

RESEARCH

RADIO AND SALES

FOREWORD

By Edgar A. Grunwald

Perhaps it's a little late to ask the question, but the wistful query persists in popping up: "What did national advertisers get for the \$540,000,000 they poured into network radio since 1927?"

Insofar as such a question arises in retrospect, it's somewhat academic, for the half billion dollars is now irrevocably over the dam. But the validity of the query persists because the original expenditure is not only being followed by an equal parade of dollars, but is, in fact, being accelerated at a high rate. In the geography of media, radio is fast assuming the contours of a mountain range, whereas newspapers and magazines are struggling to keep from settling into the quiet of a plateau. True, radio has had its success stories and/or the belief in them. It has worked up a Hindu fervor among its devotees before and behind the microphone. And it has entrenched itself behind that almost invulnerable psychological rampart—America's love of mechanical contrivances.

But the voice of the auditor nonetheless persists in inquiring whether radio has created a Pied Piper's stampede, or whether the price of a seat on the bandwagon is more than a contribution stimulated by cornets and tambourines. For, after all, there are those on whom the magic of radio has lost its hold. The record happens to show that at least 30 advertisers who boasted "leading" network programs in 1930 no longer use radio, and that two, in fact, are out of business altogether. Patently, radio's power has dimmed in a representative number of instances and, on the face of things at least, has failed several disciples on their deathbed.

The costs and complexity of modern advertising must soon demand an accounting of these matters. If radio is a whirling dervish, the giddiness of its admirers must someday wear off, so an aspirin is better now than after another half billion is spent. If, on the other hand, the medium can demonstrate two vital qualities—ability to embrace all necessary markets at the right price, and the ability to multiply a sales message with maximum conviction and timing—then its future is still before it. But these matters can only be settled by *measurement*. Judgment alone—often the handmaiden of guesswork—is not enough.

Clearly, the stage is set for the final act, in which media research must accomplish the task before it. Some of the groundwork already has been laid—as will repeatedly be shown in this writing—but unfortunately such groundwork has not received the attention it deserves. Still more research is necessary, and still more interpretation must be placed on what has been

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done, before the high detail of a finished work is obtained. To place what has been done, and what will probably be done, in proper perspective, a few paragraphs of history might prove valuable.

* * *

There is a difference between a medium and a market, as well as a means of correlating the two. Every advertiser knows that today. The point is that advertisers didn't always think about it. Old issues of magazines for the early 1900's show only the barest grasp of the fundamentals of advertising, which means that advertisers didn't fathom the potentialities of the medium or else had only a very rough idea of their market. In either event, it's safe to say that the advertising of the early 1900's often proved over-expensive and disastrous—which might be a clue to radio's early failures.

The first big step in describing the proper relationship between cart and horse came in the second decade of the century. At that time several leading universities made the transition from the study of economic geography (source of materials) to the study of markets (ultimate destination of materials in finished form). The ultimate destination of goods is the consumer. So the consumer got into the spotlight.

Once the consumer was upstage, it was a quick jump from market analysis to media analysis. Consumers learned about some of the products they bought from advertising in publications. The next question therefore was: how many readers do the publications reach?

Pioneers in experiments with circulation measurements were C. C. Parlin of the Curtis Publishing Co. and R. O. Eastman of the Kellogg Co. who, as a buyer of space for one of the leading cereal manufacturers, naturally wanted to know what he was buying. Simultaneously, sentiment was crystallizing for definite statements of circulation. Out of the combined ideas of measuring circulation, and making the results available, grew the Audit Bureau of Circulations, the first great step in media analysis.

It is worth pausing at this point to evaluate what had happened; for as the twig is bent, so grows the tree. Clearly, media analysis was off on the quantitative foot. That is, it dealt with *size* and *size only*. It stated that publication A had X number of readers, but the figure X was not factored. Whether the X readers preferred white paper to blue paper, whether they were in a better mood to read on Thursday than on Monday, whether their eyes followed a printed pattern from left to right or vice-versa—these matters were not cast up for ballot. Preoccupation centered entirely on size of circulation, and therefore the scope of this type of research was limited.

True, the printed media did make advances in their size-research. As years went by, circulations were geographically defined. Details appeared for cities and counties, and from such data advertisers began to draw parallels between places they wanted to reach and numbers of subscribers or newsstand buyers in those future arenas of strategy. From efforts along these lines sprang the embryo of media coordination with markets.

But when radio was injected into this setting, the new medium at once proceeded to demonstrate that quantitative research, for radio at least, is insufficient.

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Essentially an arm of the entertainment industry, radio immediately recognized the fact that the problem of size is a coefficient of the problem of *quality*. For if Amos 'n' Andy built a huge audience at 7 P.M., the possibility was always there that at 7:15 P.M. the audience would disperse as the coefficient of quality dwindled. The hunt for quantity in radio—that is, a figure X which can be pinned down to any appreciable time limit—proved as slippery as a pellet of quicksilver. Engineers could (and still do) define a potential listening area by electronic measurement, but for many practical purposes this is tantamount to saying we'll have a duck dinner if you bring the duck.

The point to remember about radio research, therefore, is that *sheer quantity is a coefficient of some kind of quality*—be it program merit, program timing, competition, etc., or any combination thereof. Granted only, of course, that the electronic radiation is sufficient.*

Shortly after the first network company was formed, Daniel Starch made an extensive survey, and it is notable that with a true eye to his problem he tried to ascertain, among other things, *what the audience liked by way of programs*. He attempted to depict fluctuations by seasons of the year, days of the week, hours of the day. He probed into geographical, economic, age and sex compositions. And he defined markets, therefore, not merely as rigorously-set quantities, but as possible entities which can be called into being when some *quality* is applied as life-giver. (This type of market research even now has barely begun to reach newspapers and magazines).

Radio soon took further steps in this important direction. Not content with generalities, it began to study individual programs. Set owners were asked to tabulate what they had listened to the day before. Next, researchers began to accumulate this data while individual programs were in the process of broadcast (coincidental reporting). And latterly mechanical devices have been developed to record all programs delivered by the set. Ratings on individual programs began for certain sponsors in early 1929, and a year later the regular Cooperative Analysis of Broadcasting ratings made their appearance.† In the past 11 years, such research has literally occasioned millions of phone calls, interviews, and recordings.

* * *

As the second decade of radio advances, however, the most important job is still ahead.

It is not enough to know about program qualities vis-a-vis size of audience. Radio is not a charitable institution so far as the sponsor is con-

* The problem of a station's signal strength is not being minimized here, but it is suggested that to some extent the problem is minimizing itself. Coverage is better today than it was yesterday, and the elasticity of network hookups can often throw additional stations into a breach of signal strength. All media have some problems of mechanical conveyance, and that factor is therefore separate from this discussion.

†For a discussion of the C.A.B., see pages 94-96. For a resume of its 10-year program, see VARIETY RADIO DIRECTORY, Vol. III, pages 33-151.

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cerned. The sponsor wants to sell goods. His interest in declaring a Roman holiday for the public is extremely mild.

And the problem of radio research therefore boils down—when all is said and done—to the title of this writing: "Radio and Sales."

From the outset it must be understood that all the results of salesmanship are not directly measurable. Such an astute authority as George Slockbower, vice-president and sales promotion manager of L. Bamberger & Co. (Newark, N. J., department store) has recently said: "Add up all the so-called sales that you are supposed to be getting from your favorite media . . . I think you will find that there is 80% of the store sales that you can't seemingly account for."*

But it is a mistake to suppose that methods cannot be devised to measure some of this power.

Borrowing Mr. Carnegie's title, radio's interest in "how to win friends" is merely introductory to its interest in how to "influence people." And, as stated before, radio is splendidly equipped by history to undertake this qualitative research.

* * *

In asking Archibald M. Crossley, president of Crossley, Incorporated, to discuss "Radio and Sales," the VARIETY RADIO DIRECTORY had the following considerations in mind:

1. The author has had a great deal of experience in the field of measuring radio sales effectiveness.

2. Although his organization is naturally a competitor of many other research organizations, he has dropped all competitive aspects in assembling this article, and has consulted with his colleagues, urged the use of their charts, and otherwise has attempted to give them full credit for methods and pioneering in methods.

It seems to the editors of the DIRECTORY that such an objective attitude is paramount in a discussion of this type, and that qualification on this score alone is indicative of other necessary qualifications in the field of research—which, if it is anything, is a *profession*.

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*National Retail Dry Goods Assn. Radio Session, Jan. 17, 1940.

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By Archibald M. Crossley, President, Crossley, Incorporated

I

THE JOB DEFINED

What constitutes advertising effectiveness? What results can an advertiser reasonably expect from his expenditure?

Cosmic as the words "time and space" may sound, there is no mysterious force which works wonders with the advertiser's dollar. The universe of any given market is measurable, and much of the effect of the media upon that market can be traced. In the cold light of facts we realize that the promotion dollar has a well-defined job to do, and that the job has certain limitations.

Two Fundamental Limitations on Effectiveness

First, *no medium can be expected to reach out beyond its own particular market.* While "word of mouth" publicity or dealer merchandising may spread the influence of a medium beyond its readers or listeners, such spread is a plus market, not to be counted upon. The effectiveness of a given medium involves that part of the desired market which it reaches, and how it influences that part toward actual purchases.

Second, *any given market sooner or later approaches saturation of potential consumers.** The extent of market penetration is too little recognized. It is sometimes one of the greatest difficulties with which advertising has to contend. Today, for example, we are practically at the point where all the families who might have radio sets actually have them. Almost every family with a telephone has a radio set, and in cities and towns of 5,000 population or more, about nine out of 10 families have sets. Automobile families are rapidly approaching their limit. Few new family purchasers are available to the manufacturers of refrigerators, electric irons, electric cleaners, and so on. Even cigarette customers are believed to be approaching saturation. Building construction of various kinds has received setbacks from over-extension. Many lines have been moving closer and closer to the situation of such staples as sugar, bread, shoes.

When saturation approaches, given markets are expanded very little through the addition of new consumers. As children get older, as new families are formed, and as the succeeding generation of children arrives,

* Editor's Note: The reader should bear in mind that the author definitely says "given" market. This is a vast distinction from "total potential market" in the case of many products, although radios and autos, for instance, have almost attained COMPLETE market saturation.

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new consumers are added. Increases in income, changes in location of home or occupation, and other transitions make new consumers. Excepting such normal development, restricted in scope, the aggregate of new consumers of a commodity in a given market is likely to be increased in the face of saturation only if some new product-use is developed and promoted.

After *commodity saturation* comes *brand saturation*. After the maximum of soup-consuming families is reached, Campbell approaches its maximum. When the limit of automobile families is attained, Cadillac is moving toward its zenith as a high-priced car in the high-price market. As the greatest possible number of toothpaste users is neared, the number choosing a certain brand for taste is moving toward its top. So in the competition of the brands, the leaders slow down as they begin to reach the numerical outskirts of new customers in a given market.

Aspects of Brand Competition

To expect advertising to find new customers in a well-sold market, or to increase competitive position (in terms of numbers of customers), is therefore sometimes asking too much. Campbell in 1940 probably will increase aggregate numbers of soup-consuming families in *given markets* very little, and total number of Campbell consumers in the same markets comparatively little.

Studies in medium-sized cities show that 12% of the brands of dentifrices used by housewives in an average week account for 85% of the brand mentions. Conversely, 88% of brands divided among themselves only 15% of the mentions. Fifteen percent of cereal brands named accounted for 85% of mentions. Stated the other way, 85% of brands named divided only 15% of mentions. Six percent of toilet soap brands named accounted for 91% of mentions. Ninety-four percent of brands divided 9% of mentions. Five percent of coffee brands accounted for 62% of mentions. Ninety-five percent divided 38% of purchases.

Brand competition in many lines simmers down to a few outstanding leaders, and many laggards. The laggards seldom become leaders, and the leaders normally show small percentages of gain or loss year by year in *numbers* of customers. Note the following percentages of medium-sized city families using certain brands in a typical week over a three-year period:

FLOUR—	1936	1937	1938
Gold Medal.....	22.8	24.6	26.3
Pillsbury	17.9	18.8	19.1
Swans Down.....	8.3	7.7	8.1
DENTIFRICES—			
Ipana	13.0	13.6	13.1
Dr. Lyon's.....	15.2	15.8	16.6
Pepsodent	13.5	13.3	13.4
CEREALS—			
Kellogg Corn Flakes.....	18.5	18.1	17.2
*Wheaties	10.9	13.5	14.3
Shredded Wheat.....	9.9	10.2	10.9

*Relatively new.

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For each of the brands above, large sums were spent on advertising. Many more such instances might be cited.

Three-Sided Advertising

If, then, after heavy advertising expense, brands often do not markedly increase their total customers *in a given market*, what is the function of advertising? How can large expenditures be justified? Specifically, can a million dollar appropriation pay its way if it adds only a few hundred thousand to the aggregate number of customers in areas of near-saturation?

Three principal functions of advertising appear to be involved in the question of evaluating effectiveness:

1. Creation of new customers.
2. Holding of old customers.
3. Acceleration of buying frequency on the part of old customers.

In the introduction of a new product, in the promotion of new uses of a product, or in the development of new markets, an expansion in numbers of customers may be looked for. That important new markets can be opened by adequate research and promotion, many manufacturers can testify. But for brands already well entrenched in a given market over a period of years, the possibilities of adding new customers in that market are limited. Defensively, the advertising expenditures may be allotted for the purpose of preventing the inroads of competition—that is, to maintain the numbers of customers accumulated over the years. Various examples might be cited to show that drastic curtailment or discontinuance of advertising has been followed by a major decline in sales or in relative sales position.

The full creative function of advertising, however, has not been served when numerical saturation approaches. Beyond the mere defensive holding the gains, a very important new function exists.

Multi-Brand Consumers

When nearly everybody came to own a radio, sales of sets continued to forge ahead because radio-families began developing into multiple-set families. Similarly, homes with bathrooms grew into multiple-bathroom homes—*meaning not new customers, but more sales to the same customer.* Fashion decreed matching shoes, hence *more shoes per customer.* Cereals and other foods developed use at more meals—*again more sales per customer.*

The competitive picture, however, is the most significant. Advertising pits one brand against another in a new kind of competition—the effort to sell a product to a given consumer more often than a competitor sells him.

This competition recognizes the fact that one consumer over a period of months will buy not just one brand, but several. Thus, *several companies share the same consumer.* Wherever the desire for (and the means of satisfying) variety exists, multiple-brand consumers are to be found. The average pantry shelf contains three or more different cereals. Frequently different brands of soup, soap, toothpaste, and so on, will be on hand. To the desire for variety is added the influence of the dealer. A special price or offer, a demonstration, non-availability of a particular brand at a given time—these and many other influences bring more than one brand of a given commodity into a home over a period of a few months.

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Consumption Turnover

In the normal course of events, the need for replacement arises. Let us say that for toilet soap some purchase is made once a week by a certain class of families. Using loose terminology, let us refer to that as "Consumption Turnover for toilet soap of four times monthly." Due to a combination of influences, the typical consumer in this group may buy Camay one week in the month, and Lux three weeks in the month. We may thus refer to the Camay Consumption Turnover as one per month, and the Lux Consumption Turnover as three per month. The ideal for either would be four. Therefore the major job of promotion campaigns all along the line (including selling and merchandising, dealer relations, advertising, etc.) is to get as near to the Consumption Turnover of four as possible.

In such competition radio enjoys distinct advantages. If most purchases of a given commodity occur on a Saturday morning between 10 and 11, radio provides the means to reach the consumer on Saturday at 9:30, or at any other time. *Radio provides not only a time close to the time of purchase, but it offers a day-by-day reminder.* With the growing number of radios in stores, broadcasting even provides controlled point-of-purchase salesmanship. Radio's selling is viva-voce, personalized, direct.

The directness and timeliness of this tie between seller and consumer is reflected in efforts to measure sales effectiveness. If a store announces a certain sale exclusively via radio, and a few hours later hundreds of customers come in who could not otherwise have been influenced, the selling power of the announcement is self-evident. The sales accomplishment of the Ford Sunday Evening Hour, however, is far less easily measurable. The job of the Ford program is to build goodwill over a long period so that when the need for a new automobile arises, Ford will be thought of and accepted.

Listening and Buying

In both cases, means are at our disposal to measure the act of listening and the act of buying, and to relate the two. We can ascertain what families listened when, and how many times over a period, and what purchases they made. The problem will not usually be as simple as that of the store mentioned above, nor will it usually be as difficult as that of the Ford Sunday Evening Hour. There will be the complications of advertising in other media, of word-of-mouth publicity and of dealer recommendation, of long-standing habit and of many other influences. But in some cases, at least, there are ways of minimizing these complications. In general, the nearer we can bring together the first sales impulse, the actual sale, and the interview, the easier our problem becomes. Hence, ordinarily it is less difficult to measure effectiveness for rapid-turnover items than for slow-turning items.

Much of sponsored radio time covers rapid-moving goods. So the opportunity exists for exploring into sales effectiveness measurements in the light of (a) new customers, (b) customers retained in the face of competition, (c) competitive rates of buying frequency. Thus, our job takes form.

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II

THE TOOLS AT HAND

In the evaluation of sponsored radio broadcasting, the three principal dollars and cents factors with which we have to deal are: (a) talent, time and miscellaneous program costs—known factors; (b) audience size—shown by the Cooperative Analysis of Broadcasting and Hooper reports; (c) audience buying actions—which have to be studied individually.

One of the most serious causes of reduced sales effectiveness is unearthed when a market analysis shows the receptive market to be in one group, and an audience analysis shows the program appeal being made to another (wrong) group. There are numerous examples of such misfits. The classic example is the case of a cigar program, well liked by women, and not by men.

Less serious, but much more frequent, are the misdirected programs which hit the proper market but concentrate most of their fire wide of the market. In this category we have many instances of programs intended for low income groups but using upper-income-group appeal, or conversely. Then there are programs misdirected in their appeal to certain age groups, population groups, and so on.

In order to sell goods, the first step is to reach properly the market which consumes the sponsor's product. Hence, sales results are affected by variations in the listening habits of the desired market.

The Cooperative Analysis of Broadcasting was early described as an effort to answer the question: "What programs continue to entertain and influence their proper markets in adequate measure to justify investment?"

This service has proved that one market will listen at different times than another, one will listen more than another, one will prefer different types of programs than another. Following are a few of the highlights of the variations, which bear upon sales effectiveness of programs insofar as maximum desired audience is concerned.

Sectional Variations

The time differential brings about entirely different competition for the listeners' ear, and different conditions on the Pacific Coast from those on the Atlantic Coast. An evening program in the east, unless rebroadcast, may be subject to afternoon conditions in the west. Geographical sections vary also according to different types of activities, recreation, and working hours. Prevailing climate also has its effect.

Population Groups

The large city audience normally runs lower than the rural audience in the daytime, while the reverse is true in the latter half of the evening.

Time of the Day

The composition of the audience shifts by parts of the day. Certain hours are particularly good for reaching women, others for children, and so on.

Days of the Week

In general, weekday listening habits vary little. Sunday listening apparently has been improved considerably by the use of that day for certain

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popular types of programs. Weekends are apt to show considerable variation from weekdays in summer, but not so much variation in winter. Effectiveness may be increased for some products by selecting a day of the week closest to normal shopping time.

Income Levels

A tendency exists for greater use of a radio set as the income scale is descended. On the other hand, the middle and upper groups will ordinarily have more and better sets. Mechanical recorders show many instances of long hours of set-use day after day by low income levels. Comparisons with interview data, however, indicate that there is a lesser degree of attentiveness in these levels. Upper income groups buy differently than lower income groups, and must be appealed to differently. This variation is caused by variations in purchasing power, as well as by variations in taste. Program appeals must be gauged to follow divergencies in entertainment likes and dislikes, education, shopping habits, and so on.

Seasons

In some cases, summer slumps appear to be overrated. A tendency has existed to let such slumps run their course without combative effort. Where the slump cannot be averted, or can only be averted by heavy expenditures, then off-season promotion can hardly be said to be effective. In other instances, summer advertising maintains continuity of appeal, and fills up unnecessarily deepened valleys. The situation is different today than it was before the advent of good summer programs, improved receivers, automobile and portable radio sets. Today the summer shows a falling off at certain hours and generally shorter listening periods, but no considerable drop in total audience. Effectiveness in terms of audience size depends in summer, more than ever, on the time of the day chosen.

Frequency of Appearance

Program frequency is an important factor in the entire effectiveness question, but has not been adequately studied. New techniques are making such studies possible. Back in 1923 Starch raised the question as to whether it would be more effective for an advertiser to use a magazine page every two weeks instead of a double page every four weeks. But 17 years later the vital question remains practically unanswered. Only preliminary work has been done to measure the relative value of a person hearing a program twice in a week, versus that of two persons hearing it once.

Duration

Several hour programs recently have changed to half-hours. Information is available to show the effect on audience size, but not variations in sales effectiveness.

Position

If a program immediately precedes or follows a very popular program on the same station, it will gather popularity from its neighbor. If competing on other stations with an established popular program at the same hour, its audience size, and possibly effectiveness, is apt to be reduced.

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Station Schedule

Programs, not stations, build audiences. The listeners will switch from one station to another to receive the programs desired. But if one station consistently carries more desired programs than another, a certain habit will develop toward that station when in doubt. Some stations add very little of the desired market to the total per dollar of cost, others add a great deal.

Type

Preference varies by market groups, and by years. The rating services show band-wagon tendencies, and the glutting of the air with too many shows of the same type to general disadvantage. Hence, popular favor tends to shift frequently. Audience participation programs probably run higher in sales effectiveness than do pure entertainment. Big names are not necessary for success, nor can costly programs be counted upon to click. Undoubtedly some programs could do as good a job with less expense. Lists of high-rated programs contain many without prominent personalities. Many big names have fallen from favor, and many have been built by radio.

