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A MODEL OF RADIO LISTENER CHOICE

By

Edward Ellis Cohen

A DISSERTATION

**Submitted to
Michigan State University
in partial fulfillment of the requirements
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DOCTOR OF PHILOSOPHY

**Ph.D. Program in Mass Media
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ABSTRACT

A MODEL OF RADIO LISTENER CHOICE

By
Edward Ellis Cohen

The nature of how radio listeners choose the stations they listen to has never been researched in the context of the post-television radio industry. In addition, what little research does exist about radio is often proprietary to radio stations that commission the work.

This study proposes a two stage model of radio listener choice, one for initial choice and another for day to day use once a station repertoire has been chosen. As part of the development of the model, the construct of listener loyalty is tested through use of a new scale, and the question of how listeners make changes to their station set is examined.

The model proposed for initial listener choice is based on Tversky's elimination by aspects (EBA) model, a noncompensatory model that states decision makers will select choices based on an order of elements involved in the choice. Listeners will choose an element that is most important. All choices that meet this criterion will then be part of the set for the next element. The process continues until one choice is left. A modification of the model allows for more than one choice to be left at the end of the process.

The second stage of the model proposes a "first acceptable choice" model for day to day changing.

The research involved a sample of 904 radio listeners 18 years of age or older in a large, medium, and small market. The telephone study was conducted during May and June, 1987 and involved an approximately fifteen minute interview.

The data show strong support for the EBA model as a model of initial listener choice, however there was a lack of support for the first acceptable choice model. The loyalty scale proved to be reliable and showed good validity. Additionally, numerous valuable findings for broadcasters based on demographic data were discovered.

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Chapter 1

Introduction and Literature Review

Introduction

The purpose of this dissertation is to explore the process of how listeners choose the radio stations to which they listen. The key word is "explore" because in the thousands of pages of radio research that are issued every year, none of it looks at the actual choice process.

We have a great deal of information about what people are listening to. Arbitron Ratings and Birch/Scarborough Research release quantitative syndicated radio ratings reports on a continuous basis. In fact, Birch/Scarborough will also let a subscriber know what products radio station listeners buy. On a national basis, Statistical Research Inc. conducts studies for the radio networks known as RADAR. Many other companies produce information for sale, such as Simmons, IRI, and others.

While much of the above information makes its way into the hands of those in the radio industry, there is another large segment of information that remains totally secret. This is the output of the custom research companies that conduct studies for individual radio stations. The competitive nature of the radio industry means studies probing the attitudes of listeners in local markets are not made available to anyone outside the station that pays for the work.

The needs of the market and a lack of interest on the part of the academic community have combined to produce a very limited amount of public

research on how listeners interact with radio. This study will go beyond the simple "who is listening to what station at what time" to give a look at the methods listeners use to choose the radio stations they listen to.

There are good reasons for singling out United States radio for study. The medium is unique, both among the mass media and within the greater context of how choice theory is applied. [Radio stands out from most other forms of mass media in that different radio stations are programmed to attract different segments of the total radio audience. In all but the smallest markets, commercial radio is "formatted"] and even most public radio stations, while offering occasional block programming, do tend to cater to specific audience segments, usually those interested in classical music. [In broadcast television, most programs are designed to maximize audience and to cut across large population segments. Further, programs are presented for different audiences on the same broadcast outlet. Even a television program aimed at a very specific audience segment, for example teenagers, may be followed by one designed for middle-aged adults (the tenets of audience flow notwithstanding).]

A case can be made for the similarity of radio and most magazines. With only a few exceptions, magazines cater to a small segment offering articles and advertising aimed specifically at those who share a particular interest, such as a specific hobby or trade. Even with the similarities, two major differences remain. One is cost; very few consumer magazines are free. The other is the delivery system; consumers must make an effort to get the magazine. Radio is literally everywhere.

Some cable television networks do present continuous programming for specific audience segments. MTV is an obvious example along with ESPN, CNN, and the Nashville Network. Again, radio differs from cable in the same way

that it differs from magazines; cost and delivery. The cost here is direct; the fee the cable operator charges the consumer for the service. The delivery difference is the necessity of the cable outlet or satellite dish for reception of the television signal. One of the factors affecting choice in radio may very well be where the listener uses the medium. While cable offers only a couple of locations (home or public places such as a restaurant or bar), radio remains ubiquitous, going anywhere and everywhere.

The key difference between radio and nearly all other products or services studied by choice researchers is obvious to any beginning marketing student: two of the "four P's" are missing. Product and promotion remain, but price and place do not. Place is not a problem if you are within range of the signal of the station you wish to hear and you own a radio (it is unlikely any listener would travel just to hear a radio station). Price competition does not exist because all radio stations are free to the listener. Many of the factors that researchers consider when examining consumer choice simply are not relevant with respect to the choice decision in radio. This is what makes radio unique both among the mass media and the greater array of products and services.

Literature Review

There is no literature that directly deals with the radio choice process. Instead, the research has centered on the use of the medium (Troidahl and Skolnik 1968, Lull, Johnson, and Sweeny 1978, Wober 1984b) or who is listening and how much time the individual spends with the medium (Teel, Bearden, and Durand 1979, Schlinger 1981, Lull, Johnson and Edmond 1981, Hagerty 1983). Another research area has been the relationship of music and radio listening (Wober 1984a, Baldwin and Mizerski 1985), and measurement has occasionally been studied (Beville 1983, Beville 1985, Cohen, Baldwin, and Samuels, 1987).

Without questioning the quality of the writings cited here, the quantity of research on radio since the advent of television has been skimpy.

The general choice literature contains a large amount of research that can be best reviewed by breaking down the choice process. Choice consists of different elements although not all researchers agree on what those elements are. A common thread is that choice occurs only in situations where a subject must decide between alternatives in order to best achieve some goal or outcome. This implies that a choice involves more than one alternative. Conversely, a situation with only one possible outcome is not a choice.

The first element of choice is recognition by the decision maker of a situation where a choice must be made. There must be needs, wants, or desires to be fulfilled to allow someone to enter a choice situation. The need may be something major such as buying a home or choosing a college to attend. It may be very minor, for example, the choice of what brand of laundry detergent to buy at the store. Later, the question of habitual choice will be discussed, that is, whether or not habit can eliminate what would appear to be a choice situation. In the meantime, it is assumed that humans recognize choice situations.

After recognition of a choice situation, search behavior may take place. The amount of search should correlate positively with the level of involvement of the consumer in the decision. High involvement choices such as the choice of a college to attend may involve greater search than a low involvement decision (Chapman 1986).

Stemming from Krugman's work in the '60's, involvement with a product is thought to determine how much of a decision process takes place. Stone (1984) defines involvement as the time and/or intensity of effort expended in

the undertaking of behaviors. Involvement is important in describing the radio choice process. Is radio a high or low involvement product? Does it differ for different users? A recent research note (Bolton 1986) suggests radio is a low involvement product and that it is a low priority for most listeners.

Bettman (1979) with his information processing approach to choice behavior suggested there is both internal and external search. Internal search would involve consumers reviewing stored information while external search is action the consumer takes to gain information about products. Schneider and Shiffrin (1977) reviewed how memory may be searched for information. Their psychological work has applications for consumer behavior.

Search may not necessarily involve examining all possible alternatives. Heeter (1985) discussed exhaustive and restricted orienting search in the realm of cable viewing. This is directly applicable to radio (cable and radio being similar in the number of choices available to the consumer) as it would suggest that listeners do not search out and sample every radio station available to them prior to making a choice. Sheluga, Jaccard, and Jacoby (1979) agree and suggest that consumers may make better decisions when they do not process all the information available to them. "Information overload" may exist for consumers in the search process.

Numerous factors can affect external search. Writing in the consumer behavior (product) context, Moore and Lehmann (1980) reviewed six areas that can be determinants of how extensive the search for information may be prior to purchase. These were market environment, situational variables, potential payoff and product importance, knowledge and experience, individual differences, and conflict and conflict-resolution strategies. These categories can be applied to radio choice if one allows for minor interpretation in the



payoff/importance category.

While search is the physical action of attempting to change the informational environment to make a better choice, attention involves the narrowing of the range of stimuli to which the consumer responds (Howard 1977). Howard states that attention comes from arousal and arousal is specific only to a product class (i.e. radio) and not a particular brand (i.e. WXXX).

Howard also believes that human behavior prior to "purchase" can be divided into three categories: extensive problem solving, limited problem solving, and routinized response behavior. This brings up the question of whether or not a complete choice process occurs for every choice situation (i.e. search, choice of a strategy, etc.). Howard offers the viewpoint that consumers move along a continuum from extensive problem solving to routinized response behavior as they become more familiar with products. Other researchers question whether a choice is actually made each time. Olshavsky and Granbois (1979) questioned the conventional wisdom that because two or more alternative actions exist, choice must occur. Their study led them to conclude that

...for many purchases a decision process never occurs, not even on the first purchase.

How could someone buy something with no decision process? The researchers suggested culturally mandated reasons, interlocked purchases, conformity to group norms, imitations, or reliance on the recommendations of others. As an example, just observe the number of men who bring along wives, girlfriends, or others to a clothing store and allow them to make the purchases (the author included).

In addition, Olshavsky and Granbois remarked that even when purchase behavior is preceded by a choice process, it is likely to be limited. Consumer

behavior can be viewed as ritual behavior (Rook 1985), meaning activities that occur in a fixed, episodic sequence and tend to be repeated over time.

Having reviewed the pre-choice actions, the choice process itself is next. Starting with economics, choice theory can be viewed from a base of utility theory. In the economic view of the rational man, choices are made on the basis of how much will be gained from them (subjective expected utility) (Wright 1984). It is possible though, to define rationality in other ways than simply maximization of utility (Einhorn and Hogarth 1981). Nonetheless, for each possible outcome in a choice, there is some associated utility (although this utility can be zero). It is assumed that the perceived utility can be measured in some fashion (whether or not it is accurate, hence the subjective part of SEU theory). Additionally, probabilities can be assigned to possible outcomes. Multiplying the utility value for an outcome by the subjective probability will yield the expected utility, leaving the decision maker with clearly valued options to which various strategies of how to choose can be applied. For example, the decision maker may choose to minimize loss or to maximize gain. Once a strategy is chosen, a decision can be made.

SEU theory is easy to apply to decisions that lend themselves to direct measurement of costs and benefits, such as a choice between two investments. Expected payoffs and potential risk factors can be easily quantified. When dollars and cents choices are not involved, SEU may have little to offer students of choice processes.

SEU theory does allow for the discussion of two concepts that arise often in the study of choice theory and some time should be spent on the applicability of each to this topic. The first is uncertainty, the concern each of us has that we may not have all the information needed to make the best

decision on a matter. Without that information, we may regret the choice we make (Janis and Mann, 1977). In the case of radio listening, uncertainty may be operationalized as the chance that a listener will regret the listening choice made. However, the existence of uncertainty may be questionable due to the absence of place and price. While uncertainty exists for a product that one must travel to purchase and then pay for, a radio choice that proves to be poor can be remedied quickly with the touch of a button or the turn of a dial. All that has been lost is a short amount of time. Due to the lack of penalty and the fact that much listening is done individually, uncertainty may be of minimal importance.

The other concept is risk, much like the risk involved in visiting Las Vegas or Atlantic City. Kozielski (1981) defines a risky situation as "one in which we are not quite certain of the outcome and when making a decision, we cannot predict with any degree of certainty if it will lead to success or failure, whether we win or lose." Much of the work done on risk has involved the use of experimental monetary gambles. The research has shown most people to be risk-averse (Kahneman and Tversky 1984). Given two choices that are the same yet are worded differently, most people will choose the one that appears to offer less risk. Risk in the consumer behavior sense will generally mean the potential for loss of money or social loss, such as embarrassment. Again, the lack of a cost for radio negates the monetary risk and the personal listening eliminates most of the social risk involved. Much like uncertainty, risk may not be germane to the discussion of radio choice, because radio is a low risk choice situation.

If one eliminates uncertainty and risk, a good portion of the choice research is eliminated, too. However, there remains the question of strategy.



A major strategy distinction is whether people use compensatory or noncompensatory methods to make their choices (Harrell 1986). A compensatory strategy is one where a decision maker will add up scores (mathematically or otherwise) for products on various criteria that are important and the product that scores the highest overall will be chosen. High scores on some criteria can compensate for low scores on other criteria.

A number of noncompensatory strategies have been advanced. In lexicographic models, consumers rank choice criteria from highest to lowest importance. The choice alternative that scores highest on the most important criterion will be chosen. If there is a tie, the person will then choose the choice alternative that scores highest on the second most important criterion and so on, until a choice is made.

In sequential elimination models, criteria are again ranked, but now the choice alternatives which lack the most important criterion (or score below a preset minimum) will be eliminated. This elimination process continues until only one choice alternative is left.

In conjunctive models, consumers set minimum acceptance levels on a number of criteria. The decision maker chooses the choice alternative that meets acceptable levels on all of the criteria. If more than one alternative exists, then more criteria are added until only one choice remains.

Finally, a disjunctive model finds the consumer setting minimum levels for a few crucial criteria. Alternatives that meet any of the criteria are considered acceptable. Depending on the type of decision to be made, an individual may use any of these methods.

One area of controversy in decision theory is the question of how well a model can describe what happens in the average person's mind. Previously in

this paper, SEU theory was rejected for just that reason as it is assumed that individuals simply cannot and do not assign mathematical weights to alternatives in an effort to achieve an optimal decision in the choice of a radio station. Involvement was described as an important factor because the less interest in the decision on the part of the decision maker, the less likely he/she is to follow a model that requires a large amount of thought. Compensatory models assume an extensive information processing capability on the part of the decision-maker (Park 1978) and many individual decisions faced by a person in today's society may simply produce too much of a burden if these processes are followed.

Park criticizes lexicographic models based on the potential for not only a suboptimal choice, but a ridiculous one at that. Second, the more alternatives involved, the more complex the decision and therefore, the greater the possibility of suboptimal choice. Finally, he criticizes conjunctive models for their rigidity and their inability to always generate a specific choice. All of his criticism comes in the context of presenting a sequential conflict resolution model that will be discussed later.

