecurity.

Finally, the interview session permitted an opportunity for observation of actual long distance calling behavior. Each household was given the opportunity to make a free call to any place in the country. When the offer was accepted, the interviewer was usually able to note whether a discussion preceded the call, whether the call was placed easily, how long the conversation took place, and so on.

This study was carried out by the staff of the Survey Research Center, a division of the Institute for Social Research of the University of Michigan. The Institute is under the direction of Rensis Likert, while the Director of the Survey Research Center is Angus Campbell. This study was carried out in the Economic Behavior Program of the Center, George Katona, Director. The study design, analysis, and report writing were the responsibility of Joseph Adelson, Charles Cannell, Roger W. Heyns, and John B. Lansing, with the assistance of John Colombotos.

## II. Summary

The main findings of the study may be summarized as follows:

### Socio-economic Factors

1. Friends or relatives living away. People who have friends or relatives living away are much more likely to be frequent users of long distance than those who do not.
2. The "life cycle". Young married couples who have not yet had children and older married couples whose children have left home are likely to be frequent users of long distance. The latter group is particularly important.
3. Income. The higher people's income, the more long distance calls they tend to make. As people move from lower into higher income brackets they will not automatically take on the calling behavior now typical of higher income groups.
4. Who in the family places calls. Women are more likely than men to place long distance calls. Among the families who are most frequent callers, however, there is a tendency for the differentiation between husband and wife in this respect to disappear.

### Attitudes Toward the Phone

5. Users of the phone. People who use the local phone frequently are also more likely to use the long distance phone
6. Other forms of communication. People who make many long distance calls also tend to write many letters and make many visits to friends and relatives living away. There are a few people, however, who use the phone in preference to other modes of communication.
7. Placing the call. Few people say that placing a call is difficult for them. Direct observation of people placing calls indicates, however, that there is an appreciable group of people for whom the mechanics of placing the call may be a barrier to making calls.
8. Feelings while calling. Making long distance calls is not pure pleasure to most people. People differ in the extent to which they enjoy calling. Those who report that calling is pleasant are more likely to be frequent callers.
9. Reluctance to call. A few people report that they have refrained from placing a call at some time for fear of alarming the recipient.
10. Motives for social calling. The most important motive for social calling is to maintain family ties.



11. Trouble hearing. Difficulty in hearing on the phone comes primarily from poor conditions rather than from deafness.

#### Personality Factors

12. Security-insecurity. The most secure respondents, as measured by the test, are more likely to be in the high caller group than persons who are less secure. More elaborate analysis suggests that this relationship is due in part to the effect of income and other factors.
13. Need affiliation. Respondents who have high need affiliation scores are more likely to report pleasant feelings while calling than those who have low scores, and to report enjoyment in making long distance calls.

Persons with high need for affiliation, as measured by the test, indicate a more positive attitude toward a high caller, Mrs. Jones. They are also somewhat more likely to use the phone for social purposes than are the persons with low need for affiliation.

Persons with high affiliation scores show a higher rate of contacting friends and relatives by means of letter than do low scorers. High need affiliation respondents are also more likely to report more use of the local phone than are low need affiliation persons.

There is no simple and direct relationship between need affiliation scores and long distance calling, but a more complex relationship may exist.

14. Underlying attitudes toward money. Respondents classified as Free Spenders are more frequently in the group of extremely frequent callers. Persons classified as Conservative Spenders appear more frequently in the group of very infrequent callers.
15. Overall status of the personality variables. All three measures of personality characteristics show significant relationships to one or another aspect of phoning behavior. In no case, however, is there a simple relationship between a personality characteristic and frequency of use of the long distance phone.

#### Attitudes Toward Rates

16. Are rates high? High users of long distance are more likely than low users to feel that rates for long distance calls are high. They may have in mind the charges they actually pay rather than the actual rates. Low users often have no opinion as to whether rates are high.
17. Reasons why rates are high. Of those who feel rates are high, many are thinking in terms of the Company and the service it provides. Those who feel rates are not high also may have in mind the Company and its service, but many of them are thinking in terms of the satisfaction they receive from calls.

### The Three Minute Limit

18. Length of free calls. When given an opportunity to place a free long distance call of "reasonable length", almost all respondents talked more than six minutes and most talked ten minutes or longer.
19. Belief that the company wants people to limit calls. There is still a group of people who believe the company wants them to limit the length of their calls. A smaller group of people do try to limit calls for this reason.
20. What happens after the three minutes. People are poorly informed about what happens to rates after the first three minutes.

### Number and Location of Phones

21. Number of phones. Of the high users of long distance, one out of four have more than one phone. Of the low users, one in ten have more than one phone. Of all subscribers, about one in ten have more than one phone.
22. Location of the phone. The three favorite locations for the phone are dining room, kitchen, and living room. High income people are much more likely to have a telephone in the kitchen than low income people.

### Frequency of Long Distance Calling

23. Toll charges for six months. Of all residential customers of Michigan Bell in southern Michigan, 18 percent had no toll charges over a six months period. Sixty-two percent had charges of \$1 per month or less on an average. Eight percent, however, averaged over \$5 per month.

### III. The Approach

Social long distance calls defined: The act of calling with which this study is concerned is first of all an act of social communication, like writing a letter, sending a telegram, or carrying on a conversation. These acts all involve other people, and are initiated because of the desire to communicate with others. People, however, typically do not contact others simply at random for social purposes. Nearly all non-business contacts are with people in two categories: friends and relatives. For purposes of this study a social long distance call is an act of communication involving two (or more) persons who are friends or relatives.

The focus is the habit: The single act of making a long distance call for social purposes is not the main concern of this study. The interest is in the habit of making calls of this sort. There are people who regularly make long distance calls for social purposes, there are others who never do so. The habitual choice of the phone is the central focus of this study.

As a result of this orientation, the groups selected for study consist of people who have shown a consistent pattern over a period of time. Admittedly, the time period is not long and each group may contain people for whom the pattern during the time selected was atypical. There may even be some in the high call group who made more calls in the six-month period than they had ever made before. Even with this possibility, however, there is no doubt that the two groups, as groups, have markedly different social long distance calling habits. The habit of using the long distance phone is complex and has a number of implications. For one thing, it means that the relationship between any single factor and long distance calling is not likely to be a strong one. No one factor will explain why some people make many calls and others make few or none. In a study such as this it is not a matter of isolating the factor but of finding several factors, each of which makes a small contribution to differences in behavior. Another possible complication occurs when

two factors are associated, but work in opposition; they both influence calling behavior but in opposite ways. We can find the influence of each of these only if the influence of one of them is cancelled out.

Such complications call for more elaborate analyses. These analyses take two general forms. The first consists of determining the relationship between a factor and calling behavior with one or more other factors held constant. The second consists essentially of cumulating the effects of several factors, taking into account the interrelations among them. Both of these devices were used. However neither of them was used extensively. The study was intended to detect the major factors which make a difference in long distance calling and to determine the general way in which these factors interact to influence calling behavior.

#### The Analytical Scheme

A high caller is a person who has a frequent desire to contact others living far away and habitually chooses the phone as the means for doing so. There are two key phrases in the description of the high caller: desires to contact and chooses the phone. The first calls attention to the fact that there is motivation to communicate and the second emphasizes the choice among modes of communication.

Most of the factors which influence desire to contact and choice of the phone can be classified into the three broad categories suggested earlier:

Socio-economic factors

Attitudes, perceptions and previous experience

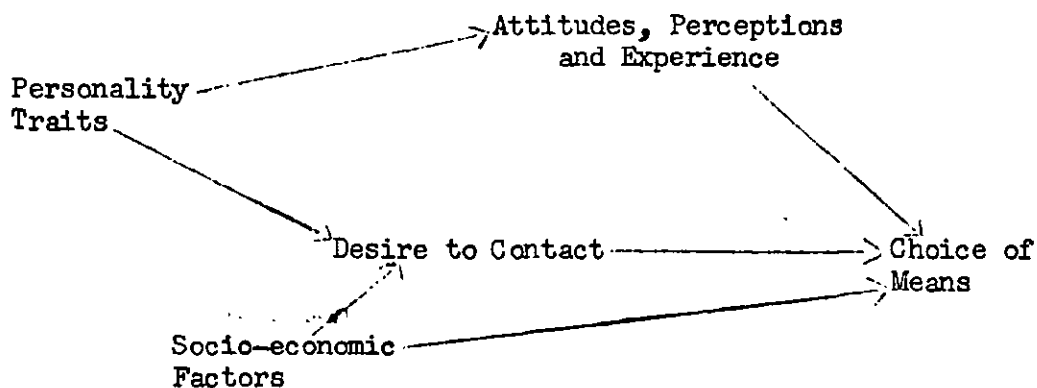
Personality traits

The first category contains factors such as income, education, age, and whether the individual has relatives living at a distance. Some of these are believed to influence the desire to communicate, and others the choice of means; still others may influence both.

The second category, attitudes, perceptions and experience, includes specific attitudes toward the phone and toward long distance calling, and experience in making long distance calls. Most of these factors influence primarily the choice of means of communication.

Included in the third category are personality traits which might be expected to underlie the desire to contact. The desire to contact is undoubtedly influenced by external conditions, such as emergencies or the sudden need for more information. The emphasis in the study, however, is upon those more or less enduring personality characteristics which might influence the strength of the desire to be in contact with friends and relatives. It is also possible that some personality characteristics will influence primarily the choice of means of communication, rather than the desire to communicate directly.

This theoretical scheme can be illustrated as follows:



This diagram, obviously oversimplified, can be translated into language. Whether a person habitually phones depends on the presence of some factors which make him desire to contact others frequently. How often this desire is present depends on his personality characteristics and upon socio-economic factors. Once the desire to contact is present, whether he phones or not depends on other socio-economic factors, as well as certain of his attitudes, his perceptions and his previous experiences with phoning.

#### IV. Socio-Economic Factors

##### Friends or Relatives Living Away

A necessary condition for long distance calling is some friend or relative at a distance. The separation may be temporary, that is, someone may have gone on a trip. Or the separation may be permanent in the sense that the friends or relatives usually live at a distance.

The results of the study show that people with friends or relatives living away are more likely to be high callers than low callers. The differences between low callers and high callers in this respect are striking. Of the high callers 90 per-

Table 1

Frequency of Long Distance Calling and  
Where Friends or Relatives Live  
(Percentage distribution of respondents)

<u>Where Friends or Relatives Live</u> <sup>1/</sup>	<u>All Respondents</u>	<u>Low Callers</u>	<u>High Callers</u>
All people mentioned live away	21	12	30
Few people live away (some here, some away)	30	53	60
No one away	32	35	9
Not ascertained	17	—	1
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	203	197

<sup>1/</sup> The question was: "Thinking of your half dozen closest friends and relatives, do they all live here in (name of city), or do they all live in other places, or what?"

cent report that some or all of their half dozen closest friends or relatives live away. Of the low callers, only 65 percent have some of their closest friends and relatives living in other places.

This finding emphasizes the importance of people's movements from one place to another as an underlying reason for social long distance calling. At one time the friends must have lived in the same place in order to get to know each other, and the relatives, similarly, must have become separated when part of a family moved away.

### The Life Cycle

Families become separated under various circumstances, but separation is normal when children grow up. Grown children are commonly expected to leave their parents' home at marriage, if not before, and they may also leave the community in which the parents live. In a family of two or more children, it is quite possible that the young adults will move in two directions so that they become separated from each other as well as from their parents and other relatives. It is possible to classify people as to where they are in this life cycle. Such a classification is used in Table 2.

Table 2

#### Frequency of Long Distance Calling and the Life Cycle (Percentage distribution of respondents)

<u>Life Cycle</u>	<u>All Respondents</u>	<u>Low Callers</u>	<u>High Callers</u>
Young, single	4	3	4
Young married, no children	11	8	15
<u>Married</u>			
Oldest child under 3	3	5	1
Oldest child 3-14	32	40	26
Oldest child 15-18	15	17	12
Older married, no children at home	28	22	35
Older, single	4	3	4
Not ascertained	3	2	3
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	203	197

In terms of the life cycle two groups are likely to be separated: older couples whose children have left home and young married people. These groups, then, would tend to be frequent callers. The older married couples with no children at home do represent one-third of the high callers compared to just over one-fifth of the low callers. The young couples with no children also make up a larger proportion of the high callers than of the low callers. It is the families with children at home who seem to be over-represented in the low calling groups. There are enough of these families in the sample so that they include nearly four in ten of the high callers, but they are six in ten of the low callers. Perhaps the explanation has to do with the longer period since these respondents left their parents, the greater likelihood in this group that the parents are no longer living, or the financial strains on the young families.

These results do establish that long distance calls are frequently made by the older generation. The young folks may call Grandmother, but she may call them too!

While telephone calls maintain communication between parents and adult children they also maintain communication among brothers and sisters. When respondents were allowed to place free telephone calls at the conclusion of the interview, four out of five talked to relatives. (See Appendix C, Table 4c.) Roughly one-third of those calling relatives were parents who called children or children who called parents, but one-third of those calling relatives called siblings. For people whose parents are no longer living and whose children are still at home, siblings are likely to be the nearest relatives living away.

#### Income and Education

Before a person becomes a habitual caller he must have someone to call. He must also have enough money to pay for the calls. Possession of an average income or better does make it easier to pay the bill!



Table 3

Income of Low and High Users of Long Distance  
(Percentage distribution of respondents)

<u>Family Income</u>	<u>Low Users</u>	<u>High Users</u>
Under \$3000	12	4
\$3000 - 4999	29	24
\$5000 - 7499	47	31
\$7500 - 9999	9	13
\$10,000 and over	3	28
Total	<u>100</u>	<u>100</u>
Number of interviews <sup>1/</sup>	193	187

<sup>1/</sup> Excludes those whose income was not ascertained. Those whose education was not ascertained are also excluded to maintain comparability with Table 4.

It is hardly surprising to find that people in the higher income brackets make up a larger proportion of high callers than of low callers.

Other studies involving the relationship of income to purchasing habits have indicated that it is not safe to assume that lower income groups will, if their income is raised, spend their money in the same way higher income groups do. The spending habits of higher income groups are influenced by other factors as well as income, among them social status, or position in society. Income and social status are related but they are not identical. Another index of social status is education. We can compare people of the same income but different education to see if education or status seems to influence use of the long distance phone.

Table 4

Low and High Users Within Income and Education Groups  
(Percentage distribution of respondents)

<u>Use of Long Distance</u>	<u>Family Income</u>			
	<u>Under \$5000</u>		<u>\$5000 - \$7499</u>	
	<u>Non- Graduates<sup>1/</sup></u>	<u>Graduates<sup>1/</sup></u>	<u>Non- Graduates</u>	<u>Graduates</u>
Low users	69	43	62	59
High users	31	57	38	41
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of interviews <sup>2/</sup>	87	42	82	70

<sup>1/</sup> "Non-graduates" are members of families where the head did not graduate from high school; "graduates" are members of families where the head received a high school diploma.

<sup>2/</sup> This table excludes those with income over \$7500 and those whose income or education was not ascertained.

In Table 4 this comparison is made. Of the people in the sample with incomes under \$5000 who are not high school graduates, 31 percent were high users. Of the people who were high school graduates, 57 percent were high users. The difference between graduates and non-graduates is much smaller, however, for the income group \$5000 - \$7499. The data suggest that education as well as income has an effect on calling, though the influence of education may not be as strong in the upper income groups. We must conclude that the relationship of calling to income shown in Table 3 is probably not solely the effect of income. As people move from lower into higher income brackets they will not automatically take on the calling behavior now typical of higher income groups.

Role of Different Members of the Family

Social forces contribute to making some families high users and others low users. Social forces may also influence which individual in the family places the calls. One hypothesis was that placing a call is seen by many people as somehow

difficult or complex, and hence, man's work. Another hypothesis is that women are the people who have the responsibility for maintaining the family. Family ties and emotions are of primary concern to women, according to this view, and accordingly they may be expected to place more social calls than men.

The data suggest that there are a few families in which the placing of a call is "man's work", and that these families make up a larger proportion of low callers than of high callers. If one member of the family usually places calls, that member is much more likely to be the wife than the husband. In about half of the families

Table 5

Relation Between Frequency of Long Distance  
Calling and Who in Family Puts Through Call  
(Percentage distribution of respondents putting through calls)

<u>Who Puts Through Long Distance Calls</u>	<u>All Respondents</u>	<u>Low Callers</u>	<u>High Callers</u>
Husband	18	23	13
Wife	48	48	47
Sometimes husband, sometimes wife	29	21	36
Someone else	2	3	2
Not ascertained	3	5	2
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents putting through calls	350	163	187

the wife is the member of the family who actually places calls, and this proportion holds for both low and high users.

The data also suggest that there is a tendency for this differentiation between husband and wife to disappear among the high users. In over one-third of these families calls are placed sometimes by the husband and sometimes by the wife.

## V. Attitudes Toward the Phone

Social scientists have long been aware of the importance of attitudes as determinants of behavior. The feelings people have, and their ideas and beliefs, growing out of their experiences, are relevant to understanding their behavior. The telephone is an object which is a part of people's daily lives, and their attitudes toward the phone are complex. This chapter explores some of the variety of these attitudes and experiences.

Local Uses of the Telephone

When one ascertains how a person uses a phone and for what purposes, one is indirectly determining his perception of the phone, his attitude toward it as a communication device for certain purposes. Does the amount and kind of use to which respondents put the local phone have any bearing on their use of the long distance phone for social purposes?