Numerous opportunities are provided to make use of the rating services in studying sales effectiveness. As both the C.A.B. and Hooper services are confined chiefly to the larger cities where the networks compete fairly evenly, it is not possible to set up an absolute audience of so many million persons in the entire United States, and to compute cost-per-listener. But it is possible to observe trends in selected cities, and to note what listeners do when a program choice is available. As records date back for nearly 11 years, program performance can be studied relatively in many ways. Frequently, after three or four months the trend can be forecast to some extent. Low first ratings are less important than the rate and consistency of upturns. A program starting high with considerable build-up, and advancing rapidly, may reach the ceiling too soon, whereas a program that starts moderately and climbs moderately, but steadily, may last a long while. Sooner or later programs may be expected to die of senility. The sponsor who seeks maximum effectiveness will do everything possible to revitalize or change the program before old age sets in. Low first ratings may be due to a bad hour of the day or to abnormal competition. Some programs start low in summer and work into a strong competitive position by fall. Some, like "Information Please," may command only moderate averages, but rank high in the desired market.

Audience size, however, definitely is only one step toward sales effectiveness. For a program to result in a buying action, it must command attention, and programs vary all over the graph-paper in attention-value. Furthermore, the commercial must command attention. To obtain such attention sponsors sometimes run contests or special offers, or use programs of an interrupting type instead of music and other types that can be heard subconsciously. One of the most popular programs on the air today is generally recognized as much less of a sales-builder than its less-popular predecessor.

Mechanical recorder tapes show three distinct types of listeners: (a) The Restless Type, shifting continually from station to station, and hearing only parts of programs; (b) The Let-it-Ride Type, with the set tuned to the same station for many hours; (c) The Middle Type, selecting programs as desired. It is not at all uncommon for a recorder tape to show a set on almost continuously from early morning to late evening, with comparatively few shifts. When such tapes are compared with interviews made shortly after the end of the pro-

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gram, it is possible to separate the programs of high attention value from those of low attention value. The extent of this inattention is demonstrated by numerous coincidental surveys showing one out of five so-called listeners unable to name the program, and one out of eight unable to name either the program or the station, at the time of the call. One study of what listeners were doing while an evening program was being delivered showed over 50% playing bridge, reading, or engaged in other attention-diverting occupations. Another study showed as high as one out of four sets in operation for 10 minutes or more when no one was in the room.

Thus, the regularly available rating services take us to the point where effectiveness can be measured in terms of relative numbers of set-owners paying attention to the program and able to identify the sponsor. These are the numbers of impressions created. If the program has made an impression, then it has done one very important part of its selling job. Between the time of the impression and the time of actual purchase many things may happen to alter or to obliterate that impression. The study of the buying action when it comes, brings up new problems.

III

STUDIES OF BUYING ACTIONS

To ascertain the extent of the work already done in studying the results of radio broadcasting, a letter was sent to a carefully selected group of major sponsors and their agencies. The companies replying to this letter spend many millions of dollars annually on time and talent. Yet, with only a few exceptions, they have done little or no analysis of this kind. The exceptions, however, are notable, in that they indicate that at least in those instances a fairly definite effectiveness has been found. In only two or three cases have advanced techniques been employed.

Some of the Difficulties Charted

One very well known advertising manager pens a word of caution after extensive use of radio:

"In our opinion, it is a mistake to use extravagant examples of the success of this or that kind of advertising in effecting sales of a particular product, for the product itself is the dominant factor in achieving success, and advertising is but *one* part of an involved operation . . . Securing the public confidence, which has so much to do with success, is not accomplished over night."

There is perhaps no better way to begin a discussion of the best means of measuring sales results. Barnum's famous sign, "This way to the Egress" produced results immediately, but people do not sit before radio receivers as they walk along Midways, eagerly awaiting the next new experience. Most of the products covered in the commercials are familiar, and while the threat of the Martians may clog the roads, the usual advertising announcement cannot be expected to build some overwhelming impulse.

"This warm evening," says a voice, "why not go down to the corner, or telephone, for some Breyer's ice cream before going to bed." Or in the morning a store may announce a particularly attractive sale. That is just about as far as the buying impulse can ordinarily be extended.

Many commercials are purely reminders. Probably most announcements

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are essentially so, varying only in degree. At one extreme is the very brief time or weather announcement, and at the other is the plug which ordinarily covers some characteristic of the product—a claim repeated over a period, such as “dated coffee,” etc. Lacking photographs, color or layout, the radio commercial must rely upon a well-spoken and well-worded, very brief message. Its effectiveness therefore may depend more often upon constant timely reminders, plus the goodwill arising from the program, than it does from a greatly aroused buying impulse. That it creates an *immediate* impulse under certain conditions is well-known. Radio contests and special offers have achieved almost fantastic mail returns, but taking part in a contest is quite different from buying a brand of soap because it has been advertised on the air. Many factors are involved. Radio may accomplish an outstanding job, only to run afoul of stiffer competition in some other buying influence.

Many of the letters received point out the difficulty of separating the effects of the different selling influences.

“We carefully watch the sales records of the individual products featured,” says one prominent manufacturer, “but it is quite difficult at times to single out the exact results secured from any one medium of advertising when the use of that medium is a part of a well-coordinated plan involving other media. We know, of course, that there is a very distinct relationship between the audience which a program has and the results obtained, but such factors as time, frequency, program types and character of commercial announcements are so interwoven with competition that it becomes very difficult to isolate these considerations and point to a general result that can be reliably expected.”

The need for more conclusive information is pretty generally pointed out in the letters. “We don’t care how many people listen to our program,” says one official, “provided they produce enough business to make them a paying proposition. Some of the programs with the biggest listening audience are very ineffective when it comes to actual sales.”

“I am not satisfied,” says another, “that the public rating of a radio program’s popularity is always indicative of its selling force or lack of it. It is very hard for us to determine what credit radio must be given for the success of the different sales promotion campaigns we have operated. We believe it is effective, but would not be able to say how effective unless we dropped radio entirely and compared sales figures over a comparative period with and without radio.”

Recognition of the need for effectiveness data has led a number of companies to undertake experiments. As one middle-western manufacturer put it, “we try to find out what makes the wheels go around.”

Sales Curves as Indicators

Mostly the first analyses have dealt with general sales trends. The International Silver Company permitted publication by CBS of a letter in which the following statement was made:

“Radio sold so much International Silver that we were able to trace the specific effect of our program on our business—a very difficult thing to do in the silverware industry, inasmuch as our product is distributed widely and purchased from the wholesaler by the small dealer. Our wholesalers’ business increased very appreciably while we were on the air, and increased on the combinations we featured in the broadcast. These were expensive combinations, so

RADIO AND SALES—Continued

it is fairly apparent that radio can sell high-priced merchandise. Our sets were retailing at \$59.50 and \$89.50."

The advertising manager for a company on the air a number of years, tells about efforts to measure actual sales results:

"The nearest approach we have reached to an actual study has been to lay down from time to time the force of our radio program, as we know it from figures furnished us by networks and other sources, against sales conditions in various territories throughout the country. Sometimes this doesn't seem to prove very much. On the whole, however, the picture has for years been so satisfactory that we have been content with our radio operation. Our picture is complicated by the fact that since we started using radio, we have introduced new products and . . . have greatly augmented our sales organization . . . Just what part radio has contributed to our success is certainly a question which we cannot attempt to answer with figures. We have no doubt that radio has helped our sales greatly. We have reason to believe that our present program . . . is the most effective radio show we have ever had on the air . . . a better sales maker."

An advertising agency writes:

"The most careful and resultful checking which we have done was for a retail store. Complete control of the outlet was easy to obtain. Sales results were weighted week by week for seasonal fluctuations to compare with previous years. The main purpose was to determine the most effective use of one-minute time from a copy point of view."

Special Offer Responses

A number of letters refer to special offer responses as effectiveness indicators. A maker of household products reports:

"It is noteworthy that our greatest progress dated from the inception of our radio activities. We seriously question whether (our product) would have risen to be the leading seller as rapidly as it has were it not for the support of radio. On the other hand, during this period of exceptional growth, we greatly intensified our magazine advertising. The only studies which we have made of radio effectiveness have had to do with responses to sample offers and, in one instance, a prize contest."

An Eastern advertising agency gives a few examples of the use of test offers: "In one market, a special sports broadcast of a locally important football game was tested by the inclusion of a specially priced article in the commercials, good for the following day only. In another case a contest program, run on a test basis, was tried in three medium-sized markets. Check, conducted over a three-week period, was made through analysis of a number of entry blanks requested by the public from various retail outlets in which the client's product was distributed."

Merchandising tie-ins are discussed by another agency in reporting the experience of a company which for three years has used no consumer medium other than radio. This company is in the food industry and features recipes. Detail men call on dealers each week with a sales story built upon the week's recipe. Thus, the program and the merchandising are used to impel activity on the part of the grocer. This agent goes on to report other examples of premium merchandising, and then concludes: "Frankly I feel that the sales power of radio can be measured only where its effectiveness as a medium can be completely isolated."

The Isolation Principle

Two letters from advertising agencies show how the principle of isolation has been applied. An Eastern agency describes a temporary sectional limitation on a radio network. A decided sales increase took place in the territory where the program was broadcast, while a decline took place in other areas. The result was considered so clear that the following year, the network was expanded to cover all territories. In another instance, the same agency studied relative attitudes toward company name by comparing two groups—listeners and non-listeners. In the former group the favorable attitude was found to be 20% more prevalent.

A Western advertising agency makes direct use of Cooperative Analysis of Broadcasting data. Names of persons interviewed in this service were classified as listeners and non-listeners according to the data obtained on specific days. Equal quantities of names in each classification were then sent a blind letter requesting information on the use of various types of products, with an enclosed reply card. The name of the client and any possible connection with radio were carefully concealed. "This technique was used on three different occasions from six months to one year apart, and in each case the use of the advertiser's product was considerably higher in listener homes as compared with non-listener homes."

Dealer Inventories

Two letters from manufacturers refer to the Nielsen Food and Drug Index as a guide to retail sales competition. One company says:

"Over a period of years . . . in our case . . . variations in sales are more closely associated with the amount of radio advertising we do than with any other medium we use. An increase in radio expenditures will show an increase in sales about 60 days after the increased expenditure starts, and a cut in radio expenditures will show a drop in sales about 60 days after the cut goes into effect. It does not necessarily follow that the increase in sales justifies the increased radio expenditure, nor that the decrease in sales is in exact proportion to the decrease in radio expenditures. But the fact remains that sales and radio expenditure lines follow each other fairly closely with a lag of about 60 days in either increase or decrease."

Referring to the difficulty of measuring the selling power of radio when many media are used, this manufacturer observes that after fumbling with several different programs, one was found that seemed to be producing results, but such results could not be attributed directly to radio at the time because the effect of a price reduction had to be considered. The program was tried out in one city, and sales mounted after a few broadcasts, with considerably greater increase than appeared in the remainder of the country. Extension to a few other cities, a few months later, was followed by outstanding sales growth in those cities. The program was therefore put on a national basis. "Today," says the executive, "it would be much harder to check, because the various other advertising activities would undoubtedly throw out of balance any estimate we might make. We believe, however, that our early experience gives a very fair measure of value." Sales went into millions before any major form of advertising other than radio was used.

This same company made several specific experiments with types of programs and schedules. A test involving changed time of broadcast was found to increase the audience only slightly. Duplication of audience achieved by two programs was studied on the basis of time and talent cost.

RADIO AND SALES—Continued

The other manufacturer compares audience rating services with retail sales services. "If the program is getting an audience and the consumer is buying more of the product we conclude that the radio program is selling the consumer. With us, more frequently than not, the radio program is the bulk, if not all, of the advertising on the product.

"While we have discontinued programs, changed to other types, changed from evening to daytime, changed time spots, length of broadcast periods and practically everything else—as a result of our conclusions, I doubt that these changes were made because of any particular set of facts, but as a result of the complete judgment in which those facts obviously played some part . . . We have not yet found the ideal formula."

What the Networks Have Done

The National Broadcasting Company provides a collection of data of different types. Canada Dry sales are reported to have increased 9% in the first seven months of "Information Please" on the Blue Network. A survey by C. E. Hooper showed four out of 10 Winchell listeners as Jergens' customers (see pages 92-93), while only 10% of non-listeners were reported as using Jergens. About a million football guides are distributed each Fall to listeners driving to Cities Service filling stations and asking for them.

The Columbia Broadcasting System has devoted considerable attention to the isolation principle. As far back as 1931, and again in 1932, Columbia presented the results of studies by Prof. Robert F. Elder of the Massachusetts Institute of Technology. The first report described three methods that were considered and rejected:

1. Sales figures before and after broadcasting.
2. Consumer inquiry as to what form of advertising influenced purchases.
3. Audience mail analysis.

The plan that was used called for isolation of a group of people who did not possess radio sets, from set-owners. The non-owners were taken as immune to the effect of radio advertising, but exposed to magazine and newspaper advertising, etc., to an equal degree with other people. Purchases of set-owners and non-owners of the same income level were compared, thus measuring the specific effect of radio advertising, the only factor not common to the two groups.

A questionnaire was mailed to selected groups in two cities, asking for the names of brands used in the home, magazines read, whether a radio was owned, and about how many hours per day the set was in use. Categories of goods selected for study were chosen as articles in common use, with rapid-turnover characteristics, common to various financial levels, and heavily advertised in other media. Resulting data were analyzed to compare brands used in radio-homes, radio homes using sets three hours or more per day, and non-radio homes.

In 1938 Columbia presented an analysis of its rural audiences, based upon a survey conducted by the Hooper-Holmes Bureau, Inc. Numbers of products were checked in the rural homes, and correlated with average hours of daily listening (see page 73).

In 1939 CBS carried on a two-fold isolation study through Crossley,

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Incorporated, for a food advertiser. Two major markets were chosen in which all sales and advertising factors were directly comparable except for radio. In both the city where the program was heard and the city where it was not heard, store inventories on the sponsor's product were taken each week for a month (see page 74). For each 100 units of sales in average stores in the non-radio market, 188 units were found in the radio market. Furthermore, in the radio market, set owners were divided into those who had heard the program and those who had not heard it. Among listener families the use of sponsor's brand to the next competing brand was 181 to 100, compared with a ratio of 107 to 100 among non-listeners. Among regular listeners the ratio was 336 to 100 compared with 159 to 100 among occasional listeners (see page 75).

In 1940 Columbia conducted another study for a pharmaceutical manufacturer. Coincidentals, personal interviews and home inventory checks were made. Two groups of 539 families each were obtained, alike on the basis of family size, income, etc. Both groups also had practically the same magazines in their homes. Regular listening families were found to have stocked the sponsor's brands in much larger proportions than non-listening families (see page 91). Listening-families able to identify the sponsor made a better showing than those not able to identify the sponsor.

Columbia now has in process of completion an extensive series of studies of sales effectiveness embodying advanced principles.

Experiments by Others

In 1936 tests were conducted by this writer's organization on a group of programs aired the same evening. Interviews the following morning made possible the separation of those who had heard each program the preceding evening and those who had not. In the group of non-listeners a further separation was made to indicate those who had not heard the program the preceding evening, but had heard it previously. Follow-up consumer interviews showed brands purchased in the two weeks since the evening covered. The results in each case demonstrated a better competitive position for the advertised brand among those who had heard the program on the specific evening (see pages 67-72). Since that time a number of studies have been conducted comparing the purchases of listeners with those of non-listeners.

IV

WHAT THE EXPERIMENTS HAVE TAUGHT

The isolation principle appears to have stood the test of time. It is a basic principle of medicine and chemistry, and works equally well in media research. Prof. Elder's original technique, however, would not work so well today because a different set of conditions would be faced. Today the non-set-owner is difficult to locate, and in some income levels and population groups he is like a needle in a haystack. Since 1931-32 we have learned, too, a great deal about the limitations of ordinary mail returns, and about the ability of the average person to state accurately and completely how much he listens and what he buys.

As stated in the first section of this article, we have also found that what

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a consumer buys or has on hand at a given time does not by any means make that person an exclusive devotee of that brand. To a very large extent the American people are Multiple-Brand Consumers. Mrs. Jones may buy only one brand at a time, and continue as a purchaser of that brand for many years, and yet within any period of a few months she may switch *temporarily* to another brand.

Rapid Turnover vs. Slow Turnover

The problem of effectiveness measurement varies with the rapidity of turnover of the product. This is true for several reasons. First, fast-turnover articles are apt to be lower-priced than slow-turning commodities. Hence, the buying impulse is apt to come about with less deliberation because not so much is at stake. Second, while sales stimuli may be at work over a long period for all types of goods, the active interest in the purchase in the one case extends over a few days or hours, and in the other case over months or longer. Thus, the purchase of an automobile is something usually considered as much as a year or more in advance. On the other hand, in the case of a new cleanser, the housewife may not even be intending to buy, but a dealer's sales talk may start and end the transaction in three or four minutes. If an investigator were standing nearby at the time, the principal buying motive could be ascertained. But in the case of the purchase of the automobile, only the finally deciding motive could be obtained on the spot, and even that might not tell the whole story.

Perhaps the two most important problems are:

1. How to separate sales influences.
2. How to time and what to do about the "incubation" period.

Even in the case of the cleanser referred to above, the actual incubation period may have dated back some months. Mrs. Jones may have recognized the name "Scourklean," for example, as something which a neighbor had recommended, or in some indefinable way it may have developed a brain association with a window display passed a number of times, or recalled an advertisement in a magazine some time back. The seed of acceptance thus may have been sown weeks or months previously.

Duration of the Impression

The seed, however, must be nurtured. Its productivity depends upon the way it is combined with other elements. The first favorable impression may be expected to last only so long, the duration depending upon the intensity of the impression and the importance of the decision which must be made. When a large amount of money is involved, little things are apt to assume importance in a receptive mind. On the other hand, when the purchase is more or less casual because very small sums are required, and the commodity is bought frequently, no ordinary stimulus will last very long. The impact of any message, however disseminated, is apt to be light—hence of temporary power.

In measuring sales impulses, it is apparently not necessary to go back to the earliest stimuli, but for slow turnover commodities, it is advisable to go farther back than ordinary memory serves. What actually sells a slow-moving item is often a long series of stimuli of different kinds. Rapid-turning lines seem to be sold either by a stimulus close to the time of purchase, or by

RADIO AND SALES—Continued

a repetition of stimuli, or by a combination of the two. In both cases *regularity of exposure* to one or more stimuli apparently plays an important part. If it were necessary in every case to trace the very first buying impulse, then the time of "incubation" would be a very difficult problem.

Separation of Sales Influences

Now, in this need for *regularity of any given stimulus (or set of stimuli) to produce regularity of purchase*, we have a clue to the separation of the different sales influences, because in an individual case only certain influences are regular. One of these is the product itself. If its performance is completely satisfactory at an acceptable price, then the product is its own salesman. If a change is made in the product or in its price, then the incubation period for that stimulus starts as soon as the change is known to the consumer.

The first job in the separation of sales influences is to divide off the constant influences from the variables. The product sells itself only in repeat sales. The first "sale" may be a free sample, but if the sample is used, then sampling (a form of advertising) was responsible. In the case of repeats, the sales influence of the product is normally a constant. If it is changed in some considerable respect, then it becomes a variable.

So also with price, packaging, distribution. So long as there is no change, the influence of each of these is a constant.

Reducing Variables to One

Variables occur most often in some form or forms of promotion. Some of these forms run along month after month, even year after year, in about the same manner. *When it happens that all the sales influences are constant except one, and consumption factors are unchanged, then rises or declines in sales appear to be brought about by that one factor.* In that case, it is frequently possible to measure the effectiveness of that one influence by observing the sales curve before and after the change has been made. The task, of course, is still simpler when only one form of advertising is used.

Unfortunately, however, the question of constant versus variable cannot be confined to any brand being studied. In the tug of war between brands, Brand A may rise or fall without a change in any sales or consumption factor. A competitor may put on a drive, cutting into the sales of Brand A. Or the competitor may seriously weaken his own activity, thus by default permitting Brand A to forge ahead. It will readily be seen, for example, that Cities Service sales may rise because another oil company withdraws from key locations, or raises its price, or lowers its quality, or weakens its advertising campaign.

The second job in sales influence separation, therefore, is to find areas in which all of the principally competing brands have just as many constants, and just as few variables, as possible.

The third job in measuring radio effectiveness is to find in those areas *two groups of people which are alike in all respects except one.* Group A has definitely been exposed to the radio programs for this particular brand, and Group B has definitely not been so exposed. Both groups are divided the same way as to city-size, income level, availability of dealers and service, price, competitive factors, and exposure to other forms of promotion. Thus, the only point of difference becomes exposure to the program.

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Isolation of Listeners Only One Step

But this does not complete the job. If it should happen that the Exposed Group shows a better competitive picture for the advertised brand in terms of brands on hand or recently purchased, we still are unable to evaluate adequately the effectiveness of the program. We do not yet know exactly what the program has accomplished. The only final answer lies in a more detailed study of the relationship between listening and purchasing.

What is the program intended to accomplish? And how much could it reasonably be expected to accomplish? Before we begin forming opinions on effectiveness, certain basic facts must be recognized:

1. *We probably can never take the full measure of effectiveness.* The program affects more people than just those who listen to it. It may impel dealers into greater activity either through their radio sets or through salesmen's portfolios and other merchandising. It may create word-of-mouth endorsement for a product. Thus, a program has "passed-on circulation" similar to that of a magazine. Contest results indicate that many non-listeners send in entries, impelled to do so by a recommendation.
2. *The program usually cannot take the full credit for a sale to a listener.* Nor can any single broadcast normally be expected to produce much in the way of active buying stimulus. Barring a special offer of some kind, the actual sale is apt to result from a combination of factors—at least from a series of stimuli of the same kind.
3. *In view of these first two points, effectiveness measures will probably never be absolute*—certainly not until techniques can be developed much further. Instead, they must be considered in terms of what we call "increments." In loose terms, an "increment" is something added on by a given circumstance. In this case, the circumstance of listening to the program would be expected to add to the listener group some increment over and above what would be found in the non-listener group.
4. *The program can only add new customers if there are new customers to be added.* If a brand is near its saturation point in customers, then less can be expected of radio than would be the case if there are new markets to develop.