When comparing the various choice models advanced in the literature, the problem is to decide which should be the most likely to be used in a situation. Involvement has been cited as an influence in choice models. The problem of search was mentioned. The problem of the amount of cognitive activity on the part of the decision-maker is important, regardless of the involvement level. Further, there is a problem with the number of alternatives to be presented in the choice situation. Research has shown that a decision maker (DM) may choose differently depending on the number of alternatives available (Chakravarti and Lynch 1983, Huber and Puto 1983). The DM may also choose



differently depending on the range of appeal of the alternatives, the "range effect" (Hutchinson 1983). For example, if three alternatives are given, the choice outcome may be different from that made with ten alternatives. If one alternative is changed to an outlier, one of the other choices may appear to be a "better" choice to the DM. Beyond that, the process used to make the choice may vary with the number of alternatives available (Johnson 1984).

⌞ All of the above considerations are important to radio. In most markets, the number of choice alternatives is large. Listeners may not be aware of all alternatives. They may not sample every station possibly due to taste considerations. Also, context effects may differ greatly over time, for example, if a station changes format from easy listening to become the third adult contemporary station in the market, there may be more attention paid to the adult contemporary format, at least temporarily. That may increase overall listening to the format, even if the new station is not successful. The cause may be the greater amount of attention caused by the change. ⌋

In his discussion of psychological theories of consumer choice, Hansen (1976) divided choice into situational variables, predispositional variables, and interaction rules. Situational variables involve a two by two matrix between actual physical stimuli, perceived aspects of the situation, specific aspects, and general aspects. In other words, how the environment acts upon the consumer and how the consumer perceives the environment may not only affect choice but may affect how the choice is made. Little research has been done in this area.

The predispositional variables include personality, general attitudes, values and interests, specific attitudes, beliefs and images, and choice-specific predispositions. The interaction rules signal a return to the debate between



compensatory and non-compensatory rules. Hansen concludes by suggesting that a model of consumer choice should be flexible enough to explain what choice principle is applied and what predispositional variables have become important in making the choice. Einhorn and Hogarth (1981) mention the possibility of "meta-strategies" of choice. Kassarian (1982) points out the lack of examination of cultural factors in choice. A consumer's mood may also play a role such as the satisfaction or dissatisfaction with a product (Gardner and Vandersteel 1984). The educational background of the consumer changes his/her choice habits, too (Gronhaug 1974). As an example, a positive correlation has been found between education and the consumption of mass media as well as between education and the reading of advertisements.

A Choice Model For Radio

The question of what choice model best applies to radio is the goal of this dissertation. Thus, for the same reasons that subjective expected utility theory was removed from consideration, it is necessary to eliminate all compensatory (additive) models. Again, it is simply too hard for the average consumer to use some form of mathematics, however crude, to make a decision on a product as unique as radio. Radio does not have a price and no ready numbers to use. Radio also involves taste; in fact, taste should be a major part of a listener's choice of a station. A listener will not generally choose something he/she does not enjoy. Without offering an answer yet to the question of high or low involvement, it appears that radio is a product that does not fit well into a compensatory choice strategy, where the decision-maker assigns scores on individual criteria and adds the scores to make a final choice.

Many strategies still remain on the non-compensatory side. One common feature of these is however unlikely some models may seem at times (in terms

of yielding a "rational" choice), they all are relatively simple to use. They also handle larger numbers of alternatives more easily on a cognitive basis, allowing the DM a simpler method to make the choice.

The noncompensatory choice model that appears most reasonable to use as a starting point is the Tversky model (1972). This is the "elimination by aspects" model, a relatively simple noncompensatory probabilistic method. It operates with the DM selecting criteria that matter to him/her in the choice situation and ranking the criteria in order of importance. The choice alternatives are then judged on the most important aspect. Those that fail to meet the criterion established by the DM for that aspect are eliminated from further consideration. If only one alternative remains, the choice is made. If more than one remains, the DM proceeds to the second most important aspect and the process continues until only one choice alternative is left.

To transform EBA into a proposed theory of radio listening choice involves two stages. It is proposed that when making initial choices, listeners do view radio as a high involvement product, using the elimination by aspects model to make a choice. This initial choice will occur when a listener has moved into a new city, has become completely dissatisfied with his/her current choice set, or at any time that a major change in listening patterns is necessary. Use of this model may yield only one station or there may be several that meet all of the relevant criteria, though these may have some sort of preference order.

It is further proposed that as one station may not satisfy the listener continuously, he/she will make changes. If these changes are made, the listener will use a simpler conjunctive or disjunctive strategy, treating radio as a low involvement product and only considering a limited set of alternatives.

Much listening, especially in-car listening, involves a great deal of dial

switching, the radio equivalent of cable zapping (Heeter and Cohen, 1988). This can be explained through a change in mood, a conflict in taste, or some other factor usually brought on by something the radio station is currently programming. It may be news content to a person that uses radio for escape or it may be a song that is distasteful to the listener. The reason for the change is not important here. The key component is the triggering once again of the choice process.

Technology also plays a role in the application of choice models in radio. When radio first came on the scene, a listener had to tune in a station by hand, a process that still exists for most radios today. However, technology gave us the pushbutton radio for cars many years ago and now, many stereo receivers for the home make use of microprocessor technology. The listener may store anywhere from four to twenty four stations in the memory of the receiver and listen to any of them at the touch of a button. Further, many home units now have remote controls that operate much like those for television sets, giving the listener the chance to "zap" radio stations. In television, the advent of remote control boxes for cable television and videocassette recorders led to profound changes in viewing habits (Heeter, 1985). As many car radios have the pushbutton feature and more home units now have memories and remote controls, there is a need to consider the ramifications of technology for the choice process.

In the case of quick changes in listening, such as the car or home zapping, the conjunctive or disjunctive noncompensatory method may also be used. If a listener simply punches buttons upon hearing something he/she doesn't wish to hear, it is proposed he/she will listen to the first acceptable alternative. Conjunctive/disjunctive methods may be used quite often depending

on the listener's taste and the convenience of pushing buttons.

The reasoning behind this high/low involvement proposal is the belief that most listeners are at least initially involved with what they listen to. Radio is important to them and at some point, they will take the time to evaluate what is available to them and identify a "repertoire" of acceptable stations. They may do this once, after moving to a new city, upon reaching an age where they make the judgement, or even when they buy a new car and must set the pushbuttons on the new radio. The process may be triggered again by external or internal cues. External cues from the environment may be advertising for a new station that appears interesting to the listener, a change in programming of the listener's current favorite station, comments from friends about another station they listen to, or even some sort of promotion a rival station is conducting. Internal cues may be changes in taste or changes in maturity levels. Any of these cues can trigger the elimination by aspects process again.

In the absence of cues to trigger reevaluation of a listener's station repertoire, there is no need for the listener to go through the relatively long (when compared to the conjunctive/disjunctive model) EBA process. Once the listener is satisfied with his/her set of choices, radio can become a low involvement product and the listener enters habitual choice. He/she either stays with one station or switches between a small set of stations (similar to the Heeter (1985) channel repertoire for cable) that have survived the EBA test, ignoring all others. Most listeners cannot tell you what station is on each button on their car radio, nor can most people name more than a few stations in a market (Heeter and Cohen, 1988). Reviewing Arbitron reports will show that the average listener samples between two and three stations a week depending on market size. No matter how many stations are available, only a



select few will survive the EBA process for most listeners.

Another unique aspect of the proposed radio choice model beyond the two levels of involvement is the presumption that one single final choice does not have to be made. The EBA process can yield two, three, or more preferred choices due to radio's lack of price and place. With unlimited switching allowed at no penalty, there is no reason for the listener to commit to a single, permanent choice as is the case with an automobile or even toothpaste.

Proposing two levels of choice is not entirely unique. Park (1978) put forth the sequential conflict resolution model which uses a process involving one stage similar to both lexicographic and elimination by aspects models followed by a possible second stage that utilizes a satisficing plus process.

Going beyond the EBA model, a modification of the model may be made, the preference tree (Tversky and Sattath 1979). The use of a tree model makes the EBA model easier to handle cognitively. In fact, it now becomes EBT or elimination by tree.

Visually, a preference tree appears to be upside down (see figure 1). This means that the DM makes his/her choice on the most important aspect, then follows that particular link to the next decision point. As with EBA, the process ideally continues until only one choice is left. As stated earlier, there is no necessity to have to eliminate down to one choice. The radio station repertoire can be the final choice through the EBA/preference tree model.

In practice, the model should work as follows: Suppose a listener in the Detroit market has between thirty and forty stations from which to choose. The listener may choose music as the most important aspect to him/her, which would start the process on the music side of the preference tree, eliminating the all talk and all news stations. Next, the choice may be for country music,

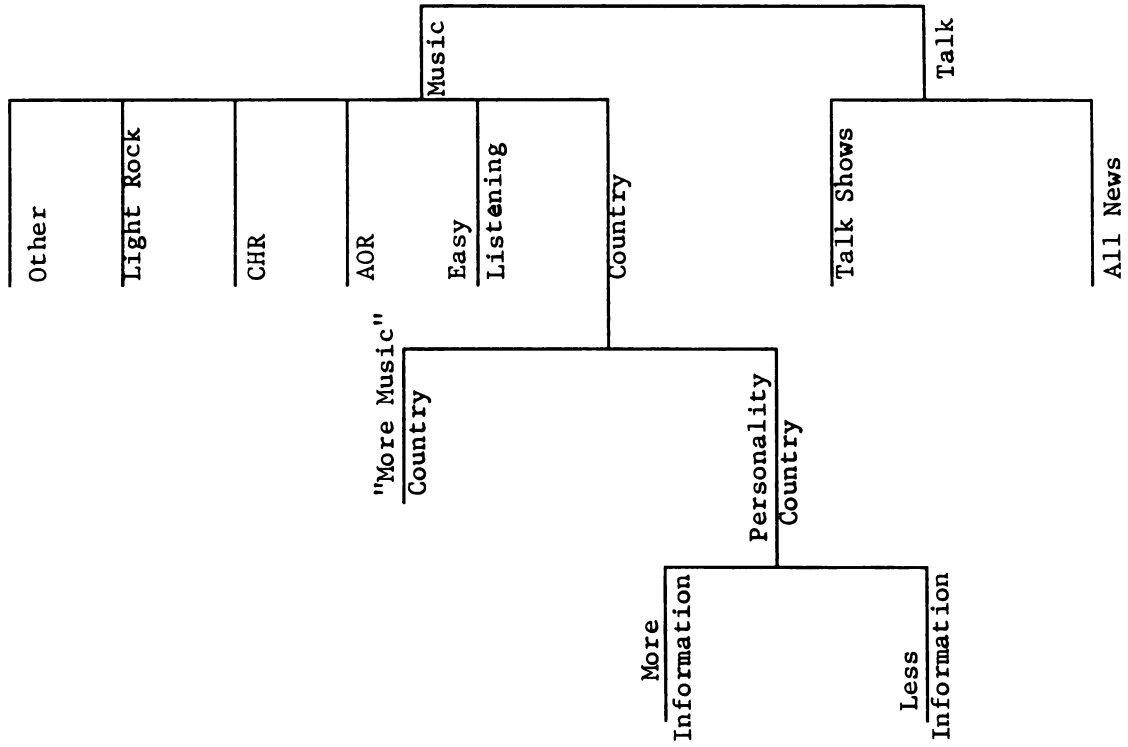
another branch of the tree. This action will eliminate all but the country music stations. As there is still more than one choice available, another decision must be made. Let us assume the next most important aspect is personality, that is, a station that has a larger amount of talk on the air. The listener will now eliminate any country stations that emphasize a "more music" approach. This should leave only one station in a market like Detroit, yet if it does not, there is no requirement to proceed further in the elimination by aspects process. A set of two or three stations is quite manageable for the average listener and he/she will then choose from among those few.

If no choice remains after the EBA process, the listener must move back up the tree to find the point where the last stations were eliminated. At that point, a different criterion must be chosen to eliminate some of the options, or all must be kept in the set and a choice made from among those.



Figure 1

Example of a Preference Tree



Chapter 2

Research Questions, Propositions, and Design

The problem to be studied is listener choice. Commercial and academic research previously cited indicated that listeners have a small set of radio stations they listen to regularly. Three basic research questions relating to listener choice and the set of regularly listened to stations will be addressed:

RQ1: How do listeners choose their initial set of stations?

RQ2: What causes listeners to add or remove stations from their set once the initial choices have been made?

RQ3: What process do listeners use to make changes within that set when actually listening to radio?

Each research question will be described in detail, including a brief overview of the issue, elaboration of the questionnaire items intended to address each question, and discussion of the analyses to be applied to the question. Study design and pretesting will be discussed first.

Pretesting

Four focus group sessions were held during April, 1987, with nineteen MSU students to get a better idea of what factors are involved in listener choice. In addition to open-ended questions, sample questionnaires were administered to the groups to test questions, wording, scales, and indexes.

The focus groups showed that, at least among the student population, more emphasis should be placed on social factors in choice than was previously thought. While many of the students did not claim to listen to the same



stations as their friends, asking about the initial choice process often elicited comments such as "I tried what other people around me were listening to" or "I heard a song I liked on the radio in a friend's room, so I tried that station." Students in a residence hall are a more homogeneous group when compared to social groups in other situations such as work, but the statements are important.

Further questioning found some focus group members did use an EBA process when first arriving in East Lansing, reporting they listened to all the stations available shortly after they settled in. Further probing discovered that when a focus group member said he or she checked "all" the stations, this often meant "all the FM stations." Many had never tried AM and felt there was little reason to do so. This suggests that listeners may not be able to articulate their true hierarchy. For example, when asked what elements would be most important in an ideal radio station, focus group members invariably talked about music and disc jockies. If they were then asked whether they would listen to their ideal station if it were on AM, some said they wouldn't. In that case, the first element in the hierarchy would be the method of transmission, not one of the programming elements. This issue was addressed in the questionnaire. Another noteworthy result of the focus groups was the determination of which elements are most important to listeners. Through talking and the pretest questionnaire, six key elements (out of fifteen presented to the groups) were identified. These were music, personalities (disc jockies), the number of commercials, news, weather, and one larger category that can be called "sound quality." This sound quality element consists of the band, the reception, the presence of stereo, and general sound quality. Due to the similarity of the elements, all four can be combined as one for measurement



purposes, although the groups tended to consider stereo slightly less important than the other criteria.

