

COMPARATIVE PREFERENCES OF RADIO AND
TELEVISION PROGRAMS WITH EMPHASIS
ON EFFECTS OF TELEVISION ON
THE PREFERENCES OF
RADIO PROGRAMS

by

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H. O.

TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
I. THE PROBLEM AND ITS SCOPE	1
The problem	1
Need	1
Delimitations	2
Definitions	3
II. PREVIOUS RESEARCH	5
III. METHOD OF APPROACH	8
IV. COMPARATIVE PREFERENCES OF RADIO AND TELEVISION PROGRAMS	23
V. SELECTIVITY OF PROGRAM PREFERENCES THROUGH TIME	37
VI. SUMMARY AND CONCLUSIONS	47
Summary	47
Conclusions	49
BIBLIOGRAPHY	52
APPENDIX	55

LIST OF TABLES

<u>Table</u>	<u>Page</u>
I. Age, Sex, Educational Level Distribution of Total Samples	12
II. Comparative Preferences of Radio and Television Programs in Percentage ...	24
III. Time Spent Watching Television and Length of Regular Access to Television	39
IV. Frequency Table of Various Day-average Hours Spent on Television	40
V. Length of Regular Access to Tele- vision and Program Preferences	42

LIST OF FIGURES

<u>Chart</u>	<u>Page</u>
1. Flow Chart of Process of Elimination .	16
2. Comparative Ranking of the Preferred Types of Radio Programs	35
3. Comparative Ranking of the Preferred Types of Programs by the Television Group	36
4. Flow Chart of Process of Control	38

CHAPTER I

THE PROBLEM AND ITS SCOPE

The Problem

The main purpose of this study was to compare preferences of radio and television programs and determine as far as possible the effect of one upon the other with emphasis on efforts to measure the effects of television on preferences of radio programs. This involved two minor problems: 1. to determine and show trends in the relative preferences of the types of radio and television programs by those who have regular access to both radio and television; 2. to find out whether selectivity of television programs through time is at work.

Need for the Study

Television is a new medium of communication. Its impact on our daily life is unpredictable. It is still to be seen what effects it would have on the radio listeners when they buy a television set or have regular access to it.

For this reason it is apparent that there is a need for study to compare the audience reactions to

various types of radio and television programs, for all communication media are educative forces whose functions and influence are of vital interest to a democratic society, and, therefore, must be made an object of scientific studies.

Delimitations

This problem was limited to the comparison of the frequency of the selections of radio and television programs. The comparison was made according to the types of radio and television programs. Ten major types of programs were selected for this purpose.

No attempt was made to measure changes in radio listening habits in terms of time spent. Only those changes in the preference of radio programs which were considered to have taken place as a result of regular access to television programs were given consideration in this study.

No persons who did not have regular access to radio programs either at home or outside home were considered. But those persons who had access to radio but not to television programs were included, so that their preference of radio programs might have provided a basis for comparison.

This problem was further limited to a study of audience reactions to the programs on both media by the selected groups in Omaha. These groups were chosen for several reasons.¹ They included church groups, women's organizations, schools and business groups. One of the main reasons was that they would represent the middle class which constitutes a major consumer class of radio and television programs.

Those persons under age of 15 were not included in this study because it was considered that they would not be able to fill out the questionnaire satisfactorily.

Definitions

The term television group, as used in this study, refers not only to those persons who own a television set but also those persons who have regular access to television. Their ownership or access may be a week old or a year old.

The term non-television group was used in this study to define those persons who have no regular

1. Infra, pp. 8-9.

access to television programs but have regular
access to radio programs.

CHAPTER II

PREVIOUS RESEARCH

Bogardus² in 1951 made a study to measure reactions to television programs by 1500 persons of various ages, sexes, educational levels, and occupational types. A scale was constructed in such a way as to give comparable quantitative results. By this scale, the arithmetic means of both (1) one person's ratings of several types of television programs (PTQ) and (2) many persons' ratings of one type of television program (PRTQ) were measured. Data were obtained through employed former graduates as members of groups, and teachers from areas represented by New York, Pennsylvania, Florida, Illinois, Texas, Washington, and California. Of 1500 persons who filled the scale 512 or 34.1 percent had no access and 988 or 65.8 percent had regular access to television programs. Those who had no access were asked what they would have liked to view if they had had time and opportunity. Indicating large

2. Emory S. Bogardus, "A Television Scale and Television Index," American Sociological Review, XVII (April, 1952), 221-23.

potential interest in television, this no access group showed a relatively high PTQ.

Those who had regular access were divided into five groups according to the length of regular access to television programs. PTQs or the arithmetic means of one person's ratings of several types of television programs for these five groups remained somewhat uniform over increase in years of regular access.

The first group (Number 248 or 25.1 percent) which had regular access less than one year showed 1.98 $\frac{1}{2}$ PTQ; the second group (Number 257 or 26.0 percent) which had regular access one to two years showed 2.06 $\frac{1}{2}$ PTQ; the third group (Number 169 or 17.1 percent) which had two to three years of regular access indicated 1.86 $\frac{1}{2}$ PTQ; the fourth group (Number 101 or 10.2 percent) which had regular access three years and over showed 2.14 $\frac{1}{2}$ PTQ; and the fifth group (Number 213 or 21.5 percent) which failed to give information showed 1.56 $\frac{1}{2}$ PTQ.

Bogardus analyzed this as indicative of the fact that novelty appeal of television programs was not dying out as new programs were being added.

PrTQ or the arithmetic means of many persons'

ratings of one type of television program indicated that football, news reels, plays (serious), comedies, educational programs, and news reports ranked highest on the list in order of mention.

The PTQ by sexes, ages, educational levels and occupational types showed the differences in reactions to television programs. Since this phase of the Bogardus study is not directly related to the problem of this thesis, no further explanation will be made here.

CHAPTER III

METHOD OF APPROACH

In order to approach this problem the survey method was used and the questionnaire technique was employed. Questionnaires were constructed in such a way as to enable people to fill them out within a couple of minutes. Both the yes-or-no type and the checking type of questions were asked as to the television ownership or regular access to television programs, the length of ownership or regular access, the favourite radio and/or television programs, and the general attributes such as chronological age, sex, occupation, education, and income.

At an early stage of this project, the use of random sampling was contemplated. Also mailing and telephone calls were considered as part of a sample collecting technique.