The cold light of facts, therefore, dictates that for many programs the *non-listener group* will make a good competitive showing for the brand under consideration, and the standing of the listener group may not be enormously greater. In one study a long-established staple was found to be used by over 80% of the people who could not have heard a recent program for that staple. Obviously, the increment added by the listeners could not bring the figure much higher than 85%.

How, then, can radio (or any advertising) justify large expenditures?

Rate of Listening and Rate of Purchase

The answer lies in the relative frequency of purchase of the advertised brand. The ideal measure of effectiveness seems to lie in the timeliness and frequency of the stimulus, in relation to time and frequency of purchase.

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All of this boils down to some means of asking two questions:

1. When and how regularly have you bought this commodity, and each brand of it?

2. When and how often have you heard the program?

That is the information desired, but the actual technique is not so easy.

In those cases where we can establish the fact that so many listeners began hearing the program recently, and began buying the brand still more recently, the known incubation period provides a good indicator of effectiveness. But many brands have been bought over a long period of time—off and on, or with some degree of regularity. For these the time factor by itself gives little help in measuring sales results.

The crux of the problem of effectiveness in most cases appears to be found in a measure of this degree of regularity of purchase. Suppose we find that Mrs. Jones, a regular Charlie McCarthy listener, buys coffee four times a month, and that her rate of buying Chase & Sanborn coffee is three times a month, and that Mrs. Smith, a non-McCarthy-fan, also buys coffee four times monthly, but Chase & Sanborn only once a month. Both listener and non-listener are Chase & Sanborn customers. The program could not make Mrs. Smith a customer because she already is one, but it might make her a *better* customer. If we could find an indicator of *buying frequency* and *listening frequency* in *two groups otherwise similar*, we would come much closer than ever before to a measurement of the power of radio. The next step would be to use this indicator to evaluate results with different types of programs, different times of the day, and so on.

Today's big job for radio insofar as rapid-turnover lines are concerned, is to accelerate Consumption Turnover of the advertised brand. To accomplish that purpose, the sponsor selects the best time of the day, duration of the program, number of times per week, program type, talent, station list, and so on. His object is not so much to reach large numbers of people occasionally, but to reach *in his specific market the maximum number of listeners who will hear his sales message attentively*.

Field Technique

How can frequency of buying, and frequency of attentive listening be determined?

The first requisite of any technique for this purpose is that by some means each consumer in the sample will be reported on accurately for a period of weeks. Ideally, this means what is known among marketing research men as a "static sample." We would like to have regular reports on the same people week after week, and month after month. But that is easier said than done.

The first difficulty is that in comparing listeners and non-listeners, all factors must always be alike in every respect except the act of listening. But people will be exposed to different conditions from time to time. They will read different magazines from one week to the next, shop in different stores, and so on. This difficulty can be overcome only by samples large enough to allow for these variables.

Second, the number of people buying a commodity at any one time usually will be small, and the number of people buying any given brand at one time will be much smaller. The number of people hearing a given program and also buy-

RADIO AND SALES—Continued

ing a given brand will be very small indeed per thousand families. There are several possible answers to this problem:

(1). Brands on hand in the home may be counted—the so-called bath-room or pantry-shelf inventory. But inventories normally do not show consumption turnover. Thus, a box of Jell-O or a can of soup may remain on the shelf a long time without use. If Campbell's stays on the shelf and Hormel's gets used up, then somewhere along the line Hormel has done a better job.

(2). The sample can be increased to the necessary point, however large that may be.

(3). Purchase can be measured over a longer period. The number of purchases over a month would be greater than the number over a week, or for a given day. If the interviewing method is used, then the length of the period is circumscribed by the number of days or weeks the memory can go back. For slow-turnover items, the memory can go back farther than it can for fast-moving, low-priced articles. Sometimes it is possible through some sort of inducement to arrange with purchasers to keep records.

The third difficulty is the fact that people subjected to the same interview at regular intervals are apt to become unduly conscious of their purchasing habits, and therefore atypical.

For these and other reasons, the opinion of research men divides into two schools—one for the static sample, and one for changed samples of similar composition. Those in the latter groups argue that as more people are covered with several samples over a period, the results can be accumulated for more detailed analysis. They claim the average frequency of purchase can be established with a very few repeat calls over a period of a few weeks, and that similar averages can be obtained satisfactorily for like groups at any time.

Frequency of exposure to the radio program itself can be established in several ways. The same people may be called upon repeatedly. Or one interview can sometimes cover several preceding programs if the programs are adequately described. Or the mechanical recorder can be used. The recorder provides the desired running record of all set use over a long period. On the other hand, it does not show who was listening, or whether the listening was subconscious or attentive. In the frequent cases where recorder tapes show sets tuned to the same station for hours at a time, the probability is that very little, if any, attention was being paid. And if the set was used by a child, for example, then there is little opportunity for the commercial to get in its work unless the product or offer appeals specifically to children. In measuring sales effectiveness the comparison should be between actual listeners and non-listeners. So a decision must be made in individual instances among several methods, no one of which is perfect. For certain purposes best results can be obtained by a combination of methods.

Technique for Slow-Moving Lines

For slow-turnover products, different techniques must be used. Here the function of the program is very different. In the case of fast-moving items the program commercial endeavors to impel almost immediate buying action, with little regard for what any other sales force may accomplish. But for many slow-moving items the program commercial frankly recognizes that it cannot

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do the job alone, and cannot do it quickly. Its job, therefore, is to build up the highest degree of acceptance, the most favorable state of mind, and in doing so a number of other sales forces are usually required over a period. Hence, the job of effectiveness measurement becomes principally one of measuring *the degree of acceptance*, not so much that of tracing actual sales. States of mind are formed over a long period, but ordinarily can be measured at one time, if the time of measurement is right. Timing assumes considerable importance. Thus, if Mr. Brown has just bought a new Buick, his degree of acceptance of the Studebaker is of little help in measuring the value of the Studebaker program. On the other hand, that state of mind would have been very important two weeks ago when the purchase was about to be consummated. *In the interview on slow-turnover goods, therefore, it is desirable to include some question which will bring out the nearness of the next purchase.* Progressive analysis of results according to months, or other calendar units distant from estimated purchasing time, can show the degree of acceptance at any point along the line.

The methods by which states of mind are measured are diverse, and must be determined in individual instances. They are likely to be qualitative in nature, dealing with attitudes and determining the basis for those attitudes by a series of detailed questions. Often they may employ the tricks of the psychologist in developing associations of ideas. For the separation of listeners from non-listeners, programs for slow-turning items require no major difference in technique from that of the other programs, except that regularity of listening over a period of at least several weeks is even more important.

V

SOME CONCLUSIONS

The need for effectiveness measurement seems to be clearly recognized, but the complexity of the problem has been frightening. In personal conversation on the subject, one often hears: "It would be a wonderful thing to have, but I don't believe it can be done." Here and there a pioneer has stepped out and refused to concede the impossibility of the task. As the experiments have moved along, some of the complexity has been dissipated.

Today we know fairly definitely that some types of studies can be made accurately. Listeners can be separated from non-listeners, and if radio is the only advertising medium, a meaningful analysis of the behavior of the two groups can be made for fast-moving items. The question now is, how much further is it possible to go?

Where different types of promotion are used and many sales factors involved, the power of radio may never be completely separated. But for many companies, it seems to be possible to set up two groups of consumers agreeing in every respect except one—exposure to the radio program. It is possible to measure the purchases and attitudes of these two groups, and to observe how the competitive position changes when radio comes into the picture. For rapid-turning items, it is feasible to record the frequency of purchase of a commodity and the relative frequencies of purchase of

RADIO AND SALES—Continued

each brand. And it is equally feasible to record the frequency of listening to the program.

This new approach to effectiveness measurement overcomes many difficulties met in the past. It has not been possible in many cases to trace the start of purchase by Mrs. Jones of a given brand, and if such start preceded the hearing of the program, then that program did not make the new customer. Still more difficult has been the tracing of the actual buying motive, and the part radio played in it. Even immediately after a purchase has been made, the customer often cannot say with certainty just what made her buy a given brand. As days and weeks after a purchase pass by, the customer is less and less aware of the impulse that played the greatest part. But the use of the frequency factor for fast-moving lines, and attitude tests in slow-moving categories, somewhat erases these difficulties.

Many problems are ahead. If we are on the right track, we are a very long way yet from reaching our goal.

That age-old stumper, the priority of the hen or the egg, has its counterpart in our problem. If the listener group shows a better competitive position for the advertised brand than the non-listener group, some argue that this only means listening as a result of buying, rather than conversely. A proud possessor of a new Ford, they say, becomes a devotee of the Sunday Evening Hour. Whether that line of reasoning can be extended to soap, soup, coffee, and so on, we do not know. To obtain the complete answer, we probably need to go back to the time factor. If people generally should start listening after the product is bought, then the purchase may be responsible for the success of the program, rather than the other way around. The same principle, of course, applies to frequency. If listening frequency follows increased consumption turnover with a certain time lag, then perhaps the product sold the program.

Vistas

The road ahead does not open up to the point where we can sell time and talent contracts based upon dollar volume of sales results. But it does seem to be leading somewhere. Just as audience measurement has accomplished something on a relative-rating basis, so effectiveness measurement can go far with the principle of relating one thing to another in terms of increments.

Most probably there will never be any cooperative service of this nature, because each measurement is an individual matter, with its own set of problems. It is difficult to see how anything more than certain basic material can be supplied jointly to different companies. To cover all the many variables that would arise in any complete study jointly undertaken, a sample of almost prohibitive size would seem to be necessary. Scope would have to be restricted to those cases where similar techniques could cover a number of programs.

There is much to keep the laboratory busy—plenty of work for the technicians. But the importance of the need justifies a great deal of effort.

A Portfolio of Radio Sales Effectiveness Studies 1930—1940

Presented in Cooperation with the Following:

Columbia Broadcasting System

Crossley, Inc.

C. E. Hooper, Inc.

Hooper-Holmes Bureau, Inc.

National Broadcasting Co.

A. C. Nielsen Co.

Elmo Roper

(Who own the copyrights to this material)

These charts were especially designed by

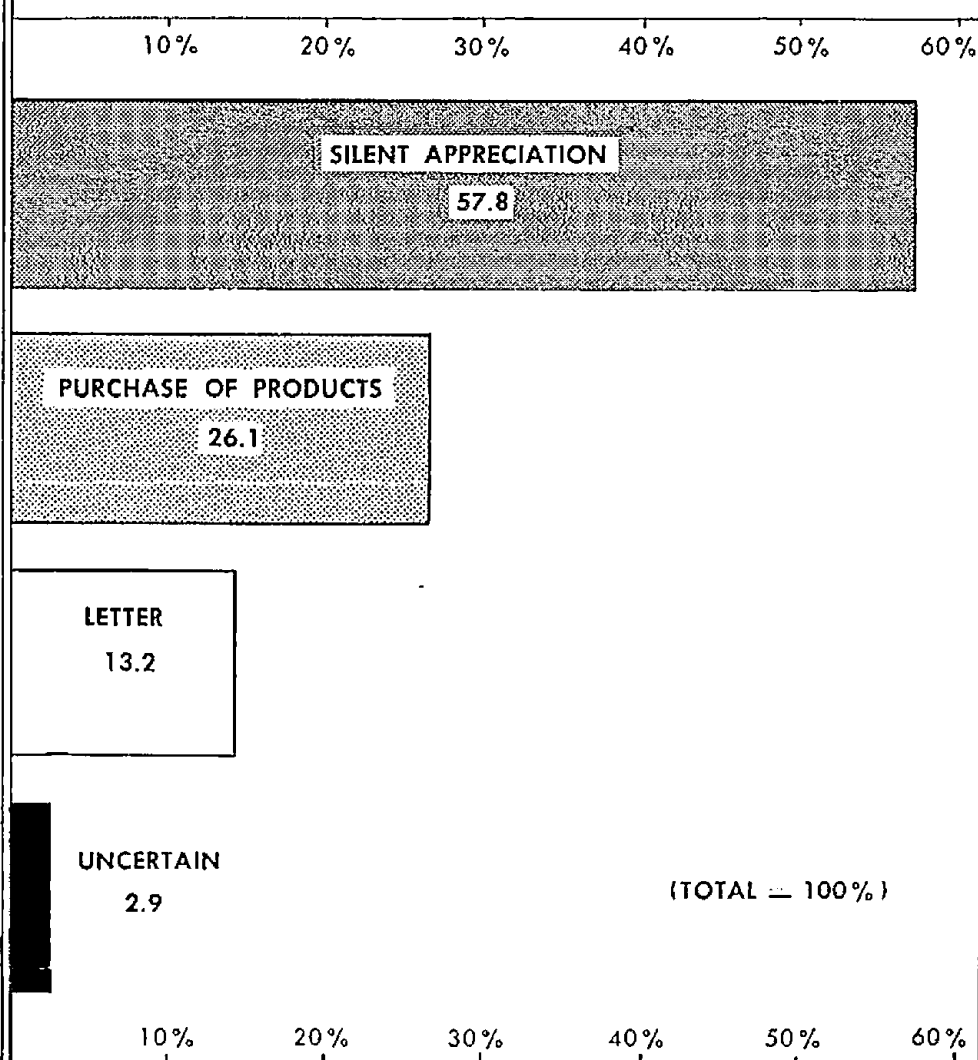
Arthur W. Thompson

Art Consultant, Variety Radio Directory

THE FIRST MAJOR RADIO vs. SALES STUDY

1930

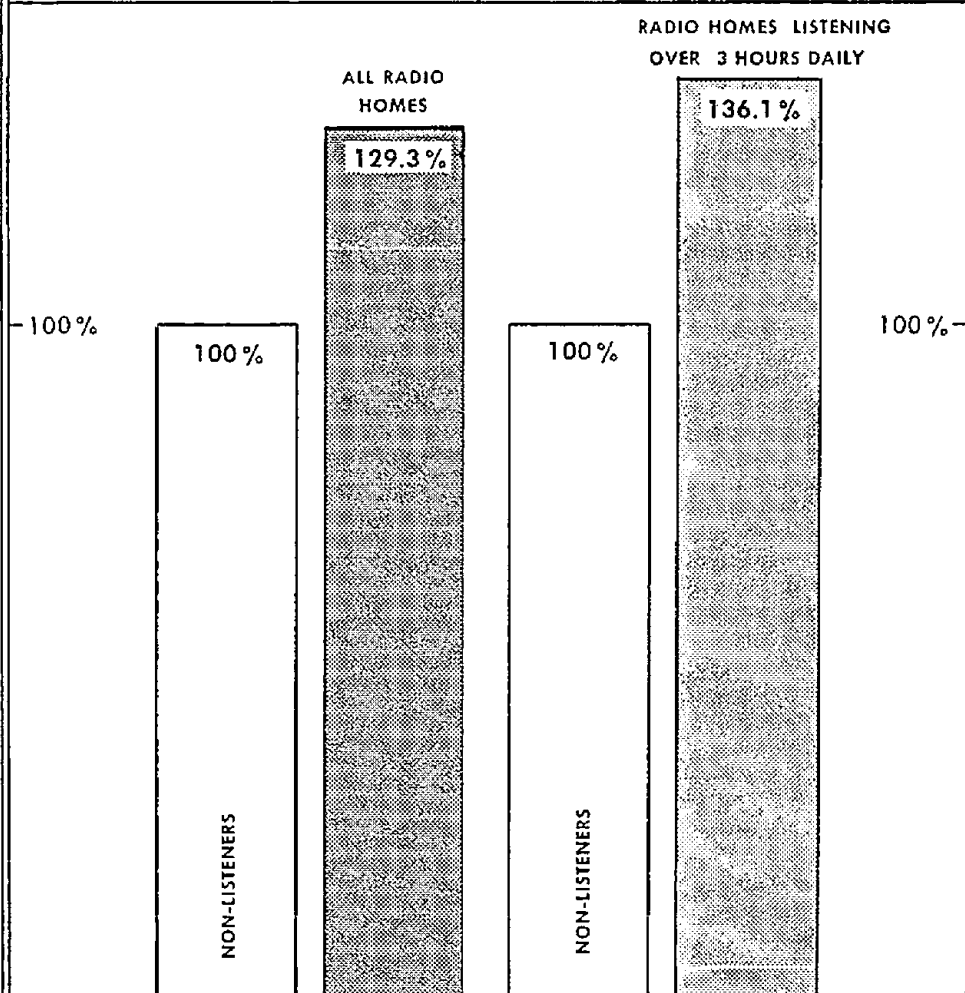
AN EXCERPT FROM A DOCUMENT PREPARED FOR
NBC BY DR. DANIEL STARCH. THE FIGURES BELOW
ARE IN ANSWER TO THE QUESTION: "HOW DO
YOU EXPRESS APPRECIATION OF PROGRAMS
PRESENTED BY STATIONS OR COMPANIES?"



THE SECOND MAJOR RADIO vs. SALES STUDY 1931

CONDUCTED FOR THE COLUMBIA BROADCASTING SYSTEM
BY PROF. ROBERT F. ELDER

SHOWING USE OF NINE CLASSES OF QUICK-TURNOVER GOODS
IN RADIO AND NON-RADIO HOMES

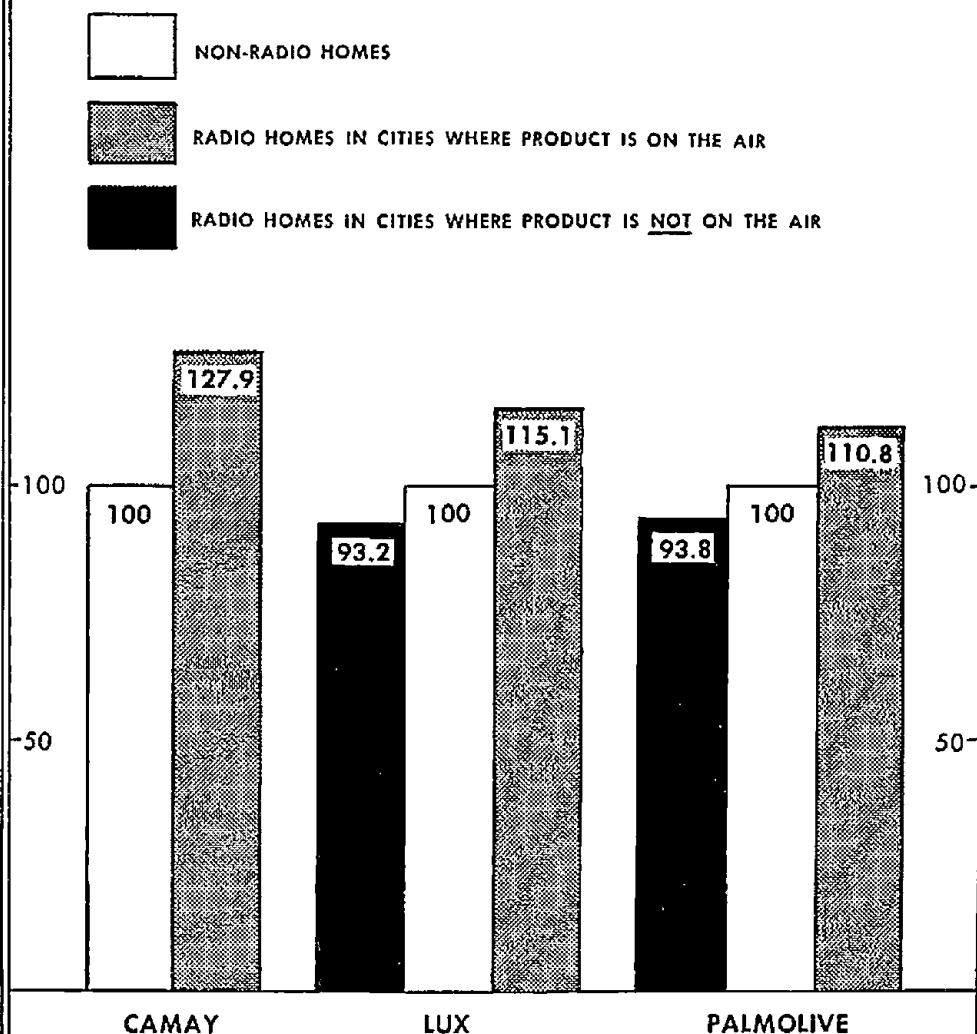


"THE MORE THEY LISTEN, THE MORE THEY BUY"