Extent of local use: One of the first questions which arises is a simple one: Do people who use the local phone frequently also fall in the group who use long distance frequently? Table 6 shows the relationship between amount of local and amount of long distance calling.

Table 6

Relation Between Total Number of Calls by Respondent  
in the Past Week Including Local Calls and  
Frequency of Long Distance Calling  

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(Percentage distribution of respondents)

<u>Total Number of Calls in Past Week</u> <sup>1/</sup>	<u>All Respondents</u>	<u>Low Callers</u>	<u>High Callers</u>
None	5	5	5
1 - 6	37	39	35
7 - 21	35	36	35
Over 21	19	14	23
Not ascertained	4	6	2
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	203	197

<sup>1/</sup> The question was: "About how many calls in the last week have you yourself made or received on your home phone - would it be none, one or two, one a day, or what?"

There is some difference between the high and low long distance users in the use of the telephone for local calls, but the difference is small. There is some tendency for more high long distance users than low users to make over 21 calls per week.

Important uses of the phone: Respondents were asked for the single most important use of the phone for them. The single most important purpose of calls is for social communications of various types, this being significantly more important for both high and low users than is either emergency or business.

Table 7

The Most Important Use of the Phone<sup>1/</sup>  
(Percentage distribution of respondents)

<u>Use</u>	<u>Low Users</u>	<u>High Users</u>
Social communications	43	49
Emergency	29	21
Business	27	27
Other	—	—
Not ascertained	1	3
Total	<u>100</u>	<u>100</u>
Number of respondents	203	197

<sup>1/</sup> The question was: "In this study we are interested in the uses of your home telephone. What are the most important uses of the telephone for you?"

One point of interest not covered in the table is the number of respondents who spontaneously mentioned the telephone as a long distance communications device when they were asked the question, "What are the most important uses of the telephone for you?" Sixty-seven respondents, out of the four hundred interviewed, spontaneously mentioned long distance. Of this group 87 percent are high users.

These high users do perceive the telephone as an important device for long distance communication.

Respondents were also shown a list of possible uses of the telephone and asked to indicate the three uses which were most important for them. Table 8 shows the tabulation of these responses separately for high and low callers.

Table 8

Relation Between Three Most Important Uses of the  
Phone and Frequency of Calling  
(Percentage distribution of respondents)

<u>Three Most Important Uses of the Phone 1/</u>	<u>All Respondents</u>	<u>Low Callers</u>	<u>High Callers</u>
Emergency	82	85	79
Business, work	55	53	57
Arrangements, friends, family	48	53	42
Visit, chat relatives	29	25	33
Shop	22	21	23
Arrange meetings	19	20	18
Visit, chat friends	16	19	12
Visit, chat, not ascertained whether friends or relatives	1	—	1
Other	1	—	1
Not ascertained	4	3	4
Total	<u>2/</u>	<u>2/</u>	<u>2/</u>
Number of interviews	400	203	197

1/ The question was: "In this study we are interested in the uses of your home telephone. What are the most important uses of the telephone for you?" "Here is a list of some of the things people use their phones for. Which of these things are important to you?" "Which are the three most important?"

2/ Totals add up to more than 100% because respondents mentioned more than one use of the phone.

The use most often mentioned in response to this question by both high and low callers, was for "emergencies." The term "emergencies" has various meanings. For example, a 75 year old widow says, "Well, I have my phone because I'm all alone. In case anything happens to me I want the phone to let people know. That's why I had it put in." A middle-aged housewife says, "I feel like every home needs a phone in case of fire or for a doctor. Anything can happen. I use it most to call my children on the phone when I'm feeling sick." A husband says, "Well, right now I use it most to get calls about my wife, who's in the hospital." Many of the specific purposes under the emergency classification had to do with the phone as a contact with outside aid in case of illness or fire. Other uses were to inform parents, children, or other relatives, of the emergency.

The second use, for both high and low users, was for business calls or calls associated with one's work. These included a dressmaker who gets her orders by phone, a businessman who phones his associates from his home to discuss business subjects, etc.

The purposes next most frequently mentioned are for contacting friends or relatives. There were three such uses on the list, and their individual scores reflect the fact that respondents spread their votes among the three.

High users are more likely to use the phone for visiting and chatting with relatives. No doubt some of these high users have in mind visits with relatives using long distance. Low users report use of the phone for making arrangements with friends and relatives more frequently than high users. Low users also are more likely to report that they visit or chat with friends by phone.

At first glance it may seem inconsistent with the theory stated earlier that low users are more likely to use the phone for these purposes. But we know that the low user group is less likely to have relatives and friends living away. The finding is consistent and shows an important relationship. People with relatives and friends living in the same locality are more likely to use the telephone to communicate with

them than if friends and relatives live out of town. If a person's friends and relatives live near him, he is likely to call to make arrangements to visit them. If they live away, the visit itself must often be by phone.

### Long Distance, Letters, and Telegrams

Respondents were given a list of specific situations in which they might want to get in touch with someone in a distant city. They were asked for each situation which they were most likely to do; phone, write, or wire. The situations were as follows: for holiday greetings, for making arrangements to meet someone, to keep in touch with relatives, to keep in touch with friends, to find out about someone's health.

Counting one point for each time the phone is selected, there is a possible total of five "votes" or points for the phone. Table 9 shows the number of votes for the phone by high and low users. The higher number of votes do tend to be given

Table 9

Relation Between the Number of Choices  
of the Phone and Frequency of Calling 1/  
(Percentage distribution of respondents)

<u>Total Number of Choices of the Phone</u>	<u>All Respondents</u>	<u>Low Users</u>	<u>High Users</u>
No votes	14	18	10
One vote for phone	23	26	20
2 - 3 votes	39	34	45
4 - 5 votes	22	19	24
Not ascertained how many votes	5	3	1
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of interviews	400	203	197

1/ The question was: "Here is a list of some specific situations when people may want to get in touch with someone in a distant city. Which would you be most likely to do - phone, wire or write - (a) for holiday greetings? (b) for making arrangements to meet someone? (c) to keep in touch with relatives? (d) to keep in touch with friends? (e) to find out about someone's health



by people who use the long distance phone more extensively.

The next table presents the details on means of communication respondents reported they would use in the five situations referred to above. The first section of the table concerns holiday greetings. Table 10 indicates that of the high users, 49 percent mention the phone as a way of conveying holiday greetings. Of those who are low users, 23 percent mention the phone. These results suggest the possibility that many people who call on holidays are high callers in general. Only about five percent of low users and of high users report that they would use telegrams for holiday greetings.

Similar comparisons can be made between high users and low users in each of the five situations. High users are more likely to say they would phone to keep in touch with relatives than low users. High users are not more likely to say they would phone to keep in touch with friends, however. This contrast further strengthens the evidence in the preceding chapter that social calls to friends are less important than calls to relatives.

High users are only slightly more likely to say they would use the phone for making arrangements or for finding out about someone's health than low users. When the purpose is to communicate with friends just to keep in touch, most people perceive letters as the relevant mode of communication. Some people select the phone for social communication with relatives, and these people tend to be high users of long distance. When the communication is more purposeful, getting information or exchanging information, more people select the phone as the appropriate method.

#### People Who Are Frequent Communicators

The preceding section implies competition between the long distance telephone and other means of communication. But it may be that individuals who communicate with friends and relatives by long distance are also those who communicate with friends and relatives by other means. There may be others who do not use long distance and also do not write or visit. Or it may be that some people always communicate with friends and relatives by telephone, whereas others communicate as frequently but use a different means of communication.

Table 10

Relationship Between Frequency of Long Distance Calling and  
Choice of Mode of Communication for Different Purposes  
(Percentage distribution of respondents) 1/

	<u>Low Users</u>	<u>High Users</u>
<u>For Holiday Greetings</u>		
Phone	23	49
Wire	5	4
Write	72	47
Total	<u>100</u>	<u>100</u>
Number of respondents	185	169
<u>For Making Arrangements</u>		
Phone	69	77
Wire	2	4
Write	29	19
Total	<u>100</u>	<u>100</u>
Number of respondents	168	157
<u>To Keep in Touch with Relatives</u>		
Phone	33	53
Wire	—	—
Write	67	47
Total	<u>100</u>	<u>100</u>
Number of respondents	172	159
<u>To Keep in Touch with Friends</u>		
Phone	26	28
Wire	—	—
Write	74	72
Total	<u>100</u>	<u>100</u>
Number of respondents	176	163
<u>To Find Out About Someone's Health</u>		
Phone	74	86
Wire	—	—
Write	26	14
Total	<u>100</u>	<u>100</u>
Number of respondents	161	139

1/ Cases not ascertained are not included in this table.

Letters and visits: Tables 11 and 12 compare letters and visits with friends and relatives with long distance phone behavior. Table 11 shows that the people who make the most long distance calls also tend to write the most letters. The sharpest contrast is in the number of people in each group who write 76 letters or over per year and those who write none. This latter group includes respondents who say they have no relatives or friends living away. Of the low users, half write no letters. Of the high users, only 15 to 28 percent write no letters.

Table 11.

Relationship between How Many Letters Respondents Write to  
Friends and Relatives a Year and Frequency of Calling  
(Percentage distribution of respondents)

<u>Number of Letters Written</u>	<u>All Respon- dents</u>	<u>Low Users</u>		<u>High Users</u>	
		<u>Bill under \$.50 for 6 mos.</u>	<u>Bill \$.50 or more</u>	<u>Bill for Six Months \$6.51-\$49.50</u>	<u>Bill \$49.51 or more</u>
None at all	36	51	52	28	15
1-5 letters a year	11	13	8	11	16
6-20 letters a year including "not too many"	19	15	17	19	26
21-40 letters a year	8	7	7	9	9
41-50 letters a year	4	6	3	1	6
51-75 letters a year including "quite a few"	3	2	2	2	6
76 or over	17	4	7	30	22
Not ascertained	2	2	4	<u>1/</u>	<u>1/</u>
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	82	121	129	68

1/ Less than 0.5 percent.

There is also a contrast between low and high users in the number of times a year they report getting together with friends and relatives. Of the high phone users one in four reports getting together 6 or more times a year with friends or relatives who live away. Of the low users, less than one in ten reports such a pattern.

Table 12

Relationship Between How Often Respondents Get Together with Friends and Relatives Living Away and Frequency of Calling  
(Percentage distribution of respondents)

<u>How Often Get Together</u>	<u>All Respondents</u>	<u>Low Users</u>		<u>High Users</u>	
		<u>Bill under \$.50 for 6 mos.</u>	<u>Bill \$.50 or more</u>	<u>Bill for Six Months \$6.51-\$19.50</u>	<u>Bill \$19.51 or more</u>
Not at all	25	45	38	12	10
Less than once a year	13	16	11	15	10
1-5 times a year; "not too often"	42	31	36	50	54
6 or more times a year; "quite a lot"	16	3	10	21	25
Not ascertained	4	5	5	2	1
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	82	121	129	68

In general, then, high phone users also use other means of communicating with friends and relatives. They are higher in all three means of communication, namely, the telephone, letters, and visits. This result is, of course, partially explained by the finding stated earlier in this report, that the people with high communication patterns also tend to have relatives and friends living away. Only a few people seem to keep in touch by phone but not by other means of communication.

Receiving calls: Communication by telephone occurs when a person receives calls as well as when he places them. Are the low users low because they just do not com-

municate with people at long distance by telephone, or are the calls initiated by someone else?

In the interviews there are cases where the respondent makes such comments as, "Oh, I always call my daughter. She is just newly-married and doesn't have much money so I call her." Another respondent says, "Well, I guess I'm just more anxious to talk with her (my daughter) than she is to me. If I waited for her to call I never would talk with her, so I'm always the one to do the calling." Table 13 indicates that these responses are not typical. There is a slight tendency for the high users to make more calls than they receive, however, these differences are not sta-

Table 13

Relationship between Responses to the Question "Do You Call Them, Do They Call You?" Frequency of Calling

<u>Who Calls Whom?</u>	<u>All Respondents</u>	<u>Low Users</u>	<u>High Users</u>
I (we) call them	24	18	28
They call	6	10	4
50 - 50	64	60	65
Not ascertained or no calls	6	12	3
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents <sup>1/</sup>	255	91	164

<sup>1/</sup> These numbers exclude those respondents who have no friends or relatives living in other places or who never call them.

tistically significant. Generally, the table shows that the highest proportion of respondents in both the high and the low groups indicate that the calling is about 50-50, that is, that they make about as many calls as they receive. There is no tendency for either high or low callers to be recipients of many more calls than they make. The high callers are higher communicators by phone than are low callers.

Table 14 shows the relationship between the number of long distance calls received in the past three months and the frequency of calling. In this table there is a clear relationship between the number of calls made and the number received.

Table 14

Relationship between How Many Long Distance Calls Received  
in the Past Three Months<sup>1/</sup> and Frequency of Calling  
(Percentage distribution of all respondents)

<u>Number of Calls Received</u>	<u>All Respon- dents</u>	<u>Low Users</u>		<u>High Users</u>	
		<u>Bill under \$.50 for 6 mos.</u>	<u>Bill \$.50 or more</u>	<u>Bill for Six Months \$6.51-\$9.50</u>	<u>Bill \$49.51 or more</u>
None	43	82	55	24	13
1 - 2	19	10	24	19	26
3 - 4	13	4	10	19	16
5 - 6	8	1	4	11	16
7 or more	14	1	3	24	28
Yes, received calls, not ascertained how many	1	1	2	1	1
Not ascertained	2	1	2	2	2/
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	82	121	129	68

1/ The question was: "Aside from strictly business calls, about how many long distance calls would you say you have received in the last 3 months from 50 miles or more away."

2/ Less than 0.5 percent.

#### Experience in Calling as Part of a Job

Experience in long distance phoning as part of a job may influence the present use of long distance. A person who has had experience in making long distance telephone calls presumably understands the way the phone operates, and has been success-

ful in using this as a means of communication. Particularly if he found telephoning a satisfying type of communication, he might be more likely than others to use long distance phone calls for social communications.

A check of this hypothesis was made. Each respondent was asked if he had ever made long distance telephone calls as part of a job. The data indicate that respondents in the high user group are more likely to have had experience in long distance phoning as part of their job than are low users. The differences here are sufficiently large to be statistically significant.

Table 15

Relationship between Frequency of Calling and the Question,  
"Have You Ever Made a Long Distance Call as Part of a Job?"  
 (Percentage distribution of respondents)

<u>How Much Long Distance Phoning for Business?</u>	<u>All Respondents</u>	<u>Frequency of Calling</u>	
		<u>Low Users</u>	<u>High Users</u>
Once or more a week	24	16	33
Less than once a week	6	7	5
Indeterminate amount	5	2	8
Has never called for job	62	72	52
Not ascertained	3	3	4
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	203	197

Although high users are people who have had experience, it does not follow that they are high users because they have had the experience. It is possible that high income people tend to place long distance calls on the job and also tend to place more social calls. A check of the relation between experience in calling on the job and frequency of calling was made therefore, taking income into account. The data

failed to establish the existence of a relation between experience in calling on the job and use of long distance at home. The test used does not rule out the possibility that a relation exists, but it is unlikely that the effect is important. (See Appendix F). Income is probably the basic factor at work rather than experience in calling.

### Placing the Call

A direct attempt was made to study difficulty in placing the call, as contrasted to unusual skill resulting from experience. It may be that for some people the process of knowing how to make the call, of going through the operator, or handling the mechanics of spanning the distance to the person whom one wants to reach may be sufficiently great that it inhibits the use of the long distance phone. Table 16 shows the responses to this question broken down by the high and low callers. Of the people who report making long distance telephone calls, only 6% said that the process of placing the calls bothered them. There is no significant difference between the high and low user groups in this respect.

Table 16

"Does Placing a Long Distance Call Bother You?"  
(Percentage distribution of respondents who make calls)

	<u>All Respondents</u>	<u>Low Users</u>	<u>High Users</u>
Does bother me	6	8	5
Does not bother me	92	88	95
Not ascertained	2	4	—
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	347	165	182



In connection with the free call, interviewers had the opportunity to watch respondents as they placed actual calls. Of those who accepted the call, eight percent had to find out how to go about it. One respondent was unable to place the call, and the interviewer finally placed it. Others may have turned down the call to avoid this problem. This experience suggests that there are people for whom the mechanics of placing a long distance call are a barrier to making such calls.

### Feelings While Calling

Another aspect of people's attitudes toward the phone is their feelings about the process or the mechanics of phoning. In the first place, if the individual finds it difficult and unpleasant to go through the process of initiating a phone call, the likelihood is that he will initiate a call only when he has to. Once the connection is made, people may feel that the phone is an adequate or inadequate device for communicating. Some people may feel that, whereas the phone is fast and convenient, it is very difficult to get one's ideas across by phone. Others may feel that they are more successful in getting their ideas across by telephone than by any other means.

Feelings while calling: Before exploring these varied dimensions in detail, one may ask in general, how do people feel while calling?

Table 17 contains information on how respondents feel about the telephone, shown separately for the high and low callers. A word of explanation as to the categories of feelings is required. Each respondent was asked an open question on how he felt about making a long distance telephone call. In addition respondents were asked to react to a list of key words, such as "relaxed," "nervous," "tense," "anxious," "keyed-up," and "happy." Although the questions themselves are worded in terms of how they feel about making long distance calls, the responses can be interpreted more broadly to indicate general feelings about the telephone. The responses to these two questions were combined, coded and classified in terms of the categories at the left side of the column headed, "Feelings" in Table 17.