When the group members were asked about trigger mechanisms for changing stations, just about anything seemed able to start them changing. As expected, programming elements could start a change, usually a disliked song, obnoxious commercial, or too much talking on the part of the disc jockey. Other obvious causes given were elements that were undesired at the time they were aired, for example, news when news wasn't wanted. In some cases, mood played a role. Some members said they occasionally changed "just to change" with no good reason for doing it. Others reported that as their moods changed, their listening choices changed. The questionnaire corroborated the spoken data regarding triggers for the change process.

The conjunctive/disjunctive model appeared to be accurate with many in the groups. They often spoke specifically of changing to the next station that met a minimum criterion (usually a song the listener liked), however a few said they check all stations and then select the best from the group.

Finally, station loyalty was discussed and tested. The students did not sound as if they were very loyal to their favorites. A scale and index were administered to attempt to assess if the level of station loyalty could be measured. Both were included in revised form in the questionnaire.

Research Questions

RQ1: How do listeners choose their initial set of stations?

It is proposed that listeners use a hierarchical approach to initially determine the stations they wish to listen to, specifically Tversky's "elimination by aspects" (EBA) method. EBA suggests that decision makers choose by selecting first what they believe to be the most important aspect important



aspect of the "product." All choices not having this aspect will be eliminated. If a number of choices remain, the process is repeated using the next most important aspect. Finally, one choice remains or the process must be repeated.

A change is proposed in the process that would allow more than one choice to be available. Recognizing the unique status of radio as a "product" (no price or place), a listener may very likely have a set of chosen stations rather than a single option. The proposition that listeners choose their set of regularly listened to stations using a hierarchical EBA method was operationalized in several ways in the survey.

First, ratings for the importance of fifteen radio elements on a seven point scale were requested to give interval measurements, permitting identification of which attributes are considered most important. The results were mean levels of importance for each of the elements that can then be ranked. Different profiles can be constructed for different subgroups, i.e. heavy versus light listeners, large repertoire (number of stations) listeners versus small repertoire, and various demographic comparisons. The results should give an idea of the specific elements that listeners prefer, both in total and in the groups.

While those analyses will yield some specifics, that alone will not give full support to the proposition of a listener hierarchy. For that reason, a second analysis involved pair comparisons to test the hierarchical EBA model. The six items that made up the fifteen pairs were identified in the focus groups, pretests, and previous research as the most important elements and allow a reasonable number of comparisons for use in a telephone survey.

The analysis is very simple. An algorithm for use in SPSS was devised that determines the structure of each listener's responses. A perfect hierarchy

would find one element would be paramount, that is, chosen over the other five elements it is compared against, while another element would be chosen over four other elements, yet another would beat three, and so on. If the number of "victories" for each element is squared and then summed across each respondent, an index of "degree of hierarchy" results. The perfect hierarchy gives a sum of 55. If an element is chosen in each comparison (rather than choosing "not sure"), the least hierarchical score would be 39, based on three elements "beating" three others and the other three "beating" only two.

Without a doubt, some respondents will not choose between a pair of elements in some cases. This is not missing data, rather it should be considered a "non-choice." Lack of choice between two elements signifies a lack of a hierarchy on the respondent's part for that particular comparison. Therefore, using these "non-choices" will result in lower "degree of hierarchy" scores such that a respondent making no choices at all will have a hierarchy score of zero.

Support for the proposition will come from higher "degree of hierarchy" scores from respondents. Lower scores will suggest that listeners use some other model for their listening choices. However, further subgroup comparisons will be run to determine if particular groups are more likely to use the hierarchical model. T-tests and analyses of variance will be used to provide the comparisons.

RQ2: What causes listeners to add or remove stations from their set once the initial choice has been made?

The research question asks how listeners make changes in their "permanent" sets of stations. What stimuli will cause an addition or deletion from the set? Programming factors are certainly involved, but other



possibilities must be investigated. The roles of listener satisfaction with and loyalty to favorite stations probably play a role.

Research question 2 will be analyzed in a few different ways. First, a ten item scale has been designed to be a measurement of "loyalty" to the listener's favorite station. The scale will be used as an index with a top score of 70 indicating someone extremely loyal to their favorite. It is assumed that an extremely loyal listener is less likely to change to a new station if a new one that is similar to the favorite were to come on the air. While this is an exploratory test of such a scale, it would be a valuable tool for station operators planning to change formats or buy stations. In this research, the degree of loyalty must be ascertained to determine whether listeners will change their permanent set of stations.

In the pretest, this scale had a reliability of .76 (alpha) with the eleven items used. The scale measures the loyalty of listeners to their favorite station for use in answering research question two. Higher loyalty scores should mean a lower likelihood of a listener changing any part of his/her set of stations. Other questions established which station is the respondent's favorite and how long the listener has claimed it as a favorite, other ways of measuring how loyal listeners are to their favorite station.

Another question asked for a rating on an interval scale of how happy respondents were with their favorite station. This establishes a potential measure of the strength of the listener's ties to the station as well as a dependent variable for use in regression analysis to be discussed next.

Another assumed indicator of listener propensity to change stations permanently must be the degree of satisfaction with the current favorite(s). Two measures will be used here.



First, a direct measurement of overall satisfaction is requested using a seven point interval scale. Next, another set of questions directly measures the likelihood of the respondent trying a new station under two different conditions. One condition is simply "a new station" and the second is "a new station that sounds similar to your favorite." In each case, the results should also show the likelihood of the respondent trying something new. If they are unlikely to try a new station, they are therefore unlikely to be considering adding stations to their listening set.

RQ3: How do users make changes within their set of stations when they actually listen to the radio?

Once listeners have chosen an initial set of stations, they can use this set for day to day listening. If it is accepted that the typical listener has more than one station in his/her set, then there must be some process for changing within this set. It was proposed earlier that listeners use a conjunctive or disjunctive strategy to choose the next station to be listened to. That means choosing the first station available that meets a minimum set of criteria or only one criterion (e.g., a song the listener enjoys is currently playing). It is proposed that listeners do not go through the drawn out EBA process proposed for initial choice.

While the strategy is important, there must be a reason for the choice process to be triggered. While no hypotheses are specified, the research delves into three areas:

RQ3a. What triggers the proposed "short version" choice process during day-to-day listening?

RQ3b. What is the propensity of different listeners to change?

RQ3c. What is the effect of the listening location on change behavior,



specifically in-car and in-home listening?

The first question covers the cues that trigger the process, both from the radio station's programming (music, commercials, personalities, etc.) and those from outside (mood). Listeners were asked about specific items that started the change process.

Another set of questions addressed the change in daily listening situations, specifically the propensity for changing and the possible causes. Four of the questions concerned the change patterns and the test of the conjunctive/disjunctive strategy proposition.

Specific format elements can cause a listener to change stations and various questions deal with this. Another question asks about whether the listener's mood causes changes, something not controlled by the radio station, yet potentially equally important in terms of change. Beyond simple frequencies, the results can be broken down by subgroups using t-tests and analyses of variance, again by radio usage and demographic groups.

The second research sub-question asks if different groups change more often than others (i.e., young versus old). It has been reported that younger listeners, specifically teens, are noted button pushers and dial twirlers, while older listeners may stick with one station much longer. While empirical evidence of this exists for television, the lack of evidence for radio dictates that this should be a question rather than a hypothesis. Individual listener characteristics to be used for comparison include: radio station channel repertoire, radio usage, age, sex, income, education, and intermarket comparisons.

Sub-question three is proposed because of the radical differences in listening environments. In-car listening is often solitary, may generate more

attention to the programming (depending on where and when one is driving), and has different technical characteristics, both in reception (FM stereo can be especially difficult to receive clearly in a moving vehicle) and receiver (car radios are much more likely to have pushbuttons and seek/scan mechanisms than home receivers). The expectation based on Heeter and Cohen (1988) is that there will be more station switching in cars. T-tests and one-way analyses of variance will be used for comparisons of means will be used to compare various groups' responses on these questions.

Design

This study was conducted by telephone in three markets: Seattle-Tacoma, Washington, Greenville-Spartanburg, South Carolina, and Fargo-Moorhead, North Dakota-Minnesota. Telephone was chosen because it enables a researcher to use a large sample size generating results that can be generalized easily to larger populations, making the results more useful to the broadcast industry. Drawing the sample was easy and both interviewers and facilities were readily available. Co-operation rates are generally high with telephone surveys and the questions asked here were readily adaptable to the telephone methodology. The main drawbacks are the lack of control and short length of the interview.

The reasoning behind the markets chosen was relatively simple. It was desirable to be able to compare large, medium, and small markets. Seattle-Tacoma is a top twenty market, Greenville-Spartanburg is in the mid-sixties, and Fargo is considered a small market, as ranked by Arbitron Ratings Company, the larger of the two syndicated radio ratings services. The geographic separation was for efficiency in conducting the survey. Using a West Coast market allowed phone calls to be made beyond midnight Eastern time. Each market contained no more than three counties in the metro area as



defined by Arbitron Radio, making the markets manageable for drawing the sample. Other factors involved in the choices included the author's familiarity with the Greenville-Spartanburg market and the desire to use a small market that did not receive outside stations from a major market. Such markets may exhibit listening characteristics similar to a large market due to the large number of choices. In the case of Fargo, the market is extremely isolated from any larger market.

Approximately three hundred completed interviews were conducted in each market. That number was chosen to allow comparisons between markets with a reasonably low sampling error (approximately 5.7 percent at the 95 percent confidence level for each market when the full sample is analyzed). The sample list was drawn from the local phone books using a systematic sample with random digit dialing. Each phone book within each market was weighted for the approximate number of residential listings in that book.

Screeners questions were asked of each potential respondent, first to eliminate radio station employees who may give biased answers, believing the survey to be on behalf of a particular radio station and then to eliminate those potential respondents that did not spend a minimum amount of time listening to radio, at least two hours a week. A total of 178 potential respondents were eliminated on the listening question and 11 radio employees were found, removing some of the potential for misleading or uninformed answers. The number of "less than two hour" listeners was 12.6 percent of all numbers where a qualified respondent was found (completes plus refusals plus non-listeners).

The telephone study was conducted from May 27 through June 8, 1987 from East Lansing, Michigan. Both students and temporary help were used and nearly all interviewers had previous experience at telephone interviewing. All

were trained prior to the calling and were supervised by the author.

A total of 904 completed interviews were conducted, 306 in the Greenville-Spartanburg metro, 294 in the Fargo-Moorhead metro, and 304 in the Seattle-Tacoma metro area. Sampling error for the overall sample is 3.25 percent at the 95 percent confidence level. Each metro area matched the metro survey area for the market as defined by Arbitron Radio. All respondents were 18 years of age or older and said they listened to radio for at least two hours a week. The response rate was 48.1 percent after eliminating business and disconnected numbers, while 17.6 percent refused, 34.3 percent were no answers, and 5.3 percent were busy or answering machines where no resolution of the number was made. All phone numbers were called a minimum of three times.

Chapter 3

Results

Presentation of results will parallel the research questions. First, background characteristics of the sample will be reported: demographics, time spent listening to radio, and station repertoire. Next, findings related to research question 1, how listeners choose their initial station repertoire, will be examined. These include the importance of various format elements and whether a hierarchical choice process is evident.

Research question 2 considers the stability of listeners' station repertoire exploring their satisfaction with and loyalty to favorite stations and their likelihood of trying new stations.

Research question 3 addresses the issue of switching stations within listeners' regular repertoire: frequency of changing stations, factors which cause them to change, and their approach to changing stations.

For each research topic, the impact of individual differences across listeners will be assessed. Interrelationships between major study constructs will also be tested. Thus, each facet of radio listening that was investigated here will be presented individually, followed by correlations with previously presented data, one way analyses of variance with each of the demographic elements and finally multiple regressions to bring together all of the data.

Demographics

The following tables tell the story of the sample. Universe estimates come from Arbitron Ratings' population estimates for the three markets, at the time of the survey.



TABLE 1
Demographics

Gender of Sample

	N	Pct	Universe Estimate
Men	433	47.9%	48.7%
Women	471	52.1	51.3

Race of Sample

	N	Pct	Universe Estimate
White	820	90.7%	93.4%
Black	52	5.8	6.0
Hispanic	2	0.2	1.6
Other	19	2.1	N/A
Refused	11	1.2	N/A

Educational Level of Sample

	N	Pct	Universe Estimate*
Less than H.S.	61	6.7%	25.1%
High School	262	29.0	34.0
Some College	276	30.5	20.4
College Degree	188	20.8	20.4**
Graduate Work	114	12.6	
Refused	3	0.3	

*Universe estimate for education based on population 25 and over. The sample is based on 18 and over.

**This percentage is for all college graduates (including graduate work).

Household Income

	N	Pct	Adjusted Pct	Universe Estimate
Under \$10,000	78	8.6%	10.2%	16.6%
\$10,000-\$20,000	156	17.3	20.4	20.8
\$20,000-\$30,000	203	22.5	26.5	17.2
\$30,000-\$40,000	161	17.8	21.0	15.5
\$40,000-\$50,000	83	9.2	10.8	10.5
>\$50,000	85	9.4	11.1	18.5
Refused	138	15.3	N/A	N/A

TABLE 1 (CONT'D.)

Age of Respondents			
	N	Pct	Universe Estimates
18-24	196	21.7%	16.3%
25-34	253	28.0	25.9
35-44	203	22.5	19.9
45-54	86	9.5	12.5
55-64	84	9.3	11.4
65+	55	6.1	14.0
Refused/Unclear	27	3.0	N/A

The biggest skew from reality is in education, where the sample shows a much higher percentage of college educated individuals than the universe estimates. In terms of age, the sample is skewed to the younger ages and the income levels show a greater percentage of middle income households, which may be due to refusals. Gender and race are not far off from universe estimates with the exception of Hispanics. Only two were interviewed, or less than one quarter of one percent of the sample versus over one and a half percent in the population. Despite the skews, no weighting will be used for the parts of the sample that are off from the universe. Instead, the reader is advised to be aware of the potential for bias in some circumstances.

The method of presentation of results will be to build one layer of results upon the previous ones. Each facet of radio listening that was investigated here will be presented individually followed by correlations with previously presented data, one way analyses of variance and t-tests as appropriate with each of the demographic elements and finally multiple regressions to bring together all of the data. Because non-white respondents represent only eight percent of the sample (52 respondents), race will not be used in the subsequent analyses.

Time Spent Listening

In commercial radio, time spent listening (TSL) is a measure commonly used by programmers to determine the staying power of their stations with audiences. Usually, these people are concerned with how long the average listener is spending with their station. In this study, TSL is a measure of how much time each listener spends with radio in general. The measure is valuable as heavy listeners may have different expectations of radio and different uses for the medium than light listeners.