CBS — PROF. ELDER STUDY: 1931

RADIO AND ITS EFFECT ON TOILET SOAP USE

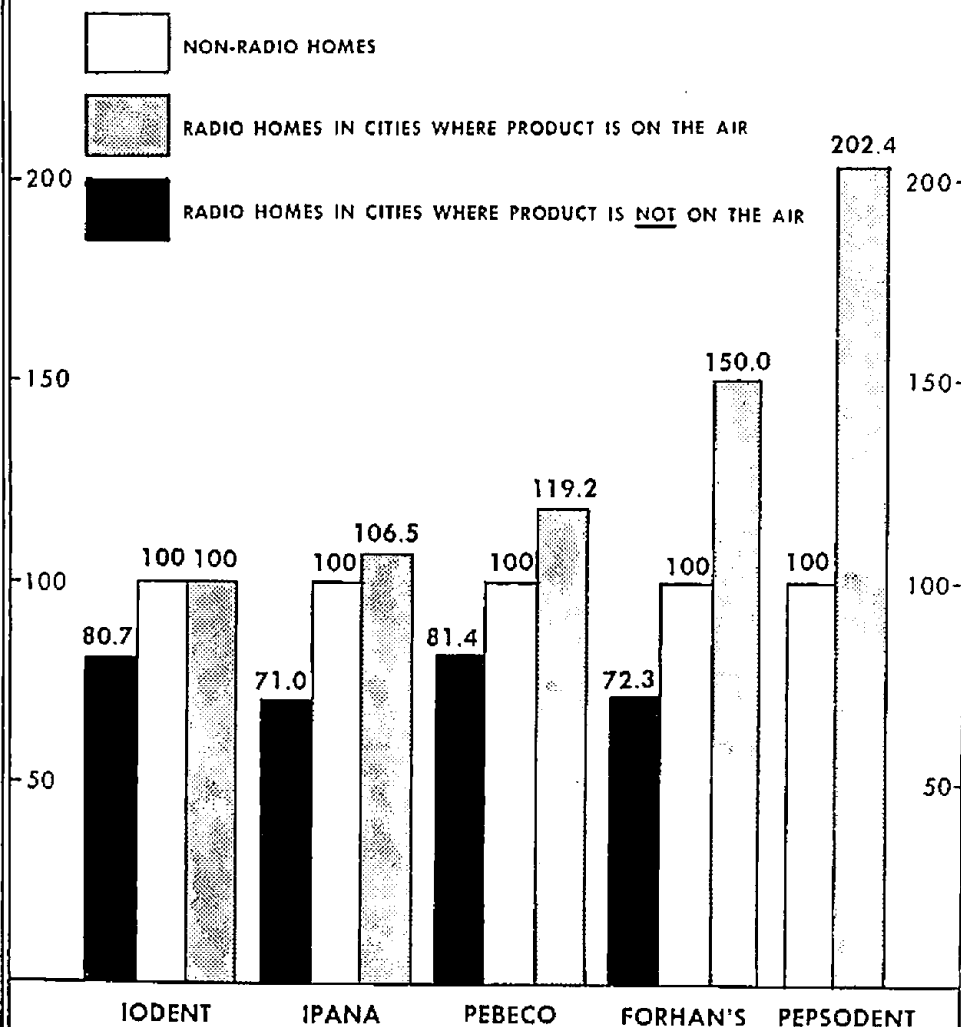
(RESEARCH METHOD: MAIL QUESTIONNAIRES)



CBS — PROF. ELDER STUDY: 1931

RADIO AND ITS EFFECT ON TOOTHPASTE USE

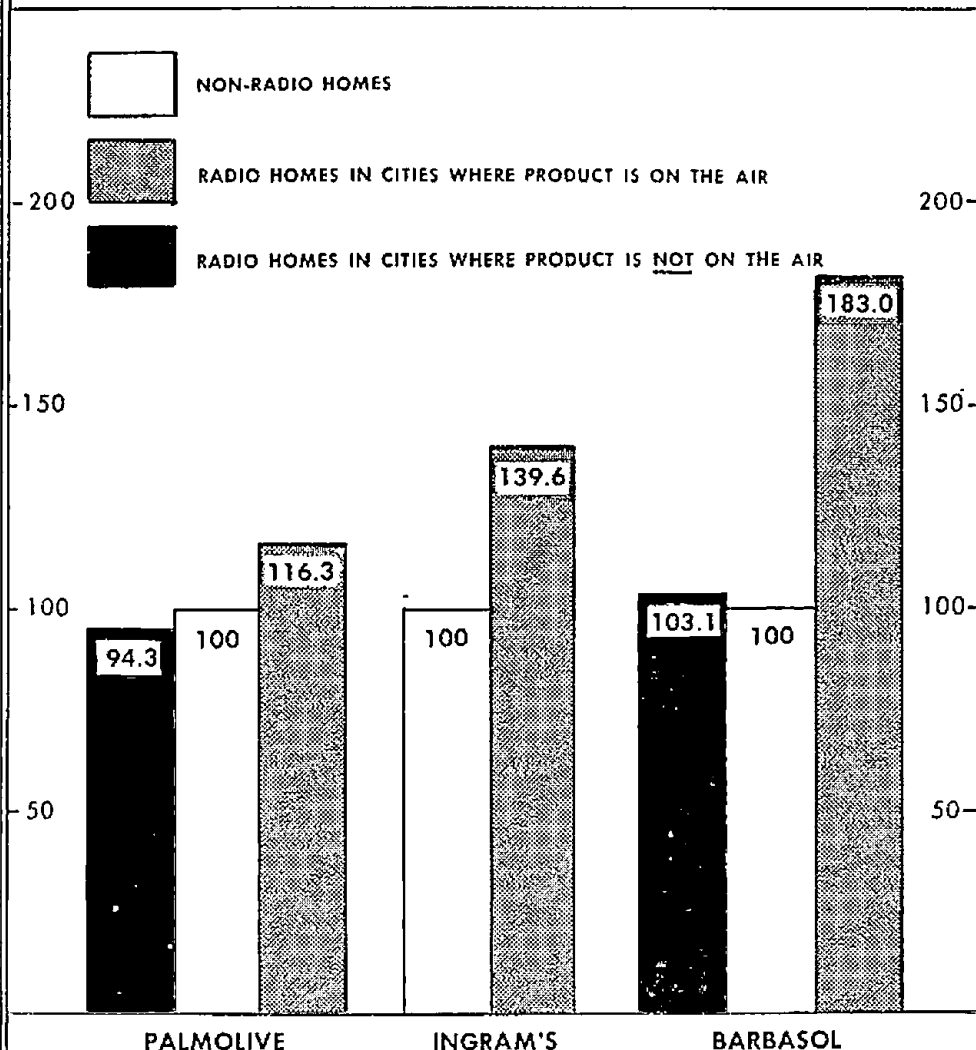
(RESEARCH METHOD: MAIL QUESTIONNAIRES)



CBS — PROF. ELDER STUDY: 1931

RADIO AND ITS EFFECT ON SHAVING SOAP USE

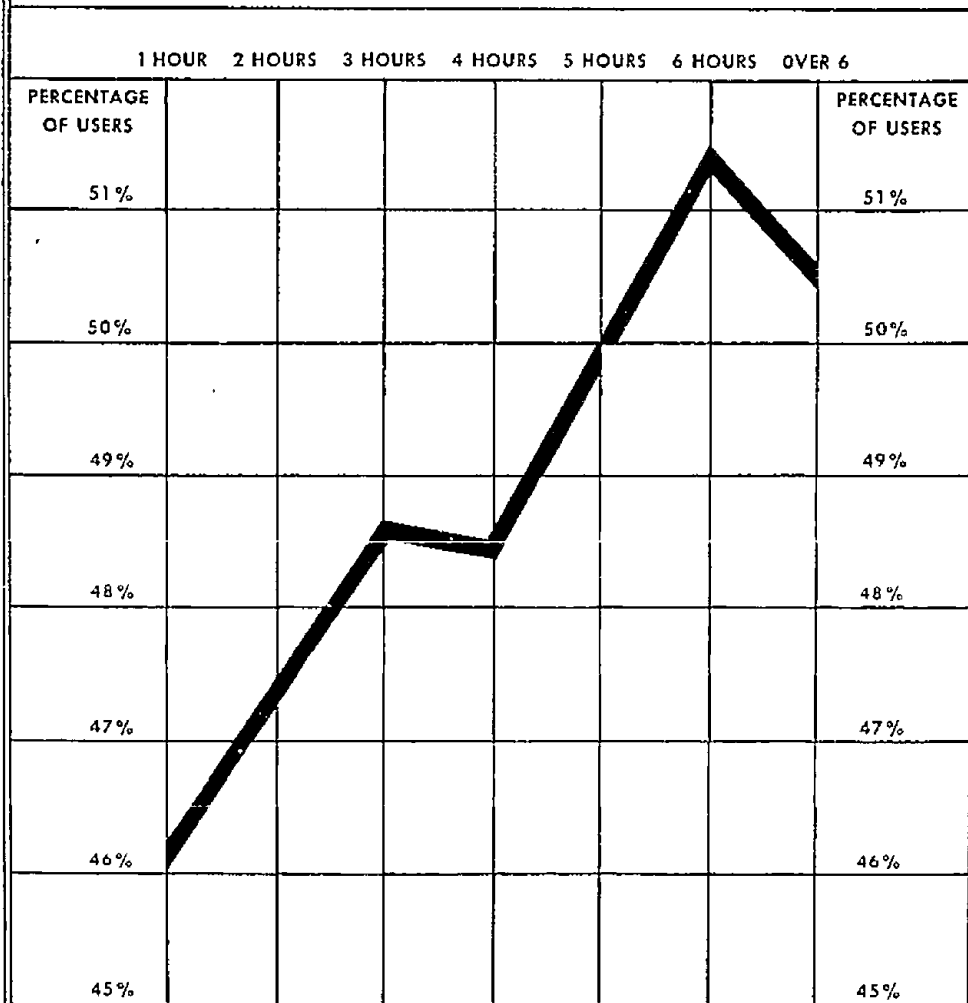
(RESEARCH METHOD: MAIL QUESTIONNAIRES)



THE THIRD MAJOR RADIO vs. SALES STUDY 1932

CONDUCTED FOR THE COLUMBIA BROADCASTING SYSTEM
BY PROF. ROBERT F. ELDER

SHOWING INCREASE IN USE OF RADIO-ADVERTISED BRANDS
IN RADIO HOMES AS LISTENING TIME INCREASES

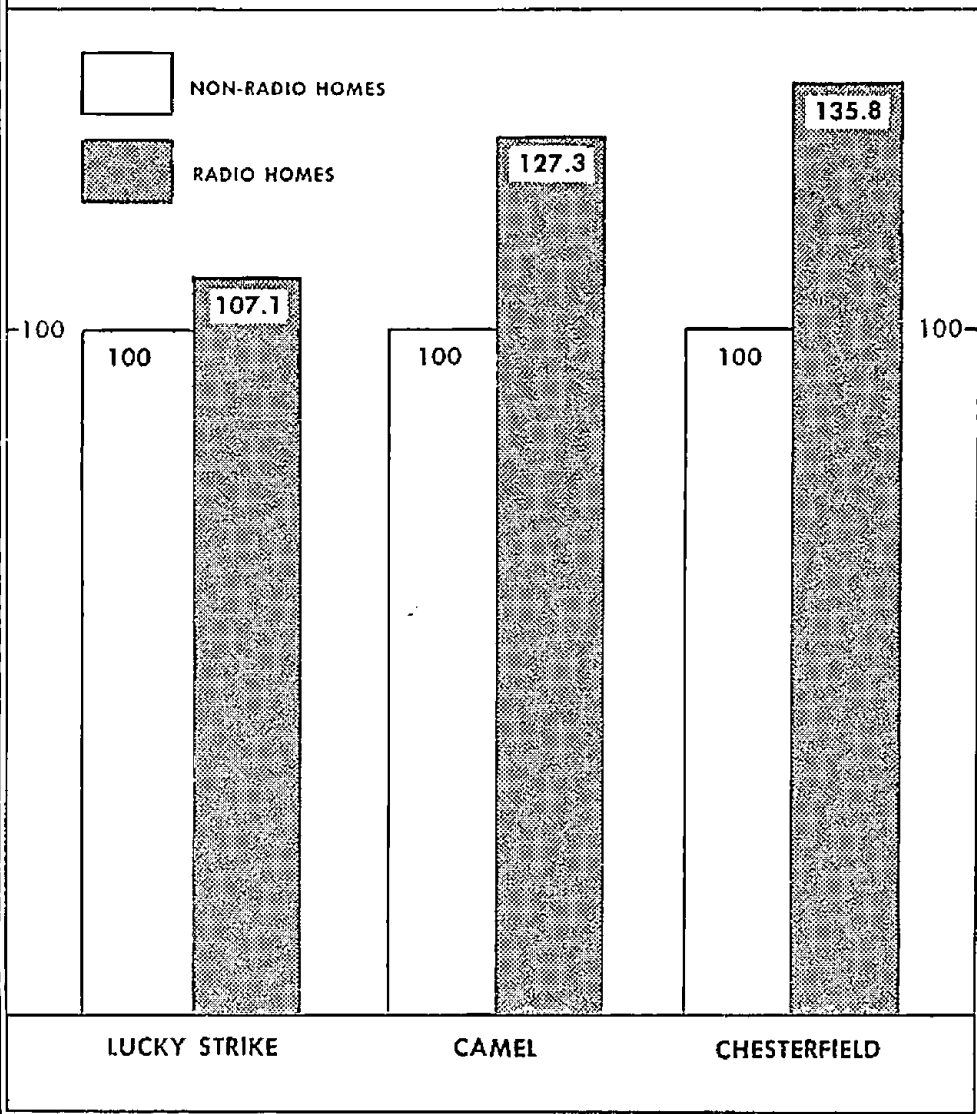


"THE MORE THEY LISTEN, THE MORE THEY BUY"

CBS — PROF. ELDER STUDY: 1932

RADIO AND ITS EFFECT ON CIGARETTE USE

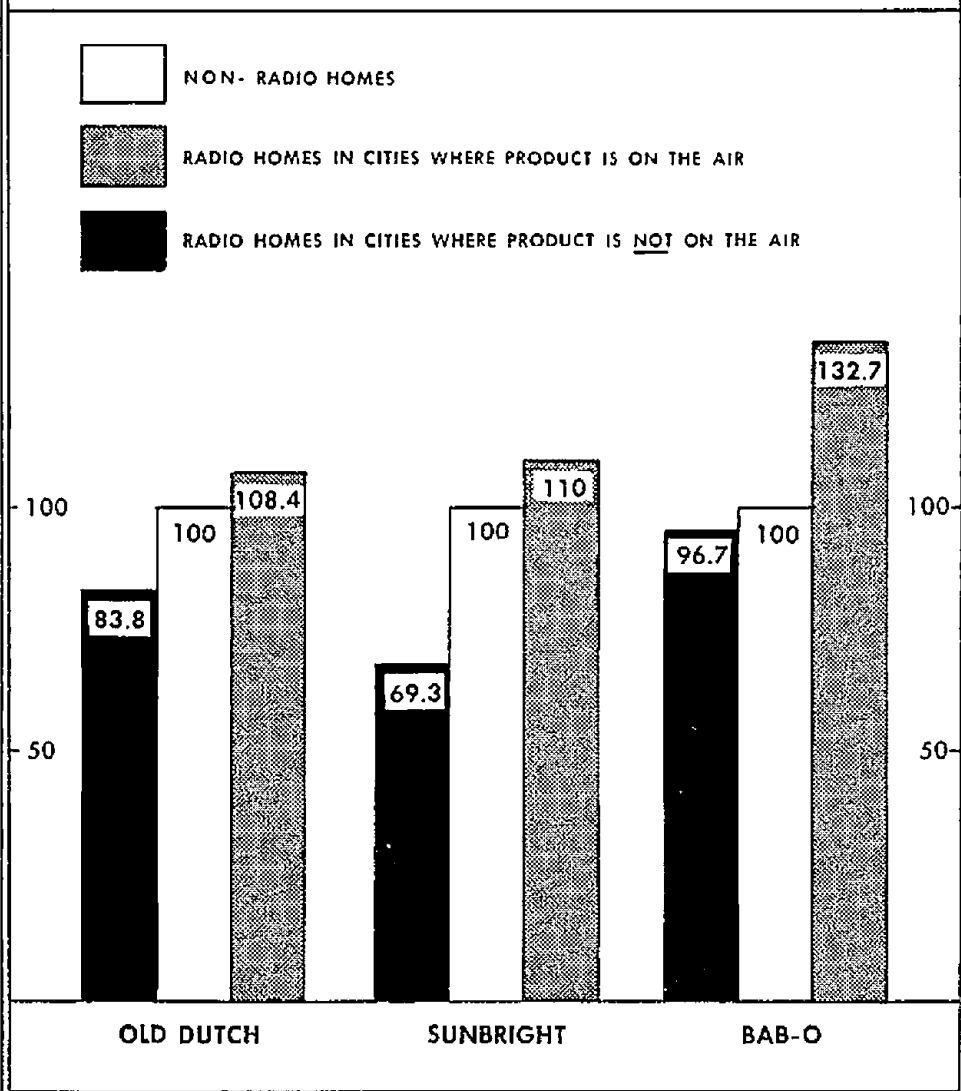
(RESEARCH METHOD: MAIL QUESTIONNAIRES)



CBS — PROF. ELDER STUDY: 1932

RADIO AND ITS EFFECT ON SCOURING POWDER USE

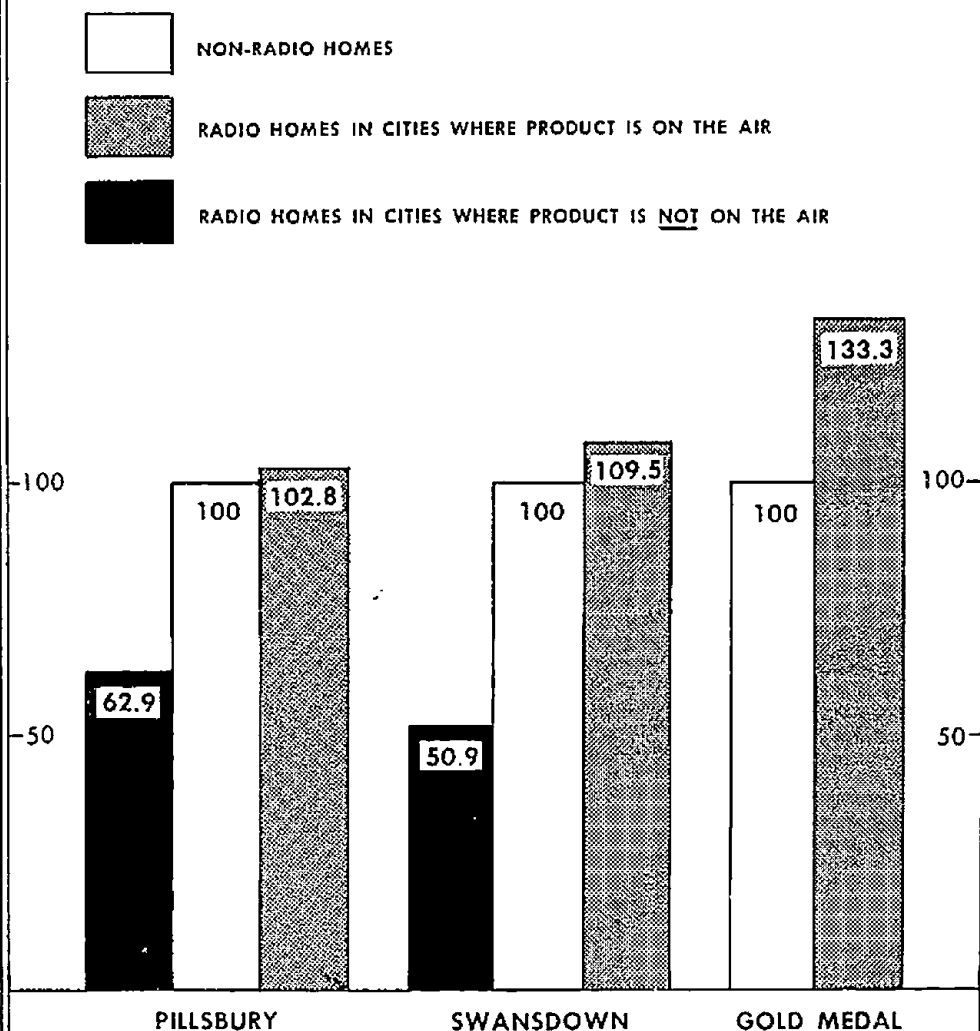
(RESEARCH METHOD: MAIL QUESTIONNAIRES)



CBS — PROF. ELDER STUDY: 1932

RADIO AND ITS EFFECT ON FLOUR USE

(RESEARCH METHOD: MAIL QUESTIONNAIRES)

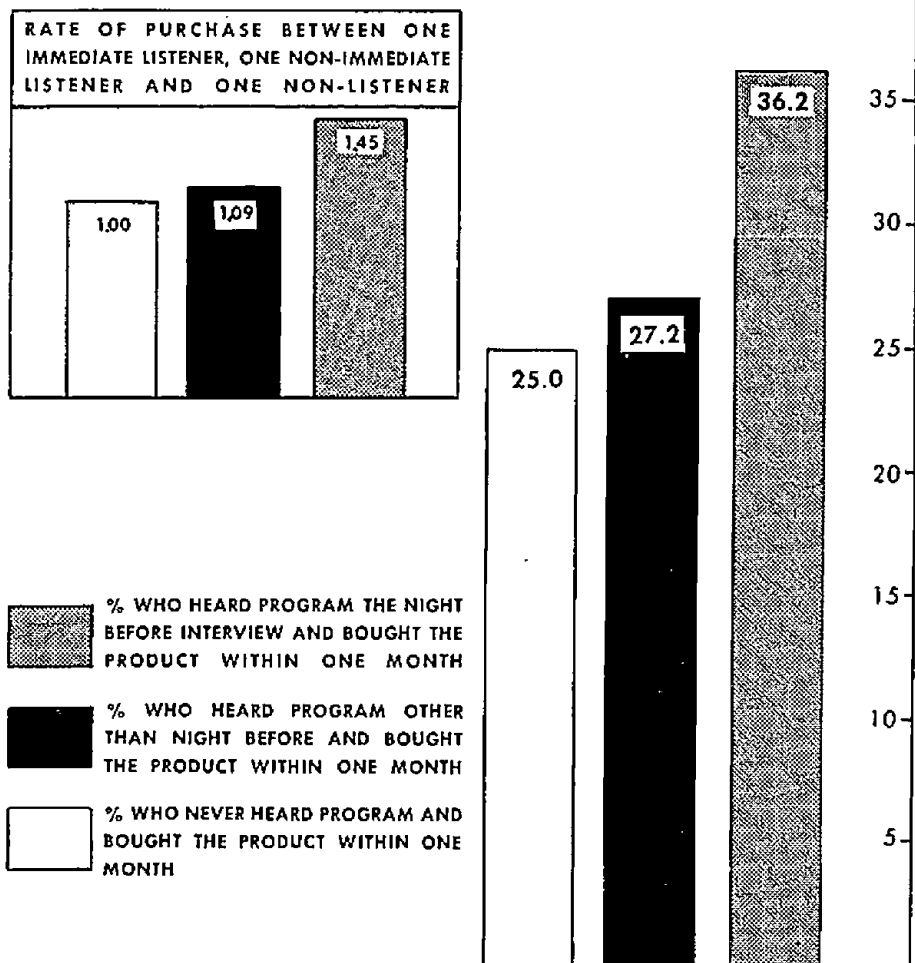


RADIO AND ROYAL GELATIN

PURCHASES: 1936

FROM A STUDY BY CROSSLEY, INC.