Table 17

Relationship Between Adjectives Describing How Respondent Feels  
When Making a Long Distance Call<sup>1/</sup> and Frequency of Calling  
(Percentage distribution of respondents)

<u>Feelings</u>	<u>All Respon- dents</u>	<u>Low Users</u>		<u>High Users</u>	
		<u>Bill under \$.50 for 6 mos.</u>	<u>Bill \$.50 or more</u>	<u>Bill for Six Months \$6.51-\$19.50</u>	<u>Bill \$19.51 or more</u>
Only pleasant	28	16	20	32	44
Mostly pleasant -- some unpleasant	31	36	30	32	30
About half and half	23	22	24	24	19
Some pleasant -- mostly unpleasant	7	4	11	6	3
Only unpleasant	4	8	6	3	1
Not ascertained	7	14	9	3	3
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents <sup>2/</sup>	347	50	106	124	67

1/ The question was: "Here is a list of ways people tell us they feel when they make a long distance call. Do any of these words describe how you sometimes feel when making a long distance call? (a) relaxed (b) nervous (c) tense (d) anxious (e) keyed up (f) happy?"

2/ This number does not include respondents who never use long distance.

In all four groups at least half of the respondents reported predominantly pleasant attitudes toward the phone. The high users are more likely to have positive attitudes toward the phone than the low users. (Note that respondents who have never used the long distance telephone have been excluded from this table.)

More complex methods of analysis (described in Appendix F) reinforce the finding that people who have pleasant feelings while calling are more likely to be high callers than those who enjoy calling less.

Feelings about receiving calls: An additional part of the process of telephoning is receiving a call. Respondents were asked how they perceived others as reacting when they received a long distance phone call, and more directly, how they themselves felt when they received a long distance phone call. The questions were, "Now about receiving telephone calls: When a person lifts the receiver and hears the operator say, 'Long distance,' how do you think they feel?" "How do you yourself feel?"

Table 18

Relationship between Frequency of Calling and Feelings of  
Respondent about Receiving Long Distance Calls<sup>1/</sup>  

---

(Percentage distribution of all respondents  
making or receiving long distance calls)

<u>Feelings About Receiving Calls</u>	<u>All Respondents</u>	<u>Frequency of Calling</u>	
		<u>Low Users</u>	<u>High Users</u>
Pleased	11	9	14
Neutral	32	27	36
Concerned	27	34	21
Not ascertained	30	30	29
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	344	154	190

<sup>1/</sup> The question was: "How about receiving telephone calls -- when a person lifts the receiver and hears the operator say 'Long distance,' how do you think they feel?" "How do you feel?"

Table 18 includes only respondents who use long distance. Of the 344 such respondents, 27 percent reported some feeling that receiving a long distance call is a matter for concern. Because of the peculiarities of the sample, it is not possible to estimate the proportion of the population who share this feeling, but 21 percent of high callers and 34 percent of low callers have this view.

The category of people who have neutral feelings is important in this table. These are probably the respondents for whom making and receiving long distance calls have become a habit. Therefore, the feeling of concern or great pleasure is missing and the attitude is merely matter of fact. High callers tend to feel neutral or pleased about receiving calls.

Reluctance to call: If the potential recipient of a long distance telephone call is perceived as likely to be alarmed or concerned, the potential initiator of the call might hesitate to place a call. Respondents were asked directly if they had ever given up for this reason a long distance telephone call which they might otherwise have made. Table 19 shows the replies of the high and low callers. Even though respondents might be concerned about the reaction of the other person,

Table 19

Relationship Between the Question, "Have You Ever Thought of Making a Long Distance Call But Decided Not to Because You Weren't Sure About How the Person You Wanted to Call Would Feel About It?" and Frequency of Long Distance Calling  
(Percentage distribution of all respondents who place long distance calls)

Have you ever thought... and decided not to?	All Respon- dents	Low Users		High Users	
		Bill under \$.50 for 6 mos.	Bill \$.50 or more	Bill for Six Months \$6.51-\$49.50	Bill \$49.51 or more
Yes	9	12	8	10	5
No	88	84	90	86	94
Not ascertained	3	2	2	4	1
Total	100	100	100	100	100
Number of respondents	357	62	107	121	67

their concern was not sufficient in most instances to stop them from making a call that they wanted to make. There is no real difference between the high and low users in this respect. A few people, but only about one in ten in each group, have at some time refrained from calling long distance for fear of alarming the recipient of the call.

Mrs. Jones

Another approach to the measurement of attitudes toward the use of the long distance phone was obtained through the use of a projective or indirect question. The question reads as follows: "Here is a question that's a little different. Mrs. Jones is a woman who makes a long distance call to her relatives once or twice a month just to visit with them. Why do you think she does this? What kind of person is she?"

This type of question is often useful to learn about attitudes of the respondent which are difficult for him to relate to the interviewer. If the interviewer asks the individual, "Why is it that you yourself don't make more long distance calls?" he is likely to get responses such as, "I make all I really need to," or "The cost is too high, I can't afford it," or something of this sort. To a direct question about why he makes as many calls as he does, the respondent is likely again to give a logical, systematic answer such as, "Well, I need to communicate with people," or "I like to keep in touch with people." The use of an indirect measure such as the "Mrs. Jones question" often yields a deeper insight into the respondent's attitudes, because he is not put into a position of either praising or blaming himself or praising or blaming others whom he knows. He is talking about the mythical Mrs. Jones, and can therefore feel free to criticize, praise, or blame, as he wishes. The stimulus itself has no indication of positive or negative affect, it neither praises nor blames Mrs. Jones, nor does it give any clues as to what aspects of her actions are good or bad or neither. Praise or blame for Mrs. Jones must come from the respondent himself.

The range of responses to Mrs. Jones can be seen from the following quotations: "Well, let's see, I would say that she wants to keep in touch with her family and she probably telephones because she dislikes writing. In fact, I often talk to my sister instead of writing, then I can get an answer back right away. I find out what the people are doing and what they're thinking. I'd say also Mrs. Jones must

by an affectionate person and certainly not tight, or she would consider the cost. And then she must have a real nice husband (laugh)." Another respondent says: "Well, I'll tell you, she must just have an awful lot of money to spend. I don't see how the average person could possibly do that. It's hard to say what kind of a person she is. She might be a nice, kind person, but I can't understand why she would spend her money that way." Another respondent gave the cryptic response: "It's either that she's lonely or she feels insecure. I would say she isn't very mature." A more positive response was: "She calls just to hear their voices. It makes people so happy to hear the voices of relatives and friends. She is just thinking of someone else's welfare and wants to make somebody happy." Another respondent says: "Why, I would say that she calls for the same reason that I do. She likes to hear the voices of the other person. She's a considerate and interesting person, the kind of a person I'd enjoy knowing." One respondent says: "Oh, I would say that she was an extravagant, lazy person. She could just as well sit down and write 'em a letter but she's too lazy to do it, so she picks up the phone and calls 'em. She's just wasting her husband's money doing that. But maybe she's so lonesome that she's a little unbalanced or maybe neurotic, and she just has to keep close to them by calling 'em all the time."

First, do people attribute positive or negative qualities to Mrs. Jones? Is she lazy, a spend-thrift, neurotic, overly-dependent on her relatives, or warm, friendly, and considerate? Of the total number of respondents, approximately half gave primarily positive reactions to Mrs. Jones, about 10 percent were mixed, and 15 percent were negative. Approximately a quarter of the respondents did not attribute personality characteristics to Mrs. Jones, but described her only in terms of what might be called situational variables, that is, they said she was aged, that she lived alone, or that she was a long way from her relatives, without indicating a positive or negative affect. The general relationship between high and low callers and the attitude ascribed to Mrs. Jones is shown in Table 20.

Table 20

Relationship Between Frequency of Calling  
and Attitude Toward Mrs. Jones<sup>1/</sup>  
(Percentage distribution of all respondents)

<u>Attitudes</u>	<u>All Respondents</u>	<u>Frequency of Calling</u>	
		<u>Low Users</u>	<u>High Users</u>
Positive	49	48	49
Mixed	12	13	11
Negative	16	17	15
Not ascertained	24	22	25
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	203	197

<sup>1/</sup> The question was: "Here's a question that's a little different. Mrs. Jones is a woman who makes a long distance call to her relatives once or twice a month just to visit with them. Why do you thing she does this? What sort of person is she?"

The low callers tend to have more negative attitudes toward Mrs. Jones than do the high callers although the difference is not statistically significant. Those with positive attitudes are split fifty-fifty between high and low callers. Further analysis, not reproduced here, suggests that those who make two or more favorable comments about Mrs. Jones are likely to be high callers, while those who make two or more negative comments are likely to be low callers. The differences are small, however. The main interest in the interpretation of this question is in the nature of the comments made about Mrs. Jones.

The content of the comments about Mrs. Jones may yield some understanding of the way in which people view the use of the telephone for social long distance calls. Keep in mind that she is using the phone for social calls in just the way the company would like to see people use it. Table 21 shows a distribution of the favorable comments about Mrs. Jones. Forty-one percent of all the respondents thought that she was a warm and friendly person. Thirty-eight percent did not express any positive

attitudes toward Mrs. Jones. Table 22 shows the distribution of unfavorable comments about Mrs. Jones. Sixty-nine percent did not have negative attitudes. Those who did have negative attitudes tend to consider her talkative, a bore, a spend-thrift, lazy, nervous or anxious. Many respondents did not attribute any personality

Table 21

Percentage Distribution of Favorable Comments About Mrs. Jones

Warm, friendly person	41
Phone more satisfying than other communications	13
A considerate person	12
A "normal" person	4
Other favorable traits	3
No positive comment	38
Not ascertained	2
Total	<u>17</u>
Number of respondents	400

1/ Totals to more than 100% because more than one comment might be given.

Table 22

Percentage Distribution of Unfavorable Comments About Mrs. Jones

Talkative, a bore	10
A spend-thrift	7
Lazy	6
Nervous, anxious	5
Immature, tied to family too close	3
Other negative attitudes	3
No negative comment	69
Not ascertained	1
Total	<u>17</u>
Number of respondents	400

1/ Totals to more than 100% because more than one comment might be given.



Table 23

Percentage Distribution of Situational Attributes of Mrs. Jones

Has a large family, many relatives, many friends	25
Lives alone	25
Is rich	13
Doesn't like to write	11
Lives too far away, can't visit	3
Has little time	2
Other situational attributes	4
No situational comment	35
Not ascertained	2
Total	<u>17</u>
Number of respondents	400

1/ Totals to more than 100% because more than one comment might be given.

characteristics to Mrs. Jones, but instead responded to the question in terms of the situation in which Mrs. Jones found herself. Of these responses, the most common were that Mrs. Jones has a large family with many relatives and friends and/or that she lives alone.

Considering these replies together, the positive motivation for social calling emerges in general terms similar to those described at various points in this report. People call because they are warm, friendly social people, or because they are in a situation where an average sort of person will have more need for social expression by phone — they live alone — or they have a large circle of friends or relatives with whom they seek to maintain ties. The underlying positive value is one of maintaining ties. From the discussion elsewhere in this report it would seem that these ties are primarily ties between parents and children and between siblings, though ties between other relatives and between friends also have some importance.

The negative comments are in part negative comments about the ties themselves. People who try to maintain ties which others would prefer to see loosened are a nuisance. They are bores, or they talk too much, or they are immature. Part of the problem is that it is normal in this country for children to leave their parents' homes, and there are strong pressures to push them out into the world. These same pressures tend to keep parents and grown children apart and may operate to reduce communication between them.

### Difficulty in Hearing

Another type of variable which is important to the understanding of any behavior is factors which may make the behavior inappropriate. Are there any factors which might make the telephone such an inadequate device that it would not be useful to the respondent as a way of communicating, no matter how strongly motivated he might be to communicate? One obvious possible barrier to the use of the phone is difficulty in hearing on the phone.

Respondents were asked, "Do you have any trouble hearing on long distance calls?" Table 24 shows the response to this question for people who make or receive any long distance telephone calls, with high and low users shown separately. Only 8 percent of all respondents say they do have trouble hearing; however, another 16

Table 24

Relationship Between the Question, "Do you have any trouble hearing on long distance calls?" and Frequency of Calling  
(Percentage distribution of all respondents who make or receive long distance calls)

Trouble Hearing?	All Respondents	Low Users		High Users	
		Bill under 50¢ for 6 months	Bill 50¢ or over for 6 months	Bill \$6.50 to \$49.50 for 6 months	Bill \$49.51 or more for 6 months
Yes	8	6	11	7	4
Sometimes, it depends	16	14	10	20	19
No	71	66	73	70	77
Not ascertained	5	14	6	3	—
Total	100	100	100	100	100
No. of respondents	348	51	106	124	67

percent report that they sometimes have trouble hearing, depending on the circumstances. Nearly a quarter of all respondents report having some trouble hearing at some time. More people in the high user group report that they sometimes have trouble hearing than the low user group. High users have a larger number of opportunities for difficulties with poor connections, noise on the line, and so forth.

Table 25 shows the reported reasons for having trouble hearing. Of the 77 respondents who mentioned such trouble, the largest proportion fall under the general heading of "poor conditions." These include people reporting static on their phone, getting poor connections, being unable to hear the respondent, having something wrong with their own telephone, and so forth. The second largest group (16 percent) report that they themselves are hard of hearing and that they, therefore, have trouble hearing on the long distance telephone. These people are not likely to be high users.

Table 25

Reasons Why Trouble Hearing<sup>1/</sup>  
(Percentage distribution of all respondents who  
have trouble hearing on long distance calls)

<u>Reasons</u>	<u>All Respondents</u>
Poor conditions <sup>2/</sup>	65
I am hard of hearing	16
Noisy room	4
Interruption, others on line	6
Other	9
Total	100
Number of respondents	77

<sup>1/</sup> The question was: "Do you have trouble hearing on long distance calls?" (If yes) "Why?"

<sup>2/</sup> Includes static on phone, poor connections, something wrong with phone, etc.,

## VI. Personality Factors

There are a large number of personality factors which might conceivably be related to the desire to contact other people or to the choice of means of communication. The factors described here were selected on the basis of psychological theory and research as having reasonable prospects of contributing to understanding of social long distance phoning. In every case, the method of measurement has been utilized in previous research and its validity has been more or less established.

### Security-insecurity

Previous studies by the phone company indicate that the phone is frequently used to reduce worry or put a stop to ambiguous speculation. Lack of information is always somewhat disturbing. There is also good reason for thinking that people differ in the extent to which they need certainty.

The insecure person is an individual with a strong need to reduce uncertainty. He is described in technical literature as a person who feels more threatened by the world and less able to cope with it than does the secure person. This person is also more in need of support, reassurance, protection and help. He is more likely to be worried about the state of his social world, more concerned that his relationships with others may be unsatisfactory. For these and other related reasons, it would appear that the insecure person might be expected to make more attempts to contact friends and relatives than his more secure colleague.

The theory was less clear as to whether the insecure person would be a high caller. Other factors such as socio-economic status might intervene, and also the very characteristics of the insecure person might make certain aspects of phoning difficult and unpleasant. He might dislike or fear the mechanics of placing the call, or feel the time pressure more keenly, for example.

Several instruments have been developed which measure security and insecurity. They have moderately high validity on the evidence at hand; that is, there is evidence that these tests actually measure what they are supposed to measure. They were not completely satisfactory for use in a field study of this sort; hence some work was done to make the items acceptable without losing their essential characteristic. A scale was developed consisting of items such as:

You have often lost sleep over your worries.\*

You sometimes avoid social contacts for fear of doing the wrong thing. The respondent answers "yes" or "no" to each statement. On the scale used here, there were seven statements whose answers were combined into a total score. Six other statements were included as "padding" for the important seven. The purpose of the padding was to prevent the items from seeming too threatening to insecure respondents.

Previous work with the insecurity score has indicated that the greatest difference exists between the people who have none of the symptoms of insecurity and those who have one or more. This finding is generally supported in this study. Accordingly the tables are presented in terms of those who score zero (secure) and those who score above zero (insecure).

Security and the frequency of calling: Table 26 shows the relationship of the security score and high and low callers. It indicates a moderate but significant tendency for the most secure respondents to be in the high caller group. A similar table has been prepared (but is not reproduced here) taking into account the scores of both husband and wife. The results are similar.

Security and income: The relationship of security to the company criterion is illuminated somewhat by the data in Table 27. This table, showing the relationship

\*This scale was developed by Dr. Jay Jackson of the Institute for Social Research, University of Michigan. The items were taken from the Guilford - Zimmerman Temperament Scale. We are indebted to the authors for permission to use these items.

between income and security-insecurity, indicates that the high income people are more secure than low income people. Since income is significantly related to social long distance calling behavior, part of the relationship of security to calling may be the effect of income. A more exact determination of the extent to which income and security independently influence calling behavior was made using more refined analysis techniques (See Appendix F). This calculation indicated that knowledge of a person's security score will not improve a direct prediction as to whether he is a high or low caller when other variables such as income, having friends or relatives living away, and feelings while calling have been taken into account.