It was decided later, however, that the use of selected groups would be a better way of gathering data. The advantages of non-random selection over random selection in connection with this study were:

1. This study was concerned with television and radio programs, the major consumer group of which

are middle class people.³ It is of the lower- and middle-income groups that television's audience is chiefly composed. "Today the lower and middle income groups, which make up 83 percent of Videotown's population own 82 percent of television sets ... About one out of eight poor and middle class families now has a set while one out of 12 of lower class homes are set owners."⁴ Focusing attention on this group, therefore, seemed reasonable;

2. When questionnaires are mailed, people in the lower economic brackets are less likely to return their questionnaires than those in the higher income brackets. This operation of selective factors on the questionnaires actually returned may result in an extremely biased sample, even though the original mailing list of prospective respondents may be a representative sample;⁵

3. Reliance upon telephone calls may exclude those persons who do not own a telephone; and

4. It is rather difficult to obtain accurate information from many persons of various

3. Supra, p. 3

4. "Videotown, One Year Later," (New York: Newell-Emmett Company), p. 12, quoted in C. A. Siepmann, Radio, Television and Society, 1952, p. 337.

5. Pauline V. Young, Scientific Social Surveys and Research, 2nd ed. rev., 1949, p. 331.

ages, sexes, educational levels, and occupational types solely by the questionnaire. It is necessary to do interviewing extensively if complete and accurate data are to be secured. Since the interviewing technique was not employed in this study, the selection of middle-class groups which have enough intelligence to give fairly accurate information was thought to be proper with respect to this study.

For these reasons, both technical and practical, a final decision was made to use selected groups such as church groups, women's organizations, business groups and schools. Also the associates of the members of these groups were asked to fill out the questionnaire.

The list of the selected organizations or groups included:^a

Dundee Presbyterian Church
 First Christ Church
 First Congregational Church
 Kountze Memorial Lutheran Church
 Trinity Baptist Church
 Omaha University
 Creighton University
 Benson High School
 South High School
 Brown Park Public School
 Kellom Public School

a. They are all located in Omaha, Nebraska.

St. Bridges Parochial School
Omaha Women's Club
Urban League
Swift Company
Omar Bakery
Emmanuel Deaconess Home
Live Stock National Bank
United States National Bank
KOIL Radio Station

A total of 1330 questionnaires were distributed, of which 243 were not returned. Of the total received which were 1087, 29 were not filled out completely, thus leaving 1058 cases for tabulation and analysis.

The composition of these 1058 cases according to ages, sexes, educational levels, and occupational types was given in TABLE I on the following page.

It will be seen from the table that the educational level of the sample was above average with 61 percent having had college education. With 61.53 percent under the age of 30, the age level of the sample was rather low, which fact might be reflected in the final results of this study. As for occupational characteristics of the sample population, it will be seen that the managerial-executive-professional group (18.70 percent), the secretarial or clerical group (17.10 percent), housewives (13.13 percent), and students (47.00 percent including

TABLE I
AGE, SEX, EDUCATIONAL LEVEL, AND OCCUPATIONAL
TYPE DISTRIBUTION OF TOTAL SAMPLES

Category	Number (Percentage in bracket)		
	TV group	Non-TV group	Total
<u>Age</u>			
15 to 30	490	161	951 (61.53)
31 to 50	168	68	236 (22.30)
51 and over	89	82	171 (16.17)
Total	747	311	1058
<u>Sex</u>			
Male	326	99	425 (40.00)
Female	421	212	633 (60.00)
Total	747	311	1058
<u>Education</u>			
Grade and High school	299	113	412 (39.00)
College	448	198	646 (61.00)
Total	747	311	1058
<u>Occupation</u>			
None	13	10	23 (02.17)
Housewife	104	35	139 (13.13)
Student*	319	99	498 (47.00)
Skilled Worker	59	9	68 (06.40)
Unskilled "	22	8	30 (02.84)
Secretarial or clerical	110	71	181 (17.10)
Managerial	17	9	26 (02.40)
Executive	20	8	28 (02.60)
Professional	83	62	145 (13.70)
Total	747	311	1058

* Including part-time student.

part-time students) were predominant. These facts might be also reflected in the results of this study.

The procedure in the approach to the solution of the problem in this study was an ex post facto experimental design. Its approach involves the description of the present situation as an effect of some previously acting causal factors. It attempts to "trace back over an interval of time to some assumed causal complex of factors which began operating at an earlier date."⁶ The central feature of the experimental method in sociological research is control of measurement rather than the physical manipulation of objects. Making observations of human relations under conditions of control is the concept of experimental design in sociological research. Chapin said:

Control of social conditions is obtained not by manipulating people or by exerting any physical force on persons. The control is obtained by selecting for observation two groups of like individuals, for example, individuals of the same income bracket, the same occupational class, the same chronological age, the same size of family, the same intelligence quotient, etc. (by matching on these attributes). Then one group, called the experimental group, is given treatment, or

6. F. S. Chapin, Experimental Designs in Sociological Research, 1947, p. 95.

receives some social program, or is subjected to some assumed and uncontrolled natural force ... in the environment. while the other group, called the social program, or is subjected treatment, prog^d and uncontrolled natural force. measurements on a sociometric scale are then made on each group at some beginning date (before) and again at the termination of a period of months or years (after). Finally, comparative changes in the mean measurements at each date are noted.⁷

In order to discover the real relationship between a magnet and iron, it is necessary to use "pure" iron and not iron ore that is complicated by the presence of other materials and metals, which it would be if "representative" of the original one. "Homogeneity, not representativeness, is the essential conditions to the discovery by a single experiment of a real relationship between two factors."⁸

To find out any real relationship between factors A and B, variable factors C, D, E, etc. must be made constant influences between and experimental group and a control group. Thus the single A-B relationship can be observed in relative isolation when the situation of disturbing influences of C, D, E, etc. upon the relationship is controlled.

7. Ibid., p. 29.

8. Ibid., p. 103.

As to the doubt upon the results when non-random samples are chosen from a heterogeneous universe, and a limited one at that, Chapin said:

... no generalization could be made from any ... experimental studies except with respect to the definite groups actually studied. We repeatedly stated that the results were limited to the closed system of each particular experiment, and that only replication of the experiment which yielded corroboratory results would supply any reliable basis for generalization to a universe.⁹

It must be clear that the findings of this study were confined to the selected groups used, and, therefore, only the repetition of a similar study by enlarging the units of samples would validate the reliability of the results as a generalization to a universe.