(RESEARCH METHOD: PERSONAL INTERVIEWS AND
SUBSEQUENT PHONE CALLS)



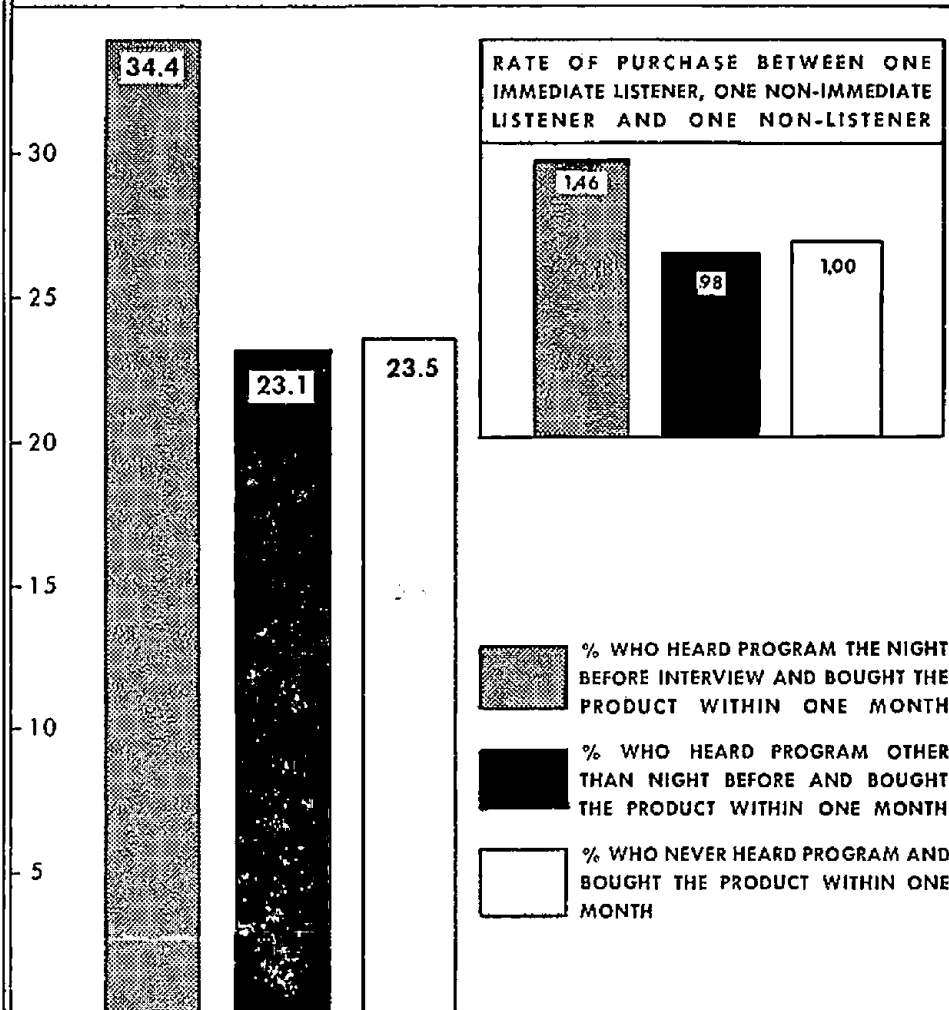
PROGRAM RATING = 21.3% (SET OWNERS = 100%)

RADIO AND CAMPBELL'S TOMATO JUICE

PURCHASES: 1936

FROM A STUDY BY CROSSLEY, INC.

(RESEARCH METHOD: PERSONAL INTERVIEWS AND
SUBSEQUENT PHONE CALLS)



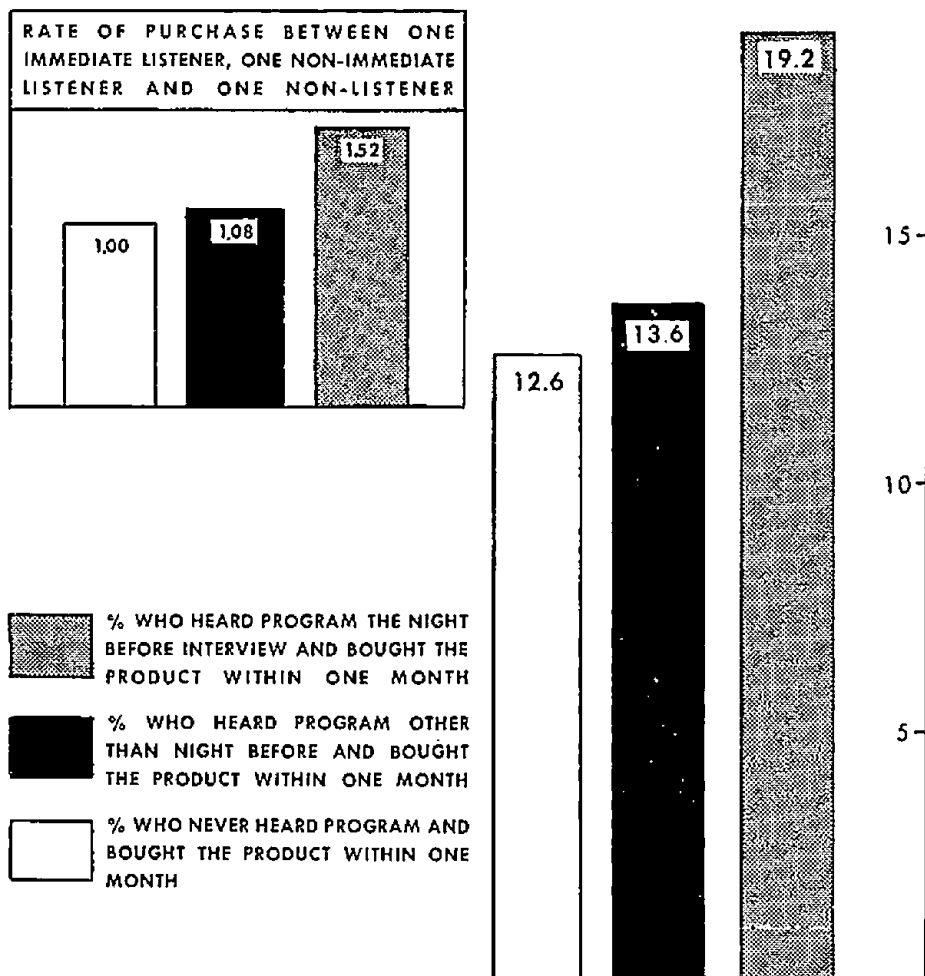
PROGRAM RATING = 25.7% (SET OWNERS = 100%)

RADIO AND LADY ESTHER POWDER

PURCHASES: 1936

FROM A STUDY BY CROSSLEY, INC.

(RESEARCH METHOD: PERSONAL INTERVIEWS AND
SUBSEQUENT PHONE CALLS)

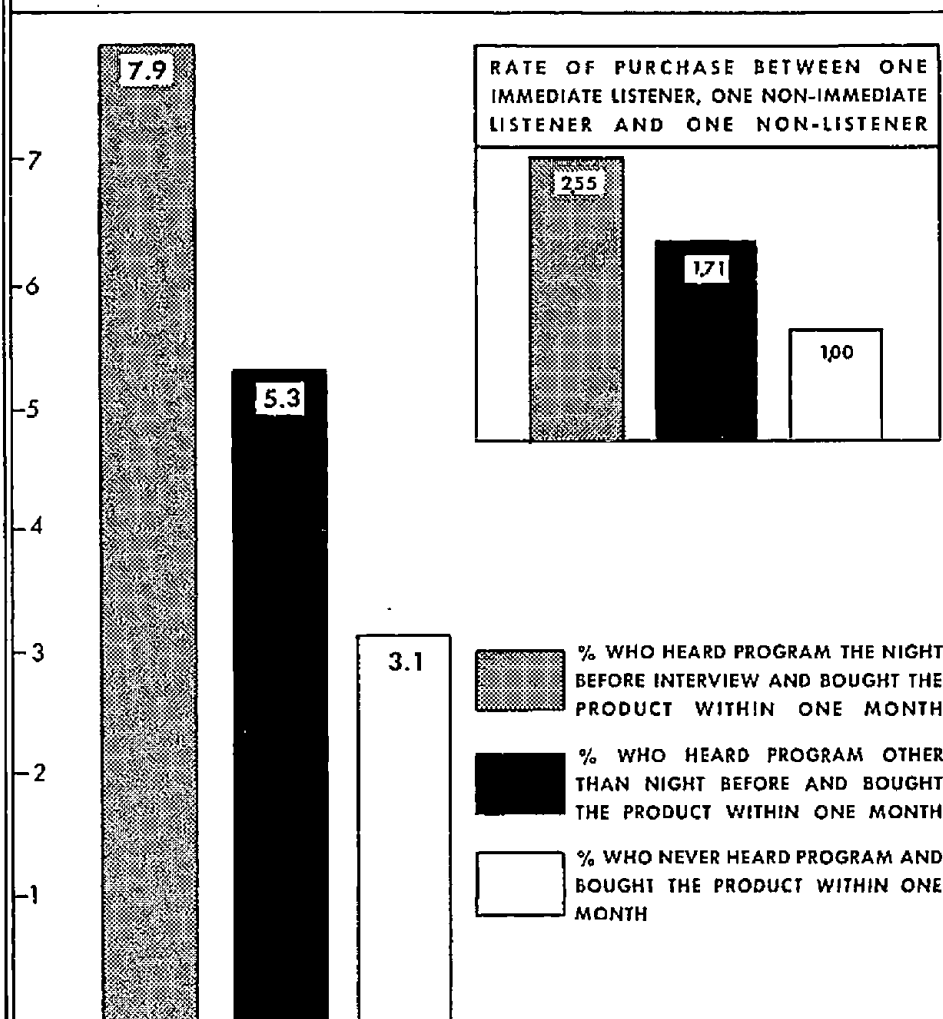


PROGRAM RATING = 18.8% (SET OWNERS = 100%)

PURCHASES: 1936

FROM A STUDY BY CROSSLEY, INC.

(RESEARCH METHOD: PERSONAL INTERVIEWS AND
SUBSEQUENT PHONE CALLS)



PROGRAM RATING = 23.4% (SET OWNERS = 100%)

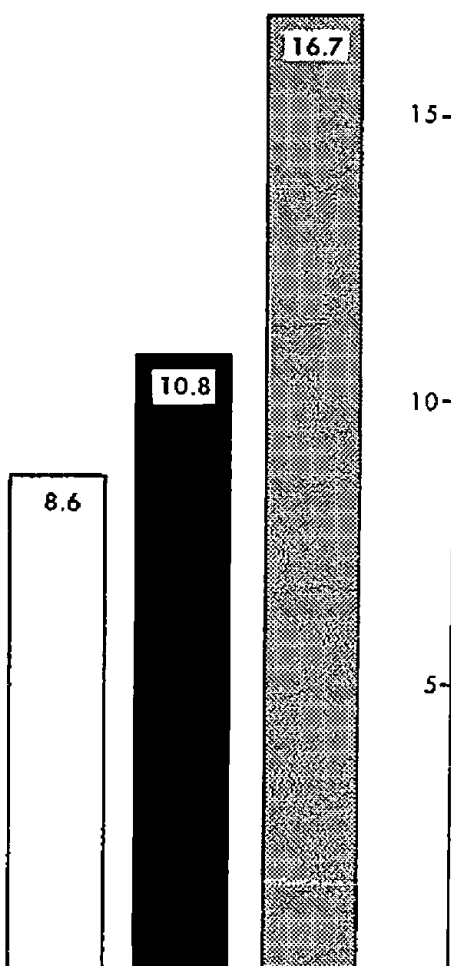
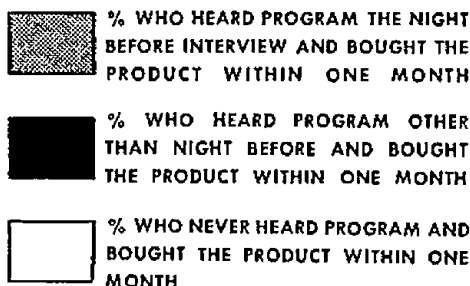
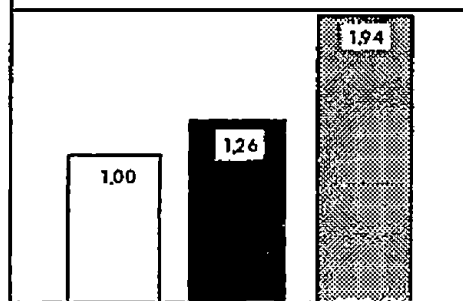
RADIO AND SLOAN'S LINIMENT

PURCHASES: 1936

FROM A STUDY BY CROSSLEY, INC.

(RESEARCH METHOD: PERSONAL INTERVIEWS AND
SUBSEQUENT PHONE CALLS)

RATE OF PURCHASE BETWEEN ONE
IMMEDIATE LISTENER, ONE NON-IMMEDIATE
LISTENER AND ONE NON-LISTENER



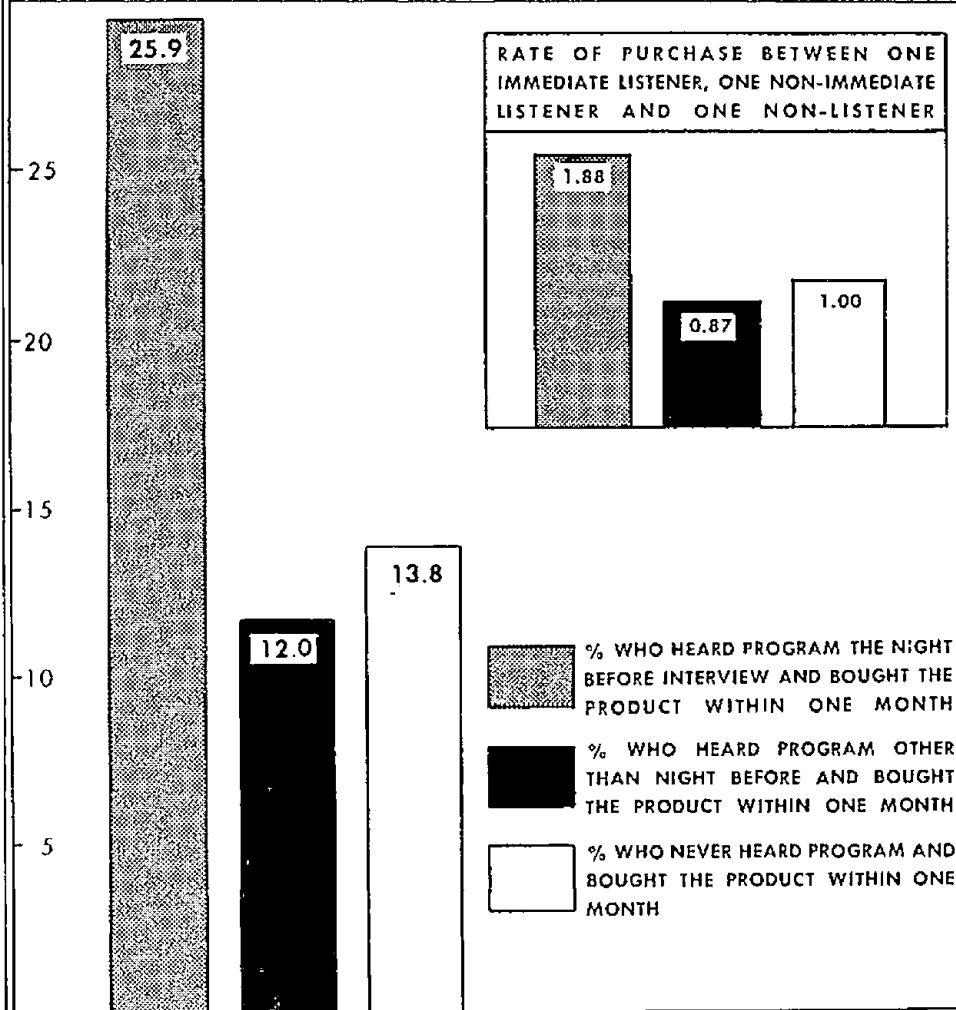
PROGRAM RATING = 10.0% (SET OWNERS = 100%)

RADIO AND LIFE SAVER

PURCHASES: 1936

FROM A STUDY BY CROSSLEY, INC.

(RESEARCH METHOD: PERSONAL INTERVIEWS AND
SUBSEQUENT PHONE CALLS)

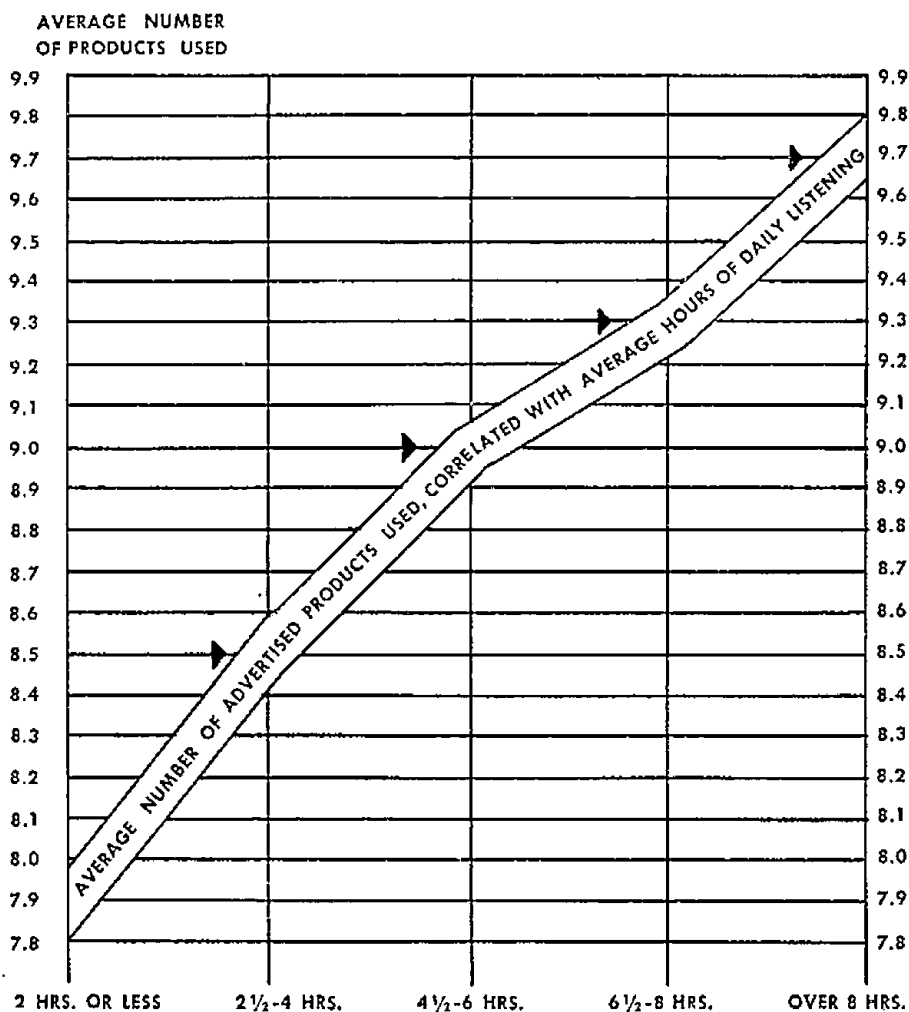


PROGRAM RATING = 3.0% (SET OWNERS = 100%)

RURAL LISTENING AND BUYING STUDY: CBS 1937-38

(CONDUCTED BY HOOPER-HOLMES BUREAU, INC.)


VIA PERSONAL INTERVIEWS, THE FOLLOWING PRODUCTS WERE CHECKED AND CORRELATED WITH AVERAGE HOURS OF DAILY LISTENING: TOILET SOAP; KITCHEN SOAP; KITCHEN CLEANSERS; CANNED SOUPS; CONDENSED MILK; CANNED TOMATO JUICE OR FRUIT JUICE; PACKAGED CEREALS; PACKAGED COFFEE; WRAPPED BREAD; TOOTHPASTE OR POWDER; FACE POWDER; LIPSTICK OR ROUGE.