Table 26

Relationship Between Score on Security-Insecurity  
Test and Frequency of Calling

	<u>All respondents</u>	<u>Security Score</u>	
		<u>Secure</u>	<u>Insecure</u>
Low Users	51	32	54
High Users	49	68	46
Total	100	100	100
Number of respondents	400	66	320

Table 27

Relation Between Security-Insecurity Score and Income

<u>Security-Insecurity Score</u>	<u>Family Income</u>						
	<u>Under \$3000</u>	<u>\$3000- 3999</u>	<u>\$4000- 4999</u>	<u>\$5000- 5999</u>	<u>\$6000- 7499</u>	<u>\$7500- 9999</u>	<u>\$10,000 and over</u>
Secure	—	19	7	16	11	29	26
Insecure	90	74	90	82	81	69	71
Not ascertained	10	7	3	2	8	2	3
Total	100	100	100	100	100	100	100
Number of respondents	29	27	74	87	66	41	58

The status of the security factor: These results indicate that the personality dimension of security-insecurity does not have a simple and direct relevance to the problem of explaining why people call long distance for social purposes. It may be that this dimension is important in particular situations. For example, making a long distance call requires a good deal of confidence and assurance. Efforts to reduce these demands on the personality, might change the calling behavior of the more insecure people. It may be that some insecure people are sensitive to situations involving uncertainty, but lack a feeling of ability to cope with the problem by such action as placing a call. A more thorough understanding of the significance of this personality characteristic for calling must await more data. But the data do suggest that no simple relation exists between security and calling. This negative result raises a question as to whether the desire to reduce uncertainty is in fact a major motive for long distance calling. The data are not sufficient to answer this question, unfortunately, but they suggest that it would be worthwhile to re-examine the topic.

#### The Need for Affiliation

People differ in the extent to which they like and want to be liked by other people. They differ in the number of friends they have and the extent to which they have satisfactory relationships with them. Recently a test has been developed which attempts to measure a personality characteristic which is related to these differences, the need for affiliation. By need for affiliation we mean the need to establish, maintain, or restore a close personal relationship. This relationship is most adequately described by the word "friendship." We know from other research that people with high scores on the test tend to seek approval from others; they also tend to be concerned with the extent to which they are approved and loved. The prediction is that, other things being equal, these people are the sort who make frequent contacts with friends and relatives for a variety of

reasons. They derive much of their satisfaction from people; they are more likely to imagine that their relationship to others needs repair; they are more in need of reassurance that they are indeed loved and liked; finally, they are more likely to be concerned about separation from loved ones.

As with the security-insecurity factor, the relationship between need for affiliation and choice of means of communication was less clear. While there are probably attractions in the long distance phone for the high need affiliation person, there was also the possibility that other features of phoning might not be attractive.

The measure: The measure of need for affiliation is obtained from stories which respondents tell about pictures which the interviewer shows them. The pictures were selected on the basis of experience gained during the pilot study.

The two stories below obtained from male respondents, illustrates the kind of material the respondents supply which can be coded for the amount of need for affiliation. The picture shows two men sitting on a fence.

"Two fellows who are apparently friends. They are enjoying an evening in the country talking. Probably talking about the relaxing day they are having together. They'll go back home and eat dinner together."

"Looks like a dairy farm. They are talking some kind of business. Could be that boy lives on the dairy farm. The other looks like some kind of businessman trying to sell him something."

The first story has many references to affiliation; the second, none at all.

Variables to be predicted: The theory indicates that need affiliation should predict several types of variables which are under study. It should predict a general tendency of the individual to contact others by letters, visits, and local phone calls, as well as by long distance. The purposes of the frequent long distance calls by the person with high need affiliation should be social. He should enjoy making and receiving calls and should be positively inclined toward



Mrs. Jones, who makes many social calls. These three types of variables will be referred to, for convenience, as frequency of communication, purposes of communication, and pleasure in communication. They will be discussed in reverse order.

Pleasure in communication: In the preceding chapter it was shown that one of the basic factors which determine how often people call is whether they experience pleasant or unpleasant feelings while calling.

Table 28

Relationship Between Need Affiliation Scores and Respondents' Feelings While Placing Long Distance Call 1/

<u>Feelings</u>	<u>All Respondents</u>	<u>Need Affiliation Score</u>		
		<u>Low (00-03)</u>	<u>Middle (04-06)</u>	<u>High (07-19)</u>
Only pleasant	28	30	22	33
Mostly pleasant - some unpleasantness	31	28	32	36
About half and half - neutral	23	25	26	15
Some pleasant - mostly unpleasant	7	9	6	6
Only unpleasant	4	4	7	3
Not ascertained	7	4	7	7
Total	100	100	100	100
Number of respondents <sup>2/</sup>	347	132	87	115

1/ The question was: "Here is a list of ways people tell us they feel when they make a long distance call. Do any of these words describe how you sometimes feel when making a long distance call?"

- a) Relaxed? (Yes was scored + 1, No - 1)
- b) Nervous? (No was scored + 1; Yes - 1)
- c) Tense? (No was scored + 1; Yes - 1)
- d) Anxious? (No was scored + 1, Yes - 1)
- e) Happy? (Yes was scored + 1, No - 1)

Only pleasant feelings indicate a score of + 5

Mostly pleasant feelings indicates scores of less than + 5 and more than + 1

Half and half indicates scores of - 1 to + 1

Some pleasant - mostly unpleasant indicate scores of - 2 to - 4

Only unpleasant feelings indicates scores of - 5

2/ Does not include those respondents who have never made a long distance call.

As shown in Table 28, the higher a person's score on need affiliation the more likely it is that his feeling while phoning are pleasant. Of those with a score as high as 07 or higher, 69 percent report pleasant feelings compared to 9 percent with unpleasant feelings. Of those with a score of 00 to 03, 58 percent report pleasant feelings and 13 percent, unpleasant. The relationship is clearly in the predicted direction.

The same relationship appears in Table 29, which reports the respondents' replies to a slightly different question.

Table 29

Relationship Between Need Affiliation Scores  
and Feelings About Making Long Distance Calls<sup>1/</sup>  
(Percentage distribution of respondents)

<u>Feelings</u>	<u>All Respondents</u>	<u>Need Affiliation Score</u>		
		<u>Low (00-03)</u>	<u>Middle (04-06)</u>	<u>High (07-19)</u>
Enjoy it; enjoy it moderately	60	55	61	70
Sometime enjoy, sometime dislike; neither enjoy nor dislike	27	33	25	22
Do not enjoy	6	7	6	1
Not ascertained	7	5	8	7
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents <sup>2/</sup>	347	132	87	115

<sup>1/</sup> The question was: "How do you feel about making a long distance call - do you enjoy it or dislike it or what?"

<sup>2/</sup> Does not include those respondents who have never made a long distance call.

The higher the need for affiliation score the more likely a person is to report, in answer to a direct question, that he enjoys making long distance calls. These two tables thus support the underlying argument as to the relation between need affiliation and calling.

Further support comes from the relation between people's score on need affiliation and their attitudes toward "Mrs. Jones".

The Mrs. Jones question permits us to determine indirectly the extent to which being a frequent long distance caller for social purposes is a respectable pattern of behavior. As the over all data indicate, most respondents have something positive to say about Mrs. Jones. Table 30 indicates that this tendency to see Mrs. Jones in positive terms increases with the need for affiliation.

Table 30

Relationship Between Need Affiliation Scores  
and Positive Personality Attributes of "Mrs. Jones"<sup>1/</sup>

<u>Attributes of "Mrs. Jones"</u>	<u>All Respondents</u>	<u>Need Affiliation Score</u>		
		<u>Low (00-03)</u>	<u>Middle (04-06)</u>	<u>High (07-19)</u>
Warm, friendly person (family minded)	41	36	36	50
Finds phone more satisfying than other ways of communicating	14	12	12	18
Considerate	13	14	8	17
Normal	4	5	2	6
Other	3	5	4	2
No positive personality attributes	38	41	48	26
Not ascertained	2	3	1	2
Total	<u>27</u>	<u>27</u>	<u>27</u>	<u>27</u>
Number of respondents	400	155	103	125

<sup>1/</sup> The question was: "Mrs. Jones is a woman who makes a long distance call to her relatives once or twice a month just to visit with them. Why do you think she does this?"

<sup>2/</sup> Total equals more than 100% because of multiple answers.

In specific terms, Mrs. Jones is more likely to be described as a warm friendly person by people who score high on need affiliation.

Purposes of communication: As discussed in the previous chapter, people differ in the uses of the telephone which they report are most important to them. Is there any relation between the uses people make of the phone and their need affiliation score? Note that the question includes local as well as long distance calls. In the high need for affiliation group, as shown in Table 31, a higher proportion

Table 31

Relationship Between Need Affiliation Scores and the Most Important Uses of the Phone to the Respondent <sup>1/</sup>

<u>Uses of Phone</u>	All Respondents	<u>Need Affiliation Score</u>		
		<u>Low</u> (00-03)	<u>Middle</u> (04-06)	<u>High</u> (07-19)
To make arrangements with friends or members of family	48	42	53	54
To visit or chat with friends	16	16	13	18
To visit or chat with relatives	29	26	30	33
In case of emergency (sickness, fire, police, etc.)	82	81	86	82
Business calls, in connection with work	55	62	56	50
To get shopping information to order from stores	22	23	23	20
To make arrangements for meetings, organizations, clubs, etc.	19	17	16	25
Not ascertained	4	5	2	2
Other	1	-	1	1
Total	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Number of respondents	400	155	103	125

<sup>1/</sup> The question was: "What are the most important uses of your telephone for you?"

<sup>2/</sup> Total equals more than 100% because of multiple answers.

mention affiliative uses of the phone, such as making arrangements, chatting with friends and relatives and fewer mention non-social purposes. The differences, however, are not large.

A similar table has been prepared, but is not reproduced, here referring to purposes of long distance calls. The results are similar; that is, the differences are small but in the predicted direction. The general impression which these tables give is that need affiliation is less closely related to the purposes for which people call than to their pleasure in communication.

Frequency of communication: A prediction supported by theory and previous research was that there would be in general a greater tendency to contact others among those with high need affiliation scores.

This prediction is tested for letters, visits, local telephone calls, and long distance calls in Tables 32, 33, 34, and 35. For letter-writing there is a difference in the predicted direction, that is, people who score high on need affiliation are more likely to write large numbers of letters. The difference is primarily in writing large numbers of letters; those with high scores are more likely to write 76 or more letters a year.

Table 32

Relationship Between Need Affiliation Score and  
Number of Letters Written Per Year to Relatives or Friends<sup>1/</sup>  
 (Percentage distribution of respondents)

<u>Number of Letters</u>	All Respondents	<u>Need Affiliation Score</u>		
		<u>Low</u> <u>(00-03)</u>	<u>Middle</u> <u>(04-06)</u>	<u>High</u> <u>(07-19)</u>
Up to 20	56	56	55	52
21 to 75	18	20	16	18
76 or more	21	15	25	26
Other answers or not ascertained	5	9	4	4
Total	100	100	100	100
Number of respondents <sup>2/</sup>	308	118	80	101

<sup>1/</sup> The question was: "Thinking of your half dozen closest friends and relatives, do they all live here in (name of city), or do they live in other places, or what? About how many letters would you say you write to relatives or friends in a year?"

<sup>2/</sup> Number of respondents includes only those respondents who have relatives or friends living 50 miles away or more.

As far as the number of visits is concerned, the data show only a slight tendency for people with high scores to visit their friends and relatives more frequently. The difference is small enough so that it may be the result of sampling error.

Table 34 indicates that there is a significant tendency for high need affiliation respondents to be high local users of the phone, using their own report. Not one respondent who scored high reported that he had failed to make or receive any calls on his home phone in the past week. Only 10 percent of those who scored high reported one or two calls, compared to 21 percent of those who scored low.

Table 33

Relationship Between Need Affiliation Score and Number of Times a Year Respondent Gets Together With Out-of-Town Friends or Relatives<sup>1/</sup>

<u>Number of visits</u>	<u>All Respondents</u>	<u>Need Affiliation Score</u>		
		<u>Low (00-03)</u>	<u>Middle (04-06)</u>	<u>High (07-19)</u>
Up to 1	45	51	49	36
1 to 10	36	31	36	39
11 or more	10	9	6	14
Other answers or not ascertained	9	9	9	11
Total	100	100	100	100
Number of respondents <sup>2/</sup>	308	118	80	101

<sup>1/</sup> The question was: "Thinking of your half dozen closest friends or relatives, do they all live here in (name of city), or do they live in other places, or what? About how often do you get together with these people?"

<sup>2/</sup> Number of respondents includes only those respondents who have relatives or friends living 50 miles or more away.

Table 34

Relationship Between Number of Calls Made or Received "Last" Week and Need Affiliation Score<sup>1/</sup>

<u>Number of Calls</u>	<u>All Respondents</u>	<u>Need Affiliation Score</u>		
		<u>Low (00-03)</u>	<u>Middle (04-06)</u>	<u>High (07-19)</u>
Up to 2	18	21	21	10
3 to 14	49	52	51	45
15 and over	29	22	26	41
Not ascertained	4	5	2	4
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	155	103	125

1/ The question was: "About how many calls in the last week have you yourself made or received on your home phone?"

Frequency of calling: Table 35 shows that there is no relation between frequency of long distance calling based on company records and respondent's score on need affiliation. In view of the theory and findings reported earlier in this report, this absence of relation came as a surprise to the investigators. Need affiliation predicts feelings while calling (which in turn predict calling); it predicts frequency of local calling; it predicts frequency of letter writing, Why should it not predict frequency of long distance calling?



Table 35

Relationship Between Need Affiliation  
Score and Frequency of Calling  
(Percentage distribution of respondents)

<u>Frequency of Calling</u>	<u>All Respondents</u>	<u>Need Affiliation Score</u>		
		<u>Low (00-03)</u>	<u>Middle (04-06)</u>	<u>High (07-19)</u>
Low Users	43	37	50	46
High Users	57	63	50	54
Total	100	100	100	100
Number of respondents <sup>1/</sup>	308	118	80	101

<sup>1/</sup> Number of respondents includes only those respondents who have relatives or friends living 50 miles or more away.

Several attempts have been made to answer this question. One approach was to consider simultaneously income, whether friends or relatives live away, experience in calling on a job, feelings while calling, and three personality variables including need affiliation. The methods used are described in Appendix F. When all these other items are taken into account, the need affiliation score does not appear to have any influence on calling.

A second approach was to look at the effect of need affiliation separately for different income groups. The results appear in Table 36.

Table 36

Relation Between Need Affiliation and Frequency of  
Long Distance Calling Within Two Income Groups

Income \$3000-5999			
<u>Frequency of Calling</u>	<u>Need Affiliation Score</u>		
	<u>Low (00-03)</u>	<u>Middle (04-06)</u>	<u>High (07-19)</u>
Low Users	39	62	63
High Users	61	38	37
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	57	38	46

Income \$6000 or More			
<u>Frequency of Calling</u>	<u>Need Affiliation Score</u>		
	<u>Low (00-03)</u>	<u>Middle (04-06)</u>	<u>High (07-19)</u>
Low Users	23	37	27
High Users	77	63	73
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	48	35	45

This table yielded another surprise. It appears, if these data can be believed, that the effect of need affiliation is in the predicted direction for the income group over \$6000, but in the opposite direction for the families with income of \$3000 to \$5999. The number of interviews involved is small and there is, of course, the possibility that these are only chance relationships. Further attempts to illuminate this problem will require more time.

Status of the affiliation score: It appears that the affiliation motive is relevant to an understanding of social long distance calling. There are several indications that the high need affiliation person is, under certain conditions, the person who is a high contactor of others and in that sense, a potential long distance caller. The affiliation score does predict local calling as well as attitudes which are in turn related to frequency of long distance calling. In particular it predicts people's pleasure or lack of pleasure in long distance calling. It does not itself predict long distance calling, or, at best, the relation is complex. It is clear that the relationship of the motive to calling is not one which overpowers the influence of other motives, habits and attitudes.

The measure of the motive used was developed with a heavy emphasis on friendship. The scoring system takes this into account. There is evidence in the data that long distance calling for social purposes is much more a matter of relationships to relatives than to friends. This, together with recent evidence in The Detroit Area Study that relatives are more important than friends, would suggest that it might be worthwhile to modify the scoring system to permit more reflection of concern with establishing, maintaining, or restoring close relationships to relatives.

#### Underlying Attitudes Toward the Use of Money<sup>1/</sup>

This portion of the study was exploratory. That statement could be made about other parts of the research, but is particularly appropriate here. The hypotheses in this portion of the study were derived from a substantial body of literature

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<sup>1/</sup> This characteristic was referred to in the pilot study as retentiveness. The change in title was dictated by experience in actual measurement of this factor, and because the new title reflects more accurately the characteristics with which the study is concerned.

concerning unconscious attitudes towards the use and meaning of money. The hypotheses originally grew out of clinical observation; until now they have remained more or less untested. The present research has attempted to give them an empirical test, and to enlarge our understanding of the connections between personality dynamics and consumer behavior.

It is a prevailing belief among psychologists that for many (though not all) adults, money has an unconscious significance; one which is rooted in childhood experience. The causal sequence is of this nature: early experiences in the area of giving and receiving become crucial for some children. Attitudes in this area may never outgrow their childhood sources, and may remain influential in determining the adult's feelings about spending, saving, and giving. Consequently, if we know the individual's underlying feelings about money, we should be able to make a more accurate prediction concerning his pattern of consumption.

The instrument: It was first necessary to develop a technique which would yield information about the subject's unconscious attitudes towards money. An instrument which had proved promising in previous research along this line is a projective picture, which shows a young boy (or girl, if the respondent is female) seated before a table, upon which there is a piggybank and several stacks of coins. The youngster's facial expression is ambiguous, so that the subject is unable to determine his attitude or action towards the bank and coins. The respondent is asked the following:

What's going on here?  
What is the person thinking?  
What does he (she) want?  
What's going to happen next?