Time spent listening was calculated by combining the results of two questions. First, respondents were asked how many hours they listened to radio on an average weekday. The same question was repeated for weekends. Those measures were multiplied by five and two days respectively, and summed to represent TSL in an average week.

For those few respondents (less than ten) who reported that they did not work a normal work week (e.g. Wednesday through Sunday), interviewers were instructed to have them adjust the definitions of weekday and weekend to their work week. The reader should keep in mind that TSL means presented here are somewhat higher than those given by other sources, such as the commercial ratings services, Arbitron, Birch, and RADAR. This difference is accounted for by the screener question at the start of the survey. Only respondents who listened to radio at least two hours a week were surveyed. This would be expected to raise the overall average somewhat when compared to other measures.



TABLE 2

**Time Spent Listening
(in hours per week)**

Overall Mean	29.1 Hours/Week	
Age Group		
	TSL	
18-24	32.3	F=2.86 df=762 p=.014
25-34	29.9	
35-44	24.6	
45-54	26.4	
55-64	31.7	
65+	29.0	
Educational Level		
Less than H.S.	36.5	F=6.63 df=896 p=.001
High School Graduate	33.5	
Some College	28.1	
College Graduate	24.5	
Post Graduate Work	25.6	
Income		
Under \$10,000	33.9	F=2.06 df=762 p=n.s.
\$10,000-\$20,000	31.8	
\$20,001-\$30,000	26.4	
\$30,001-\$40,000	28.7	
\$40,001-\$50,000	27.5	
More than \$50,000	26.1	
Gender		
Male	26.9	t=2.77 p=.006
Female	31.1	
Market Size		
Large	27.9	F=1.50 df=899 p=n.s.
Medium	28.4	
Small	31.0	

The mean amount of listening time by respondents in an average week was 29.1 hours or just over four hours a day with a standard deviation of 23.2 hours. Three respondents who reported listening 168 hours per week (24 hours



per day) were coded as missing data for TSL. Following the lead of the ratings services which regularly delete respondents who report listening levels that are considered "too large," these "continuous" listeners were eliminated. It is unlikely that anyone can "listen" 24 hours per day, whether or not they choose to sleep at some time.

Bivariate analyses were performed to assess the relationship between TSL and demographics. Every demo except income and market size showed statistically significant results. For age, the overall ANOVA yielded an F of 2.86 ($p=.014$), indicating a significant relationship between age and TSL. Scheffe comparisons were used to pinpoint significant differences between categories. Scheffe post hoc comparisons were run on all ANOVAs in this dissertation. Scheffe offers the advantages of a more conservative test and eliminates the use of a large number of t-tests, which would have certainly resulted in some significant results regardless of the true outcomes. The 35-44 group listened to radio the least, only 24.6 hours per week. On the other end, the 18-24 cell listened over 32 hours per week and the 55-64 group spent approximately 31 2/3 hours per week listening to radio. A Scheffe comparison showed a significant difference between the 18-24 year old group and the 35-44 group. No other significant differences between age groups were found.

Education had a significant relationship to TSL ($F=6.63$, $p=.001$). The less than high school education group spent over 36.5 hours per week with radio, while the college degree group listened fewer than 24.5. The post-graduate work cell listened only 25.6 hours per week. Scheffe comparisons showed significant differences at the .05 level between the college degree cell and both the less than high school and high school degree groups. In this sample, those with less education spend more time listening to radio.

Gender showed significant differences in listening levels, based on the t-test statistic. There was a significant difference between men and women ($t=2.77$, $p=.01$). In this sample, women spent over four hours a week more with radio than men did. Women listened an average of 31.1 hours. Men spent fewer than 27 hours with the medium.

Station Repertoire

The number of stations each respondent listened to was determined by two questions. First, each respondent was asked what stations they listened to on a regular basis. Next, each was asked to name if there were any other stations they listened to once in a while. The sum of the two figures is a number that can be referred to as station repertoire. The number from the first question is also useful on its own, as a set of regularly listened to stations. Information for both will be presented in this section.

TABLE 3

Station Repertoire

	Number of Stations	
Regular Stations	2.0	
Other Stations	1.0	
Total Repertoire	3.0	

Distribution		
Number of Stations	Frequency	Percentage
1	141	15.6%
2	252	27.9
3	243	26.9
4	128	14.2
5	67	7.4
6	38	4.2
7	20	2.2
More than 7	14	1.5
Don't Know	2	0.2

TABLE 3 (Cont.)

Age Group		
18-24	3.3	F=4.80
25-34	3.2	df=874
35-44	3.0	p=.001
45-54	2.7	
55-64	2.7	
65+	2.3	
Education		
Less than High School	2.5	F=3.55
High School Graduate	2.8	df=898
Some College	3.3	p=.007
College Graduate	3.0	
Post Graduate Work	3.2	
Income		
Less than \$10,000	2.8	F=1.16
\$10,000-\$20,000	3.3	df=763
\$20,001-\$30,000	3.0	p=n.s.
\$30,001-\$40,000	3.0	
\$40,001-\$50,000	3.1	
More than \$50,000	3.3	
Gender		
Male	3.2	t=2.90
Female	2.9	p=.004
Market Size		
Large	3.3	F=6.11
Medium	3.0	df=897
Small	2.8	p=.002

In this study, the average listener used three stations, two of which were listened to on a regular basis.

There were no correlations above .01 between how many stations respondents listened to and how much time they spent with radio.

Education, age, market size, and gender showed differences between groups for station repertoire. Greater education meant more stations (ANOVA, $F=3.55$, $p=.01$) and younger listeners tended to listen to more stations (ANOVA, $F=4.80$,

$p=.001$), although individual comparisons were not significant. For gender, the t of 2.90 was significant at a probability level below .01. Male respondents listened to more stations than female respondents.

Market size results confirmed what would seem logical to most readers and has been shown in nearly every syndicated ratings report: given more options, listeners will listen to more stations. In this case, not only is the overall station repertoire ANOVA significant ($F=6.37$, $p=.002$), but the Scheffe comparisons show the large market respondents listened to more stations than either the medium market respondents or the small market respondents.

Finally, age was statistically significant ($F=4.80$, $p=.001$). Scheffe comparisons showed differences at the .05 probability level between the 18-24 cell and the 65+ cell and between the 25-34 cell and the 65+ group. In this case, it appears that younger listeners will shift around between more stations than older listeners.

RQ1: Initial Selection of Repertoire

The study examined the importance of radio format elements in selecting an initial repertoire and the hierarchical nature of these attributes.

Importance of Format Elements

Respondents were questioned as to how important fifteen different elements of radio formats were to them. A one to seven scale was used with seven meaning "extremely important" and one equalling "not important at all." While some format element may have been left out, the list was an attempt to be exhaustive (see table 4).



TABLE 4

Importance Scores of Radio Elements

	Mean
Reception	6.5
Music	6.3
Sound Quality	6.3
Stereo Sound	5.6
News	5.2
Weather	5.2
FM	5.2
Limited Commercials	5.1
Community Involvement	4.9
Disc Jockies/Personalities	4.7
Traffic Reports	3.6
Sports Reports	3.4
Contests	3.2
Phone-In Talk Shows	3.1
Play by Play Sports	2.8

Reception, music, and sound quality were the most valued elements among the respondents. Stereo sound placed in between other elements. A group of secondary importance consisted of news, weather, FM, limited commercials, community involvement, and disc jockies. Finally, traffic reports, sports reports, contests, phone-in talk shows, and play by play sports were not considered to be as important by this group. Graphically, the differences become more clear, as shown in figure 2. J

If any one independent variable shows major differences in the importance of the dependent variables, it is gender. Of the fifteen t-tests run, fourteen showed statistically significant differences at the .05 level of probability or better. Limited commercials was the only format element that was not different for men and women. The results for each element are shown in table 5.

Figure 2

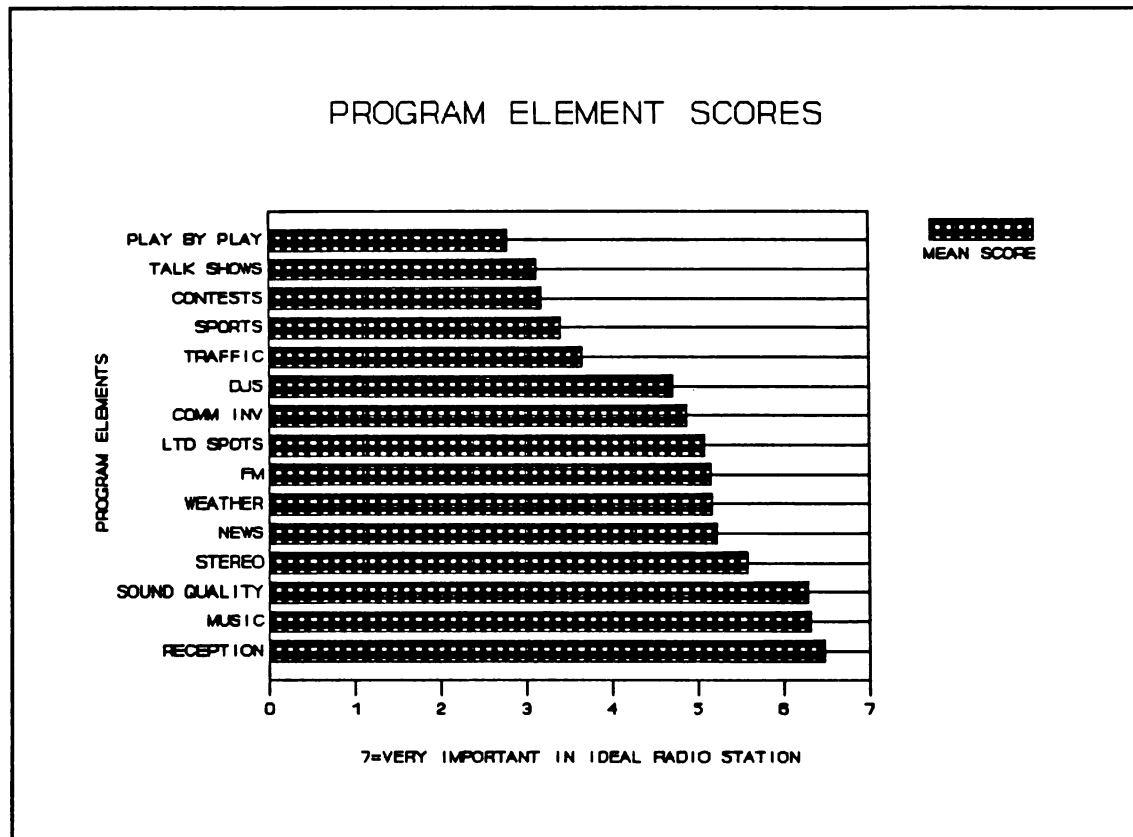




TABLE 5

Element Importance Scores by Gender

Element	Male	Female	t	p
Sports Reports	4.1	2.7	10.93	.001
Play by Play Sports	3.2	2.4	5.84	.001
Weather	4.8	5.5	5.36	.001
Music	6.2	6.5	4.28	.001
Phone-in Talk Shows	2.9	3.4	3.57	.001
Disc Jockies/Personalities	4.5	4.9	3.05	.002
Contests	3.0	3.4	2.79	.005
Stereo Sound	5.7	5.4	2.66	.008
News	5.1	5.4	2.65	.008
FM	5.3	5.0	2.53	.012
Reception	6.4	6.5	2.47	.038
Community Involvement	4.8	5.0	1.99	.047
Traffic Reports	3.5	3.8	1.97	.050
Sound Quality	6.2	6.4	1.96	.050
Limited Commercials	5.2	5.0	1.43	n.s.

Of the significant results, women rated ten of the elements as more important. The men in the sample rated only four elements higher, two of which, sports reports and play by play, could have easily been hypothesized in advance of the study. The other two are sound quality related, FM and stereo; however, the women in the sample rated both reception and sound quality higher than the men.

Another independent variable that was analyzed was time spent listening, described earlier in this section. Correlations were run between TSL and each of the importance variables. Table 6 shows the matrix.

TABLE 6

Correlations Between Time Spent Listening and Importance

	r	p
Contests	.19	.001
Phone-in Talk Shows	.15	.001
Disc Jockies/Personalities	.12	.001
Community Involvement	.09	.01
Stereo	.08	n.s.
Music	.07	n.s.
Play by Play Sports	.06	n.s.
Sound Quality	.06	n.s.
Weather	.04	n.s.
Limited Commercials	.04	n.s.
Traffic Reports	.03	n.s.
Sports Reports	.02	n.s.
FM	.00	n.s.
News	-.01	n.s.
Reception	-.02	n.s.

It appears that light radio listeners are a somewhat different group than heavy listeners. The differences in importance scores could be interpreted as differences of involvement, that is, for light listeners, not much of anything is that important to them with radio being similar to toothpaste. For heavy listeners, by virtue of the amount of time they spend with the medium on a weekly basis, everything is more important.

Another comparison was made with the independent variable of how many stations a listener used. Again, Pearson product-moment correlation was used and in this case, not a single correlation was statistically significant. Thus, the number of stations in a listener's repertoire has no relationship to the importance of the various format elements.

TABLE 7

Element Importance Scores by Income

Element	<\$10K	\$10K-\$20K	\$20K-\$30K	\$30K-\$40K	\$40K-\$50K	\$50K+	F	df	p
Contests	3.5	3.7	3.2	3.1	2.7	2.6	4.22	765	.001
Community Involve	4.7	5.3	4.7	5.0	4.4	4.7	3.75	765	.003
Phone-in Talk	3.4	3.2	2.9	3.4	2.8	2.6	2.89	764	.014
Disc Jockies	5.1	5.0	4.7	4.6	4.6	4.3	2.55	765	.027
Ltd. Commercials	5.1	4.9	5.1	5.4	5.0	5.4	1.73	765	n.s.
News	5.3	5.2	5.1	5.2	5.2	5.6	1.40	765	n.s.
Reception	6.4	6.5	6.5	6.6	6.2	6.5	1.36	765	n.s.
Stereo Sound	5.5	5.8	5.7	5.4	5.3	5.4	1.27	764	n.s.
Sports Reports	3.4	3.2	3.4	3.5	3.6	3.8	1.26	765	n.s.
FM	5.1	5.4	5.2	5.1	4.8	4.9	1.23	765	n.s.
Music	6.5	6.3	6.3	6.4	6.1	6.3	1.01	765	n.s.
Play by Play	2.9	2.6	2.8	2.6	2.8	3.0	0.86	764	n.s.
Weather	5.2	5.3	5.0	5.1	5.2	5.3	0.49	765	n.s.
Traffic Reports	3.8	3.8	3.6	3.5	3.5	3.5	0.48	758	n.s.
Sound Quality	6.3	6.3	6.3	6.3	6.3	6.2	0.31	765	n.s.