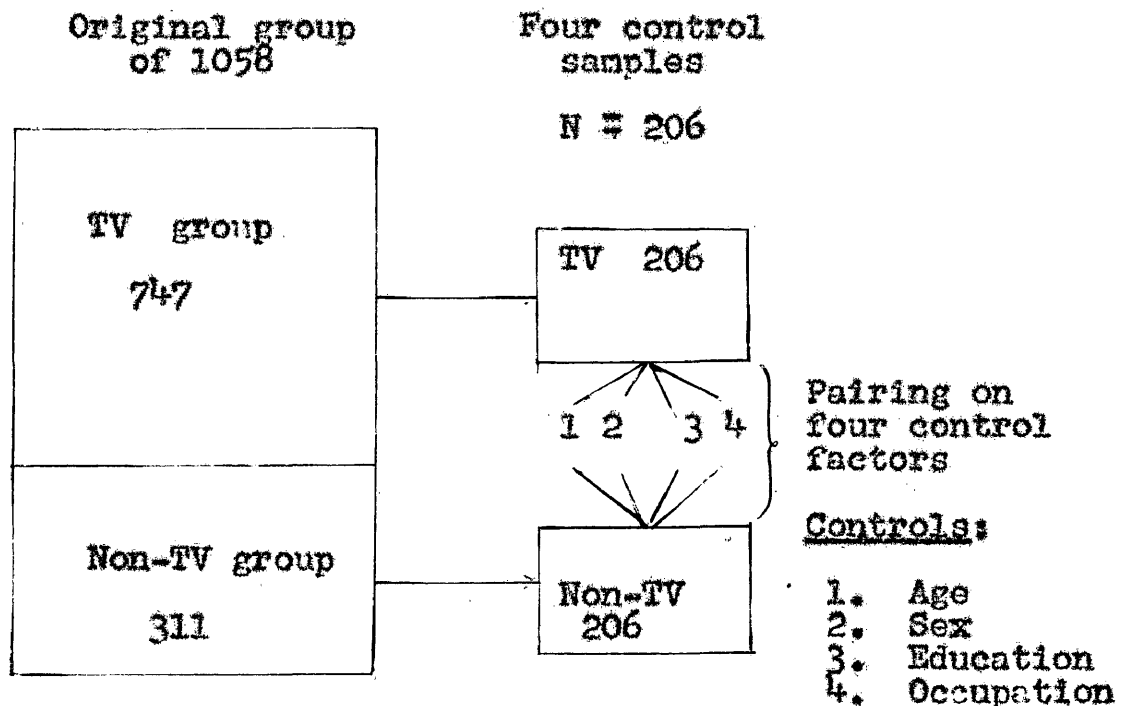
The procedure of this experimental method, as applied to this study, was as follows:

The original sample of 1058 was divided into two groups. The first group had regular access to television programs. This was called the experimental or television group. The second group consisted of those who did not have regular access to television programs. This was called the control

9. Ibid., pp. 179-80.

group or non-television group. Next, the two groups were paired by equating age, sex, education and occupation. Enforcing these four controls eliminated 646 individuals, so that the final experimental group consisted of 206 males and females, and the control group consisted also of 206 males and females. Chart 1 below illustrates the process.

CHART 1. FLOW CHART OF PROCESS OF ELIMINATION



"Jahn considers one hundred cases in each group, that is, two hundred in all, to be the lower limit for sufficiently accurate statistical

estimates."¹⁰

There are two methods of matching. One is the method of identical individual matching; the other is the method of matching by sub-categories. The first method requires that for each individual in the experimental group there be another in the control group alike in respect to score on every one of the matching factors. This method results in very great loss because of inability to satisfy such a precise matching requirement.¹¹

The method of matching by sub-categories, however, has the great advantage of avoiding serious losses due to matching. It requires the elimination only of cases from one group which are entirely outside the categories of the other group.

In this study, individual matching was used. The subclasses of factors used were: three age

10. Julius A. Jahn, "A Control Group Experiment on the Effect of W. A. P. Work Relief as Compared to Direct Relief upon the Personal-Social Morale and Adjustment of Clients in St. Paul, 1939" (M. A. Thesis, University of Minnesota, 1942), p. 41, quoted in E. Greenwood, Experimental Sociology (New York: King's Crown Press, 1945), p. 115.

11. Chapin, op. cit., p. 172.

groups, that is, 15-30, 31-51, and 51 and over; 2. two sex groups; 3. five educational levels, that is, grade school, high school, 1-2 year college, 3-4 year college, and graduate and above; and 4. nine occupational classes, that is, none, student, housewife, unskilled worker, skilled worker, clerical or secretarial, managerial, executive, and professional.

When two persons, one from each group (control and experimental), could not be found in a category, that category was dropped.

An income factor was not used in this study as a control factor because many people, for some reason, failed to state their yearly incomes. Also some of them were students or housewives who worked part-time or full time, or had no income under their own names. Since income levels and occupational types are usually closely related to each other, the omission of an income factor from the list of control factors was not considered serious.

In eliminating surplus cases in individual matching, a constant-ratio method was used in preference to a random method. Greenwood discussed the methods of eliminating surplus in favor of the constant-ratio method in Experimental Sociology.

When using this method, he recommended that "Within each category, the number in the smaller sub-group of cases, whether experimental or control, be divided by the number in the larger, the resulting ratio be applied to the distribution of the end-factor in the larger group."¹² For example, using the data of this study, assume that within a category there are five control (non-television group) and ten experimental (television group) cases and that among the latter, six listen to radio "less" or "much less" and four listen to radio "more" or "about the same". Dividing five by ten yields a ratio of one-half. Now half of the "less" or "much less" cases and half of the "more" or "about the same" cases must be discarded.