The analysis: The stories were classified into three major groups. Each story type was presumed to indicate a different motivational pattern in regard to the utilization of income. The following sections describe the personality groupings which were developed, and the specific predictions made as to differences in long distance use.

I. Free spenders: A story was placed in this category when respondent told of the boy (or girl) as spending the coins to buy something for himself. In many cases the action is impulsive; that is, the story-hero is depicted as wanting something urgently, and unable to delay the impulse to get it.

This type of subject is likely to be self-indulgent. He wants to satisfy his wishes as quickly as possible, and is liable to make decisions quickly and even impulsively. He is less likely than other people to weigh and calculate expenses; consequently, cost is less apt to act as a barrier to purchasing. For these reasons, Free Spenders should be over-represented among those who make many long distance calls.

II. Conservative spenders with high concern for others: A story was placed in this grouping when it pictured the boy or girl as spending the money in order to buy a gift for someone else.

The motivational dynamics here are more complex than for the other groups. These subjects ordinarily tend to be cautious in their spending, particularly so in the purchase of luxuries. In the case of long distance phoning, however, another motive comes into play. These individuals show an over-riding need to be altruistic. They are very concerned about helping and being kind to other people. There is a conflict, then, between the wish to keep in touch with friends and relatives and the counter-tendency to use money cautiously. The most reasonable prediction seemed to be that these respondents would fall between the other two groups. They would be neither conspicuously high nor extremely low in the amount of long distance use, and would tend to occupy the middle categories.

III. Conservative spenders: A story was placed in this category when the boy or girl was seen as deciding not to spend the money, but rather to keep it. In scoring these stories, a seemingly minor yet dynamically important distinction

was kept in mind: these are not stories about saving, they are stories about not spending. Consequently, stories which emphasized the virtues of thrift and of long-term saving were not included within this group.

These individuals show a high degree of cost concern. Money is perceived, for unconscious reasons, as possessing great personal significance. For them, to spend money tends to arouse anxiety, particularly if it is spent incautiously. The prediction follows logically: the conservative spenders will be extremely low in long distance use.

IV. Others: Not all of the stories received fell into the above three categories. A substantial number of stories showed no particular thematic emphasis, and were scored neutral. Other stories, which had definite and distinctive themes, did not, in the judgment of the investigators, reflect unconscious attitudes towards money. Some subjects misunderstood the picture, or told irrelevant stories. No predictions were made in any of these instances.

The absence of any prediction for this residual group of respondents is unfortunate from the point of view of solving the statistical problem of differentiating between high and low users. Of the 400 respondents, only 176 fell into the three groups for which predictions could be made. The difficulties in classifying the others arise in large part because only a single picture was used to measure this dimension of personality in contrast to four which were used in measuring need affiliation. Another source of difficulty was that the respondents in this study represent both sexes, all ages, and all socio-economic strata whereas previous research had been with homogeneous groups. The variety of types of story was much greater than in the earlier research, and the system of classification used earlier was not entirely equal to the strain.

Results: Table 37 shows the data which bear most directly upon the major predictions. In this table only respondents with someone to call are shown, that is, those with friends or relatives living away. While 20 percent of all respondents had a bill for six months of \$49.51 or more, 31 percent of the free spenders fall into this category. On the other hand, free spenders appear infrequently in the group of extremely low long distance users with bills under \$.50. Nine percent of them are in this group, compared with 17 percent of the total sample.

The prediction was that conservative spenders would be among the lowest long distance users, and the table bears this out. Twenty-nine percent of them are in the group with bills under \$.50, compared with 17 percent of all respondents. At the other extreme, only 10 percent of conservative spenders are to be found in the group who spent over \$49.51 compared with 20 percent of the entire sample.

The prediction was that because of a conflict of motives the conservative spenders with high concern for others would fall between the other two groups in the amount of long distance calling. The data suggest that this is in fact the case. These respondents are under-represented in both of the extreme categories, and are found in great number among the two middle groups in long distance use.

Table 37

Relationship Between Underlying Attitude Toward Money  
and the Frequency of Calling

(Percentage distribution of respondents)

Frequency of Calling	All Respondents	Underlying Attitude Toward Money				
		Self- Indulgent and Free Spender	Conservative Spender with Conser- High Concern for others	vative Spender	Other	Inapplicable or Refusal
<u>Low User</u>						
6 month bill less than 50¢	17	9	12	29	15	42
6 month bill more than 50¢	26	30	34	24	26	3
<u>High User</u>						
6 month bill \$6.51 to \$49.50	37	30	42	37	38	36
6 month bill more than \$49.51	20	31	12	10	21	19
Total	100	100	100	100	100	100
Number of Respondents <sup>1/</sup>	310	54	65	21	137	33

<sup>1/</sup> Number of respondents includes only those respondents who have relatives or friends living 50 miles or more away.



The effect of underlying attitudes toward money was also tested in a more complex analysis which took into account the other personality variables as well as income, having friends or relatives away, experience in calling on the job, and feelings while calling. (See Appendix F) This analysis included all respondents. Underlying attitude toward money failed to contribute significantly to a prediction as to whether a respondent would be a high or low caller when these other factors were taken into account.

Status of attitude toward money: There is evidence of a relationship between underlying attitude toward money and calling for at least a few respondents in Table 37. The absence of a relationship in the complex analysis may be the result of two factors. First, a majority of respondents could not be classified for reasons already given. In the two-way table those who could not be classified can be ignored, but in the multi-variate analysis they had to be included. Second, the multi-variate analysis was set up to divide respondents into two groups, high users and low users. In the two-way table it appears that underlying attitude toward money is most useful in predicting extremely high versus extremely low use of the long distance phone.

#### Overall Comment on the Personality Measures

There are a number of general conclusions which apply to all of the personality factors. While all of them are related to each other, they are by no means the same thing with different labels. All are potentially capable of contributing something independent of the others.

Secondly, the relationship of these measures to actual calling behavior is complex. In no case does the factor overwhelm all other influences. They interact on a complex way with other habits, attitudes and socio-economic factors.

Third, personality factors seem more closely related to other factors which predict calling than to actual calling behavior, especially as that is reflected in the company records. This result may be due in part to the fallibility of the criterion. The high call categories may contain some high business users; it may also contain some persons for whom their behavior was atypical. This differential tendency to predict may reflect accurately the dynamics of calling, however. The personality measures bear on basic orientations toward people and toward contacting them. Intervening between these orientations and the use of a particular device are a host of other factors, such as attitudes, experiences and habits, which, together with the basic orientations, influence the actual choice made. There is, then, on the data, a rough kind of confirmation of the original theoretical formulation. The personality measures identify potential callers; the other intervening factors identify the barriers and facilitators, which influence the mode of communication used.

## VII. Attitudes Toward Rates

The 1955 Survey of the Residence Market for Long Distance indicates that about 28 percent of all telephone users will reply that rates are higher than they should be when asked: "Do you think the rates for long distance calls are low, reasonable, or higher than they should be?" A similar question was asked in the present survey, and the results are reported in Table 38. Since people who are neither unusually high nor unusually low users were left out of the present survey altogether, there is no reason to expect the proportion of all respondents who say rates are high to

Table 38

Relationship Between Perception of Long Distance Rates  
Frequency of Calling  
(percentage distribution of all respondents who make  
or receive long distance calls)

Perception of Rates <sup>1/</sup>	Frequency of Calling				
	All Respondents	Low Users		High Users	
		Bill 50¢ or under for 6 months	Bill 50¢ or more for 6 months	Bill \$6.50 to \$49.50 for 6 months	Bill \$49.51 or more for 6 months
High	25	16	19	29	35
Not high	48	44	54	49	41
Rates irrelevant <sup>2/</sup>	6	6	5	7	7
Don't know	7	10	10	6	1
Not ascertained	14	24	12	9	16
Total	100	100	100	100	100
Number of respondents	346	51	105	123	67

<sup>1/</sup> The question was: "How do you feel about the rates for long distance calls?"

<sup>2/</sup> These respondents might say, "I don't even think about rates."

be the same as in the national survey. But by coincidence the proportion in this survey, 25 percent, is within sampling error of the national average.

In Table 38 the perception of rates by high users is compared with the perception of rates by low users. The results are clear-cut: high users are most likely to feel that rates are high.

To compare the extreme groups, of those with a bill of under \$1.50 for a period of six months, one in six feel that rates are "high". Of those with a bill of \$50 or more, two in six feel that rates are "high".

The reverse statement is not true. That is, it is not true that many low users feel rates are low. They are more likely to have no opinion about rates, or, at least, no opinion which interviewers could elicit with the question which was asked. Low users are by definition people who rarely or never make long distance calls, and it is not surprising that people who do not make long distance calls have not thought much about rates and really have no idea whether rates are high or low. Of those with a bill under \$.50, one-third said they had no opinion or failed to express an opinion about whether rates were high compared to one-sixth of those with a bill of \$49.51 or more.

To think that rates are high is not the same as to think that rates are unfair. The issue of the fairness of rates was put to respondents directly in the following question: "Some people feel that the long distance rates are unfair and ought to be cut. How do you feel about that?" This question is so phrased as to make it very easy for the respondent to agree that rates are unfair. It was intended to obtain a maximum estimate of the proportion of high and low callers who feel rates are unfair. (Once more it should be kept in mind that the sample in this study represents two special groups rather than the general population.)

Table 39

Relationship Between Attitude Toward Rates  
and Frequency of Calling  
(percentage distribution of all respondents  
who make or receive long distance calls)

Attitude Toward Rates	All Respondents	Frequency of Calling			
		Low Users		High Users	
		Bill 50¢ or under for 6 months	Bill 50¢ or more for 6 months	Bill \$6.50 to \$49.50 for 6 months	Bill \$49.51 or more for 6 months
Rates fair	50	47	51	48	49
Rates unfair	14	22	11	14	15
Rates fair for some calls, unfair for others	8	2	6	10	15
Don't know	10	8	13	7	10
Not ascertained	18	21	19	21	11
Total	100	100	100	100	100
Number of respondents	346	51	105	123	67

The data in Table 39 show that about half of the high callers and half of the low callers feel that rates are fair. The proportion who feel that rates are unfair also is about the same for high users as for low. But the proportion who make the sophisticated comment that rates are fair for some types of calls and unfair for others is higher among high users than among low users.

To summarize: people who make frequent use of long distance are more likely than those who do not to have well-developed attitudes toward rates. The high users, who pay the larger telephone bills, show some tendency to feel that rates are high. They do not show a tendency to feel that rates in general are unfair, though they may take exception to particular features of the rate structure.

It may help to understand these feelings to examine the context in which people think and talk about rates. In Table 40 the frames of reference of those who think rates are high are compared with the frames of reference of those who think rates are not high.

Table 40

Relationship Between Frames of Reference of Responses  
to Questions Concerning Rates and Perception of Rates<sup>1/</sup>  
(percentage distribution of all respondents using long distance)

<u>Frames of Reference</u>	<u>All Respondents</u>	<u>Perception of Rates</u>	
		<u>Rates High</u>	<u>Rates Not High</u>
Respondent compares rates with other luxuries	1	3/	1
Respondent compares rates with other means of communication	4	2	6
Respondent compares rates with other prices and costs in general	10	8	11
Respondent thinks in terms of satisfaction with phoning	12	3	17
Respondent thinks in terms of Company or services	16	13	19
Respondent compares Mich. phone rates with other state phone rates	6	6	4
Don't know	2	3/	3/
Not ascertained	50	59	45
Other	7	9	5
Total	<u>2/</u>	<u>2/</u>	<u>2/</u>
Number of respondents	344	87	166

<sup>1/</sup> The question was: "How do you feel about rates for long distance calls?" "Some people feel that the long distance rates are unfair and ought to be cut. How do you feel about that?"

<sup>2/</sup> Totals more than 100 percent because more than one frame of reference indicated.

<sup>3/</sup> Less than 0.5 percent.

Very few people indeed are comparing rates with the price of luxuries when they refer to rates as high or not high. And few people compare rates for telephone calls with the cost of other means of communication. The most common frame of reference is the Company and the services it provides. People tend to relate the money the Company receives to the work the Company performs. People who think rates are not high are likely to think in terms of the satisfaction they receive from the calls.

Few people feel rates are high because telephone calls are not satisfying. Both among high callers and low callers there is a group who evaluate rates in terms of the general price level and the cost of living.

The opinion that rates are high seems to be less structured in people's minds than the feeling that rates are not high as indicated by the proportions for whom no frame of reference was ascertained. Fifty nine percent of those who feel rates are high give no frame of reference, compared with 45 percent who feel rates are not high. The implication is that among those who say rates are high there are many without any well developed rationale for their feelings. The same is true, but to a lesser extent, among those who say rates are low.

The question about fairness, it will be recalled, was intended to bring out even the weakest and vaguest feelings that rates are unfair. It should not be surprising, then, that almost two-thirds of those who said rates were unfair mentioned no frame of reference. Those few who did supply a context, were thinking in terms of the company and its services or rates or in terms of their own satisfaction with calling rather than in terms of prices of other goods and services. But this group was so small that these findings must be regarded as highly tentative.

Those who felt rates to be fair were more likely to supply a context, as shown by Table 41. They mentioned the same frames of reference as the others, and

also compared rates with other prices, with the cost of living and with charges for other means of communication.

Table 41

Relationship Between Frames of Reference of Responses  
to Questions Concerning Rates and Attitude Toward Rates<sup>1/</sup>

<u>Frames of Reference</u>	<u>All Respondents</u>	<u>Attitude Toward Rates</u>		
		<u>Rates fair</u>	<u>Rates unfair</u>	<u>Rates fair for some calls, not for others</u>
Respondent compares rates with other luxuries	1	1	3/	3/
Respondent compares rates with other means of communication	4	6	3/	3/
Respondent compares rates with other prices and costs in general	10	16	3/	3/
Respondent thinks in terms of satis- faction with phoning	13	19	7	3
Respondent thinks in terms of Company or services	16	24	9	7
Respondent compares Mich. rates with other state phone rates	5	2	4	38
Don't know	2	3/	3/	3/
Not ascertained	50	38	63	45
Other	7	7	9	10
Total	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Number of respondents	348	169	54	29

1/ The question was: "How do you feel about rates for long distance calls?" Some people feel that the long distance rates are unfair and ought to be cut. How do you feel about that?"

2/ Totals more than 100 percent because more than one frame of reference indicated.

3/ Less than 0.5 percent.



There is one semantic problem which must be kept in mind in interpreting answers to questions about rates. To a person in the telephone industry or to an economist or lawyer the word "rate" means a charge per unit. A charge of X cents for three minutes is a "rate". But to a customer the word "rate" may mean the total charge which he has to pay. When one speaks of rates, he may think of a charge of Y cents for a certain call or even of a total bill of Z dollars which he paid.

It was shown in the "1955 Survey of the Residence Market for Long Distance" that people either do not know or overestimate the lowest rates to the places they call most often. It is entirely possible that they do know about what it costs then, on the average, to make the calls which they do make. When a respondent observes that he thinks the rates are fair because the satisfaction he receives from the calls he makes is worth what they cost him, he must be thinking of rates in the sense of total cost to him.

This line of reasoning raises the possibility that people may not be quite as badly informed about the cost of long distance as has been supposed. Nevertheless, a real lack of information may exist. The data ~~are~~ not conclusive one way or the other on this point.

The study does indicate what cost information will be most relevant to people. Tables based on information from company records show that it is the nearby states which are called. Table 42 shows that the frequency with which calls are made from residential phones in Michigan to another state depends, in part, on how close that state is to Michigan and on how many people live there. People who do not call their friends or relatives now out of ignorance of the rates presumably would call nearby states, too, if they did call.

Table 42

Relationship Between Number of Times Different States and Canadian Provinces  
Are Called at Least Once and Their Ranked Distance from Lansing, Michigan =  
(Percent distribution of respondents who placed any  
long distance calls in past 3 months)

<u>Rank Order</u>	<u>State or Province</u>	<u>Percent</u>	<u>Rank Order</u>	<u>State or Province</u>	<u>Percent</u>
1	Michigan	56	31	Nebraska	1
2	Ohio	17	32	Kansas	1
3	Indiana	4	33	South Dakota	*
4	Wisconsin	3	34	Maine	*
5	Illinois	13	35	Oklahoma	*
6	West Virginia	1	36	North Dakota	*
7	Kentucky	4	37	Louisiana	1
8	Pennsylvania	4	38	Quebec	*
9	Iowa	*	39	Florida	2
10	New York	7	40	Manitoba	*
11	D. of Columbia	1	41	Colorado	1
12	Maryland	1	42	Texas	2
13	Tennessee	4	43	Wyoming	--
14	Missouri	1	44	Montana	*
15	Virginia	2	45	New Mexico	*
16	Delaware	--	46	Utah	--
17	Minnesota	1	47	Idaho	*
18	New Jersey	2	48	Arizona	*
19	North Carolina	1	49	Nevada	--
20	Vermont	1	50	Washington	1
21	Connecticut	1	51	Oregon	*
22	Ontario	2	52	California	5
23	Massachusetts	1	53	Outside United States, Mexico	*
24	South Carolina	1			
25	New Hampshire	*			
26	Rhode Island	*			
27	Arkansas	1			
28	Georgia	3			
29	Alabama	2			
30	Mississippi	1			
			Total		<u>3/</u>
			Number of respondents who made at least one long distance call in past three months		779

\* Less than 0.5 percent.