Income level proved to have little explanatory power regarding importance of format elements. Four of the fifteen ANOVAs showed statistically significant results, but two of these, disc jockies ($F=2.55$, $p=.027$) and talk shows ($F=2.89$, $p=.014$) showed no significant differences in the Scheffe comparisons. On the other hand, contests and community involvement did yield some significant comparisons.

Contests ($F=4.22$, $p=.001$) showed a significant difference between the \$10,000-\$20,000 cell and both the \$40,000-\$50,000 cell and the \$50,000+ cell. A likely explanation is that someone making less than \$20,000 a year needs whatever is being given away more than someone making over \$40,000 a year, but this does not explain the lack of a significant difference between the upper income groups and the under \$10,000 category.

Community involvement ($F=3.75$, $p=.003$) showed one statistically significant comparison. The \$10,000-\$20,000 cell rated this element significantly more important than did the \$40,000-\$50,000 cell.



TABLE 8

Element Importance Scores by Education Level

Element	<H.S.	H.S. Grad	Some Coll.	Coll. Grad	Post Grad	F	df	p
Contests	4.7	3.6	3.2	2.7	2.1	20.93	900	.001
Disc Jockies	5.4	5.1	4.8	4.2	4.0	13.91	900	.001
News	5.3	5.1	4.9	5.4	5.6	4.71	900	.001
Stereo	6.0	5.7	5.7	5.3	5.1	4.60	899	.002
Ltd. Commercials	4.5	4.8	5.1	5.3	5.4	4.13	900	.003
Comm. Involvement	5.3	5.1	4.6	4.9	4.7	3.72	900	.006
Traffic Reports	4.3	3.8	3.6	3.3	3.4	3.18	893	.014
Phone-in Talk	3.9	3.2	3.0	3.1	2.9	3.15	899	.014
FM	5.9	5.2	5.2	5.0	4.8	2.82	900	.025
Sound Quality	6.5	6.3	6.4	6.1	6.2	2.01	900	n.s.
Music	6.5	6.3	6.4	6.2	6.2	1.71	900	n.s.
Reception	6.6	6.4	6.5	6.5	6.5	1.33	900	n.s.
Weather	5.5	5.2	5.1	5.0	5.2	1.17	900	n.s.
Play by Play	3.3	2.8	2.7	2.8	2.7	1.10	899	n.s.
Sports Reports	3.8	3.4	3.3	3.4	3.3	0.75	900	n.s.

Education is next and nine of the fifteen ANOVAs showed significant comparisons. The only comparisons that did not prove statistically significant were music, sound quality, weather, sports reports, reception, and play by play.

The disc jockies importance comparison ($F=13.91$, $p=.001$) showed some striking Scheffe comparisons. The two most educated groups, those with college degrees and those who had done post-graduate work, rated the importance of disc jockies significantly lower than the other three educational levels measured here.

News worked out the opposite way, with the more educated respondents placing greater importance on news ($F=4.71$, $p=.001$). Scheffe comparisons showed the college degree and post-grad cells scoring significantly higher than the some college group. Surprisingly, the "some college" group scored news importance lower than the less than high school and high school graduate groups.

The contests ANOVA showed a very high F ratio ($F=20.93$, $p=.001$). Seven

of the Scheffe comparisons were statistically significant at .05. The post grad cell was significantly different from all three of the lower educational level groups. The college degree group was significantly different from the two lowest educational level groups. Also, the some college and college degree groups rated contests significantly lower than the less than high school group. It seems evident that contests appeal to lesser educated listeners and that it may be possible the contests have a negative appeal to some, more educated listeners.

Limited commercials showed a significant difference in the ANOVA ($F=4.13$, $p=.003$), but none of the Scheffe comparisons were significant. The same situation resulted for traffic reports ($F=3.18$, $p=.014$) and stereo ($F=4.60$, $p=.002$).

Talk shows ($F=3.15$, $p=.014$) did show significant differences because of the higher importance score given by the less than high school segment. This group scored talk show importance at 3.9, which was significantly higher than the post grad group (mean=2.9) and the some college group (mean=3.0). FM also showed a difference between groups ($F=2.82$, $p=.025$). The less than high school group again scored an element higher (mean=5.9) than did the post grad group (mean=4.8). Finally, community involvement ($F=3.72$, $p=.006$) did show a difference, but this time it was between the high school graduate cell (mean=5.1) and the some college group (mean=4.7).

One note about the education comparisons is that the lowest educational level respondents tended to rate nearly every element higher than other groups, whether the difference was significant or not. It leads to the question whether there is truly a difference or whether this is a case of an inherent artifact of telephone survey methodology. There may be some value to suggesting that some other researcher investigate whether there is some special premium that

lesser educated people place on radio in particular, or mass media in general.

TABLE 9

Element Importance Scores by Age

Element	18-24	25-34	35-44	45-54	55-64	65+	F	df	p
News	4.5	4.9	5.5	5.7	6.0	6.0	19.12	876	.001
Weather	4.7	4.9	5.2	5.6	6.0	5.9	11.47	876	.001
Stereo Sound	6.3	5.7	5.4	4.9	5.1	5.0	10.58	875	.001
Music	6.5	6.5	6.3	6.2	5.8	5.8	9.36	876	.001
Disc Jockies	5.2	4.8	4.8	4.2	4.2	3.9	7.44	876	.001
Contests	3.9	3.1	3.0	2.8	3.0	2.8	6.20	876	.001
Ltd. Commercials	5.2	5.3	5.2	4.9	4.5	4.3	4.39	876	.001
Play by Play	2.8	2.6	2.7	2.8	3.1	3.6	3.15	875	.008
FM	5.6	5.1	5.0	4.8	4.9	5.0	3.01	876	.011
Traffic Reports	3.5	3.3	3.9	3.8	4.0	3.9	2.06	870	n.s.
Sports Reports	3.7	3.2	3.3	3.3	3.7	3.5	1.84	876	n.s.
Sound Quality	6.4	6.2	6.2	6.2	6.4	6.2	1.73	876	n.s.
Phone-in Talk	3.2	2.9	3.1	3.0	3.3	3.6	1.59	875	n.s.
Comm. Involvement	4.8	4.7	5.0	5.2	4.7	5.0	1.50	876	n.s.
Reception	6.5	6.5	6.4	6.5	6.5	6.5	0.43	876	n.s.

Comparing the importance of the fifteen elements by age, nine of the ANOVAs were statistically significant at a minimum of the .05 level of probability. These were music, disc jockies, news, weather, contests, play by play sports, limited commercials, FM, and stereo.

The overall music ANOVA was significant ($F=9.36$, $p=.001$) and five of the Scheffe comparisons were also significant. The 18-24 and 25-34 cells were significantly different than the 65+ group and the 18-24, 25-34, and 35-44 groups were significantly different from the 55-64 group.

While the importance scores were lower, the results for disc jockies were similar to the outcome of music importance ($F=7.44$, $p=.001$). Again, younger listeners rated disc jockies more important than did their older counterparts. In this case, four Scheffe comparisons were statistically significant, those being the 18-24 and 25-34 cells rating importance of disc jockies significantly higher than 65+ respondents, and the 18-24 cell was also significantly higher than the

45-54 and 55-64 groups.

News and weather ANOVAs yielded very high F ratios (news=19.12, weather=11.47) and as one might guess, reversed the order of importance of the music and disc jockies results. The Scheffe comparisons for news confirm the "generation gap" in terms of importance of that element to listeners. The 35-44, 45-54, 55-64, and 65+ groups all rated news significantly more important than the 18-24 and 25-34 groups. There is an age "break" at about 35 years old; below that age, news, while somewhat important, is not a major consideration, above that age, it may be as important as any other element that the station has control over.

The Scheffe results for the weather were not quite the same. The 45-54, 55-64, and 65+ groups rated weather significantly more important than did the 18-24 group. The 55-64 and 65+ groups rated it higher than did the 25-34 group and the 55-64 group rated weather significantly more important than did the 35-44 group. One possible explanation might be attention span. It takes much less time to listen to a weather forecast than the news headlines.

< Contests showed one major difference by age group (ANOVA, $F=6.20$, $p=.001$) with the 18-24 group rating contests significantly more important than any other age group. No other Scheffe comparison proved to be significant. Thus, the importance of contests can be said to be very age-sensitive.]

Play by play sports broadcasts also showed significant results ($F=3.15$, $p=.008$) with older listeners generally scoring it higher. The only significant Scheffe comparison was between the 65+ group and the 25-34 cell with the older listeners rating play by play higher. While play by play importance was significant, sports reports were not.

The next significant result was limited commercial importance ($F=4.39$,

$p=.001$). While only one Scheffe comparison was significant (25-34 rating limited commercials higher than 65+), the overall "break point" was at 45 years old. Those under 45 rated limited commercials at approximately 5.3 on the seven point scale. Above that age, the average is approximately 4.6.

Finally, two reception elements proved to be significant, FM and stereo, however the latter was much more important than the former. In the case of FM ($F=3.01$, $p=.011$), no Scheffe comparisons were significant and in fact, nearly all groups were the same with a mean of around five with the exception of the 18-24 group, which rated FM much higher at 5.6. In the case of stereo ($F=10.58$, $p=.001$), the differences are more obvious. Based on Scheffe comparisons, the 18-24 group is different from all other age cells, however younger listeners tended to rate stereo higher than FM.

Paired t-tests were run on the 18-24, 25-34, and 35-44 age cells to see if the differences between the importance ratings for FM and stereo were significant. The results:

TABLE 10

t-Test Results for FM Versus Stereo Importance

Group	FM Mean	Stereo Mean	t Value	Sig.
18-24	5.6	6.3	5.25	.001
25-34	5.1	5.7	4.89	.001
35-44	5.0	5.4	2.92	.004

The importance of these data is that FM might not be one of the more important elements to radio listeners. Listeners may discern a difference between FM as an element of radio and other elements of sound quality.

TABLE 11

Element Scores by Market Size

Element	Large	Medium	Small	F	df	p
Traffic Reports	4.5	3.7	2.7	50.42	896	.001
Comm. Involvement	4.4	5.4	4.8	27.19	903	.001
FM	4.7	5.8	5.0	23.97	903	.001
Contests	2.5	3.6	3.3	22.61	903	.001
Weather	4.6	5.5	5.4	20.56	903	.001
Phone-in Talk	2.7	3.2	3.5	11.91	902	.001
Stereo Sound	5.2	5.9	5.6	10.85	902	.001
Disc Jockies	4.4	5.0	4.7	6.90	903	.002
Sports Reports	3.2	3.6	3.2	2.91	903	n.s.
Ltd. Commercials	5.2	4.9	5.1	1.90	903	n.s.
Play by Play	2.6	2.9	2.8	1.49	902	n.s.
Music	6.3	6.4	6.3	1.40	903	n.s.
News	5.1	5.3	5.2	0.77	903	n.s.
Reception	6.4	6.5	6.5	0.70	903	n.s.
Sound Quality	6.2	6.3	6.3	0.49	903	n.s.

The last demographic variable is market size and eight of the fifteen ANOVAs were statistically significant. Starting with disc jockies ($F=6.90$, $p=.002$), the medium market ranked highest, and the Scheffe comparison showed a difference between the medium and large markets.

While news showed no significant difference, weather did ($F=20.56$, $p=.001$). In this case, the medium and small markets scored similarly, but the large market rated weather importance somewhat lower. The Scheffe comparison bore this out with both the medium and small market showing significantly higher than the large market. Of course, a result like this begs the question of whether this is a difference due to market size or a difference due to characteristics of the market. Each of the markets has their weather problems (Seattle is rainy, Greenville-Spartanburg receives a good number of thunderstorms, and Fargo has great extremes of temperature).

Contests also showed differences between markets ($F=22.61$, $p=.001$). Again, the small and medium markets were significantly higher than the large



market in the Scheffe tests. Once again, talk shows looked like the two previous significant comparisons ($F=11.91$, $p=.001$). One more time, the small and medium markets were significantly higher than the large market in their importance rating for talk shows. This result is interesting in that the smaller markets may not have full-time talk stations. Perhaps that is why they place a greater importance on this particular element.

One comparison that was no surprise and yielded probably the largest F ratio of any comparison in this study, was traffic reports. In this case, the F was 50.42 and every Scheffe comparison was significant. In this case, the large market rated traffic reports most important, the medium market was in the middle, and the small market rated traffic reports lowest. The obvious reason here is the volume of traffic in the three markets, however there is relevance for a station considering using traffic reports in a smaller market to gain an edge as an information station.

FM showed a significant difference by market size ($F=23.97$, $p=.001$). In this case, the medium market ranked FM as more important when compared to the other two markets which may have something to do with the fact that there are no dominant AM stations in that market and in fact, none of the AM stations' signals can actually cover the metro area. Stereo results were similar ($F=10.85$, $p=.001$) with the medium market rating stereo as more important than the small and large markets.

Finally, community involvement showed major differences by market size ($F=27.19$, $p=.001$). In this case, Scheffe comparisons showed differences between each of the markets with the medium market rating community involvement highest, the small market about a half point behind, and the large market rating community involvement lowest.



It is interesting to note that, with the exception of traffic reports, the largest market generally ranked each element lower in importance than the other markets. It would take another survey in more markets to find out if this is an inherent trait of the larger markets or simply something unique to Seattle-Tacoma.

After seeing all the statistically significant results for the ANOVAs, Scheffe tests, and correlations described above, the reader might expect regression analyses to show reasonably high r^2 numbers, but that is not the case. The independent variables included in the analyses were time spent listening, age, sex, race, income, education, market size, and number of stations in the station set. The fifteen regressions are detailed below:

TABLE 12

Regressions on Importance of Elements

Reception

Variable	B	t	Sig t
Gender	-0.23	3.11	.002
Constant	6.60	124.50	.001
F=9.67 $R^2=.01$			

Music

Variable	B	t	Sig t
Age	-0.02	6.75	.001
Gender (M=1, F=0)	-0.40	5.19	.001
Constant	7.24	61.83	.001
F=34.22 $R^2=.08$			

Sound Quality

No variables were in the equation

TABLE 12 (cont.)