One may question the effects of losses through matching upon the measures of results. Chapin said:

In general, we found that the cases dropped, either by losses or from inability to match on control factors, were cases showing more extreme measurements.... Thus the net effect of losses was to increase the homogeneity of the residual groups (experimental and control) from which the results of the experiment were inferred.¹³

12. Greenwood, op. cit., p. 123.

13. Chapin, op. cit., pp. 173-4.

The significance of percentage differences between the television and non-television groups was determined by the following formula.¹⁴

<u>Symbol</u>	<u>Meaning of Symbol</u>
n_1	Size of sample 1. (Total number = 206 of people who have TV)
n_2	Size of sample 2. (Total number = 206 of people who have radio but not TV)
P_1	Percentage of individuals in sample 1 who have a given trait. (Percentage of individuals in Sample 1 who like "Athletic" programs best)
	$= \frac{62}{206} \cdot 100 = 30.09\%$
P_2	Percentage of individuals in Sample 2 who have the trait. (Percentage of individuals who have radio but not TV, who like "Athletic" programs best)
	$= \frac{55}{206} \cdot 100 = 26.74\%$
P_d	Absolute difference between P_1 and P_2
	$= 30.09 - 26.74 = 3.35\%$
p	Proportion of individuals in combined samples ($n_1 \neq n_2$) who like "Athletic" programs best.
	$= \frac{62 + 55}{206 + 206} = \frac{117}{412} = .28$

14. Davies, Vernon, Table Showing Significance of Differences Between Percentages (for uncorrelated data), Stations Circular No. 102. Pullman, Washington: The State College of Washington, Washington Agricultural Experiment Stations, Institute of Agricultural Sciences, and Department of Rural Sociology, September, 1950.

After the values for the above symbols have been identified or computed, the following steps were taken in using the table below showing significance of differences between percentages. The table was as follows:¹⁵

	P		<u>5%</u>	<u>1%</u>	- Levels of significance
			<u>200</u>	<u>200</u>	- Sample sizes
Proportions	.05	.95	.. 4.30	5.65	
in combined	.10	.90	.. 5.91	7.78	
samples	.20	.80	.. 7.88	10.38	- Percentage
having	.30	.70	.. 9.03	11.89	differences
trait	.40	.60	.. 9.66	12.71	
	.50	.50	.. 9.85	12.97	(Pd)

1. Having found the proper segment in the table, the next step is to make use of p. The value of p in this problem is .28. The values of p in the segment are in the left-hand column. Since a p value of exactly .28 is not shown in the segment, select the p value next closer to .50 reading down, which is .30.
2. Having found the proper p value to use, namely .30, read along the row on which .30 is found to the second column in the segment and find the number 9.03. Glancing up this column to the top of the page, note "5%" which indicates a level of significance.

15. Ibid., p. 22.

If P_d , as previously obtained, is equal to or greater than 9.03, it is statistically significant at the five percent level.

3. Next inquire whether P_d reaches the one percent level of significance. Reading along the row with a p value of .30 to the third and last column in the segment, a value of 11.89 will be noted. If P_d is above this amount, the difference can be said to reach the one percent level of significance.

It will be noted that the P_d in this problem (3.35 percent) was far less than the 9.03 percent which was required at the five percent level of significance. Thus the conclusion must be drawn that this difference of 3.35 percent could be due to chance factors and not to regular access to television or lack of it.

CHAPTER IV

COMPARATIVE PREFERENCES OF RADIO AND TELEVISION PROGRAMS

This chapter deals with the first of the two minor problems involved in this study, that is, to determine and show trends in the relative preferences of the types of radio and television programs by those who have regular access to both radio and television.¹⁶

The comparison of the preferences of radio and television programs was made, in this study, by the use of the non-television group as a control group which provided a basis for comparison.

The percentage preference frequency of the major types of radio and/or television programs by 206 individuals from each group (control and experimental) were arranged in the table on the following page.

The types of radio programs as rated by the television group in TABLE II were those programs to which the group was still paying attention after

16. Supra, p. 1.

having regular access to television programs.

TABLE II
COMPARATIVE PREFERENCES OF RADIO,
TELEVISION PROGRAMS
(Percentage in brackets)

Type of Programs	TV group (206)		Non-TV (206)		P _d	Test ^d
	TV ^a		Radio ^b			
Athletic	62	(30.09)	55	(26.74)	3.35	N
Boxing *	72	(35.82)	20	(9.70)	26.12	S 1,5
Comedy	113	(54.85)	88	(42.71)	12.14	S 5
Drama or Play	143	(69.41)	138	(66.99)	2.42	N
Educational . .	50	(24.27)	61	(29.61)	5.34	N
Classic Music	42	(20.38)	105	(50.97)	30.59	S 1,5
Popular Music	64	(31.06)	151	(73.30)	42.24	S 1,5
News	27	(13.10)	162	(78.64)	65.54	S 1,5
Quiz	70	(33.98)	73	(35.43)	1.45	N
Religious . . .	36	(17.47)	55	(26.74)	9.27	S 5

	Radio ^c		Radio		P _d	Test
Athletic	30	(14.56)	55	(26.74)	12.18	S 1,5
Boxing *	13	(6.31)	20	(9.70)	3.39	N
Comedy	49	(23.78)	88	(42.71)	18.93	S 1,5
Drama or Play	71	(34.46)	138	(66.99)	32.53	S 1,5
Educational . .	27	(13.10)	61	(29.61)	16.51	S 1,5
Classic Music	66	(32.03)	105	(50.97)	18.94	S 1,5
Popular Music	142	(68.93)	151	(73.30)	4.37	N
News	174	(84.46)	162	(78.64)	5.82	N
Quiz	34	(16.50)	73	(35.43)	18.93	S 1,5
Religious . . .	31	(15.04)	55	(26.74)	11.70	S 1,5

a. Data based on Question No. 8: "Name the type of TV programs you like best."

b. Data based on Question No. 10: "If you do not own a TV set: which radio programs do you listen to most often?"

- c. Data based on Question No. 9: "Name the radio programs you still listen to after owning a TV set."
- d. S denotes significance of P_d (Percentage difference) and \bar{N} denotes lack of significance. Number (1 and 5) denotes percentage levels of significance.

*"Boxing" is a kind of "Athletic" program. This is a weakness in the questionnaire used.

It will be seen from the data in the table above that the attractiveness of popular music on television did not seem to be as great as some other programs. The formula made according to the data to test the percentage difference was:

$$n_1 = 206$$

$$n_2 = 206$$

$$P_1 = 31.06$$

$$P_2 = 73.30$$

$$P_d = 42.24$$

$$p = \frac{64 \times 151}{206 \times 206} = .59$$

The observed P_d 42.24 was above the 9.85 percent, the required value at the five percent level of significance, or the 12.95 percent required at the one percent of significance.^a It can be said therefore that the difference reached both one percent and

a. See p. 21.

five percent levels of significance. From this it may be concluded that as far as popular music was concerned, regular access or absence of regular access to television programs was a factor in this change in the preference percentages. Did this mean that people preferred radio popular music to television popular music? It appears that this was reflected more or less in the percentage difference between two groups (television and non-television) with regard to their preferences of radio popular music. Note the observed P_d was 4.37 (73.30 - 68.93) which was below the required value of 7.88 at the five percent level of significance. The difference could have occurred due to chance factors. In this case, therefore, regular access to television programs did not seem to affect the preference of popular music on radio.