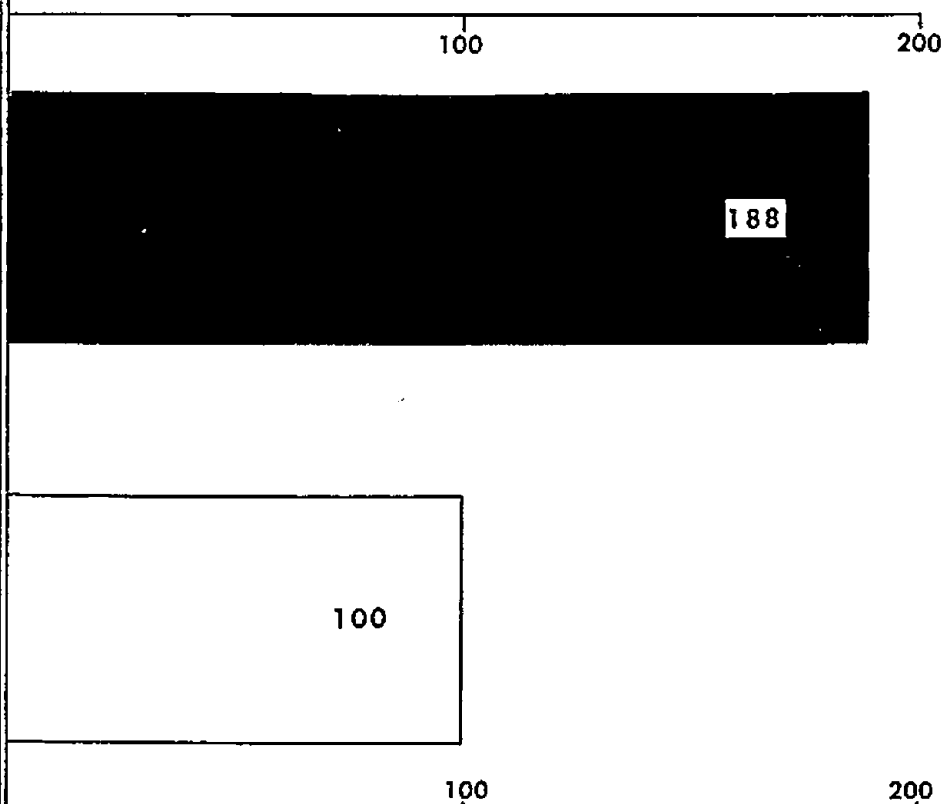
RADIO vs. DEALER SALES: CBS 1939

SAME FOOD PRODUCT AS ON FACING PAGE

(METHOD = STORE INVENTORY CHECKS)

 UNITS OF SALE PER WEEK IN AVERAGE
STORES IN NON-RADIO MARKET

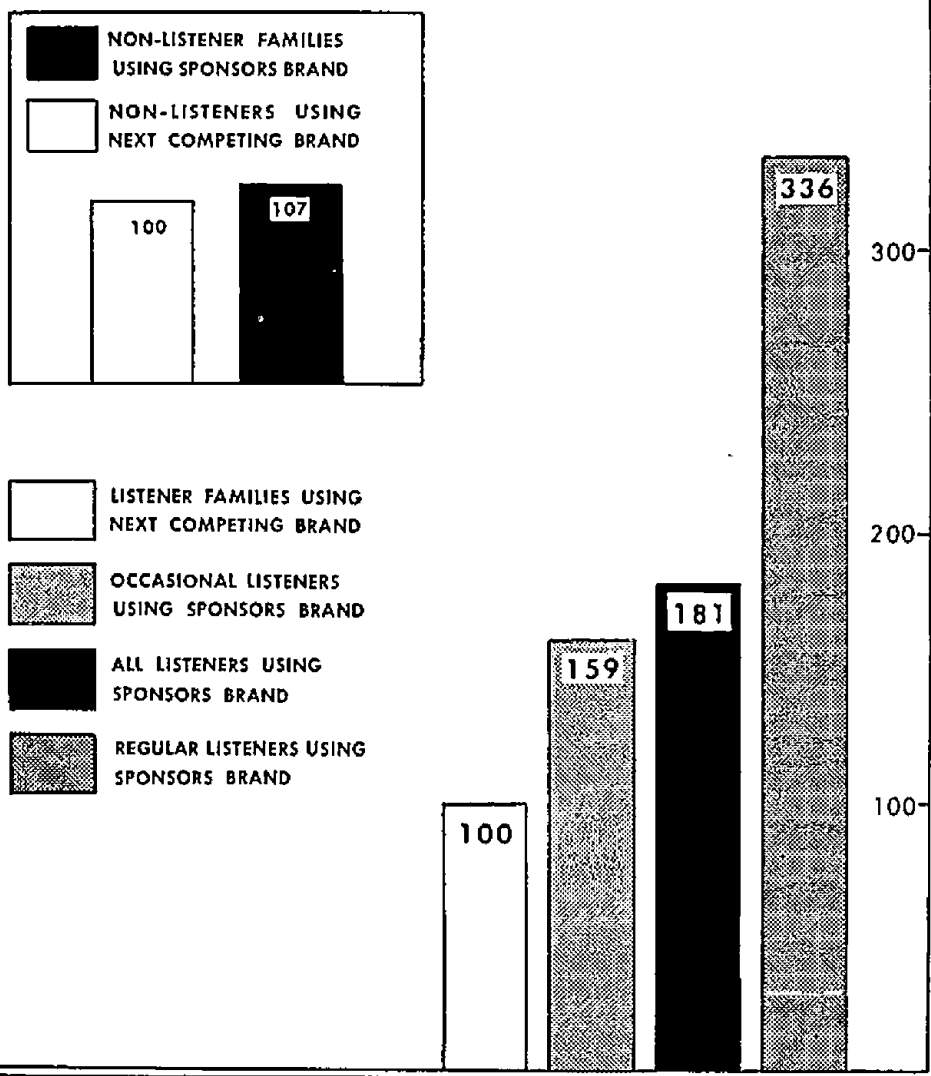
 SALE UNITS IN RADIO MARKET



RADIO vs. HOME USE: CBS 1939

A CERTAIN FOOD PRODUCT

(METHOD = COINCIDENTAL CALLS FOLLOWED BY INVENTORY)



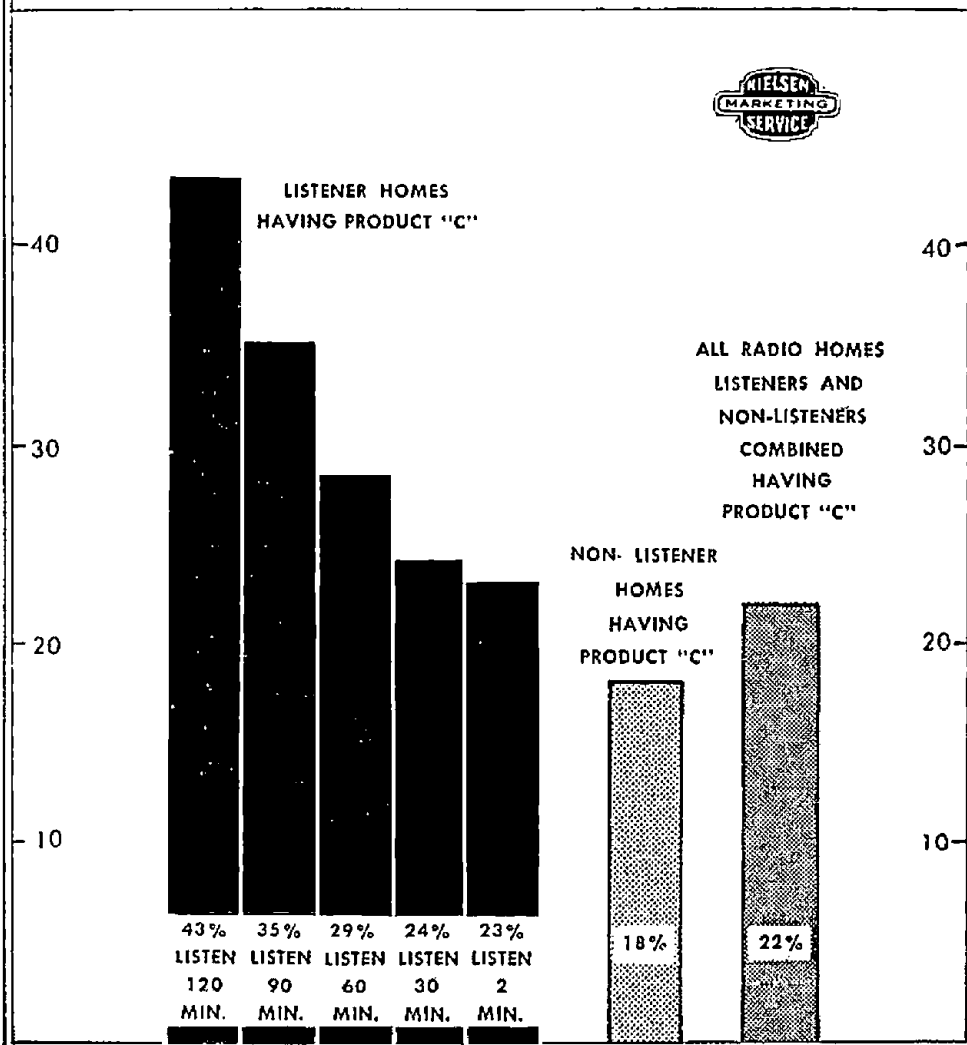
NIELSEN SERVICE

CORRELATION OF RADIO LISTENING AND HOME INVENTORY FOR PROGRAM "C"

CALCULATED ON MONTHLY BASIS

RESULTS BELOW PRESENT AVERAGES FOR 6 FOUR WEEK PERIODS

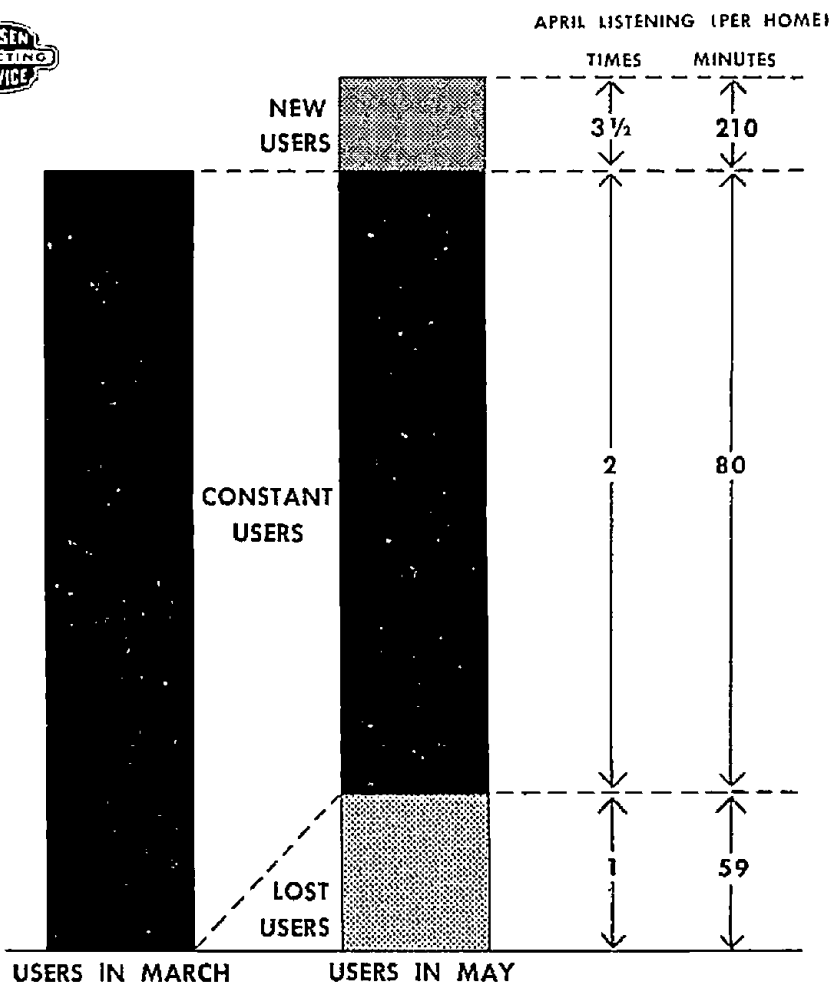
(METHOD: NIELSEN AUDIMETER AND INVENTORY)



NIELSEN SERVICE

CORRELATION OF LISTENING AND BUYING PROGRAM "B"

A PANEL OF HOMES HAVING PRODUCT B IN A CERTAIN MONTH, COMPARED WITH THE SAME PANEL TWO MONTHS LATER. IT WILL BE NOTED THAT NEW USERS OF THE PRODUCT LISTENED A TOTAL OF 210 MINUTES (OF A POTENTIAL 240 MINUTES) DURING THE INTERVENING MONTH, AND AN AVERAGE OF $3\frac{1}{2}$ TIMES TO THE FOUR BROADCASTS. ON THE OTHER HAND, THE LOST CUSTOMERS LISTENED ONLY 59 MINUTES DURING THE INTERVENING MONTH, AND AN AVERAGE OF ONLY ONCE TO THE FOUR BROADCASTS.

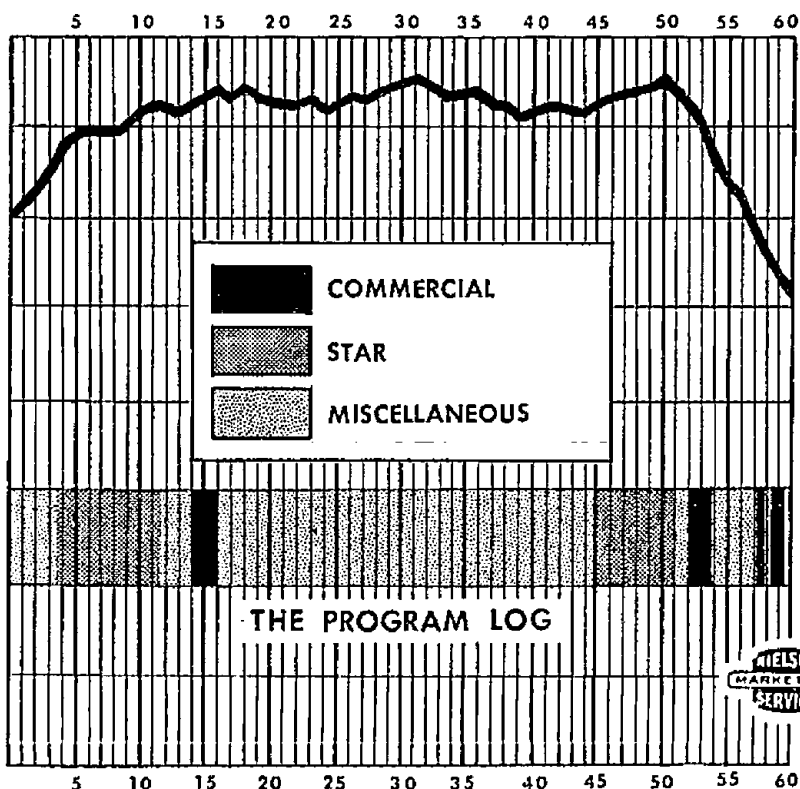


NIELSEN SERVICE

PROGRAM "A's" RADIO AUDIENCE

MINUTE BY MINUTE AUDIENCE IN PER CENT OF TOTAL RADIO FAMILIES

A FURTHER ESSENTIAL REFINEMENT IN MEASURING RADIO SALES EFFECTIVENESS IS TO DETERMINE WHETHER THE LISTENERS WERE ACTUALLY TUNED IN DURING THE TIME OF THE COMMERCIAL ANNOUNCEMENTS, OR ONLY TO THE ENTERTAINMENT SECTION OF THE BROADCAST. THE ANSWER FOR PROGRAM "A", SHOWN BELOW, WAS MADE VIA THE NIELSEN AUDIMETER. SUCH A CURVE CAN BE COMPARED TO THE PANEL OF HOMES STUDIED FOR USE OF THE PRODUCT.



NIELSEN SERVICE

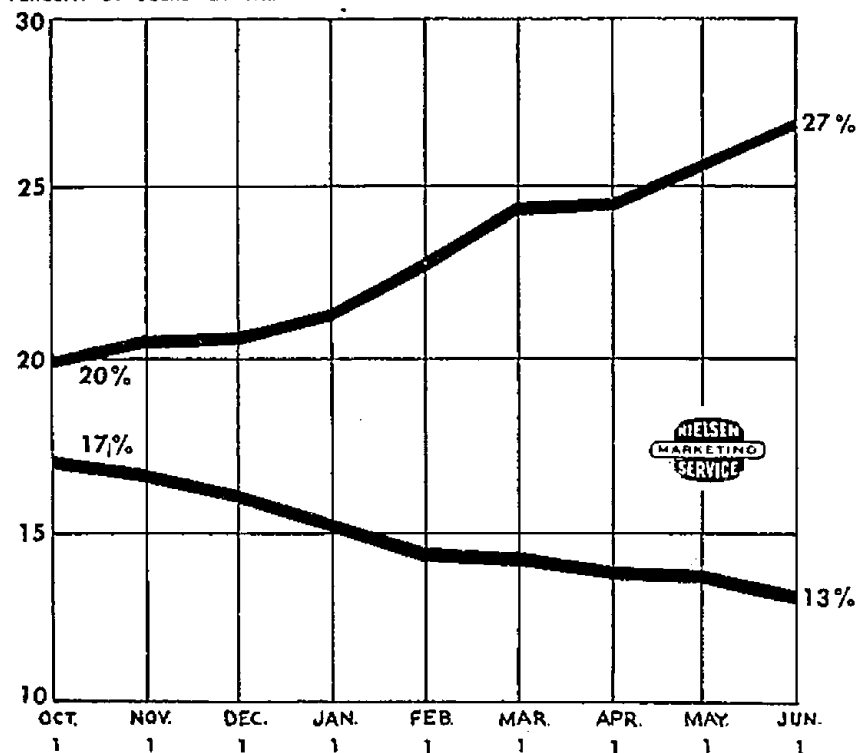
SALES EFFECT OF RADIO

HYPOTHETICAL CASE

IN THE FINAL ANALYSIS, THE TREND INFORMATION IN CORRELATING RADIO LISTENING AND BUYING IS THE IMPORTANT THING. AFTER A FEW MONTHS OF BROADCASTING, IT BECOMES POSSIBLE TO SEPARATE THE LISTENERS TO ANY PROGRAM FROM THE NON-LISTENERS, AND THEN DRAW TWO CURVES INDICATING THE PERCENT OF USERS AMONG THE LISTENERS VERSUS THE PER CENT OF USERS AMONG NON-LISTENERS.

IT IS ENTIRELY POSSIBLE THAT THE PERCENT OF USERS AMONG LISTENERS MAY BE LOWER THAN AMONG NON-LISTENERS WHEN A PROGRAM IS FIRST PUT ON THE AIR. HOWEVER, REGARDLESS OF THE LEVEL AT THE START, IF THE PERCENT OF LISTENERS AMONG USERS INCREASES FROM MONTH TO MONTH WHILE THE PERCENT OF LISTENERS AMONG NON-USERS DECREASES OR REMAINS CONSTANT, IT IS QUITE SAFE TO CONCLUDE THAT THE PROGRAM IS SELLING GOODS.

PERCENT OF USERS OF THE PRODUCT AMONG LISTENERS AND NON-LISTENERS.