Stereo

Variable	B	t	Sig t
Age	-0.03	6.67	.001
Education	-0.21	3.55	.001
Medium Market	0.48	3.47	.001
Constant	7.16	27.65	.001
F=24.00 R ² =.09			

News

Variable	B	t	Sig t
Age	0.04	10.12	.001
Station Repertoire	0.12	3.61	.001
Education	0.12	2.36	.020
Large Market	-0.28	2.25	.029
Constant	3.03	12.09	.001
F=28.73 R ² =.13			

Weather

Variable	B	t	Sig t
Age	0.03	6.94	.001
Large Market	-0.83	6.56	.001
Gender	-0.45	3.80	.001
Constant	4.59	25.18	.001
F=35.90 R ² =.13			

FM

Variable	B	t	Sig t
Medium Market	0.96	6.05	.001
Age	-0.16	3.07	.003
Education	-0.14	2.08	.038
Gender	0.31	2.07	.040
Constant	5.66	18.00	.001
F=14.76 R ² =.07			

Limited Commercials

Variable	B	t	Sig t
Age	-0.02	4.63	.001
Education	0.21	3.51	.001
Constant	5.32	20.63	.001
F=16.86 R ² =.04			

TABLE 12 (Cont.)

Community Involvement

Variable	B	t	Sig t
Medium Market	0.66	4.41	.001
Time Spent Listening	7.93 ⁻³	2.90	.004
Large Market	-0.35	2.29	.023
Constant	4.52	33.24	.001
F=25.68 R ² =.07			

Disc Jockies/Personalities

Variable	B	t	Sig t
Education	-0.38	6.75	.001
Age	-0.03	6.33	.001
Gender	-0.40	3.23	.001
Medium Market	0.35	2.62	.009
Constant	6.95	26.92	.001
F=26.13 R ² =.12			

Traffic Reports

Variable	B	t	Sig t
Large Market	1.84	9.45	.001
Medium Market	1.02	5.29	.001
Education	-0.23	3.32	.001
Gender	-0.31	2.00	.046
Constant	3.53	13.26	.001
F=25.44 R ² =.12			

Sports Reports

Variable	B	t	Sig t
Gender	1.45	10.13	.001
Medium Market	0.44	2.95	.003
Constant	2.58	22.94	.001
F=56.44 R ² =.13			

Contests

Variable	B	t	Sig t
Education	-0.49	7.60	.001
Large Market	-0.76	4.99	.001
Time Spent Listening	0.01	3.41	.001
Age	-0.02	3.78	.001
Gender	-0.36	2.53	.012
Constant	5.50	16.85	.001
F=28.59 R ² =.16			



TABLE 12 (Cont.)

Phone-In Talk Shows

Variable	B	t	Sig t
Large Market	-0.68	4.47	.001
Gender	-0.48	3.33	.001
Time Spent Listening	0.01	3.25	.002
Constant	3.24	21.55	.001
F=15.17 R ² =.06			

Play by Play Sports

Variable	B	t	Sig t
Gender	0.92	6.49	.001
Age	0.17	3.65	.001
Time Spent Listening	7.22 ⁻³	2.28	.023
Large Market	-0.34	2.22	.027
Constant	1.57	6.34	.001
F=14.25 R ² =.07			

The largest r^2 is almost .17 for contests, while not one independent variable is in the equation for sound quality. In other words, demographic variables explain very little variance in the various dependent variables, the format elements.

The Structure of Listener Choice

One lynchpin of this study is the idea that listener choice can be modelled. In this case, the hypothesis is that listeners use a hierarchical choice process as explained earlier. Also explained earlier was the method used in this study to determine whether or not an individual listeners has a hierarchy for choice, consisting of fifteen paired choices scored as "victories" for one format element or as a "tie." The number of victories for each element is squared with the new numbers added for a final score. A perfect hierarchy will score 55. All ties (no choices) is a score of zero. Making a choice each time but choosing the least hierarchical system will score 39. Table 13 shows the number of victories for each element tested and the frequency distribution for the hierarchy scores.



TABLE 13

"Victories" for Tested Radio Elements

Number of	Music	News	Weather	DJs	Ltd Spots	Sound Quality
5	204	52	42	38	24	193
4	280	124	102	81	112	259
3	215	188	175	137	172	189
2	140	203	210	179	219	135
1	52	196	213	232	175	91
0	13	141	162	237	202	37

How to read above table: 204 respondents selected music above the other five elements music was paired with. 280 respondents selected music over four other elements, meaning it "lost" to one other element.

Distribution of Hierarchy Scores

Score	Frequency	Percentage
55	324	35.8%
54	9	1.0
53	119	13.2
52	6	0.7
51	103	11.4
50	11	1.2
49	50	5.5
48	7	0.8
47	49	5.4
46	30	3.3
45	10	1.1
44	16	1.8
43	42	4.6
42	10	1.1
41	8	0.9
40	10	1.1
39	12	1.3
Less than 39	88	9.7

The "perfect hierarchy" score of 55 was the modal value with over one third of the respondents. On the other hand, fewer than one eighth of the respondents could be said to have no hierarchy at all in their choices for listening. Exactly half of the respondents scored either perfect or near perfect hierarchies.

When the hierarchy scores were contrasted by demographic factors through

ANOVAs and t-tests (see table 14), some important differences did arise. Education, age, and market size offered some explanation for differences in hierarchy score. First, it appears that those with higher levels of education have higher hierarchy scores ($F=5.25$, $p=.001$). The Scheffe comparisons showed significant differences between the "some college," "college degree," and "post graduate work" groups and the "less than high school" cell.

In the age category, younger listeners tended to have higher hierarchy scores than did the older respondents. The ANOVA ($F=4.21$, $p=.001$) yielded three significant comparison which showed the three younger age groups scoring higher hierarchy scores than the 55-64 group. Income also proved to be statistically significant (ANOVA $F=2.31$, $p=.043$), but none of the groups were significantly different. Finally, both market size and gender were not statistically significant independent variables.

TABLE 14
Hierarchy Scores by Demographic Groups

Age		
18-24	49.2	$F=4.21$ $df=876$ $p=.001$
25-34	49.7	
35-44	49.5	
45-54	48.1	
55-64	45.2	
65+	47.3	
Education		
Less than High School	45.0	$F=5.25$ $df=900$ $p=.001$
High School Graduate	47.9	
Some College	49.4	
College Degree	50.2	
Post Graduate Work	49.3	

TABLE 14 (Cont'd.)

Income		
Less than \$10,000	46.6	F=2.31
\$10,000-\$20,000	48.6	df=765
\$20,001-\$30,000	49.9	p=.043
\$30,001-\$40,000	49.4	
\$40,001-\$50,000	50.0	
More than \$50,000	50.1	
Gender		
Male	49.3	t=1.48
Female	48.4	p=n.s.
Market Size		
Large	48.2	F=1.45
Medium	48.9	df=903
Small	49.4	p=n.s.

Correlations were performed for all of the previously discussed dependent variables with the hierarchy score. Table 15 gives the results:

TABLE 15

Correlation with Hierarchy Score

Variable	r	p
Importance-Weather	-.17	.001
Importance-Contests	-.17	.001
Importance-Talk Shows	-.14	.001
Importance-News	-.11	.001
Importance-Traffic Reports	-.11	.001
Importance-Community Involvement	-.11	.001
Importance-DJs/Personalities	-.10	.01
Importance-Play by Play	-.10	.01
Time Spent Listening	-.09	.01
Station Repertoire	.05	n.s.
Importance-Sports	-.05	n.s.
Importance-FM	-.04	n.s.
Importance-Ltd Commercials	.02	n.s.
Importance-Sound Quality	-.02	n.s.
Importance-Stereo	-.02	n.s.
Importance-Music	.01	n.s.
Importance-Reception	-.01	n.s.

It is interesting to see that there are statistically significant, albeit small, negative correlations with a number of elements, all of which are talk elements with the exception of time spent listening. The only talk element not to have a statistically significant negative correlation was sports reports and that one has the highest of the non-significant results. All of the non-talk elements were not significantly correlated with the hierarchy score. The results show that while those who place more importance on talk format elements are less likely to use a hierarchy in choosing an initial set of radio stations, the leap of logic cannot be made to say that listeners who place more importance on non-talk elements are more likely to use a hierarchy in choosing a station set.

The regression analysis again did not yield any important results in and of itself, although the importance may be in what it did not show. Twenty four independent variables were entered in the stepwise regression; only four were significant yielding an r^2 of .063. The four variables were three importance variables: talk shows, weather, and contests, and education. The first three are related negatively to hierarchy score, while, as noted above, education has a positive relation with hierarchy score. This leaves some other factors to explain over 93 percent of the variance in hierarchy score, apparently factors that are not directly related to radio.

RO2: Stability of Station Repertoire

Three factors related to the stability of listeners' initial station repertoire were measured: listener satisfaction, station loyalty, and likelihood of sampling a new station.

Listener Satisfaction

Listener satisfaction was measured directly very early in the questionnaire. After establishing what their favorite station was, the respondents were asked

to rate their satisfaction level on a seven point scale where one was not satisfied at all and seven was very satisfied. Listeners were very satisfied with their favorite stations. The mean was a very high 6.2 and both the median and the mode were seven.

As shown in table 16, t-tests and ANOVAs were performed on the demographic groups. The mean for women was 6.4 while for men it was a significantly lower 6.1, yielding a t value of 4.85 ($p=.001$).

ANOVAs performed on education, income, and market size showed no differences between groups, however age did ($F=6.24$, $p=.001$). It appears that older listeners are likely to be more satisfied with their favorite stations than are younger listeners. Scheffe comparisons showed the 45-54 and 55-64 cells rating their satisfaction higher than the 18-24 group. Additionally, the 45-54 group was higher than the 25-34 group.

TABLE 16

Listener Satisfaction by Demographic Groups

Age		
18-24	6.0	F=6.24
25-34	6.1	df=873
35-44	6.3	p=.001
45-54	6.5	
55-64	6.5	
65+	6.4	
Education		
Less than High School	6.5	F=2.80
High School	6.3	df=896
Some College	6.2	p=.026
College Degree	6.2	
Post Graduate Work	6.1	



TABLE 16 (Cont'd.)

Income		
Less than \$10,000	6.2	F=0.68
\$10,000-\$20,000	6.3	df=762
\$20,001-\$30,000	6.2	p=n.s.
\$30,001-\$40,000	6.2	
\$40,001-\$50,000	6.1	
More than \$50,000	6.3	
Gender		
Male	6.1	t=4.85
Female	6.4	p=.001
Market Size		
Large	6.1	F=1.76
Medium	6.3	df=899
Small	6.3	p=n.s.

The correlations with the other variables examined to this point are listed below:

TABLE 17

Correlation of Satisfaction with other Variables

Variable	r	p
Time Spent Listening	.18	.001
Importance-Contests	.15	.001
Importance-Comm. Involvement	.14	.001
Station Repertoire	-.12	.001
Importance-DJs/Personalities	.11	.01
Importance-News	.11	.01
Importance-Sound Quality	.10	.01
Importance-Weather	.10	.01
Hierarchy Score	-.09	.01
Importance-Sports Reports	.09	n.s.
Importance-Music	.08	n.s.
Importance-Reception	.08	n.s.
Importance-Play by Play	.08	n.s.
Importance-Weather	.06	n.s.
Importance-Talk Shows	.06	n.s.
Importance-FM	.05	n.s.
Importance-Stereo Sound	.03	n.s.
Importance-Ltd Commercials	-.02	n.s.

Of the eighteen correlations presented in the table above, half are



statistically significant. While that fact is important, what is more important is the variables that reach that level. Throughout this study, music and sound quality (in the overall sense of a combination of good reception, good sound, stereo, and FM) have been the most important elements to the respondents. While some listeners do opt for informational elements such as news and weather and others find personalities important, those two have been cited over and over. Now that the study reaches the question of listener satisfaction, it appears that importance of music to a listener has no correlation with satisfaction and that nearly all of the "sound quality" elements (with the exception of sound quality itself) are also not correlated with satisfaction.

Those variables that did score high sometimes seem to defy explanation. While it is easy to accept that satisfied listeners may listen more (hence a statistically significant positive correlation), it is difficult to accept that the importance of contests should have such a high positive correlation. The significant negative correlation with number of stations is quite reasonable given the logic that less satisfied listeners would be more likely to switch around more than satisfied listeners. On the other hand, the negative correlation for hierarchy score with satisfaction leads to the possibility that hierarchical-style listeners have a different profile and a different expectation about what they want from radio than do non-hierarchical listeners. As the correlation is significantly negative, it would appear that hierarchical listeners do not feel they are being served as well by radio as do non-hierarchical listeners.

Finally, the multiple regression confirmed the other analyses. The results are presented below:



TABLE 18

Regression on Satisfaction

Variables	B	t	Sig t
Time Spent Listening	.11	4.73	.000
Education	.11	4.33	.000
Gender (M=1,F=0)	-.24	-3.45	.001
Imp-Contests	.04	2.54	.011
# Stations	-.08	-2.60	.009
Imp-Comm. Involve	.04	2.11	.035
Constant	5.62	32.24	.000
F=15.16 R ² =.11			

As has been common in the previous multiple regressions, the equation does not explain very much of the variance in the dependent variable, in this case approximately eleven percent. As with the other cases, demographics and radio format elements do not explain much of the variance in listener satisfaction.

Listener Loyalty

Up until this point, the study has dealt with the elements of a radio station's sound, generally things the station can control. But radio, like many consumer goods, means many things to many different people. Some get very involved with radio, while others are simply users who find it a useful tool at various times of the day. Whatever the case for an individual, a major component of how someone feels about their favorite radio station(s) has nothing to do with the kind of music or how often the news is read; it is the feeling, good or bad, the person gets from listening. Good feelings about a station, greater involvement, and a feeling that the station "cares" about the listener should ideally lead to greater "loyalty" to the station. Greater loyalty means that an individual listener is a less likely target for another station seeking to raid the first station's audience.