In conclusion it seems likely that some of the non-television group may be drawn over to television for popular music if and when it has access to television, but the majority may remain radio listeners as far as popular music is concerned.

A similar tendency seems to be seen in the case of classic music on television. As far as the groups

used in this study are concerned, and under present conditions, it may be safely said that if and when the non-television group has regular access to television, it may listen to classic music more often on radio than television. To some extent, however, effects of television seem to be seen in this case as the following analysis of percentage differences indicates.

The observed P_d between two groups regarding their preference of radio classic music programs was 18.94 (50.97 - 32.03). This was above the required 9.85 and 12.97, indicating that the difference was significant at both one percent and five percent levels. This may indicate the influence of television on preference of radio classic music.

The observed P_d regarding television and radio classic music programs was 30.59 (50.97 - 20.38) which was far above the required values of 9.66 and 12.71. Thus the difference can be said to have reached both five and one percent levels of significance. It seems certain that radio was much more preferred for this particular type of program.

In summary, it can be concluded that, while radio classic music was preferred to televised

classic music, there was an indication that televised classic music drew much attention of the television audience. The novelty of watching opera singers and orchestra performances might be a factor involved.

Discussing whether a radio program would gain anything when it was put on television, Shayon observed as follows:

Watching the[music] performers only detracts. The first glimpse of the back of Arturo Toscanini's neck is interesting -- the second is redundant. The same goes for Lauritz Melchior's hair, Jascha Heifetz's G-string, and Helen Traubel's ya-ho-to-ho outline. They are superb artists, but our enjoyment of their artistry derives from the beautiful sounds they produce, not from the sight of them producing the sounds.¹⁷

Music is static visually. "The auditory sense does not require accompanying visual action in order to be satisfied with musical sounds."¹⁸ The visual sense, however, does require action, and "there is no real action in televised music, just as there is no action in the televising of a news commentator."¹⁹

17. R. L. Shayon, "TV and Radio," Saturday Review of Literature, XXXIII (November 4, 1950), 28.

18. M. Levine, "Television: Trend or Variable?" Musical America, LXXI (February, 1951), 88.

19. Loc. cit.

It is still to be seen whether this was an influencing factor in the relatively greater popularity of music programs on radio.

The data in TABLE II also indicates a similar trend in the comparative preferences of newscasts on the two media. It appears that people dialed more often than channeled when they wanted news. In this case, the observed P_d was 65.54 percent. The test showed that the difference was significant at both five percent and one percent levels. Presence or absence of regular access to television can therefore be said a factor.

Turning to the observed P_d (5.82) for radio program preferences, it will be noted that the difference could have been due to chance factors. In this instance, therefore, regular access to television or lack of it did not seem to be a factor.

In summary "News" seems to be preferred on radio and the pull of television is not strong enough to draw audience from radio in this particular case. It seems unlikely for the non-television group therefore to be drawn over to televised newscasts to any great extent if and when it has regular access to television programs. An observation by Siepmann

made in this connection in Survey may partly account for this. He said:

... Radio newscasts probably will continue popular. Their attraction is that of immediacy and of consciseness (sic)... Little is gained by sight of (radio commentators;) through seeing some of them much may be lost. The peculiar magnetism of the unseen voice may be expected to continue to exert a strong hold over listeners.²⁰

Shayon related his reaction to televised newscasts as follows:

The unit of news is the item of information and this strides along quite briskly, thank you, in radio. It may not travel any slower in television, but the camera provides no real plus so far. These "library" or "working desk" shots of the newscaster, pretending not to read his copy out of the lower corner of his left eye, are as phoney as they are dull; and as for the maps and the film-clips, they don't have anywhere near the impact they produce on the big-size motion picture newsreel screens.²¹

The fact that one does not have to see the newscaster in order to learn what is going on in the world seems to be the most plausible reason why radio is preferred for this type of program.

It will be seen from TABLE II that the P_d 's for two more types of programs on both media (26.12 and

20. C. A. Slepman, "Television--Hopes and Limitations," Survey, LXXXVI (January, 1950), 7.

21. Shayon, op. cit., p. 28.

12,14) reached five percent and/or one percent levels of significance. They were "Boxing" and "Comedy." Regular access to television seems to be a factor in the greater popularity of these two types of programs on television.

The observed P_d for "Boxing" on radio, however, showed the difference (3.39) was not significant. They could have occurred due to chance factors, and, therefore, the influence of regular access to television did not seem to be a factor. It may be concluded that "Boxing" seemed to go well on television, but the influence of television on radio "Boxing" did not seem to have been working to any significant extent.

While auditory sense does not require action, the visual sense does require action. "From their very nature, sports events come out best on television. When two guys maul each other for fifteen rounds there is action; when two guys wrestle, no matter how ridiculous they look, there is still action - and every seat is a ringside seat for the television audience...."²²

22. Levine, op. cit., p. 88.

The observed P_d for radio "Comedy" preference, on the contrary, reached the significance at both five and one percent levels. This seems to mean that regular access to television was a factor. Was this because of technical advantages of televised "Comedy" or better quality of comedians on television?

Regular access to television did not seem to affect the preference of "Athletic" programs. The P_d was 3.35 (30.09 - 26.74), which did not indicate significance. Its effect, however, was indicated by the comparison of two groups regarding their preferences of radio "Athletic" programs. Note that the P_d (12.18) was significant at both five and one percent levels. Was this due to the ability of television to satisfy both visual and auditory senses, or to the fact that there is movement or action in athletic programs which must be seen to be really enjoyed?

As for "Religious" programs, the observed P_d (9.27) indicated that the difference reached the five percent level of significance. Radio seemed to be preferred. However, the fact that more religious programs are available on radio might be a factor involved.

Regular access to television seemed a factor

in the P_d for radio "Religious" programs. (11.70)
It will be noted that significance was reached at both five percent and one percent levels. This seems to indicate the influence of regular access to television on the preference of radio religious programs.

It may be concluded that, granting that radio has more religious programs, radio religious programs seemed to be preferred, but that the effect of television on the preference of radio religious programs were seen at the same time.