- 1/ 1. States and provinces are ranked on the basis of their straight-line distance from their approximate "center" to Lansing, Michigan. This accounts, for example, for Wisconsin's (4) being ranked nearer to Michigan than Illinois (5).
  2. Only the three nearest states called by each respondent are included in this tabulation; however, since only 4 percent of those who made any long distance calls in the past three months called more than three states, the percentages in this table are only slightly underestimating.
  3. Each of the 48 states is included in this list, whether any calls were placed there or not; however, only those Canadian provinces are listed to which at least one call was placed in the past three months.
- 2/ Percentages add to more than 100 because some respondents called more than one state in past three months.

### VIII. The Three Minute Limit

There can be no question that the three minute limit has the effect of restricting the length of social long distance calls. How long people would talk if additional time were free is difficult to estimate, but it surely would be well over three minutes. In the present study, as already noted, families were given the opportunity to make a free long distance call of "reasonable" length after the interview. The distribution of the length of these calls appears in Appendix C, Table C-7. It is there shown that the distribution is as follows:

	<u>percent</u>
under 3 minutes	2
3 - 5 minutes	5
6 - 9 minutes	30
10 - 14 minutes	54
15 minutes or over	7
Not ascertained	2
Total	<u>100</u>

There are two aspects of this distribution which are worthy of comment. Only two percent of all calls lasted under three minutes. The absence of short calls may be the result of the special situation in which these calls were made. Since respondents did not select the time when they were to call, the content of the conversations were probably social. Short calls may be adequate to make arrangements or to transmit special information. The data do suggest, however, that for social conversations three minutes is not enough.

It is also striking that very few of these calls, only seven percent, lasted over 15 minutes. This length of time had been mentioned orally to interviewers who had insisted on knowing what was a "reasonable" number of minutes for these calls. The intent of this interpretation was not to impose a strict limit of 15 minutes, but that may have been its actual effect. In other words respondents were not entirely free from pressure from the interviewers to limit their calls, and it may be that some would have talked longer if all pressure had been absent.

Does the Company Want People to Limit Calls?

During World War II in particular the normal pressure on people to limit their conversations was increased by direct exhortations to be brief so that others might have a chance to use the overloaded circuits. Are the attitudes toward longer conversations created then, now operating to keep people from spending money on long distance calls?

Respondents were asked whether they think the phone company wants people to limit calls to three minutes. In Table 43 the answers of high users and low users are compared. About one-fifth of all respondents felt that the Telephone Company wants the customers to limit their calls to three minutes. Both high and low callers report this in about the same proportions. Another 17 percent of all respondents felt that upon occasions they were expected to limit the duration of calls. Only about half of the high and low users answered unequivocally that the company did not want customers to limit their calls.

It is not clear, however, that this perception has a major effect on actual calling. The data show differences from one group of users to another, most of which are small enough so that they may be the result of sampling errors only. The differences are, however, in the predicted direction.

Table 43

Relationship Between Perception of Phone Company's Desire to  
Limit Long Distance Calls to Three Minutes<sup>1/</sup> and Frequency of Calling  
(Percentage distribution of respondents making or receiving calls)

Phone Company's Policy	All Respon- dents	Frequency of Calling			
		Low Users		High Users	
		Bill for 6 months \$0.50 or under	Bill for 6 months \$0.50 or more	Bill for 6 months \$6.51 - \$49.50	Bill for 6 months \$49.51 or more
Wants to limit	21	14	29	20	18
Sometimes yes, sometimes no	17	14	13	19	21
Does not want to limit	49	48	41	50	57
Don't know	6	10	7	5	4
Not ascertained	7	14	10	6	--
Total	100	100	100	100	100
Number of respondents	345	50	105	123	67

<sup>1/</sup> The question was: "Do you think the phone company wants you to limit your long distance calls to three minutes?"

It should be kept in mind that in earlier sections of this report a number of factors have been shown to influence calling. Properly the effect of this variable should be tested taking into account the other variables. Taken by itself Table 43 does not settle the question of whether people are keeping down the length of their calls because they think the company wants them to.

Another approach to the problem is to ask questions designed to explore in more detail respondents' attitudes on the topic and the reasons for their behavior. Table 44 shows reasons people gave for thinking that the phone company wants people to limit calls. Those who believe the company wants people to limit all calls, say

Table 44

Relationship Between Reasons Why Phone Company Wants To  
Limit Calls and Perception of Phone Company's Desire To  
Limit Long Distance Calls to Three Minutes <sup>1/</sup>  
(Percentage distribution of respondents perceiving phone  
company as attempting to limit calls)

<u>Reasons</u>	<u>All Respon- dents</u>	<u>Phone Company wants people to limit calls</u>	<u>Phone Company wants people to limit some calls, not others</u>
To keep lines free generally	62	87	30
To keep lines free on holidays or for disasters	18	1	40
Company says so (in advertising)	1	1	—
Other	11	7	9
Not ascertained	8	4	21
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents <sup>2/</sup>	130	73	57

<sup>1/</sup> The question was: "Do you think the phone company wants you to limit your long distance calls to three minutes?" "Why?"

<sup>2/</sup> This number does not include those respondents who neither make nor receive calls.

simply that the purpose is to keep its lines free. Of those who believe the company wants some calls limited but not all, there is a substantial group who speak in the same general terms about keeping lines free. Most, however, have in mind holidays or disasters when there may be special reasons for limiting calls. For people who have this attitude there would be no reason to limit calls except under these circumstances.

Do people who feel the phone company wants them to limit their calls actually attempt to keep within three minutes? People were asked if they did make such an attempt. Table 45 shows the relation between people's perception of the company's policy and their own efforts. Of those who believe the company does not want calls

Table 45

Relationship Between Effort to Limit Calls to Three Minutes<sup>1/</sup>  
and Perception of Phone Company's Desire to Limit Calls<sup>2/</sup>  
(Percentage distribution of all persons making or receiving calls)

<u>Effort to Limit</u>	All Respon- dents	<u>Perception of Phone Company's Policy</u>		
		<u>Wants to limit</u>	<u>Sometimes yes, sometimes no</u>	<u>Does not want to limit</u>
Attempts to limit	49	70	44	42
Some yes, some no	9	9	14	10
Does not attempt to limit	35	20	40	44
Don't know	—	—	—	—
Not ascertained	7	1	2	4
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	344	74	58	168

<sup>1/</sup> The question was: "Do you try to limit your long distance calls to three minutes?"

<sup>2/</sup> The question was: "Do you think the phone company wants you to limit your long distance calls to three minutes?"

held to three minutes, some 42 percent attempt to limit their calls to three minutes for other reasons. Of those who say the company does want calls held down, 70 percent actually attempt to limit their calls. It is possible to assume that 42 percent of this latter group would limit their calls anyway, and, by subtraction, to estimate that 28 percent of those who feel the company wants them to limit their calls are actually influenced in that direction. About six percent of the total sample of people who make or receive long distance calls by this estimate, are so influenced. Since this entire study concerns only high and low users with no intermediate users, the estimate of six percent should not be generalized to all phone users. The conclusion does seem indicated, however, that there is a small group of people who try to limit their calls to three minutes because they believe the company wants them to.

#### People's Attempts to Limit Calls to Three Minutes

Partly because some of them believe the company so desires, and partly for reasons of their own, many people try to limit calls to three minutes as we have just noted. But to try is not automatically to succeed. As shown in Table 46, some respondents who said they tried, reported success; some, failure; and some, a mixed picture. There is a relation, reasonably enough, between people's efforts to keep

Table 46

Frequency of Calling in Groups Formed According to Responses  
to the Question "Do you try to limit your long distance  
calls to three minutes?"

<u>Does Respondent attempt to keep long distance calls to 3 minutes? Does he succeed?</u>	<u>All Respon- dents</u>	<u>Frequency of Calling</u>	
		<u>Low Users</u>	<u>High Users</u>
"Try and succeed"	5	8	4
"Try and unclear"	45	57	35
"Try and fail"	8	2	12
"Don't try"	42	33	49
Total	100	100	100
Number of respondents <sup>1/</sup>	290	129	161

<sup>1/</sup> Respondents who have never made long distance calls, or who gave answers to these questions other than those shown are not included in this table.



their calls short and the size of their bill. Of those with a bill of \$50 or more, almost half do not try to keep under three minutes, compared to one-fifth of the low users.

A more subtle question concerns the effect of people's efforts to limit their calls on their pleasure in making social calls. It is possible that people who are concerned about keeping their calls brief, who talk with one eye on the clock and their hand on their wallet, find calling something of a strain.

The data in Table 47 fail to confirm this hypothesis. The differences in people's feelings while calling between those who try to keep calls short and those who do not try are in the predicted direction but they are small enough so that they may be the result of chance fluctuations.

Table 47

Adjectives Used in Describing How Respondent Feels  
When Making a Long Distance Call in Groups Formed  
According to Responses to the Question, "Do You Try  
To Limit Your Long Distance Calls to Three Minutes?"  
(Percentage distribution of respondents)

<u>Adjectives</u>	<u>All Respondents</u>	<u>"Try and Fail"</u>	<u>"Try and Succeed"</u>	<u>"Try and Unclear"</u>	<u>"Don't Try"</u>
Only pleasant feelings	24	41	19	26	31
Mostly pleasant--some unpleasant feelings	27	9	19	34	39
About half and half	20	40	30	21	20
Some pleasant--mostly unpleasant feelings	6	5	6	11	4
Only unpleasant feelings	4	5	13	5	4
Never uses long distance	13	—	—	1	—
Not ascertained	6	—	13	2	2
Total	100	100	100	100	100
Number of respondents	400	22	16	131	121

An additional factor which may tend to limit calls is the impression which people may have that the rate per minute rises after the first three minutes. There is always some uncertainty in asking questions involving ideas like a rate per minute, as to whether all respondents understand what is meant. Also, one must always keep in mind in interpreting such tables as 48 the peculiar nature of the sample which omits people with an intermediate number of calls. The finding that 35 percent of respondents believe the rate per minute goes up after three minutes should not be

Table 48

Relationship Between Perception of Phone Company's Desire<sup>1/</sup> to Limit Calls to Three Minutes and Perception of Long Distance Rates After Three Minutes<sup>2/</sup>

(Percentage distribution of all respondents making or receiving calls)

Phone Company's Policy	All Respondents	Rates After Three Minutes					Total
		Rate goes up	Rate goes down	Rates stay the same	Don't know	Not ascertained	
Wants to limit	21	10	2	5	4	—	21
Sometimes yes, sometimes no	17	5	5	3	4	—	17
Does not want to limit	49	16	10	10	12	1	49
Don't know	6	2	1	1	2	—	6
Not ascertained	7	2	—	—	1	4	7
Total	100	35	18	19	23	5	100

No. of respondents 345

1/ The question was: "Do you think the phone company wants you to limit long distance calls to three minutes?"

2/ The question was: "After three minutes are up do you think the rate per minute on long distance calls goes up, goes down, or stays the same?"

taken to mean that one-third of all telephone users are misinformed. Taking into account the 23 percent who said they "don't know", it does seem appropriate to conclude that many people are poorly informed about what happens to rates after the first

three minutes.

A further question may be asked: Are the people who think the rate per minute goes up after three minutes the same ones who think the company wants calls held down to three minutes? Only one in ten of the phone users falls in this category of the doubly misinformed. The two attitudes seem to be largely independent.

#### Summary of Effect of The Three Minute Limit

The primary effect of the time limit is to restrict the length of calls. When the three minute orientation is removed, as on the free call, most respondents talk longer than three minutes. Some respondents limit their calls to three minutes for reasons of their own; a small number of others limit the length of their calls because they believe the company wants them to. A substantial number of people in the sample are ill informed about the rates after three minutes. These misperceptions about rates and company policy toward the three minute limit are not a function of general ignorance about phoning; few people are misinformed in both areas.

# IX. The Number and Location of Phones

## Number of Phones

Of the low users, about one in ten has two or more phones, as shown by Table 49. Of the high users of long distance, about one out of four has more than one phone. Of those high users with a bill of \$50 or more, one out of ten has three or more phones in his home. Strictly speaking these proportions refer to the proportion of people in homes with that number of phones, but the proportion of families would be roughly the same.

Table 49

Relationship Between Number of Phones in House and  
Frequency of Calling  
(percentage distribution of all respondents)

<u>Number of Phones</u>	<u>All respon- dents</u>	<u>Frequency of Calling</u>			
		<u>Low Users</u>		<u>High Users</u>	
		<u>Bill under 50¢ for 6 months</u>	<u>Bill 50¢ or more for 6 months</u>	<u>Bill \$6.50 - \$49.50 for 6 months</u>	<u>Bill \$49.51 or more for 6 months</u>
One phone	82	93	87	73	76
Two phones	15	5	11	24	15
Three or more phones	3	2	2	2	9
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	400	82	121	129	68

Having more than one phone is unusual for people with low incomes but common among those with incomes of \$10,000 or more. Once again in interpreting a table such as Table 50 it must be kept in mind that the intermediate users of long distance do not appear in the sample. The effect of this omission is

Table 50

Relationship Between Number of Phones and Income  
(percentage distribution of respondents)

Number of Phones	All respon- dents	Income						
		Under \$3000	\$3000- 3999	\$4000- 4999	\$5000- 5999	\$6000- 7499	\$7500- 9999	\$10,000 and over
Only one phone	81	90	100	94	88	79	80	48
Two phones	15	3	<u>1/</u>	5	11	18	20	38
Three phones or more	3	7	<u>1/</u>	<u>1/</u>	<u>1/</u>	3	<u>1/</u>	14
Not ascer- tained	1	<u>1/</u>	<u>1/</u>	1	1	<u>1/</u>	<u>1/</u>	<u>1/</u>
Total	100	100	100	100	100	100	100	100
Number of respondents	400	29	27	74	87	66	41	58

1/ Less than 0.5 percent

to make the level of the proportions who have different numbers of phones open to some doubt. But it is unlikely that the main findings would be different for a sample of all phone subscribers. That is, it is safe to conclude that only a small proportion of families with incomes below \$5000 have more than one telephone. This proportion rises rapidly as income rises.

Do people use their extensions when they make long distance calls? Only four percent of the families who accepted the free call actually made use of an extension. More families presumably would have used an extension if they had had one. The free calls involved two or more people from the family placing the call for two of the free calls out of three. The telephone typically was passed from one member of the family to another.

Location of the phone

Telephones may be placed in almost any room in the house. The three favorite locations, however, seem to be the dining room, kitchen, and living room.

Table 51

Relationship Between Location of Phone and  
Frequency of Calling  
(percentage distribution of all respondents)

<u>Location of Phone</u>	<u>Frequency of Calling</u>				
	All respon- dents	Low Users		High Users	
		Bill 50¢ or under for 6 months	Bill 50¢ or more for 6 months	Bill \$6.50 - \$49.50 for 6 months	Bill \$49.51 or more for 6 months
Hallway	17	18	16	12	28
Living room	21	12	26	22	21
Bedroom	17	11	17	19	21
Kitchen	25	26	21	27	24
Basement	3	<u>1/</u>	2	3	9
Dining room	29	35	26	28	26
Den or other recreation room	4	2	1	5	9
Other place	3	<u>1/</u>	4	3	3
Not ascertained	3	2	2	5	1
Total	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Number of respondents	400	82	121	129	68

1/ Less than 0.5 percent

2/ Total more than one hundred percent because more than one phone.

Nearly three out of both high users and low users have a telephone in the dining room, while between two and three out of ten have one in the kitchen and about two in ten have one in the living room.

Location in a hallway or in a bedroom is also common. Roughly two out of ten have phones in these locations.

A phone in a basement or in a den is unusual, especially among low users. Roughly one percent of them have phones in a den or recreation room and, similarly, roughly one percent have phones in the basement. These proportions are larger for the high users, reaching roughly 10 percent for those with a bill of \$50 or more over a six-month period.

The high users tend to be people with higher incomes, as noted earlier. People with high incomes have more telephones, which implies telephones in more locations. The relation between income and locations where telephones are found is shown in Table 52.



Table 52

Relationship Between Location of Phone and Income

<u>Location of Phone</u>	<u>Income</u>							
	<u>All respon- dents</u>	<u>Under \$3000</u>	<u>\$3000- 3999</u>	<u>\$4000- 4999</u>	<u>\$5000- 5999</u>	<u>\$6000- 7499</u>	<u>\$7500- 9999</u>	<u>\$10,000 and over</u>
Hallway	17	28	7	16	13	15	12	26
Living room	21	38	37	27	18	18	5	21
Bedroom	17	21	<u>1/</u>	12	17	15	17	36
Kitchen	25	3	15	16	28	26	41	40
Basement	3	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	3	<u>1/</u>	17
Dining Room	29	21	33	27	32	41	27	16
Den or other recreation room	4	<u>1/</u>	7	<u>1/</u>	2	<u>1/</u>	7	14
Other place	3	<u>1/</u>	<u>1/</u>	5	<u>1/</u>	3	<u>1/</u>	7
Not ascertained	3	<u>1/</u>	<u>1/</u>	1	1	<u>1/</u>	5	<u>1/</u>
Total	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Number of respondents	400	29	27	74	87	66	41	58

1/ Less than 0.5 percent

2/ Totals more than 100 percent because more than one phone.

High income people are much more likely to have a telephone in the kitchen than low income people. High income people are also more likely to have a phone in a bedroom. However, they seem to be somewhat less likely to have a phone in a dining room.

Appendix A. The SampleSelection of Sample

The area covered in this study consists of the southern half of the lower peninsula of the State of Michigan. The northern boundary of the area studied is the northern boundary of the following counties: Muskegon, Kent, Montcalm, Isabella, Midland, and Bay.