This section of the questionnaire used ten items that attempted to measure



loyalty to a radio station through a combination of involvement, that "good feeling," and other attributes. Each item was scored on a seven point scale where "strongly disagree" equalled one and "strongly agree" equalled seven. Principal components factor analysis revealed that seven of the items loaded together and appeared to be measuring loyalty. The other three items created two other factors that in the researcher's judgement, did not appear to be measuring loyalty or some component of the construct. The scale was reduced to the seven items, with the scores for each reported below. Reliability for the seven item scale was .80. The factor loadings for each item are in parentheses after the description of the item.

TABLE 19
Factor Analysis and Means for Loyalty Scale

Item	Mean
Listening to my favorite station makes me feel good. (.77)	6.0
The music my favorite station plays is the same kind of music I like best. (.63)	5.9
My favorite station cares about what I want to hear. (.75)	5.5
I feel like I know the people at my favorite station. (.67)	5.1
I can't imagine any other station would sound better than my favorite station. (.68)	4.9
I tell friends about my favorite station. (.71)	4.5
I get involved with my favorite station by calling the station, entering contests, or going to events sponsored by the station. (.59)	3.0

The scores of the variables were combined to create a score for the scale.

This score will be used as a "loyalty score" in all of the following analyses.

These loyalty scores were run through the usual set of t-tests and ANOVAs to check for differences between groups and the results are shown in table 20.

TABLE 20
Loyalty Scores by Demographic Groups

Age		
18-24	35.6	F=0.99 df=874 p=n.s.
25-34	34.2	
35-44	34.5	
45-54	35.8	
55-64	34.0	
65+	34.7	
Education		
Less than High School	39.8	F=15.85 df=897 p=.001
High School Graduate	36.6	
Some College	34.5	
College Graduate	32.5	
Post Graduate Work	32.0	
Income		
Less than \$10,000	35.7	F=3.33 df=762 p=.006
\$10,000-\$20,000	36.4	
\$20,001-\$30,000	35.0	
\$30,001-\$40,000	34.9	
\$40,000-\$50,000	33.0	
More than \$50,000	32.4	
Gender		
Male	33.0	t=6.01 p=.001
Female	36.3	
Market Size		
Large	33.0	F=10.37 df=900 p=.001
Medium	36.0	
Small	35.3	

Age was the only group to not show statistically significant differences between groups. Gender proved to be a solid differentiating factor. Women in



this sample were much more loyal to their favorite station than were men ($t=6.01$, $p=.001$). The difference in means was over three points (men $x=33.0$, women $x=36.4$).

Income also showed some difference, which has not happened often in the earlier results. Lower income listeners were more likely to be more loyal than those with greater income ($F=3.33$, $p=.006$). Scheffe comparisons showed one difference between groups, with the \$10,000-\$20,000 group showing significantly higher loyalty levels than the over \$50,000 household income group.

This makes an interesting interplay with the differences shown by educational levels ($F=15.85$, $p=.001$). Listeners with high school educations or less are an entirely different group than those with at least some college or higher levels of education. The two lower groups (some high school, high school diploma) scored significantly higher than all three of the higher educational level groups, with the exception of the high school diploma cell and the some college cell.

As education and income are often linked, a two-way analysis of variance was run on loyalty with education and income as the independent variables. The interaction effect was not significant ($F=.60$, $p=.913$) showing no interaction between the two variables. While the intuitive answer upon seeing the original ANOVAs is to assume a link between these two (lower educated, lower income listeners are more loyal), it is not borne out by the tests.

Interestingly, market size also showed differences. In this case, listeners in the small and medium markets scored significantly higher on loyalty than did those from the large market ($F=10.37$, $p=.001$). One possibility for this is the greater number of radio choices in the large market as opposed to the smaller ones. The Seattle-Tacoma respondents offered approximately 35 different

station choices, Greenville-Spartanburg listeners chose about 25 stations and Fargo-Moorhead respondents gave approximately 15 choices. Listeners in a large market, considering the limited number of commercial formats available, are more likely to have a choice of similar stations, thus allowing easier changing. Unless there is an emotional need for loyalty on the part of the listener, it need not be given.

As with all other variables, correlations were run with the other variables analyzed to this point. Here are the results:

TABLE 21
Correlations with Listener Loyalty Scores

Variable	r	p
Importance-Contests	.39	.001
Importance-DJs/Personalities	.35	.001
Importance-Community Involve	.29	.001
Time Spent Listening	.26	.001
Importance-Music	.18	.001
Importance-Sound Quality	.18	.001
Importance-Talk Shows	.18	.001
Importance-Weather	.15	.001
Importance-Traffic Reports	.14	.001
Importance-Stereo	.14	.001
Importance-Reception	.12	.001
Importance-FM	.11	.001
Station Repertoire	-.11	.001
Hierarchy Score	-.10	.01
Importance-Play by Play	.05	n.s.
Importance-News	.04	n.s.
Importance-Sports	.01	n.s.
Importance-Ltd. Commercials	-.01	n.s.

For the first time in the results of this study, reasonably large correlations begin to appear. For example, the importance of contests has a very high positive correlation with the loyalty score, suggesting that those who do listen for contests are very loyal to the stations that run them. The result is the same for disc jockies. This element has a very high positive correlation with loyalty, leading to the same explanation again. It is also worth noting that

hierarchical listeners and dial-switchers are not as loyal to favorite stations, suggesting that these listeners are open to new stations, however they are not likely to be loyal to a new favorite either.

Two important correlations in this set must be discussed. Time spent listening showed a very strong .26 correlation with loyalty and that begs the question of temporal sequencing: which came first, the loyalty or the time spent listening? Whichever it is, this result shows that loyal listeners are generally longer listeners, which is very important to programmers throughout out the industry. If stations can build loyalty, a direct result in the average quarter hour may be seen. $\square$

Station repertoire showed a statistically significant negative correlation with loyalty. A question for future study is whether these listeners are just not capable of being loyal to any one station or if they are still searching, perhaps not happy with any format currently available to them or may unaware of some format in the market that may be satisfactory. Finally, multiple regression was run with loyalty as the dependent variable and the usual cast of characters as independent variables. This regression had the greatest explanatory power of any in this study.

TABLE 22

Regression on Loyalty

Variable	B	t	Sig t
Satisfaction	2.58	9.32	.000
Imp.-Contests	0.79	5.75	.000
Imp.-DJs/Personalities	0.68	4.35	.000
Imp.-Comm. Involvement	0.68	4.45	.000
TSL	0.62	3.31	.001
Imp.-Music	0.69	2.90	.004
Gender (M=1, F=0)	-1.47	2.81	.005
Education	-0.62	2.51	.012
Constant	6.05	2.33	.020
F=50.84 R ² =.36			

Importance of format elements and demographics appear to do a much better job of explaining variance in loyalty than they do for explaining other variables in this study. The results here lead to the conclusion that the loyalty scale is high in face validity, considering the strong positive correlation with satisfaction.

Another method was used to measure loyalty in this study. While the previously discussed method attempted to find various factors that measured the construct itself, respondents were also asked two questions related to actions. They were asked if a new station were to come on the air, what would be the likelihood of their listening to it. Next, they were asked if that new station sounded similar to their favorite station, how likely would they be to listen to it. A seven point scale with seven equalling "definitely would listen" and one equalling "definitely would not listen" was used. It was assumed that listeners who were more loyal to their favorite stations would not be as likely to try a new station, no matter what it sounded like.

TABLE 23

How Likely Would You Be to Try a New Station...

Value	You Didn't Know		That Sounded Similar to Your Favorite	
	N	Pct	N	Pct
1 (least likely)	95	10.5%	53	5.9%
2	31	3.4	16	1.8
3	52	5.8	25	2.8
4	132	14.6	123	13.6
5	143	15.8	140	15.5
6	98	10.8	168	18.6
7 (most likely)	351	38.8	376	41.6
DK/RF	2	0.2	3	0.3

These two variables had a strong positive correlation with each other of .47, suggesting that respondents would show very similar behaviors in both hypothetical situations.

TABLE 24

Trying a New Station You Didn't Know by Demographic Groups

Age		
18-24	5.4	F=2.18
25-34	5.2	df=874
35-44	5.0	p=n.s.
45-54	4.6	
55-64	5.1	
65+	5.0	
Education		
Less than High School	5.6	F=3.37
High School Graduate	5.2	df=899
Some College	5.2	p=.010
College Degree	4.9	
Post Graduate Work	4.6	
Income		
Less than \$10,000	5.3	F=1.15
\$10,000-\$20,000	5.4	df=764
\$20,001-\$30,000	5.3	p=n.s.
\$30,001-\$40,000	4.9	
\$40,001-\$50,000	5.0	
More than \$50,000	5.1	
Gender		
Male	5.2	t=1.78
Female	5.0	p=n.s.
Market Size		
Large	4.7	F=9.16
Medium	5.4	df=901
Small	5.2	p=.001

TABLE 25

Try a New Station that Sounds Like Your Favorite by Demographics

Age		
18-24	5.9	F=4.74
25-34	5.8	df=873
35-44	5.4	p=.001
45-54	5.2	
55-64	5.1	
65+	5.4	
Education		
Less than High School	5.9	F=0.95
High School Graduate	5.5	df=898
Some College	5.6	p=n.s.
College Degree	5.5	
Post Graduate Work	5.4	
Income		
Less than \$10,000	5.8	F=1.26
\$10,000-\$20,000	5.8	df=763
\$20,001-\$30,000	5.6	p=n.s.
\$30,001-\$40,000	5.4	
\$40,001-\$50,000	5.4	
More than \$50,000	5.6	
Gender		
Male	5.5	t=0.33
Female	5.6	p=n.s.
Market Size		
Large	5.5	F=0.53
Medium	5.6	df=900
Small	5.5	p=n.s.

As shown in tables 24 and 25, gender showed no differences in the t-tests, and ANOVA showed no difference with income as the independent variable. Education did have a minor relationship with trying new stations. The ANOVA for the unknown new station was significant ($F=3.37$, $p=.01$) but Scheffe comparisons revealed no differences between groups. The means, though, showed that lesser educated cells were more likely to give a new station a try.

However, with the similar sounding condition, the ANOVA was not significant.

Market size provided some interesting results. The ANOVA for the unknown format station was significant ($F=9.16$, $p=.001$) and Scheffe comparisons found that the large market listeners were significantly less likely to listen to a new station than smaller market listeners, however those differences disappeared when the format was known to be similar to the favorite station. Perhaps the reason could be that in larger markets, the large number of stations means there is no reason to experiment with an unknown quantity.

Age had some explanatory power. While the ANOVA for the unknown station was nearly significant ($F=2.18$, $p=.055$), the test for the known format was statistically significant ($F=4.74$, $p=.001$). Scheffe comparisons found a difference between the 18-24 group and the 55-64 cell, with the younger listeners more likely to try a new station that sounded similar to their favorite.

The correlation matrix was run for the two variables and is shown in tables 26 and 27 below.

TABLE 26

Correlations with Trying a New Station You Didn't Know

Variable	r	p
Importance-Stereo	.17	.001
Importance-Contests	.14	.001
Station Repertoire	.13	.001
Importance-DJs/Personalities	.13	.001
Importance-Sound Quality	.12	.001
Importance-FM	.11	.01
Importance-Music	.08	n.s.
Importance-Talk Shows	.07	n.s.
Importance-Play by Play	.07	n.s.
Time Spent Listening	.06	n.s.
Importance-Weather	.06	n.s.
Importance-Sports	.06	n.s.
Importance-Ltd. Commercials	.06	n.s.
Importance-Comm. Involvement	.06	n.s.
Satisfaction	-.05	n.s.
Importance-Reception	.03	n.s.
Importance-News	.02	n.s.
Importance-Traffic Reports	-.01	n.s.
Hierarchy Score	-.01	n.s.

TABLE 27

Correlations with Trying a New Station
That Sounds Similar to your Favorite

Variable	r	p
Importance-Stereo	.16	.001
Importance-Music	.14	.001
Station Repertoire	.12	.001
Importance-Ltd. Commercials	.07	n.s.
Importance-Sound Quality	.07	n.s.
Importance-FM	.07	n.s.
Time Spent Listening	.06	n.s.
Importance-Reception	.04	n.s.
Satisfaction	-.04	n.s.
Importance-Talk Shows	-.03	n.s.
Importance-Comm. Involvement	.02	n.s.
Importance-Sports	-.02	n.s.
Importance-Play by Play	-.02	n.s.
Hierarchy Score	.01	n.s.
Importance-DJs/Personalities	.01	n.s.
Importance-News	-.01	n.s.
Importance-Weather	-.01	n.s.
Importance-Contests	-.01	n.s.
Importance-Traffic Reports	-.01	n.s.

Not many items correlated well with trying a new station. The number of stations did showing the dial-switchers at work again, and stereo sound, a variable that is not content-sensitive has a strong positive correlation. Other correlations were scattered around.

Regression analysis (tables 28 and 29) did little to explain variance in the dependent variables of trying new stations. For a station that one does not know anything about, six variables explained only eight percent of the variance. Significant variables were station repertoire, presence of large market, education and loyalty. For a station that sounds similar, the variance explained is even lower, only two percent. Age was the only significant variables. Evidently, other factors, probably psychological and sociological, explain the variance in trying new stations.

TABLE 28

Regression on Trying a New Station You Don't Know

Variable	B	t	Sig t
Station Repertoire	0.16	4.22	.001
Large Market	-0.55	-3.57	.001
Education	-0.23	-3.44	.001
Loyalty	-0.02	-1.98	.048
Constant	6.10	14.35	.001
F=10.13 R ² =.08			

TABLE 29

Regression on Trying a New Station
That Sounds Similar to Your Favorite

Variable	B	t	Sig t
Age	-0.02	-3.72	.001
Constant	6.15	36.88	.001
R ² =.02			

RO3: Patterns of Listening Change

Effect of Location

Most listeners do not listen to one station consistently. In the case of this study, only sixteen percent of the respondents said they listened to just one station. That means change behavior needs to be studied. Later, possible trigger mechanisms for change will be discussed.

While there are a number of places that one can listen to radio, a listener may not have control over the choice in every location. For example, the radio listening at work may be a choice made by a superior or can be a group norm, forcing the listener to accept the choice or be ostracized. Two places where a listener can be reasonably assumed to have some, if not total control, are at home and in the car. Thus, these two listening environments were studied as they each have different characteristics and possibly different listening and change patterns.