The remaining three types of programs, namely "Drama or Plays," "Educational," and "Quiz" indicated that their P_d 's on two media were not significant. There were no indications that regular access to television or lack of it was a factor. The existence of day-time listeners, especially women, might be a factor in the popularity of these three types of programs on radio.

However, the P_d 's concerning these three types of programs on radio indicated the effect of television. All three types showed that their P_d 's were significant.

In conclusion, the effect of regular access to television was not seen on the four types of programs,

namely "Athletic," "Drama or Plays," "Educational," and "Quiz." Their popularity seemed to remain unmodified whether they were put on radio and television. It is still to be seen whether this indication was due to intrinsic merit of programs or some other factors including those mentioned above. (Existence of day-time radio listeners, availability of radio programs.)

As for "Quiz," Shayon analysed that "they have motion (not physical movement, though many of them do feature dancing bears and seltzer-water bottles) but the movement from one question, from one test to the next."²³ Concerning drama Shayon was of the opinion that :

Drama, like news, tends to lose on television. The unit of drama on the radio, as on the stage, is the moving line. The unit of films is the shot. The unit of television has still to be discovered. It isn't the line, - for, as in films, there are long stretches in television without a word. It isn't the shot - for there are often equally long stretches in which the camera just holds on one or two characters. As everyone knows, television drama borrows the units of films, radio, and stage and scrambles them all together in a crazy-quilt pattern. This is the real reason why television drama is relatively unsatisfactory to date. ²⁴

The ranking of radio and television programs in order of preferences presented an interesting picture.

23. Shayon, op. cit., p. 28.

24. Loc. cit.

The order of preference by the non-television group was: 1. News; 2. Popular music; 3. Drama or plays; 4. Classic music; 5. Comedy; 6. Quiz; 7. Educational program; 8. Religious and Athletic; and 9. Boxing.

The list for the television group was the same except the educational programs and the religious-athletic programs exchanged their ranking positions.

CHART 2. COMPARATIVE RANKING OF THE PREFERRED TYPES OF RADIO PROGRAMS

Television group		Non-television group	
News	1	1	News
Popular music	2	2	Popular music
Drama or plays	3	3	Drama or plays
Classic music	4	4	Classic music
Comedy	5	5	Comedy
Quiz	6	6	Quiz
Religious	7	7	Educational
Athletic	8	8	Religious and Athletic
Educational	9	9	-----
Boxing	10	10	Boxing

The order of preferences of television programs, however, was somewhat different. As the

following chart indicates, the newscasts which ranked first on radio dropped to the last, while drama or plays topped the list. Comedy followed the drama or plays. Boxing, quiz, popular music, and the athletic programs came next in order of mention. The educational programs and classic music and the religious programs finished the list.

CHART 3. COMPARATIVE RANKING OF THE PREFERRED TYPES OF PROGRAMS BY THE TELEVISION GROUP

<u>Radio</u>		<u>Television</u>
News	1	1 Drama or plays
Popular music	2	2 Comedy
Drama or plays	3	3 Boxing
Classic music	4	4 Quiz
Comedy	5	5 Popular music
Quiz	6	6 Athletic
Religious	7	7 Educational
Athletic	8	8 Classic music
Educational	9	9 Religious
Boxing	10	10 News

The above chart will clearly indicate which types of programs appear to go better or be preferred on television as well as which types seem to lose or be less favored on television by the selected groups studied in this study.

CHAPTER V

SELECTIVITY OF PROGRAM PREFERENCES THROUGH TIME

In this chapter the second minor problem involved in this study is discussed. The question is whether television viewers are getting more selective in their choice of programs as time passes. It is difficult to determine how much of today's response to television is attributed to novelty and how much to intrinsic merit of program.

An attempt was made to find out whether the groups selected for this study showed any selective tendency with regard to their preferences of television programs.

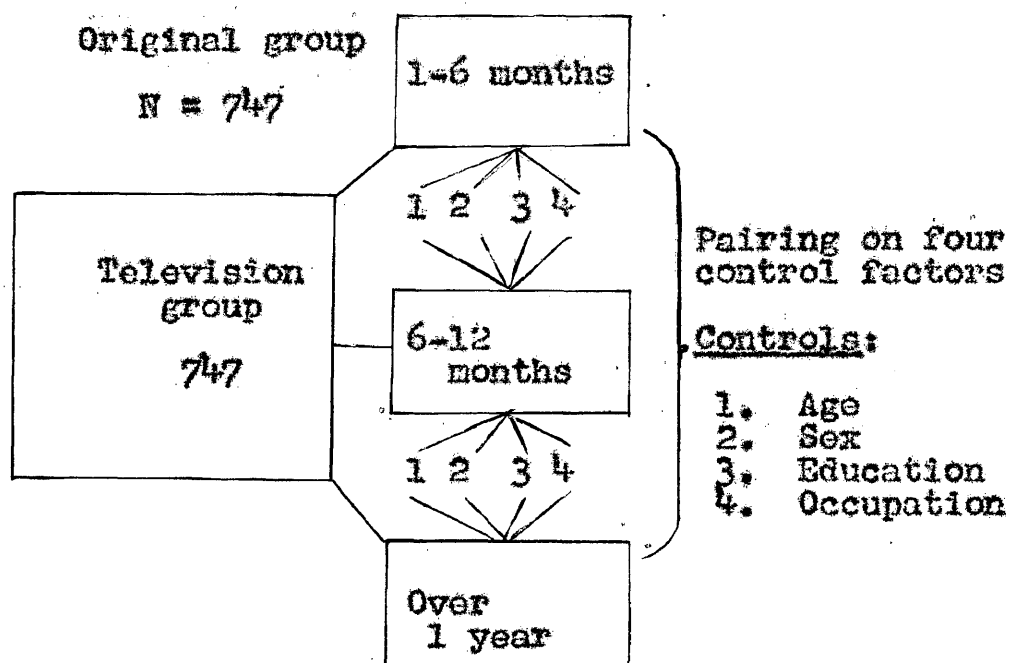
An experimental design was also applied to the approach to this problem. The original television group of 747 was reduced to 116 in each of the three groups having regular access to television for various length of time.

The first group had one to six months of regular access to television programs; the second group had regular access twice as long as the first group; and the third group three times as long as the first group.