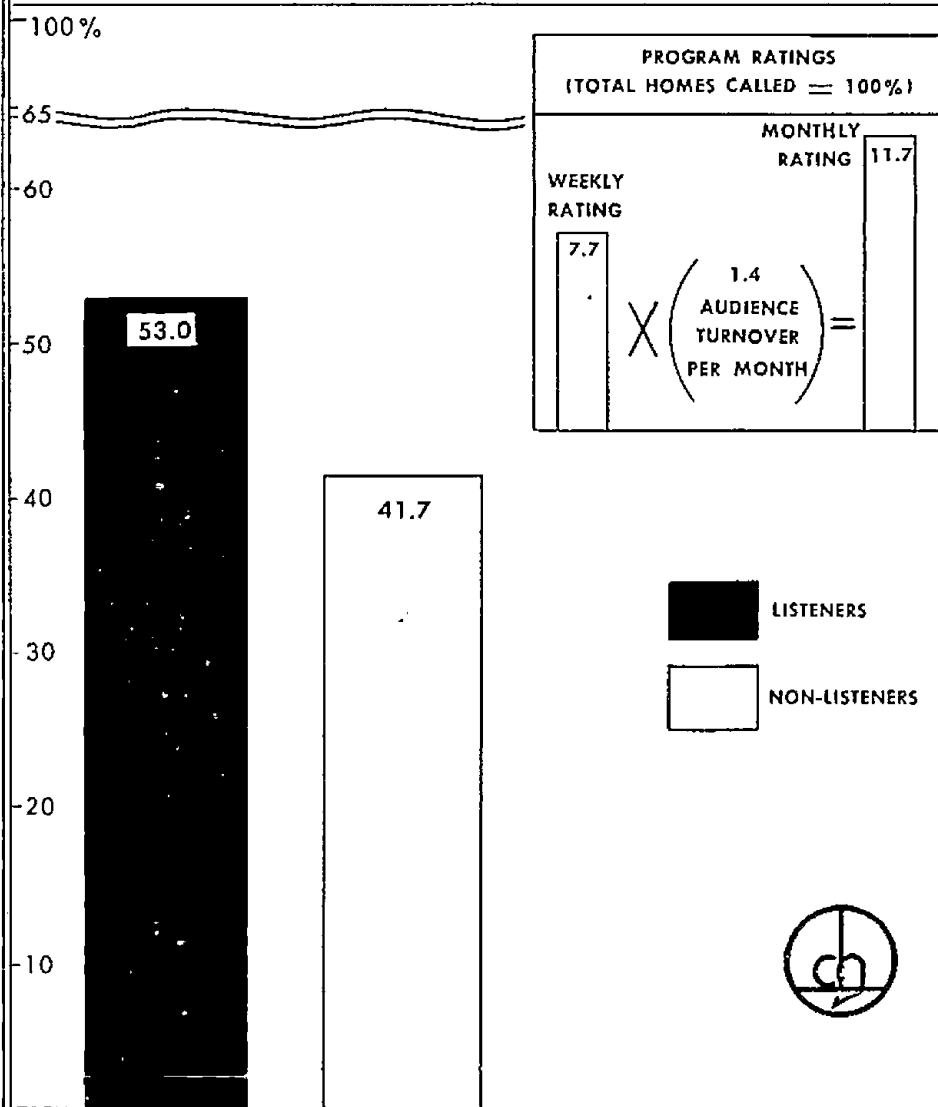
START OF BROADCAST

HOOPER RADIO REPORT: 1940

DRUG PRODUCT

USE OF PRODUCT IN LISTENER AND NON-LISTENER HOMES

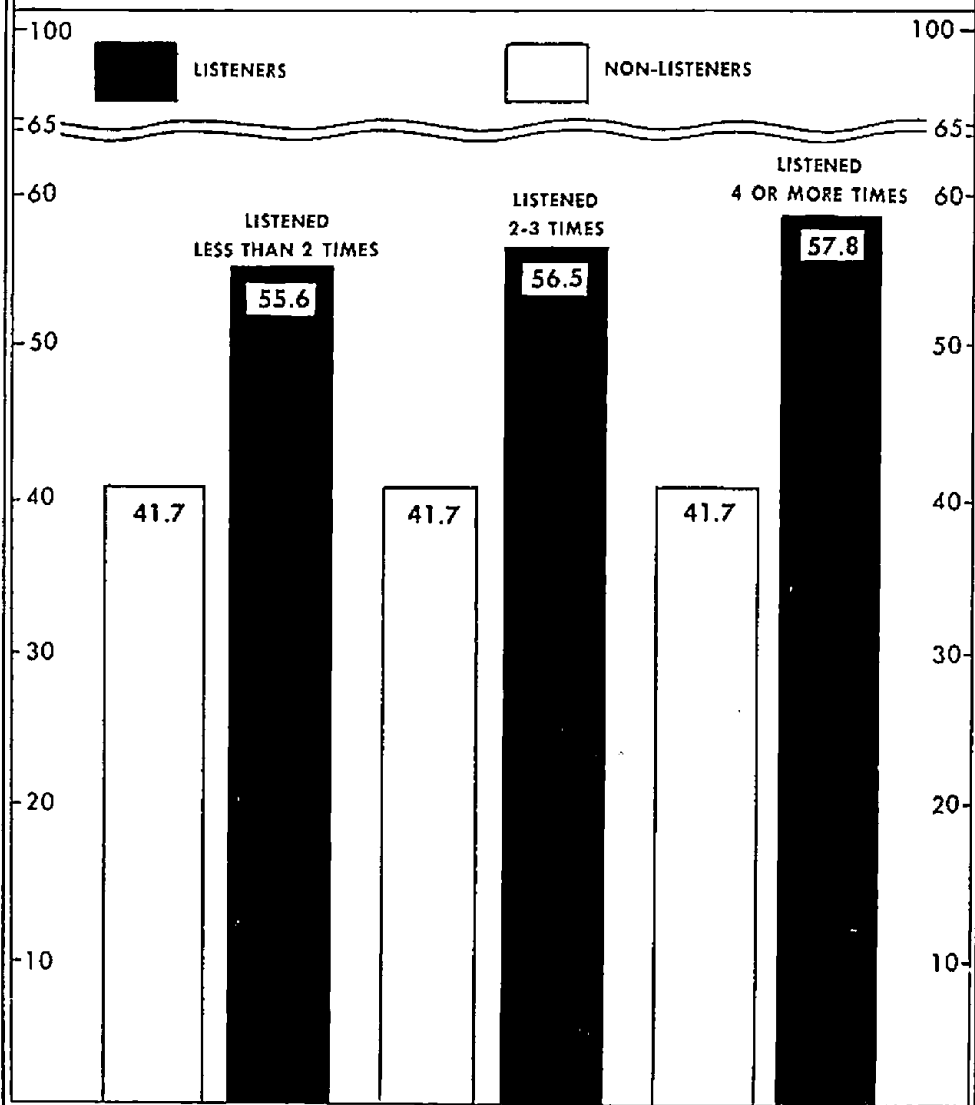
(METHOD = COINCIDENTAL AND RE-TELEPHONE)



HOOPER RADIO REPORT: 1940

SAME DRUG PRODUCT AS ON FACING PAGE

SHOWING USE OF PRODUCT
WITH FREQUENCY OF LISTENING IN PAST MONTH

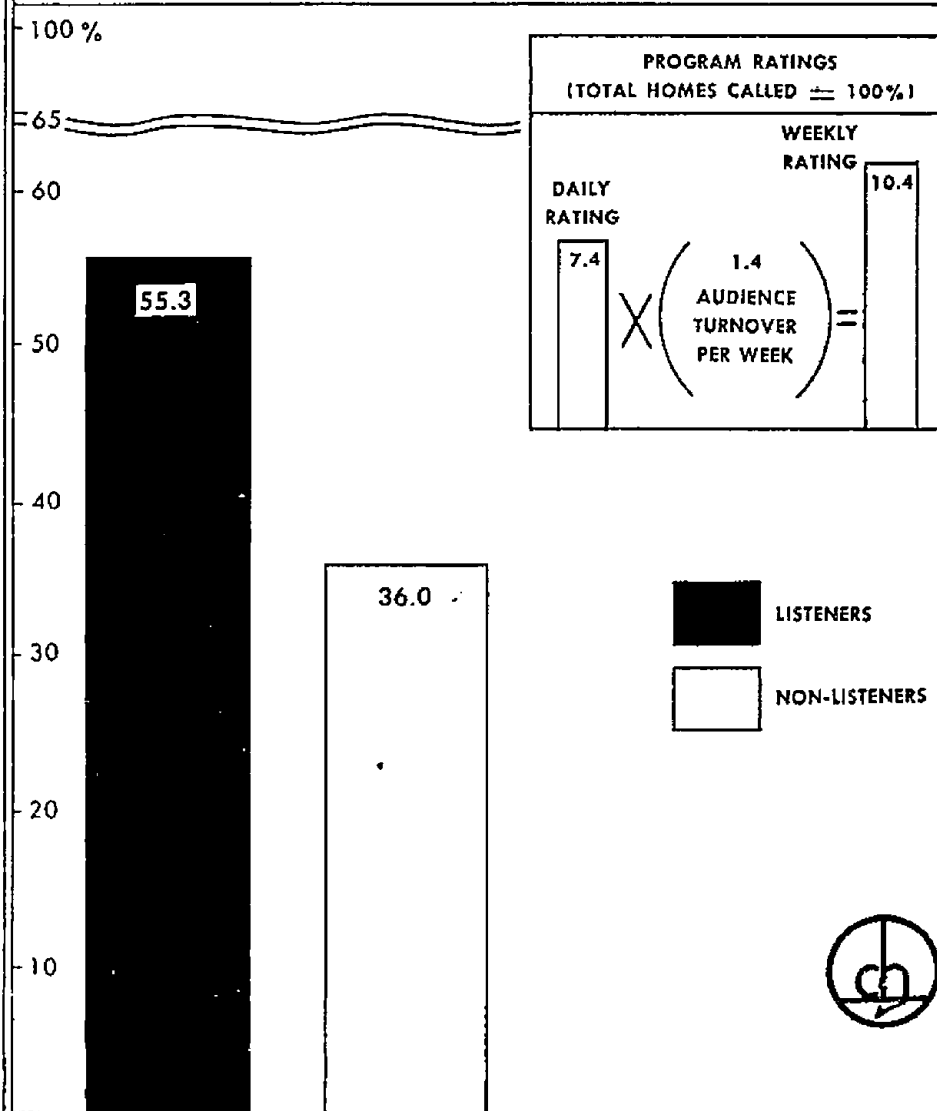


HOOPER RADIO REPORT: 1940

FOOD PRODUCT

USE OF PRODUCT IN LISTENER AND NON-LISTENER HOMES

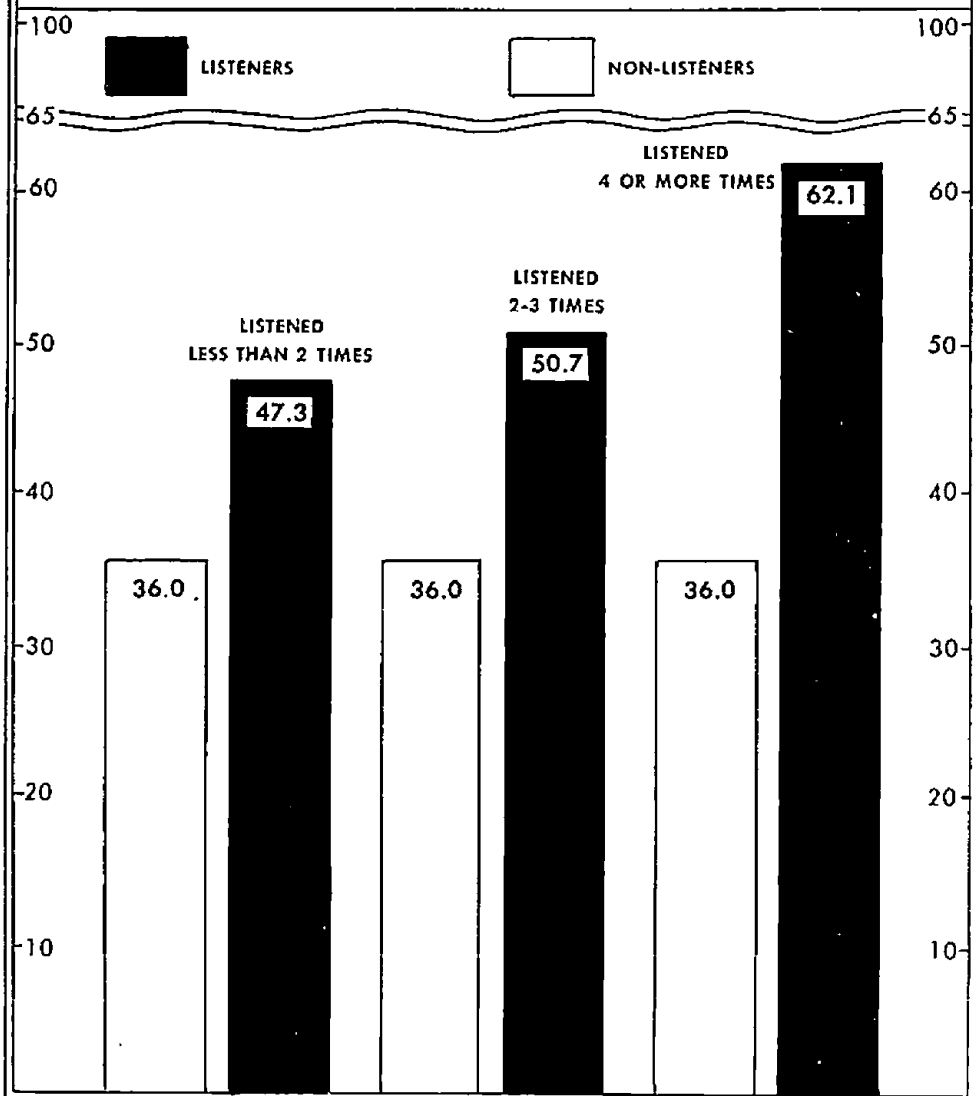
(METHOD = COINCIDENTAL AND RE-TELEPHONE)



HOOPER RADIO REPORT: 1940

SAME FOOD PRODUCT AS ON FACING PAGE

SHOWING USE OF PRODUCT
WITH FREQUENCY OF LISTENING IN PAST WEEK

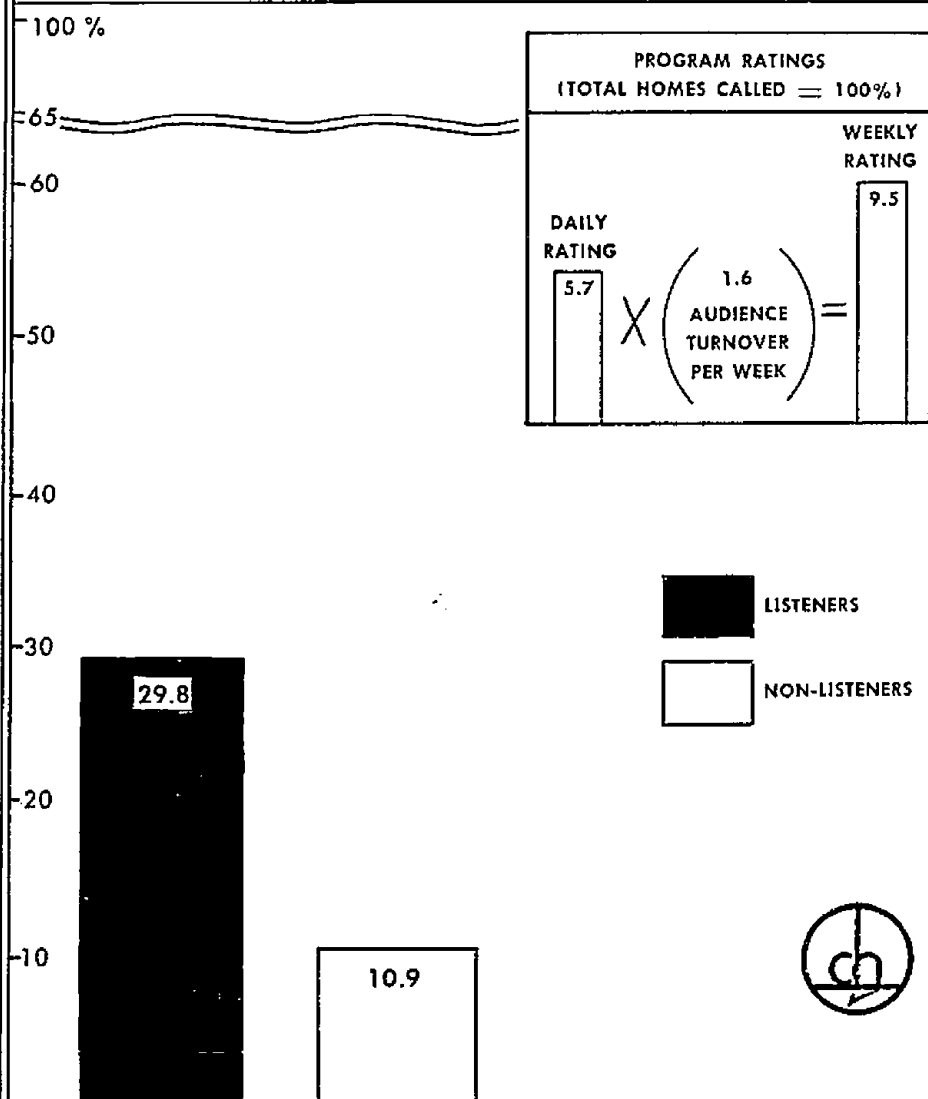


HOOPER RADIO REPORT: 1940

SOAP PRODUCT

USE OF PRODUCT IN LISTENER AND NON-LISTENER HOMES

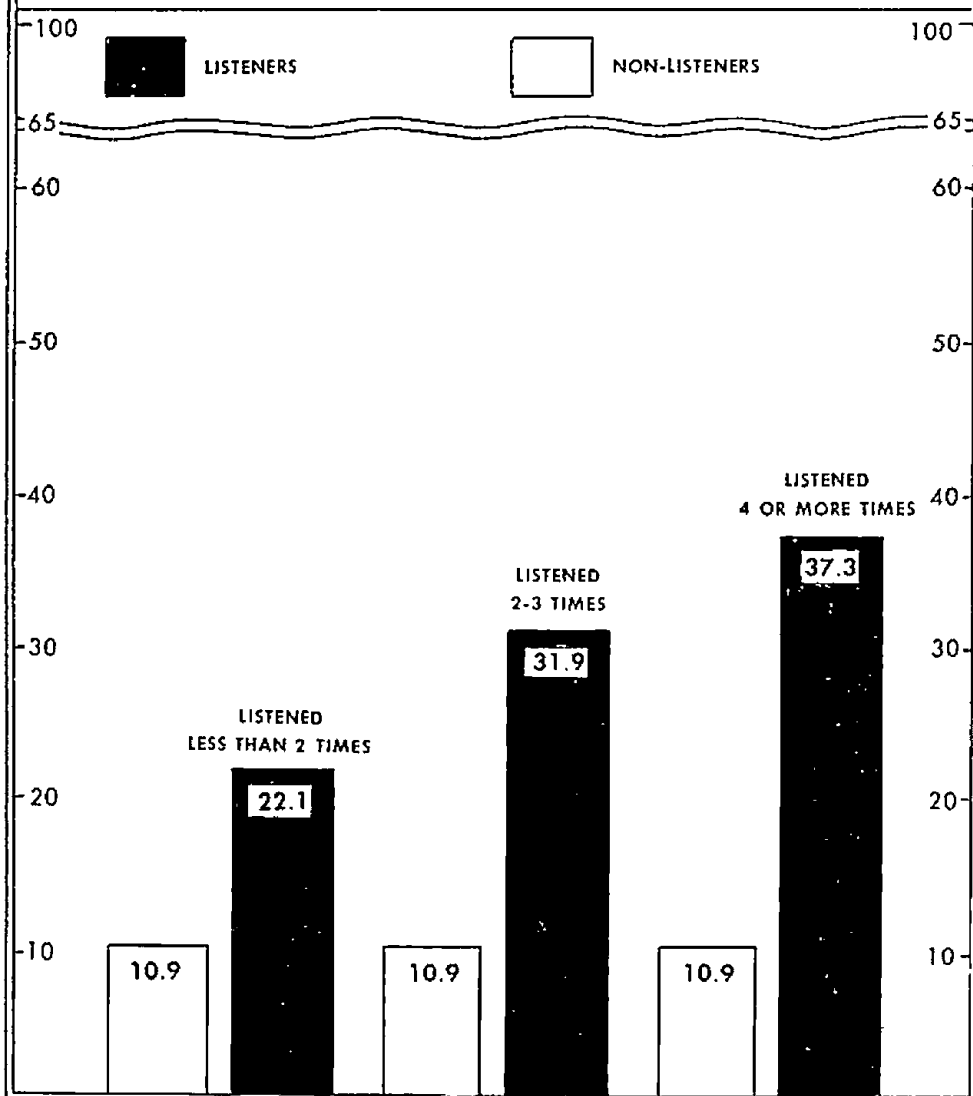
(METHOD = COINCIDENTAL AND RE-TELEPHONE)