The universe sampled consists of the residential subscribers of the Michigan Bell Telephone Company in this area and their spouses. If the subscriber has no spouse, only the subscriber falls in the sample. If the subscriber does have a spouse, both fall in the sample.

Of the 400 interviews about half were taken with "heavy" long distance users and half with "zero" long distance users. A heavy user is defined to be one who made six or more long distance calls in the last period of three months for which data were available at the time when the sample was selected. A zero user is defined as a subscriber who made no long distance calls in the same period. For purposes of this study a long distance call is defined as a call to a point over 50 miles from the point of origin.

The first stage in the selection of the sample was the selection of a sample of counties. These counties actually had been selected prior to the start of work on this survey. The next stage was to select telephone exchanges from a list of all exchanges of the Michigan Bell Telephone Company in the sample counties.

Actual telephone numbers were then selected from the exchanges selected in the previous stage. These numbers were returned to the Michigan Bell Telephone Company. The Company listed the names and addresses of subscribers corresponding to each selected residential number plus information about the amount of money spent for long distance calls in each of the last six months (usually May to October 1956) and information about places called during the last three months.

From the list thus obtained those subscribers were selected for interview who were heavy users. A number of zero users equal to the number of heavy users was selected. The number of zero users in the population is much larger than the number of heavy users, but maximum efficiency in comparisons is achieved when the groups to be compared are equal. Those who made from one to five long distance calls were not selected for interview.

### Sampling Error

The main emphasis in the analysis of the interviews taken in this study is upon comparisons between heavy users and zero users. The most relevant sampling errors, therefore, are the errors of comparisons between two subgroups. Where there is neither positive nor negative correlation between data from the interview with the husband and data from the interview with the wife, the number of interviews is equivalent to the number of observations and should be used in entering the table below. Where there is a positive correlation between the two, the number of independent observations is less than the number of interviews. In the extreme case of perfect positive correlation the number of independent observations is about 120 in each of the two main groups.

Differences equal to or greater than those shown below may be taken as significant at the 95 percent level:

<u>Approximate Value of the Percentage Found</u>	<u>Minimum Difference Between Two Groups Needed for Significance</u>	
	<u>For two groups each of 200</u>	<u>For two groups each of 100</u>
35 to 65 percent	11	15
20 or 80 percent	9	12
10 or 90 percent	7	—

For example, if 50 percent of heavy users are found to have characteristic A and 39 percent of zero users are found to have characteristic A, the difference between 50 and 39, or 11, is just large enough to be statistically significant.

Appendix B: The Questionnaire

Survey Research Center  
University of Michigan

November 1955  
Study 643

FACE SHEET - Fill out and attach one to each interview.

Interviewer's Name \_\_\_\_\_ Interview No. \_\_\_\_\_

Date of Interview \_\_\_\_\_

List here all adults in Dwelling Unit (aged 18 or over)

No.	Relation to Head	Check person in whose name phone is listed	Check who is R for this interview	Is this the first or second interview?
1	Head			
2				
3				
4				
5				

Interview: a) The person in whose name the phone is listed and

b) The wife (or husband) of this person

1. Do you have any children under 18? Yes No

If YES 2. How many? \_\_\_\_\_

3. How old are they? \_\_\_\_\_

QUESTIONNAIRE - Write answers in notebook.

4. In this study we are interested in the uses of your home telephone. What are the most important uses of the telephone for you?

If necessary 4a. What kind of calls are most important?

5. (Show card)

Here is a list of some of the things people use their phones for. Which of these things are important to you? (Check on card)

- a) Which are the three most important? (Double check)
  - b) About how many calls in the last week have you yourself made or received on your home phone - would it be none, one or two, one every day, or what?
6. Here is a list of some specific situations when people may want to get in touch with someone in a distant city. Which would you be most likely to do - phone, wire, or write -
- a) For holiday greetings?
  - b) For making arrangements to meet someone?
  - c) To keep in touch with relatives?
  - d) To keep in touch with friends?
  - e) To find out about someone's health?
7. Aside from calls that are strictly business calls, have you yourself placed any long distance phone calls in the past 3 months, that is, to a place 50 miles away or farther?

If yes 8. About how many?

9. In general, what were the purposes of these calls?

10. How many of these calls were your idea and how many were suggested by someone else in the family?

If no 11. Have you placed any in the past year?

If yes 12. About how many?

13. In general, what were the purposes of these calls?

If no 14. Have you ever placed a long distance call?

ASK PEOPLE WHO HAVE EVER MADE LONG DISTANCE CALLS: (If never skip to Q. 19)

15. Before a long distance call is placed, do you and the family talk it over?

If any talk  
or discussion

15a. What do you talk about

16. Apart from who decides to call in your family, who actually puts through the call?

17. When you are getting ready to place a long distance call yourself, does the actual placing of the call bother you at all or don't you mind it?

18. Have you ever thought of making a long distance call but decided not to because you weren't sure about how the person you wanted to call would feel about it?

ASK EVERYONE

19. Aside from strictly business calls, about how many long distance calls would you say you have received in the last three months from 50 miles or more away?

If "None" 20. Have you received any calls like this within the past year?

If yes 20a. About how many?

IF ANY CALLS MADE OR RECEIVED IN LAST YEAR (If none skip to Q. 30)

21. Do you have any trouble hearing on long distance calls?

If yes 21a. Do you ever have trouble hearing on local phone calls?

22. Here is a list of ways people tell us they feel when they make a long distance call. Do any of these words describe how you sometimes feel when making a long distance call:

a) relaxed?

b) nervous?

c) tense?

d) anxious?

e) keyed up?

f) happy?

23. How do you feel about the rates for long distance calls?

24. Some people feel that the long distance rates are unfair and ought to be cut. How do you feel about that?

25. After three minutes are up do you think the rate per minute on long distance calls goes up, goes down or stay the same?

26. Do you try to limit your long distance calls to 3 minutes?
- 26a. Why? (Why not?)
27. Do you think the phone company wants you to limit your long distance calls to 3 minutes?
- 27a. Why? (Why not?)
28. How do you feel about making a long distance telephone call - do you enjoy it or dislike it or what?
- 28a. Why do you feel this way?
29. Now about receiving telephone calls - when a person lifts the receiver and hears the operator say, "Long distance", how do you think they feel?
- 29a. How do you feel yourself?

ASK EVERYONE

30. Here's a question that's a little different. Mrs. Jones is a woman who makes a long distance call to her relatives once or twice a month just to visit with them. Why do you think she does this?

30a. What kind of person is she?

31. Have you ever made long distance calls as part of a job?

If yes 31a. How much long distance phoning did you do?

32. (Introduce pictures)

I'm going to show you some pictures and I'd like you to make up a story about them.

(Ask for pictures I, II, III, IV)

a) What's going on here?

b) What is the person (what are they) thinking?

(1) What do they want?

c) What's going to happen next?

(If necessary, say: We're just interested in what people see in these pictures.)

33. Thinking of your half dozen closest friends and relatives, do they all live here in (Name of city), or do they all live in other places, or what?

If  
any  
live  
out-  
side  
(city)

34. Where do they live?

35. About how many letters would you say you write to relatives or friends in a year?

36. About how often do you get together with these people?

37. About how often do you usually talk to relatives or friends by long distance phone?

If calls 38. Do you usually call them, do they call you, or is it about 50-50?

If one calls more often 39. How does it happen that (they) (you) usually place the call?

40. When you talk long distance with your family or friends are you usually the only one who talks to them or do other members of the family also talk?

41. (Introduce last two pictures)

I have two more pictures here I'd like you to tell me a story about.

(Ask for pictures V and VI)

a) What's going on here?

b) What is the person thinking?

(1) What does (he) (she) want?

c) What's going to happen next?

42. (Introduce check sheets.)

Here's something else that's different. I wonder if you'd take this and read it over and check the "yes" or "no".

(If R stops and thinks over each answer) — Just check the first thing that comes to you, don't bother to think too long about it.

(If asked) — We're trying to find out more about the people who do use phones for long distance calls and who don't make long distance calls.

43. (We've talked a lot about long distance phone calls. There's one more thing I'd like to ask ---) In your opinion why is it that people don't make more long distance calls?

If necessary 43a. How about you, what keeps you from making more calls?



PERSONAL DATA - Fill out and attach to interview with head.Information About Head

(Questions may be asked of husband or wife)

D1. Do you have just one phone or do you have more than one?

only one more than one (specify) \_\_\_\_\_

D2. What room is it (are they) in? \_\_\_\_\_

D3. Is your (head's) age roughly? 18-24 25-34 35-44 45-54 55-64 65 or over

D4. How many grades of school have you (head) finished?

1 2 3 4 5 6 7 8 9 10 11 12If more than 8. D4a. Have you (head) had other schooling? Yes NoIf yes D4b. What other schooling have you (head) had?(Type of schooling) \_\_\_\_\_  
(College, Secretarial, Business, etc.)If attended college: D4c. Do you (head) have a college degree?Yes NoD5. What was the total income for you and your family over the last 12 months?  
Does that include the income of everyone in the family?Under \$1000 \$1000-1999 \$2000-2999 \$3000-3999 \$4000-4999  
\$5000-5999 \$6000-7499 \$7500-9999 \$10,000 and over

D6. What kind of work do you (head) do? \_\_\_\_\_

D7. Sex of head: man womanD8. Race: white negro other (specify) \_\_\_\_\_

## Card to go with question 5

- |   | <u>Check, if<br/>important</u> |
|---|--------------------------------|
| 1. to make arrangements with friends or other members of the family                   | <input type="checkbox"/>       |
| 2. just to visit or chat with friends   | <input type="checkbox"/>       |
| 3. just to visit or chat with relatives   | <input type="checkbox"/>       |
| 4. in case of emergency - sickness, fire, police, and so forth                        | <input type="checkbox"/>       |
| 5. business calls, in connection with one's work                                      | <input type="checkbox"/>       |
| 6. to get shopping information or to order things from stores                         | <input type="checkbox"/>       |
| 7. to make arrangements for meetings or in connection with an<br>organization or club | <input type="checkbox"/>       |

## Check sheet to accompany Q. 42

- |  |                              |                             |
|--|------------------------------|-----------------------------|
| 1. You start to work on a new project with a great deal of enthusiasm  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. You find it easy to make new acquaintances  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. You sometimes feel "just miserable" for no good reason at all   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. You like to take part in many social activities   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. You often find it difficult to go to sleep at night because you keep thinking of what happened during the day | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. You are inclined to stop to think things over before you act  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. You sometimes avoid social contacts for fear of doing the wrong thing   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. You enjoy getting acquainted with people  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 9. You have often lost sleep over your worries   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 10. You like to play practical jokes upon others   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 11. You have hesitated to make or accept social engagements because of shyness                                   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 12. You are inclined to limit your acquaintances to a select few   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 13. You are generally free from worry about possible misfortunes   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Q. 42 (cont.)Please check one

- |  |              |                 |
|--|--------------|-----------------|
| 14. The trouble with phone calls is that you can't see people's faces and expressions.   | <u>Agree</u> | <u>Disagree</u> |
| 15. Compared to other things I spend money for, long distance calls are worth the money.   | <u>Agree</u> | <u>Disagree</u> |
| 16. I usually think it over a long time before I decide to buy something.  | <u>Agree</u> | <u>Disagree</u> |
| 17. Long distance calls are so expensive I wouldn't use one except in an emergency.  | <u>Agree</u> | <u>Disagree</u> |
| 18. I am much more likely to say the wrong thing over the phone than face to face  | <u>Agree</u> | <u>Disagree</u> |
| 19. A long distance call is better than writing because you can always ask questions when something isn't clear and get it clear right away. | <u>Agree</u> | <u>Disagree</u> |
| 20. Some people are hard to understand on a long distance call.  | <u>Agree</u> | <u>Disagree</u> |
| 21. I always worry about what people are thinking about over the phone.  | <u>Agree</u> | <u>Disagree</u> |
| 22. When a person gets a large long distance phone bill he probably feels that it was an extravagance.                                       | <u>Agree</u> | <u>Disagree</u> |
| 23. People sometimes seem far away on calls.   | <u>Agree</u> | <u>Disagree</u> |
| 24. Before I make a long distance call I have to think of all the things I'd like to talk about, or I forget what to say.                    | <u>Agree</u> | <u>Disagree</u> |
| 25. No matter how much money I'm making I always feel "broke".   | <u>Agree</u> | <u>Disagree</u> |
| 26. After we've made plans on a long distance call I can't remember all the details.   | <u>Agree</u> | <u>Disagree</u> |
| 27. I am careful about large expenditures but not about little ones.   | <u>Agree</u> | <u>Disagree</u> |
| 28. Long distance calls are worthwhile because you can talk to people and get an immediate answer.   | <u>Agree</u> | <u>Disagree</u> |
| 29. I think that long distance calls cost so much money that there's never any excuse for making them.                                       | <u>Agree</u> | <u>Disagree</u> |
| 30. Most of the time I feel that I'm pretty well off, financially.   | <u>Agree</u> | <u>Disagree</u> |
| 31. I enjoy hearing people's voices over the phone   | <u>Agree</u> | <u>Disagree</u> |
| 32. When someone suggests making a long distance call one of the first things that comes up is cost.   | <u>Agree</u> | <u>Disagree</u> |

Appendix C: The Free CallObservation Form Filled in by InterviewersObservation Form - The Free Long Distance Call(Attach to interview with head)

After completion of the final interview at each address, thank the respondent (or respondents, if both are present) and tell them that they may make one long distance call of reasonable length anywhere in the U.S., if they wish. The call must be made while you are still there. Be sure to mail promptly to the phone company the form reporting the call so that R. will not be billed.

After leaving the respondent, please fill in this form and attach to the interview with the head.

- 
1. Acceptance: Was the free call accepted or declined?    accepted    declined
- What time of day was the offer made?
- Who was present?

(If declined) a) Did the respondent mention any special reason for not making the call?

(Don't ask him, but if he volunteered a reason, please write in what he said.)

For respondents who did accept the offer

2. Skill in placing the call: Did R. know exactly how to place the call, or did he have to find out what to do?

3. Discussion in the family before the call: Was there any discussion at all about the call before it was placed? If so, how long was the discussion? What was discussed?

4. Participation: What members of the family participated in the call from your end? If more than one, did they make use of an extension so that they could be on the line simultaneously? If you happen to know - who participated from the other end?
5. Satisfaction: Did R. seem pleased about the call after it was made?
6. Other comments about the call:
7. Length of call: Approximate length of call:
- Under three minutes    3 - 5 minutes    6 - 9 minutes  
10 - 14 minutes    15 minutes or over

#### Tables Showing Experience With the Free Call

The following tables show the frequency distributions of answers to the items on the observation form. The tables are numbered to correspond to the items on the form.

Table C-1

Was the Free Long Distance Call Accepted?  
(percentage distribution of families)

<u>Reaction to offer</u>	<u>Percent</u>
Accepted the offer	65
Accepted, but unable to complete the call	3
Declined the offer	25
Not ascertained	7
Total	<u>100%</u>
Number of families	230

Table C-1a

Relation Between Who was Present and Whether  
the Free Call was Accepted  
(Percentage distribution of families with husband and wife)

<u>Who was Present</u>	<u>All Families with Husband and Wife</u>	<u>Response to Offer of Free Call</u>	
		<u>Accepted</u>	<u>Declined</u>
Husband only	3	1	6
Wife only	4	3	6
Husband and wife, no other(s)	38	41	34
Husband and other(s), but not wife	2	2	2
Wife and other(s), but not husband	8	9	4
Husband and wife and other(s)	26	31	15
Other(s) only	1	—	2
Not ascertained	18	13	31
Total	<u>100</u>	<u>100</u>	<u>100</u>
Number of families with husband and wife	196	148	48

Table C-1b

Time of Day When Offer of Free Call Was Made

<u>Time of Day</u>	<u>Percent of all Families</u>
Before noon	7
12:01 P.M. to 2:00 P.M.	5
2:01 P.M. to 5:30 P.M.	13
5:31 P.M. to 7:30 P.M.	5
7:31 P.M. to 9:30 P.M.	9
9:31 P.M. to 11:00 P.M.	1
After 11:00 P.M.	--
Not ascertained <u>1/</u>	60
Total	<u>100</u>
Number of families	230

1/ The high proportion "not ascertained" appears to be the result of the fact that this item is "buried" on the reporting form.



Table C-1c

Reasons for Declining the Free Long Distance Call

<u>Reason</u>	<u>Percent of Families who Declined the Call</u>
Couldn't think of anyone to call	39
Inconvenient time of day to call	9
Afraid of alarming the recipient by a long distance call	5
Unable to call (ill, deaf, etc.)	2
Too busy to make a call	3
Doesn't like to call	2
Doesn't believe in making calls just to chat	3
Suspicious of the offer of a free call	15
No special reason given	19
Total	<u>100%</u>
Number of families who refused the call	57

Table C-2

Skill in Placing the Long Distance Call

<u>Skill in Placing the Call</u>	<u>Percent of Families Who Accepted the Call</u>
Knew exactly how to place the call	67
Knew fairly well how to place the call; no particular difficulty	18
Had to find out how to place the call; had trouble; had to ask the operator lots of questions <u>1/</u>	8
Not ascertained	7
Total	<u>100%</u>
Number of families accepting the call	150

1/ Includes one person who was unable to place the call and had the interviewer place it.