CHART 4. FLOW CHART OF PROCESS
OF CONTROL

Control samples

N = 116



The factors used as controls were: 1. three age categories (15-30, 31-50, and 51 and over); 2. Sex factors; 3. Two educational categories (grade-high school and college-and-above);^a and 4. Eight occupational categories (none, housewife, student, manual worker including both skilled and

a. Since the selected groups used in this study were from the middle class, the average educational level was high, hence the presence or absence of college education was considered an appropriate dividing line.

unskilled worker, white collar worker including secretarial and clerical worker, professional, managerial, and executive). The chart on the preceding page illustrates this process of control.

Next, a frequency table was made to compare the total number of hours spent by each of these three groups watching television. The day-average number of hours spent on television by each group were also compared.

TABLE III

TIME SPENT WATCHING TELEVISION AND
LENGTH OF REGULAR ACCESS TO TELEVISION

Length of regular access to television	Total hour spent on television (Per capita day average)
1 - 6 months	286½ (2.46)
6 -12 months	281 (2.41)
Over 1 year	284 (2.44)

It will be seen from the data in TABLE III that the total amount of time spent watching television did not differ so much from one group to another. Only slightly larger was the amount of time spent by the first group which had less than six months of regular access to television programs. When reduced to the day-average amount of time spent,

the margin of difference was too small to be considered significant.

TABLE IV

FREQUENCY TABLE OF VARIOUS DAY-AVERAGE
HOURS SPENT ON TELEVISION

Average hour spent per day ^a	1-6 months ^b		6-12 months		Over 1 year	
	Fre- quency	Total	Fre- quency	Total	Fre- quency	Total
0	0	0	0	0	0	0
$\frac{1}{4}$	4	1	4	1	4	1
$\frac{1}{2}$	4	2	8	4	4	2
$\frac{3}{4}$	1	$\frac{3}{4}$	0	0	0	0
1	17	17	20	20	22	22
$1\frac{1}{4}$	2	3	1	$1\frac{1}{2}$	4	6
2	41	82	36	72	27	54
$2\frac{1}{4}$	3	$7\frac{1}{2}$	0	0	2	5
$2\frac{1}{2}$	14	42	20	60	24	72
$3\frac{1}{4}$	0	0	1	$3\frac{1}{2}$	0	0
$3\frac{1}{2}$	23	92	14	56	17	64
4	5	25	4	20	6	30
5	1	6	3	18	2	12
6	0	0	0	0	0	0
7	1	8	2	16	2	16
8	0	0	1	9	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
Total	116	286 $\frac{1}{2}$	116	281	116	284

- a. Data based on Question No. 7: "How many hours a day on the average do you watch television?"
- b. Data based on Question No. 6: "Do you have a TV set in home or regular access to television? (If 'Yes') How long?"

It was assumed that, as length of regular access increased, the day-average amount of time

might settle around two to three hours and the frequency of a five-or-six-hours-a-day case might decrease. For this purpose, another frequency table was made to find out whether there was any difference between the three groups with regard to the day-average amount of time spent.

The data in TABLE IV, however, did not seem to indicate a trend to prove such a hypothesis. There were few extreme cases in which eight or nine hours were spent daily in front of a television set. The pattern of the frequency distribution of those persons who watched television programs for a couple of hours a day was rather uniform for all the three groups, or at least it did not show any trend consistent enough to indicate the operation of selectivity through time.

Another attempt was made to approach this problem in terms of: 1. the total frequency of preferences of various programs; and 2. the preferences of each individual type of program.

It was assumed that, with the increase of months of regular access, the number of the types of television programs people watched might become smaller or the number of people who preferred a

particular type of program might change.

From TABLE V it will be seen that the total frequency of program preferences failed to show any significant margin of difference.

TABLE V

LENGTH OF REGULAR ACCESS TO TELEVISION
AND PROGRAM PREFERENCES
(Percentage in brackets)

Type of program	1-6 months	6-12 months	Over 1 year
Athletic	28 (24.13)	32 (27.58)	41 (35.34)
Boxing	38 (32.75)	31 (26.72)	40 (33.61)
Comedy	58 (50.00)	60 (51.72)	57 (49.13)
Drama or plays	60 (51.72)	66 (56.89)	69 (59.47)
Educational	15 (12.93)	18 (15.51)	19 (16.37)
Music, classic	25 (21.55)	15 (12.93)	11 (09.47)
Music, popular	38 (32.75)	28 (24.13)	32 (28.44)
News	7 (06.03)	12 (10.34)	6 (05.17)
Quiz	25 (21.55)	32 (28.44)	17 (14.65)
Religious	18 (15.51)	21 (18.10)	19 (16.37)
Any other	4 (03.44)	2 (01.72)	4 (03.44)
Total	319	327	318

All these data appear to indicate that the novelty appeal of television programs has not shown a tendency to decrease. This seems significant considering the fact that the groups selected for this study were supposed to have above average amount of education.

This tentative conclusion on the selectivity

of program preference over increase of time was also reached by Bogardus' study.²⁵

It is interesting to note that, when attention is turned to the preference frequency of each type of program separately, there seemed to be a trend of selectivity working in the choice of programs. This appears to be more or less clearly seen in the case of classic music. The percentage went down from 21.55 to 12.93, and further to 9.47 as the length of regular access to television increased.

The same significance test of percentage difference was applied to this. To illustrate the process:

A. Comparison of 1-6 months group with 6-12 months group.

$$n_1 = 116$$

$$n_2 = 116$$

$$P_1 = 21.55$$

$$P_2 = 12.93$$

$$P_d = 8.62$$

$$p = \frac{25 \sqrt{15}}{116 \sqrt{116}} = .17$$

25. Supra, p. 5.

B. Comparison of 1-6 months group with over-1 year group.

$$n_1 = 116$$

$$n_2 = 116$$

$$P_1 = 21.55$$

$$P_2 = 09.47$$

$$P_d = 12.08$$

$$P = \frac{25 \cancel{116} / 11}{116 \cancel{116}} = .17$$

By referring the values obtained as above to the following table, it was determined that the P_d 8.62 was not significant (as it was below the 11.22), but the P_d 12.08 was significant at the five percent level of significance (as it was above the 11.22).

A segment of table showing significance of difference between percentages. 26

	P	5%		1%	~ Levels of significance - Sample sizes	
		100	- 100			
Proportions	.05	.95	..	6.11	8.06	
in combined	.10	.90	..	8.41	11.09	
samples	.20	.80	..	11.22	14.79	- Percentage
having	.30	.70	..	12.85	16.95	differences
trait	.40	.60	..	13.74	18.12	(P_d)
	.50	.50	..	14.02	18.49	

It may safely be said therefore that in this particular instance, television seems to lose its charm. Most people seem to look at the performance by a great orchestra under the baton of a famous conductor, for example, but they become tired of doing so after a period of time.