HOOPER RADIO REPORT: 1940

SAME SOAP PRODUCT AS ON FACING PAGE

SHOWING USE OF PRODUCT
WITH FREQUENCY OF LISTENING IN PAST WEEK

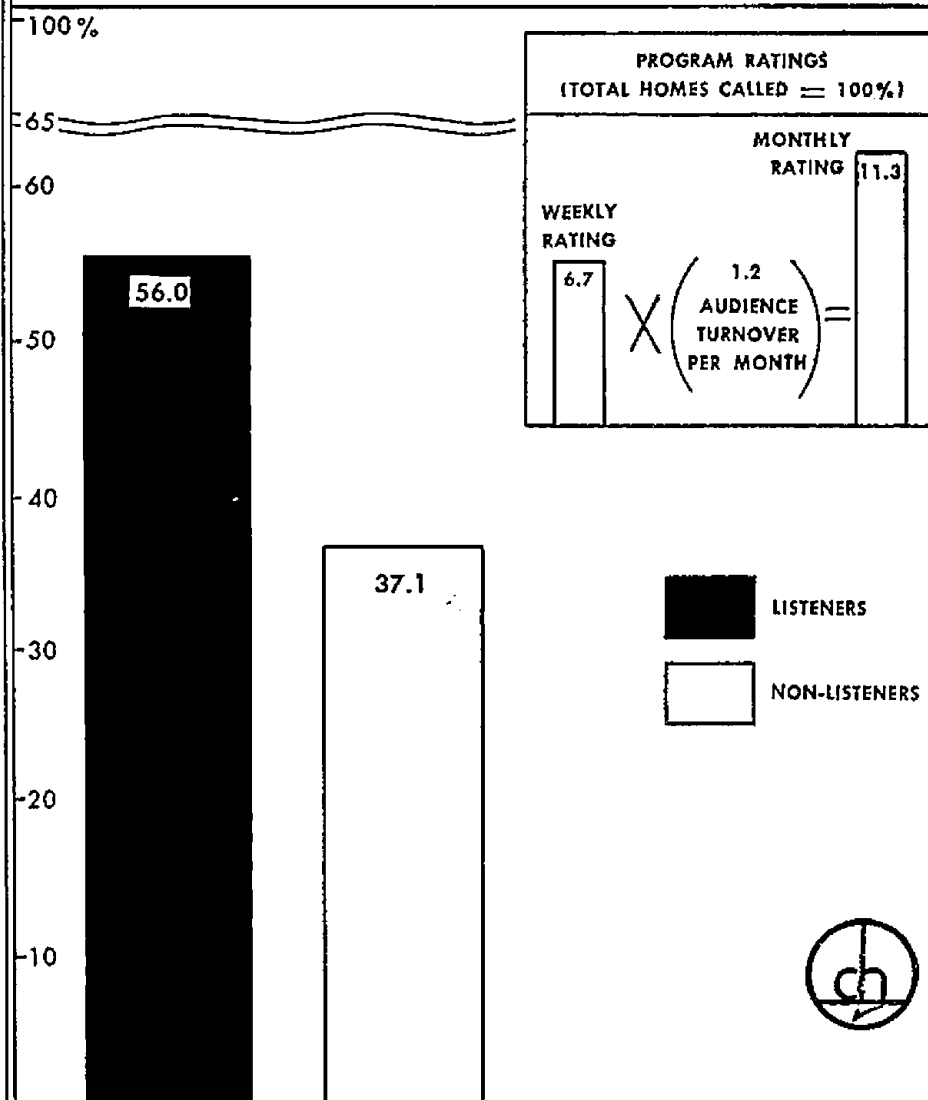


HOOPER RADIO REPORT: 1940

CEREAL

USE OF PRODUCT IN LISTENER AND NON-LISTENER HOMES

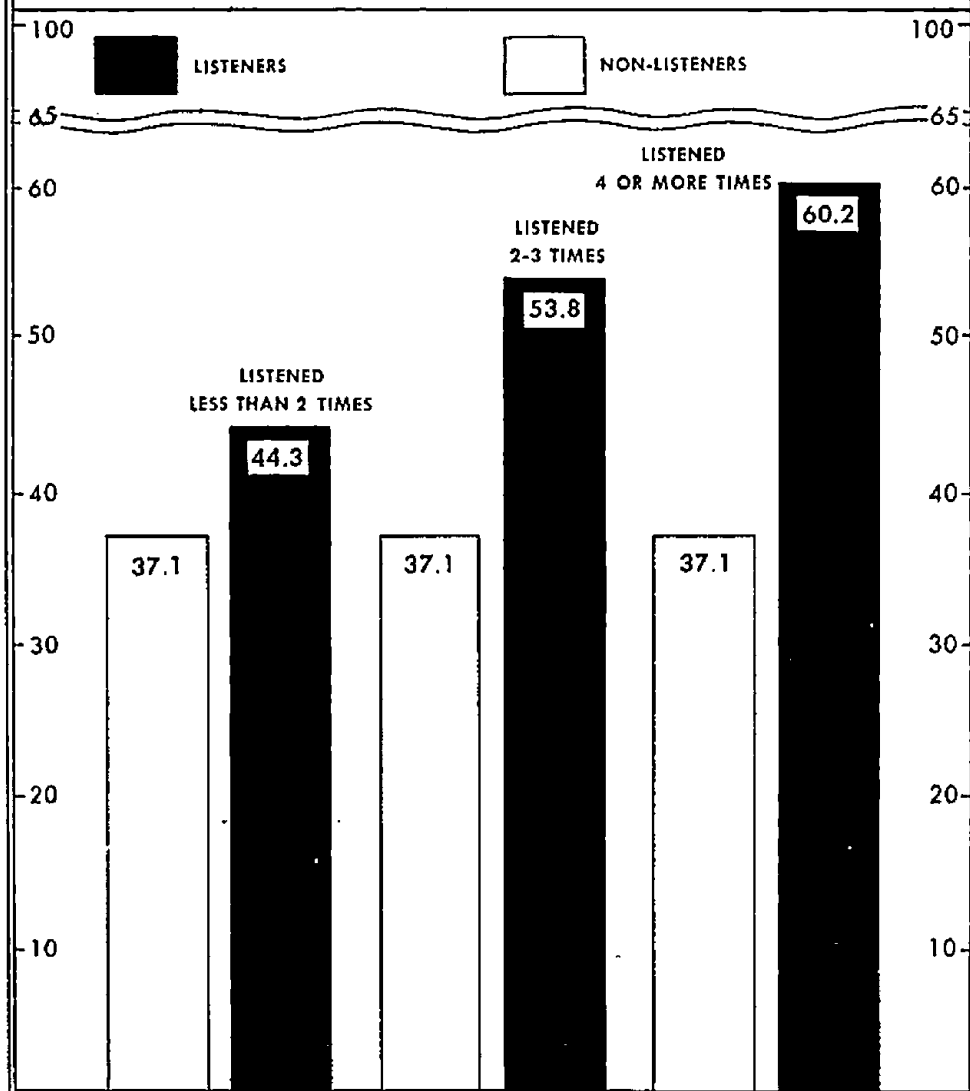
(METHOD = COINCIDENTAL AND RE-TELEPHONE)



HOOPER RADIO REPORT: 1940

SAME CEREAL PRODUCT AS ON FACING PAGE

SHOWING USE OF PRODUCT
WITH FREQUENCY OF LISTENING IN PAST MONTH

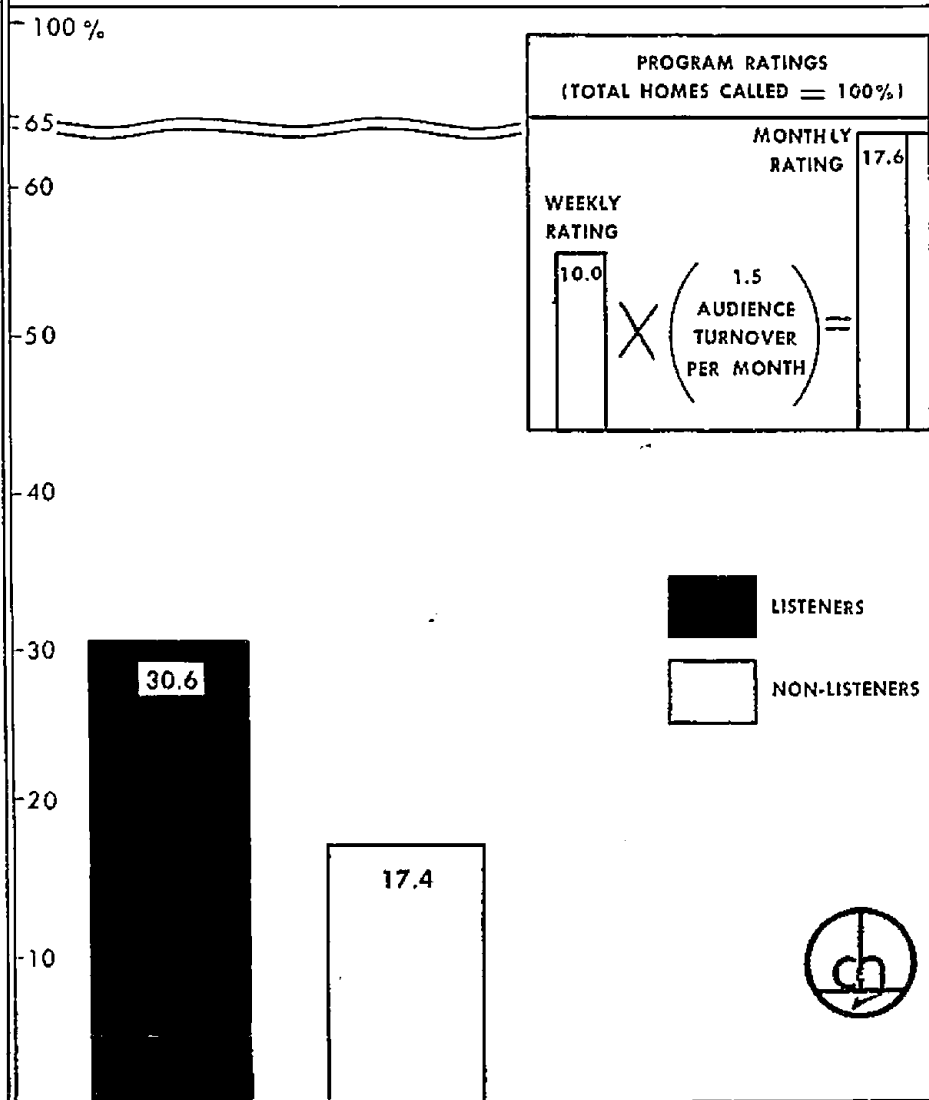


HOOPER RADIO REPORT: 1940

TOILET PREPARATION

USE OF PRODUCT IN LISTENER AND NON-LISTENER HOMES

(METHOD = COINCIDENTAL AND RE-TELEPHONE)

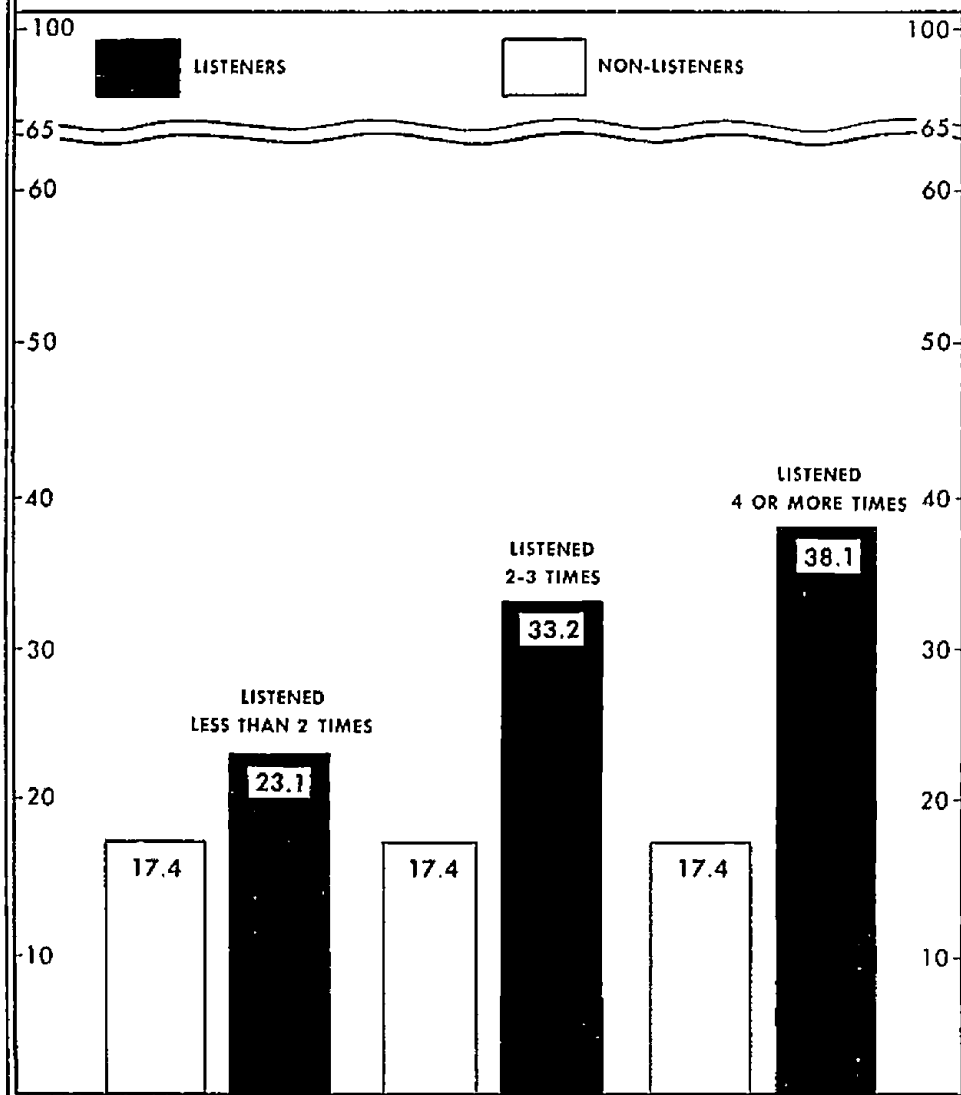


HOOPER RADIO REPORT: 1940

SAME TOILET PREPARATION AS ON FACING PAGE

SHOWING USE OF PRODUCT

WITH FREQUENCY OF LISTENING IN PAST MONTH

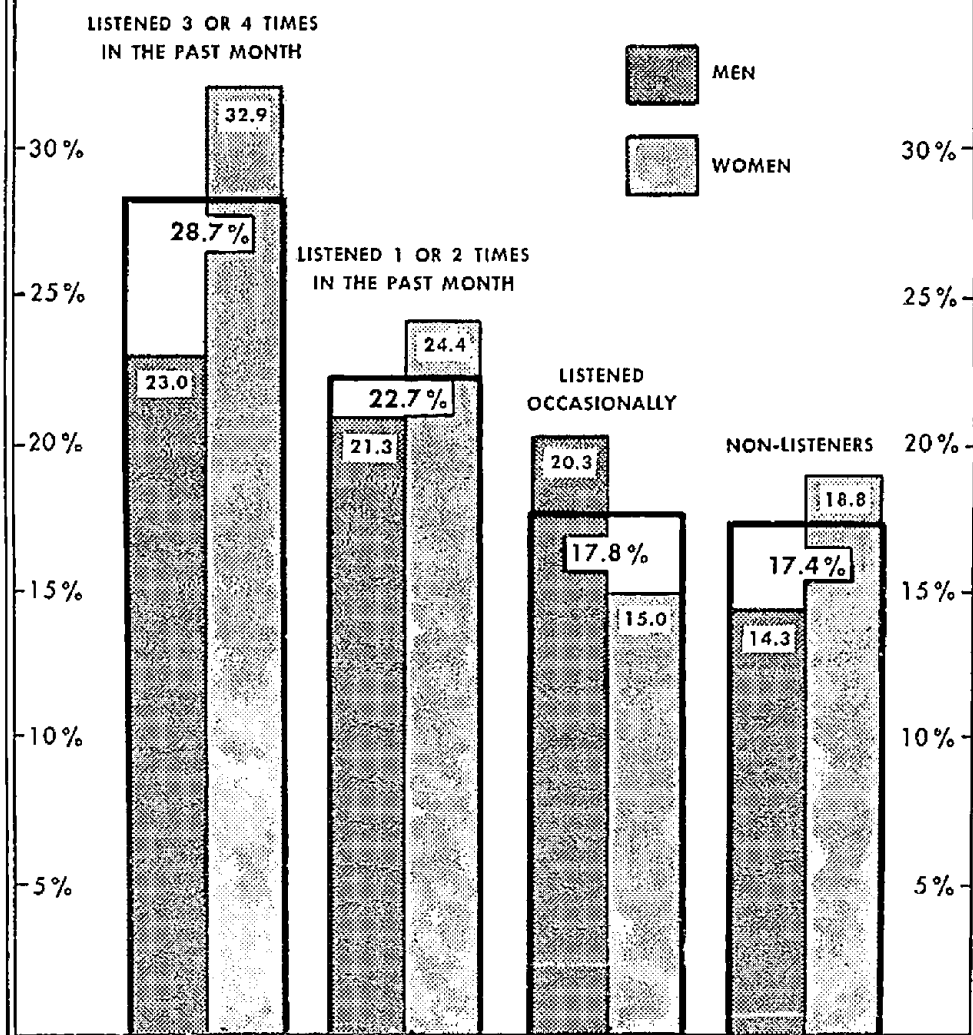


RADIO vs. SALES: CBS 1940

A CERTAIN TOILET SOAP

FAMILIES HAVING PRODUCT ON HAND
DETERMINED BY PERSONAL INTERVIEWS

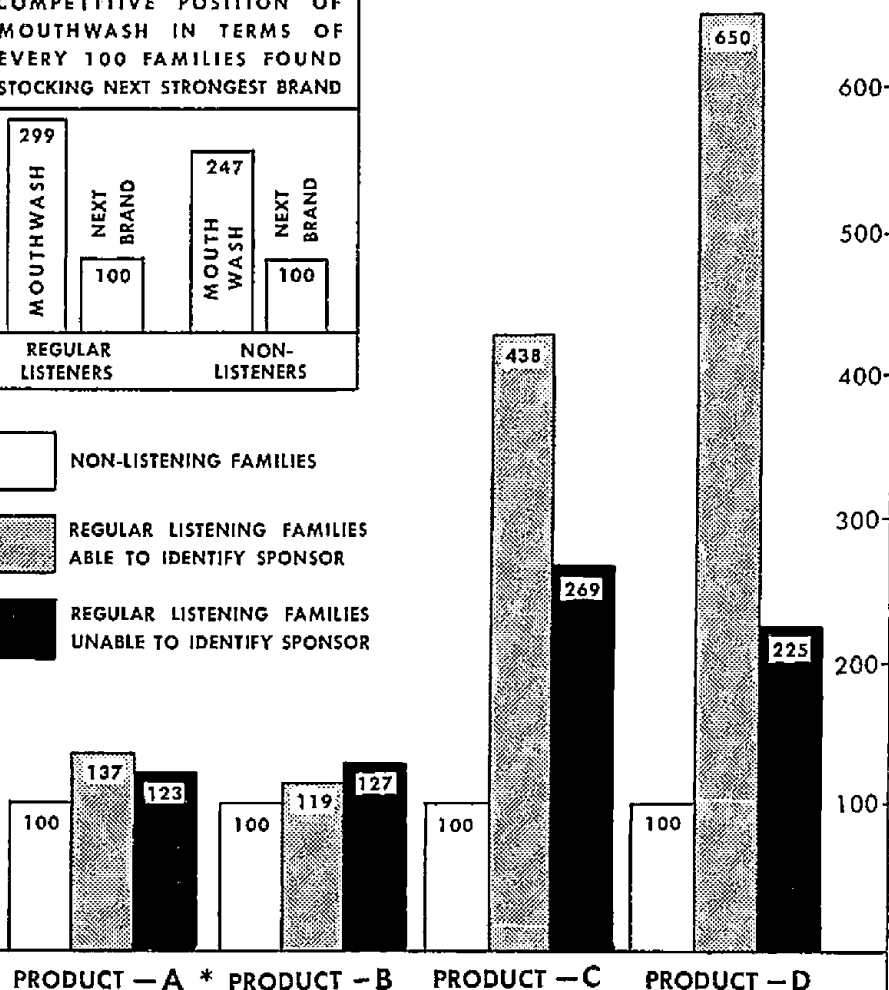
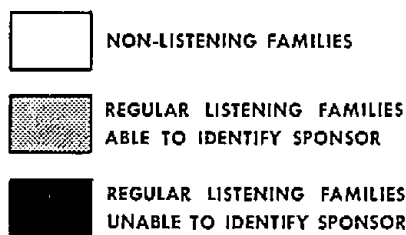
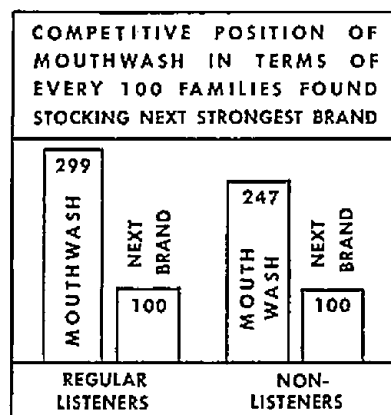
(TOTAL U. S. MARKET = 100%)



RADIO vs. SALES: CBS 1940

CERTAIN DRUG PRODUCTS

(METHOD = COINCIDENTAL CALLS FOLLOWED BY INVENTORY)

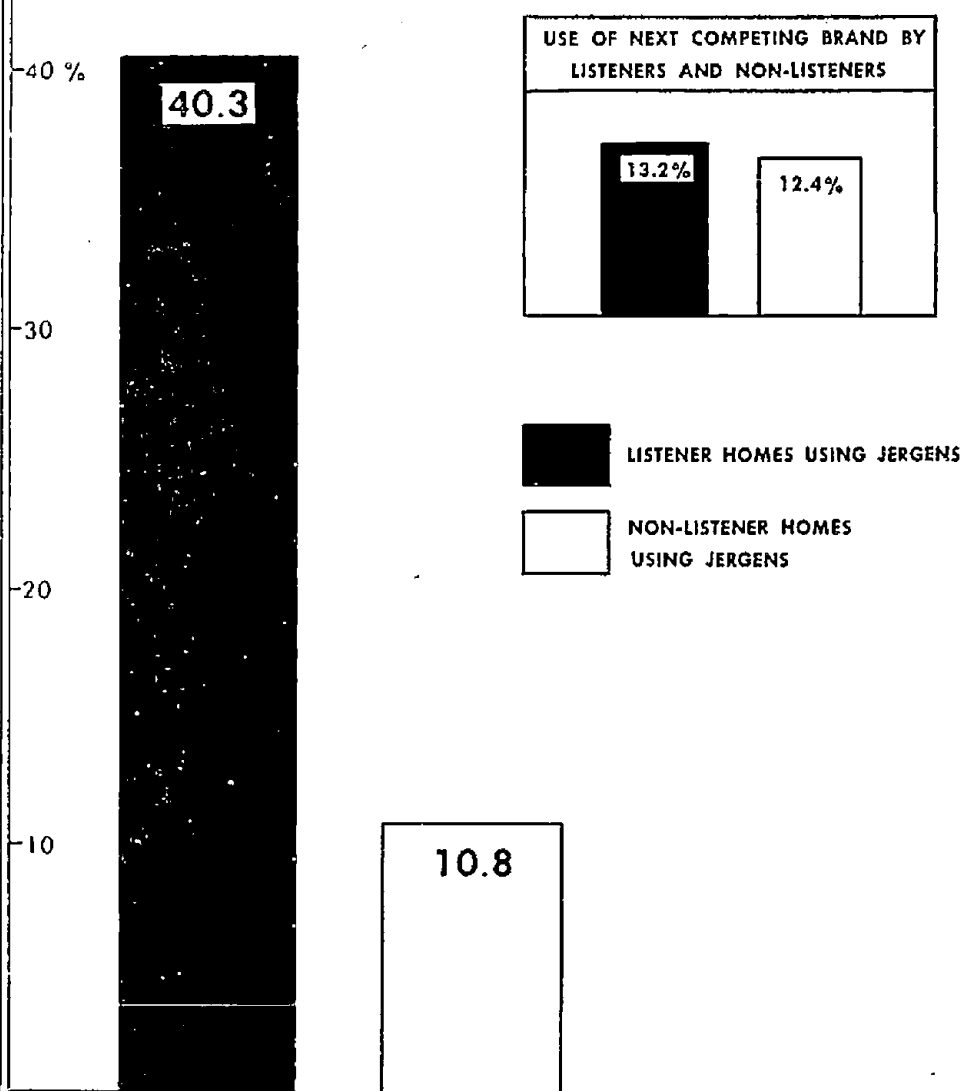


*PRODUCT DID NOT BEAR FAMILY TRADE NAME

RADIO vs. SALES: NBC 1940

JERGENS LOTION

(METHOD = COINCIDENTAL AND RE-TELEPHONE)



RADIO vs. SALES: NBC 1940

JERGENS LOTION • SAME AS ON FACING PAGE

SHOWING USE OF PRODUCT WITH FREQUENCY OF LISTENING
IN PAST MONTH