Table C-3

Discussion in the Family Before the Call

<u>Extent of Discussion</u>	<u>Percent of Families Who Accepted the Call</u>
Yes, there was discussion about the call before it was placed	<u>61</u>
Discussion "very brief", under one minute	17
Discussion "prolonged", more than one minute	17
Length of discussion not ascertained	27
No, no discussion	<u>31</u>
Only one person present, no discussion possible	<u>5</u>
Not ascertained	3
Total	<u>100</u>
Number of families accepting the call	150

Table C-3a

Discussion in the Family Before the Call

<u>What was Discussed</u>	<u>Percent of Families Who Accepted the Call</u>
Whom to call	79
Who was to place call	9
How long to talk	—
What to talk about	2
Method of placing call	1
Concern over recipient's reaction	5
Not ascertained	3
Other	10
Total	<u>117</u>
Number of families discussing the call	94

1/ Adds up to more than 100 percent because respondents expressed more than one concern before making the call.

Table C-4

How Many People Participated From the Family Placing the Call

<u>Participants (from the family placing the call)</u>	<u>Percent of Families Who Accepted the Call</u>
One person	34
Two persons	39
Three persons	12
Four persons	7
Five persons	3
Six persons	1
Seven persons	1
Number not ascertained	3
Total	<u>100</u>
Number of families accepting the call	150

Table C-4a

What Members of the Family Participated in the Call

<u>Participants (from the family placing the call)</u>	<u>Percent of Families Who Accepted the Call</u>
<u>One person</u>	
Husband only	5
Wife only	23
<u>Two or more persons</u>	
Husband and wife (but no others)	31
Husband and wife and others	20
Husband and one or more others not including the wife	1
Wife and one or more other not including the husband	9
Single person family	9
Participation not ascertained	2
Total	<u>100</u>
Number of families accepting the call	150

Table C-4b

How Many People Participated on the Receiving End

<u>Participants (from the people receiving the call)</u>	<u>Percent of Free Calls</u>
One person	46
Two persons	19
Three persons	2
Not ascertained	33
Total	<u>100</u>
Number of calls	150

Table C-4c

Who Participated From the Receiving End

<u>Participants (from the people receiving the call)</u>	<u>Percent of Free Calls</u>
<u>Relatives</u>	<u>63</u>
Parents	11
Siblings	25
Children	10
Other relatives	17
Husband or wife of person placing the call	—
<u>Friends</u>	<u>16</u>
Not ascertained	21
Total	<u>100</u>
Number of calls	150

Table C-4d

Was an Extension Used

<u>Use of Extension</u>	<u>Percent of Families Who Accepted the Call</u>
Used extension	4
Did not use extension (Includes families where only one person participated in the call)	89
Not ascertained	7
Total	<u>100</u>
Number of families accepting the call	150

Table C-5

Respondents' Reaction after Free Call was Made

<u>Respondents' Reaction</u>	<u>Percent of Families Accepting the Call</u>
Very pleased	68
Pleased	26
Not so pleased	2
Not ascertained	4
Total	<u>100</u>
Number of families accepting the call	150

Table C-7

Duration of the Free Call

<u>Length of Call<sup>1/</sup></u>	<u>Percent of Families Who Accepted the Call</u>
Under 3 minutes	2
3 - 5 minutes	5
6 - 9 minutes	30
10 - 14 minutes	54
15 minutes or over	7
Not ascertained	2
Total	<u>100%</u>
Number of families accepting the call	150

<sup>1/</sup> Interviewers were instructed to tell respondents they might talk "a reasonable length of time."



Appendix D. The Frequency of Long Distance Calling  
as Shown by Company Records

The basic sample of residential telephones from the records of Michigan Bell, unlike the sample selected for interview, represents a true cross-section of all residential telephones of the Company in southern Michigan. (For an exact statement of the area sampled, see Appendix A). As the sampling plan worked out, this sample amounted to 1571 subscribers. Tabulations based on the records for these individuals represent a by-product of the main investigation, but they may have some interest in their own right.

Table D-1 shows the frequency distributions of toll charges for a six month period and a three month period. The data are presented in detail in Table D-1 in order to facilitate any further manipulations which may be desired.

Dollar Total of Toll Charges from Company Records  
(percentage distribution of residential phones)

<u>Amount of Charges</u>	<u>Six Month Period</u>	<u>Three Month Period</u>
0	18.0	27.9
under 50 cents	5.4	6.4
\$ 1	10.8	14.6
2	8.5	8.7
3	5.5	6.7
4	5.7	4.8
5	4.3	4.4
6	3.8	3.5
7	3.6	2.1
8	2.5	2.5
9	1.9	1.4
10	2.5	2.8
11	1.8	1.7
12	1.8	1.5
13	2.2	0.9
14	1.7	0.6
15	1.4	0.7
16	1.3	0.8
17	1.2	0.3
18	1.4	0.8
19	0.5	0.3
20 - 29	6.1	3.1
30 - 39	3.0	1.3
40 - 49	1.5	0.9
50 - 59	1.0	0.4
60 - 69	0.6	0.3
70 - 79	0.5	
80 - 89	0.4	
90 - 99	0.3	0.1
100 - 109	0.2	
110 - 119	0.1	0.1
120 - 129	0.1	-
130 - 139	-	0.1
140 - 149	-	0.1
150 - 159	-	-
160 - 169	0.1	-
170 - 179	0.1	-
180 or over	0.2 <u>1/</u>	0.2 <u>2/</u>
Total	<u>100.0</u>	<u>100.0</u>
Number of phones	1571	1571
Median	\$4	\$2

1/ These two observations are at \$202 and \$346.

2/ These two observations are at \$194 and \$250.

The meaning of the data is easier to grasp when they are compressed, as in the following tabulation for the six month period:

<u>Amount of Toll Charges for Six Months</u>	<u>Proportion of Residential Customers</u>	<u>Cumulative Proportion</u>
None	18.0	18.0
\$ .01 - \$6      (\$1 per month or less)	44.0	62.0
\$7 - \$12      (over \$1 per month up to \$2)	14.1	76.1
\$13 - \$18      (over \$2 per month up to \$3)	9.2	85.3
\$19 - \$24      (over \$3 up to \$4 per month)	4.1	89.4
\$25 - \$30      (up to \$5 per month)	2.9	92.3
\$31 and over      (over \$5 per month)	7.7	100.0
	<u>100.0</u>	

Of all residential customers, 18 percent had no toll charges over a six month's period. Sixty-two percent had charges of \$1 per month or less. Seventy-six percent had charges of \$2 per month or less. At the other extreme 8 percent had charges of more than \$5 per month on the average over the period.

The typical subscriber had a total bill of \$4 for toll for the period. That is, \$4 is the median of the distribution. The average, or arithmetic mean, is \$10. The mean is increased by the small numbers of subscribers with very large bills. The largest which fell in the sample was \$346 for the period.

The data obtained from company records for the sample included the number of extensions.

Relation Between Service and Equipment and Number of Extensions  
(percentage distribution of residential phones)

<u>Number of extensions</u>	<u>All phones</u>	<u>Single party, measured</u>	<u>Service and Equipment</u>		
			<u>Single party, flat rate</u>	<u>Party line, measured</u>	<u>Party line, flat rate</u>
None	89.4	94.9	80.0	95.6	91.4
One	9.4	5.1	17.6	3.6	8.3
Two	0.6	-	1.9	-	0.2
Three	0.2	-	0.5	-	0.1
Not ascertained	0.4	-	-	0.8	-
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Number of phones	1571	39	420	413	690

As shown in Table D-2, 10 percent of the customers in the sample had one or more extensions. People who are willing to pay the charge for a single party line are also more willing to pay for extensions. Of those with a single party line and service at a flat rate, 20 percent had one or more extensions.

In preparing the sample for this study, as noted earlier, only long distance calls to places 50 miles or more away were counted. The data from company records, however, included shorter calls. Table D-3 shows the relation between the total number of calls placed from a phone and the number of calls placed to points 50 miles or more away. This table departs from the usual procedure in this report in one respect: the proportions add to 100 percent horizontally. The first row indicates that of those who made no toll calls at all, 100 percent made no toll calls to places 50 miles away. The second row shows that of those who made one toll call only, 41 percent did not call a place 50 miles away but 58 percent did,

leaving one percent not ascertained. Of those who made eight calls, 27 percent made all of them to places 50 miles away while 27 percent did not make any calls of that distance, with the others distributed between these extremes.

An examination of the tables suggests that some subscribers call places under 50 miles away almost exclusively and others call primarily places 50 miles distant or more. People who make considerable numbers of calls, however, tend to call both places under and over 50 miles away.

Relation Between Total Number of All Toll Calls for Three Month Period and Total  
Number of Toll Calls for Three Month Period to Places 50 miles Away or More

Total Number of all toll calls	Total Number of Toll Calls to Places 50 miles away or more																	26- over	Not ascer- tained	Total		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16- 20					21- 25
0	100																				100	(452)
1	41	58																		1	100	(242)
2	34	24	41																	1	100	(181)
3	29	14	17	39																1	100	(110)
4	25	16	20	14	25																100	(107)
5	26	17	13	7	15	22															100	(69)
6	16	5	9	11	9	13	37														100	(56)
7	28	8	15	8	13	8	3	15												2	100	(39)
8	27	7	7	11	5	5	5	6	27												100	(44)
9	19	10	3	10	10	10	3	10	6	19											100	(31)
10	30	11	-	7	7	4	4	-	7	11	15									4	100	(27)
11	15	9	5	5	-	5	9	15	9	5	9	9								5	100	(21)
12	4	13	18	4	4	4	4	13	4	4	-	9	19								100	(23)
13	8	17	8	-	-	17	-	8	8	-	-	18	8	-						8	100	(12)
14	14	15	7	7	7	-	-	7	-	15	14	7	-	7	-						100	(14)
15	30	-	13	-	13	-	-	-	13	-	-	6	6	13	-	6					100	(16)
16-20	12	16	6	3	6	3	-	3	6	9	6	-	6	6	3	3	12				100	(33)
21-25	7	7	3	-	3	7	-	-	10	3	7	-	-	3	10	7	10	20	3		100	(30)
26 and over	8	8	4	8	-	-	4	-	4	4	4	4	8	-	4	-	8	12	20		100	(25)
Not as- certained																				100	100	(39)
All re- spond- ents	48	16	10	6	4	2	2	1	2	1	1	1	1	*	*	*	1	1	*	3	100	(1,571)

Appendix E. Respondents' Reports and Company Records  
of the Frequency of Calling

In this survey information was obtained from Company records about the number of calls to places 50 miles away from telephones falling in the sample, and individual respondents were asked how many calls they had placed to such places over three months. At first glance it might seem that the number of calls placed by the husband plus the number placed by the wife should equal the number found on the Company records, after some allowance is made for any calls placed by others in the family.

Unfortunately time necessarily elapsed between the drawing of the sample and the actual interviews. And the data taken from the records for use in drawing the sample had to be data for complete months. The month then current could not be used since it was incomplete. Even months just over could not be used since it requires some days after the conclusion of a billing period before the bill is drawn up and mailed out and the record becomes available. Time also was required for the actual selection of the sample, the preparation of lists of addresses, and the mailing of those lists to interviewers, not to mention the period of over a month between the beginning and end of interviewing. As a result the respondents were not talking about the same period as that covered in the records.

Comparisons between the two reports, therefore, are subject to variation resulting from differences over time in the number of calls people place. Discrepancies also may result from memory error on the part of respondents, or errors by interviewers, or clerical errors.

Table E-1

Company Records Compared to Respondents' Reports on Number  
of Calls to Places 50 Miles Away Over Three Months 1/  
(Percentage distribution of phones)

Company Records	Respondents' Reports												Not ascertained	Total
	None	01-02	03-04	05-06	07-08	09-10	11-12	13-14	15-16	17-18	19-20	Over 20		
None	26.5	10.5	3.5	2.2	0.8				0.4		0.4	0.4	3.5	48.2
01-02	0.4													0.4
03-04														
05-06	0.9	1.3	0.8	1.7		0.9		0.9	0.4					6.9
07-08	2.1	0.4	2.6	2.6	0.8	0.8	0.9	0.4		1.2	0.4	0.4	0.8	13.4
09-10	0.9	0.9	0.9			1.3	1.3		0.8				2.1	8.2
11-12	0.4	0.4		1.7		0.9	0.9	0.4		0.4		0.8	0.4	6.3
13-14		0.4	0.8	0.4	0.4	0.4						0.4	1.3	4.1
15-16				0.4	0.4		0.4			0.4		0.4	0.4	2.4
17-18				0.4	0.4							0.4		1.2
19-20													0.4	0.4
Over 20	0.8	0.4	0.4				0.8			0.4		2.0		4.8
Not ascertained	0.9	0.4											0.4	1.7
Total	32.9	14.7	9.0	9.4	2.8	4.3	3.9	2.1	1.6	2.4	0.8	4.8	9.3	98.0 <sup>2/</sup>

<sup>1/</sup> The two reports refer to different periods of three months. Respondents' reports are husband's calls plus wife's calls only.

<sup>2/</sup> Does not equal 100.0% owing to rounding.



Table E-1 shows the relation between the two reports. This table is percentagized "into the corner", that is, the entry in each cell in the table is the proportion of all phones in the sample falling in that cell. For 26.5 percent of all phones both respondents' reports and Company records show no calls to places 50 miles away. For 10.5 percent of all phones the Company records show no calls, but respondents report one or two calls. It is reassuring that for only two percent of the sample did the Company report no calls while the respondents reported seven or more calls. These phones would belong in the high user category according to respondents, though they were actually classified as low users in the analysis because of the Company records.

There is a somewhat larger group for whom the respondents reports show only a few calls but the Company data show a considerable number of calls. For example, there are 4.3 percent for whom respondents reported no calls but the Company data show five or more calls. This result suggests that, on the average, people tend to forget some of the calls they made rather than to exaggerate the number. As a result of the possibility of memory error of this type the analysis has been based on the data from the Company records.

Appendix F. Regression Analysis

This section of the appendix describes briefly the technical details of a regression analysis carried out as a part of this study. The conclusions reached have been incorporated in the main text.

Regression analysis is a statistical technique which permits us, in this case, to predict whether an individual is a high, or low, social long-distance caller on the basis of other information about the individual. The likelihood of an individual's being a high long distance caller is expressed in terms of a probability. The chances may be 3 out of 10 that individual A is a high user. We have found for example, that high income families are more likely to be higher users than low income families. This relationship may be expressed by a regression equation of the form:

$$Y = a + bX$$

where Y is the predicted factor (probability of being a high user)

where X is the predicting factor (level of income)

An advantage of regression analysis is that it is not necessary to predict the criterion, high or low telephone usage, from only one factor, as income level. Other factors can be taken into consideration simultaneously to help predict whether a family is a high or low user. Essentially multiple regression analysis involves extending the regression equation to include more terms.

The following is a list of the additional factors used in this particular analysis together with the symbols which represent them in the multiple regression equation, and the scores assigned to various categories of each factor:

C = criterion of long distance usage: this is the dependent variable, - the variable which is predicted.

0. No long distance calls to places 50 miles away or more in past three months, according to company records.
1. Six or more long distance calls to places 50 miles away or more in past three months, according to company records.

S = score on test of security-insecurity

0. No points (highest security score)
1. 1 point
2. 2 points
3. 3 points or not ascertained
4. 4 points
5. 5 points
6. 6 points (lowest security score)

N = score on need affiliation test

00. no points on need affiliation (lowest need affiliation)
01. 1 point
02. 2 points
03. 3 points
04. 4 points; also not ascertained
05. 5 points
- etc.

M = score on attitude toward money test

0. Conservative spender
1. Middle position; not ascertained
2. Free spender

Y = Income level

1. Under \$1000
2. \$1000 - 1999
3. \$2000 - 2999
4. \$3000 - 3999
5. \$4000 - 4999; also not ascertained
6. \$5000 - 5999
7. \$6000 - 7499
8. \$7500 - 9999
9. \$10,000 and over

A = Friends or relatives away (Q. 33)

0. No friends or relatives live away
1. A few friends or relatives live away; also not ascertained
2. All friends or relatives live away

E = Experience making long distance calls as part of job (Q. 31)

0. No, have never made long distance call as part of job
1. Yes, have made calls as part of job, but not too much, less than once a week, or amount of calling indeterminate; also, not ascertained whether have ever made long distance calls as part of job
2. Yes, have made calls as part of job; "a lot," "quite a bit," "it was part of my job" (one or more calls a week)

F = Feelings while making a long distance call (Q. 22)

1. Pleasant feelings only
2. Mostly pleasant, but some unpleasant feelings
3. About half and half; some pleasant, some unpleasant; also not ascertained and never make long distance calls
4. Mostly unpleasant; some pleasant
5. Only unpleasant feelings

The multiple regression equation incorporating the seven independent variables listed above is as follows:

$$C = .0658 + .215A + .068Y - .082F \\ (.035) (.013) (.022) \\ + .047E + .004S - .018M - .006N \\ (.028) (.014) (.048) (.007)$$

This equation can be used in two ways:

- (1) Given information about any given individual's income, need affiliation; security and retentiveness scores, whether he has friends or relatives away, etc., it is possible to include these values in the above equation and solve for C (high or low user). The computed C, expressed as a probability of his being a high user, would then represent the C predicted on the basis of the estimated relationship shown.
- (2) The second and more important use is to test for the significance of the partial regression coefficients: + .215 for A (friends or relatives away); + .068 for Y (income); - .082 for F (feelings while calling), etc., the test involves the standard errors of the coefficients, which are the figures in parentheses under each coefficient. If the coefficient is more than twice its standard error, the chances are more than 95 out of 100 that the true value of coefficient is not zero. If the true value is not zero, the independent variable in question contributes to the estimate of the dependent variable even taking into account the other independent variables.