As for the athletic programs, their seasonal nature must be taken into consideration in analyzing the percentage differences among three groups having regular access to television for different length of time. The gradual rise of the percentage from 24.13 up to 25.24 might be partly due to this factor. The test of significance of P_d 's between three groups, however, failed to reach the five percent level of significance. It will be seen from the computation made as follows:

$n_1 = 116$	$n_1 = 116$
$n_2 = 116$	$n_2 = 116$
$P_1 = 24.13$ (1-6 months)	$P_1 = 24.13$ (1-6 months)
$P_2 = 27.58$ (6-12 months)	$P_2 = 35.34$ (Over 1 year)
$P_d = 6.55$	$P_d = 11.21$
$P = \frac{28}{116} \neq \frac{32}{116} = .26$	$P = \frac{28}{116} \neq \frac{41}{116} = .29$

(Required value = 12.85)

A rather steady increase in the percentage was also seen in drama and plays and educational programs. The test of their P_d 's, however, failed to reach the five percent level of significance. Increasing efforts on the part of educators to secure more time for educational purposes seem to be a factor involved in the latter case.

As a whole there seems to be few really significant indications of the selectivity through the length of regular access to television.

It might be possible that the first group (with regular access less than six months) have had opportunities, though not regular, to watch television programs for a considerably long period before having regular access to them, and consequently it had acquired its pattern of preference when it came to have regular access. Improvement in the programming and telecasting techniques may be another factor of enduring novelty and charm of television programs.

CHAPTER VI

SUMMARY AND CONCLUSIONS .

(Summary

1. Regular access to television appeared to be a factor in the relative preferences of almost all types of radio and television programs.

2. Some types of programs seemed to draw more audience attention when put on television. "Boxing" and "Comedy" were such types of programs. Where radio programs were still given attention after the television ownership or regular access to television programs, television "Comedy" seemed to draw more attention than its radio counterpart. Television "Boxing," under the same circumstances, however, did not seem to affect its radio counterpart adversely.

3. Other types of programs seemed to lose audience attention when put on television. They were "Popular Music" and "News." Regular access to television did not seem to affect adversely the preference of these two types of programs on radio where radio programs were still given attention after the television ownership or regular

access to television programs. Under the same circumstances, however, the remaining types of programs were less preferred on radio.

4. "Classic Music" and "Religious" programs seemed to enjoy less audience attention on television, but the data indicated that regular access did affect preference of these two types of programs in favor of television where radio programs were still given attention after the television ownership or regular access to television.

5. The degree of preference or popularity of "Athletic," "Drama or Plays," "Educational," and "Quiz" seemed to remain nearly the same on both media. The data in this study, however, appeared to indicate that regular access affected adversely the audience response to these four types of programs on radio where attention was still given to radio programs after the television ownership or regular access to television programs.

6. The amount of time spent watching television remained somewhat uniform over the increase in months of regular access.

7. The combined preference frequency percentages of various types of programs also remained

rather uniform over the increase in length of regular access.

8. However, one type of program showed changes in its preference frequency percentage as the amount of regular access increased. It was "Classic Music." This type of program seemed to lose its hold on audience as months of regular access increased.

9. The above findings were based on data obtained by the use of selected groups in Omaha, Nebraska during the period between May and June, 1952. Consequently they presented only an arresting sample of audience reactions to radio and television programs.)

Conclusions

1. There is a need to repeat a similar study to ascertain changes in reactions toward television and radio programs.

2. It is still to be seen whether today's reaction to various types of television programs is attributed to their novelty or intrinsic merit of programs.

3. At present, the technical limitations of television seemed to be factors in the relatively

smaller attractiveness of certain types of television programs.

> 4. The ability of television to satisfy both eyes and ears at once, which is essential for the enjoyment of certain types of programs, might partly account for the greater popularity of some types of programs on television than on radio.

5. The presence of day-time radio listeners, mostly women, might be a factor in the relatively strong pull of certain types of radio programs, especially "Educational" programs and "Drama or plays." As for the relative popularity of "Religious" programs, the fact that more religious programs are available on radio must be taken into consideration.

6. Selectivity in the choice of television programs through time did not seem to be in operation in terms of time spent.

7. However, selectivity through time did seem to be working on the preference of at least one type of program when individual programs were taken separately. It appeared to owe changes in its popularity partly to the technical limitations of television.

8. It is still to be seen whether it was mainly

due to the seasonal nature of programs, improvement of televising techniques, or some other unknown factors that few indications of selectivity through time were shown.

9. As a whole, according to our study, novelty appeal of television was not dying out as time passed.

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APPENDIX

QUESTIONNAIRE

Your cooperation in answering the following questions will be greatly appreciated.

H. O.

1. Age: 15-30____, 31-50____, 51 and over_____.
2. Sex: Male____, Female_____.
3. Please check: Education: grade school____, high school____, 1 or 2 years college____, 3 or 4 years college____, graduate_____.
4. Occupation: none____, student____, housewife____, unskilled worker____, skilled worker____, clerical or secretarial____, managerial____, executive____, professional_____.
5. Yearly income:
under \$2,000____, \$2,000-4,000____,
\$4,000-6,000____, over \$6,000_____.
6. Do you have a TV set in home or regular access to television?
Yes____: How long? 1-6 months____,
6-12 months____,
More than 1 year____.
No_____.

7. How many hours a day on the average do you watch television? _____(hours)
8. Name the type of TV programs you like best:
 Athletic_____, Comedy_____, Quiz_____,
 Popular music_____, Classic music_____,
 Drama or plays_____, Educational_____,
 Religious_____, News_____, Boxing_____,
 Any other_____.
9. Name the radio programs you still listen to after owning a TV set:
 Athletic_____, Comedy_____, Quiz_____,
 Popular music_____, Classic music_____,
 Drama or plays_____, Educational_____,
 Religious_____, News_____, Boxing_____,
 Any other_____.
10. If you do not own a TV set: which radio programs do you listen to most often?
 Athletic_____, Comedy_____, Quiz_____,
 Popular music_____, Classic music_____,
 Drama or plays_____, Educational_____,
 Religious_____, News_____, Boxing_____,
 Any other_____.
11. Since you had regular use of a TV set did you listen to radio:
 more_____, about the same_____,
 less_____, much less_____.