The respondents were asked how often they changed stations both at home and in the car. Four point scales were used with the choices being never, not very often, somewhat often, and always. In the case of in-car listening, a fifth category of "no car radio" was accepted. The results:

TABLE 30

How Often Do You Change Stations?

Group	At Home		In Car	
	N	Pct	N	Pct
Very Often	36	4.0%	129	14.3%
Somewhat Often	126	13.9	213	23.6
Not Very Often	521	57.6	367	40.6
Never	214	23.7	177	19.6
No Car Radio	N/A		4	0.4
Don't Know/RF	7	0.8	14	1.5

The difference comes from those who change very often or somewhat often. Almost 38% say that they change stations at least somewhat often in he

car, while only around 18% say they change that often at home. The "never change" groups are somewhat similar in size, so most of the difference can be attributed to those who don't change very often at home, but take on a different attitude in the car environment. The Pearson's correlation between the two groups is .47, strongly significant.

The ANOVAs and t-tests were checked for both at home and in-car change behavior and are shown in tables 31 and 32. Note that the question was scored with never equal to 4 and very often equalling 1, thus lower scores mean more change.

TABLE 31
At Home Change Behavior by Demographic Groups

Age		
18-24	2.7	F=9.64 df=869 p=.001
25-34	3.0	
35-44	3.1	
45-54	3.2	
55-64	3.2	
65+	3.2	
Education		
Less than High School	3.0	F=2.41 df=893 p=.048
High School Graduate	3.1	
Some College	2.9	
College Degree	3.0	
Post Graduate Work	3.1	
Income		
Less than \$10,000	3.0	F=1.04 df=759 p=n.s.
\$10,000-\$20,000	2.9	
\$20,001-\$30,000	3.0	
\$30,001-\$40,000	3.1	
\$40,001-\$50,000	3.1	
More than \$50,000	3.1	
Gender		
Male	2.9	t=4.38 p=.001
Female	3.1	

TABLE 31 (Cont'd.)

Market Size		
Large	3.0	F=1.61
Medium	3.0	df=896
Small	3.1	p=n.s.

TABLE 32

In Car Change Behavior by Demographic Groups

Age		
18-24	2.4	F=15.53
25-34	2.5	df=863
35-44	2.7	p=.001
45-54	3.1	
55-64	3.0	
65+	3.3	

Education		
Less than High School	3.1	F=6.46
High School Graduate	2.8	df=887
Some College	2.5	p=.001
College Degree	2.7	
Post Graduate Work	2.6	

Income		
Less than \$10,000	2.6	F=0.88
\$10,000-\$20,000	2.8	df=754
\$20,001-\$30,000	2.6	p=n.s.
\$30,001-\$40,000	2.6	
\$40,001-\$50,000	2.7	
More than \$50,000	2.5	

Gender		
Male	2.5	t=5.56
Female	2.8	p=.001

Market Size		
Large	2.6	F=0.94
Medium	2.7	df=889
Small	2.7	p=n.s.

In the t-test, differences arose between genders. While both groups change more frequently in the car, men change more often than women ($t=4.38$ at

home, 5.56 for in-car), which goes along well with the other behaviors cited earlier of less loyalty and more stations in the repertoire. Men are more volatile listeners than women, at least in this sample.

The significant independent variables for both at home and in car listening are two: education and age. Education is barely significant in the overall ANOVA for changing at home ($F=2.41$, $p=.048$) with no significant differences between groups, while it shows greater effect on the change in car variable ($F=6.46$, $p=.001$). However, no clear pattern emerges as the group that changes most often is the "some college" cell, which is significantly different from the "less than high school" and "high school graduate" groups. The more educated groups do not show any differences from the less educated groups. Therefore, the value of education in explaining propensity to change is questionable.

Age does prove to be a good discriminating variable for change behavior. The results of this study confirm what most people believe to be true: younger listeners do change stations more often. In this case, the ANOVAs are strongly significant ($F=9.64$, $p=.001$ for at home, $F=15.53$, $p=.001$ for in car). Scheffe tests show that the 18-24 group is different from every other age cell in at home dial switching, specifically this group tunes around the dial more.

The in-car situation varies more. Rather than showing less changing at age 25, the in-car button pushing appears to continue up to age 45. The 18-24 and 25-34 groups switch significantly more often than the 45-54, 55-64, and 65+ groups. In addition, the 35-44 group switches more often than the 65+ cell. While the dial switching among younger listeners is accepted by many (without the benefit of empirical data), it is interesting that listeners between the ages of 25 and 44 who do not switch often at home, will exhibit very different behavior in the other environment. This has implications for stations that

program primarily to that age group and justifies measures that might seek to hold listeners longer in drive times compared to programming moves for times when listeners are more likely to not be in the car.

The correlations between frequency of change by listening environment and the previously discussed variables come next. The results are below:

TABLE 33

Correlations with At Home Change Behavior

Variable	r	p
Station Repertoire	-.34	.001
Satisfaction	.20	.001
Loyalty	.19	.001
Importance-Weather	.11	.01
Importance-Comm. Involvement	.08	n.s.
Importance-Stereo	-.07	n.s.
Hierarchy Score	-.06	n.s.
Importance-Sports	-.06	n.s.
Importance-FM	-.05	n.s.
Importance-News	.04	n.s.
Importance-Weather	.04	n.s.
Importance-Reception	.04	n.s.
Importance-Play by Play	-.04	n.s.
Time Spent Listening	.03	n.s.
Importance-Music	.02	n.s.
Importance-Talk Shows	-.02	n.s.
Importance-DJs/Personalities	.01	n.s.
Importance-Contests	.01	n.s.
Importance-Ltd Commercials	.01	n.s.
Importance-Traffic Reports	.01	n.s.



TABLE 34

Correlations with In Car Change Behavior

Variable	r	p
Station Repertoire	-.37	.001
Loyalty	.25	.001
Satisfaction	.25	.001
Importance-Weather	.14	.001
Importance-Comm. Involvement	.13	.001
Importance-News	.10	.01
Importance-Talk Shows	.10	.01
Importance-Traffic Reports	.08	n.s.
Importance-Ltd. Commercials	-.07	n.s.
Time Spent Listening	.06	n.s.
Hierarchy Score	-.06	n.s.
Importance-Sound Quality	.04	n.s.
Importance-Music	-.04	n.s.
Importance-Stereo	-.04	n.s.
Importance-Contests	.03	n.s.
Importance-FM	-.03	n.s.
Importance-DJs/Personalities	.02	n.s.
Importance-Sports	-.02	n.s.
Importance-Reception	-.01	n.s.
Importance-Play by Play	-.01	n.s.

For the most part, very little correlates with frequency of change, no matter what the environment. Only one programming element scored a significant correlation with both change patterns and that was weather. Apparently, hearing the weather may go along with listeners changing less frequently. Otherwise, listening to more stations is negatively correlated with frequency of changing, which only goes to show the validity of the measures. Also, loyalty and satisfaction have strong positive correlations, showing that loyal listeners don't change as often, again a vote for validity, but no breakthrough in research.

Multiple regression was run on both of the change variables. The independent variables had more explanatory power with the in-car dependent variable than with at-home listening.

TABLE 35

Regression on Frequency of Changing at Home

Variable	B	t	Sig t
Station Repertoire	-.20	8.37	.000
Satisfaction	.07	2.61	.009
Loyalty	.01	3.52	.001
Age	.04	2.45	.015
Income	.05	2.64	.008
Gender (M=1, F=0)	-.11	2.10	.036
Importance-FM	-.02	1.97	.049
Constant	2.62	12.52	.000
F=22.15 R ² =.18			

TABLE 36

Regression on Frequency of Changing in the Car

Variable	B	t	Sig t
Station Repertoire	-.27	8.80	.000
Loyalty	.02	4.84	.000
Age	.11	4.64	.000
Gender (M=1, F=0)	-.22	3.35	.000
Satisfaction	.10	2.80	.005
Importance-Traffic	.03	2.43	.015
Importance-Music	-.07	2.42	.016
Constant	2.20	6.95	.000
F=33.57 R ² =.25			

While the station repertoire, the loyalty scores, satisfaction, and age are the most important independent variables in explaining frequency of change in both the at-home and in-car listening environments, some interesting variables surface after that. As mentioned previously, gender plays a role, but income and the importance of FM to the listener have some effect on at-home listening. Surprisingly, the importance of FM leads to more dial-switching.

For in-car listening, importance of traffic reports leads to less button punching (or dial switching, depending on one's car radio), while importance of music leads to more. Those who are concerned about traffic (in this study, it would most likely be those in the large market) are more likely to switch around less, presumably because the station(s) they listen to have traffic

reports. Alternatively, those who find music very important will switch around more, probably trying to find a song they prefer. This substantiates beliefs held by many radio programmers, but never backed up by empirical data.

What Causes The Change?

Having examined the propensity to change, the study also examines some of the possible causes of station switching. Respondents were given six items that might cause a listener to change stations and were asked to tell whether the item caused them to change stations very often, somewhat often, not very often, or never. The six items were: personalities or disc jockies, talk, commercials, music, reception, and the listener's mood. Here are the results for each item:

TABLE 37

How Often Do Items Cause Change?

Item	Very Often (Pct)	(Cume Pct.)	Somewhat Often (Pct)	Not Very Often (Pct)	Never (Pct)	DK/ RF (Pct)
Talk	180 (19.9)	(43.5)	213 (23.6)	305 (33.7)	205 (22.7)	1 (0.1)
Music	121 (13.4)	(35.6)	201 (22.2)	331 (36.6)	249 (27.5)	2 (0.2)
Commercials	154 (17.0)	(33.9)	153 (16.9)	293 (32.4)	302 (33.4)	2 (0.2)
Reception	109 (12.1)	(32.7)	186 (20.6)	329 (36.4)	276 (30.5)	4 (0.4)
Mood	73 (8.1)	(31.0)	207 (22.9)	380 (42.0)	239 (26.4)	5 (0.6)
DJs	41 (4.5)	(16.1)	105 (11.6)	408 (45.1)	348 (38.5)	2 (0.2)

If the very often and somewhat often categories are lumped together, talk proves to be the element that causes more tuning when compared to the others. At the bottom end, only around seventeen percent of the sample said they tune out at least somewhat often because of disc jockies. The other elements are fairly even.

TABLE 38

Correlations with Causes of Change

Disc Jockies/Personalities

Variable	r	p
Satisfaction	.24	.001
Station Repertoire	-.20	.001
Loyalty	.18	.001
Time Spent Listening	.12	.001
Importance-Music	.10	.01
Importance-Sound Quality	.08	n.s.
Importance-Play by Play	-.07	n.s.
Importance-FM	.06	n.s.
Hierarchy Score	-.06	n.s.
Importance-Reception	.05	n.s.
Importance-Ltd. Commercials	.05	n.s.
Importance-Weather	.05	n.s.
Importance-Sports	-.05	n.s.
Importance-DJs/Personalities	.04	n.s.
Importance-Stereo	-.04	n.s.
Importance-Traffic	.03	n.s.
Importance-Contests	.02	n.s.
Importance-Talk Shows	.02	n.s.
Importance-Comm. Involvement	.01	n.s.
Importance-News	-.01	n.s.

Talk

Station Repertoire	-.31	.001
Loyalty	.19	.001
Satisfaction	.18	.001
Importance-Weather	.12	.001
Hierarchy Score	-.12	.001
Importance-FM	-.12	.001
Importance-Stereo	-.12	.001
Importance-Talk Shows	.10	.01
Time Spent Listening	.09	n.s.
Importance-News	.07	n.s.
Importance-Music	-.07	n.s.
Importance-Ltd. Commercials	-.06	n.s.
Importance-Comm. Involvement	.05	n.s.
Importance-Traffic	.04	n.s.
Importance-DJs/Personalities	.03	n.s.
Importance-Sound Quality	.03	n.s.
Importance-Contests	.02	n.s.
Importance-Reception	-.02	n.s.
Importance-Play by Play	.01	n.s.
Importance-Sports	.01	n.s.

TABLE 38 (Cont'd.)

Commercials		
Variables	r	p
Satisfaction	-.31	.001
Loyalty	.19	.001
Satisfaction	.18	.001
Importance-Weather	.13	.001
Importance-Comm. Involvement	.09	.01
Importance-Sound Quality	.09	n.s.
Time Spent Listening	.08	n.s.
Importance-Music	.07	n.s.
Importance-Contests	.06	n.s.
Importance-Sports	-.06	n.s.
Importance-Play by Play	-.06	n.s.
Importance-FM	-.05	n.s.
Importance-Stereo	-.05	n.s.
Hierarchy Score	-.05	n.s.
Importance-News	.04	n.s.
Importance-Talk Shows	.03	n.s.
Importance-DJs/Personalities	.03	n.s.
Importance-Ltd Commercials	-.03	n.s.
Importance-Reception	.02	n.s.
Importance-Traffic	-.01	n.s.
Music		
Variable	r	p
Loyalty	.30	.001
Station Repertoire	-.27	.001
Satisfaction	.24	.001
Time Spent Listening	.15	.001
Importance-Comm. Involvement	.14	.001
Importance-Weather	.12	.001
Importance-Contests	.12	.001
Importance-Play by Play	.08	n.s.
Importance-Sound Quality	.08	n.s.
Importance-Talk Shows	.06	n.s.
Importance-DJs/Personalities	.05	n.s.
Importance-Traffic Reports	.05	n.s.
Importance-Stereo	-.05	n.s.
Importance-Music	.04	n.s.
Importance-News	.04	n.s.
Importance-Ltd Commercials	-.04	n.s.
Importance-Sports	.03	n.s.
Importance-FM	-.02	n.s.
Hierarchy Score	-.02	n.s.
Importance-Reception	.01	n.s.

TABLE 38 (Cont'd.)

Reception		
Variable	r	p
Station Repertoire	-.25	.001
Loyalty	.21	.001
Satisfaction	.20	.001
Importance-Weather	.11	.001
Time Spent Listening	.10	.01
Importance-Stereo	-.10	.01
Importance-Talk Shows	.09	.01
Importance-Comm. Involvement	.08	n.s.
Importance-News	.07	n.s.
Importance-Sound Quality	.06	n.s.
Hierarchy Score	-.06	n.s.
Importance-Ltd Commercials	-.06	n.s.
Importance-FM	-.06	n.s.
Importance-Reception	.05	n.s.
Importance-Play by Play	.03	n.s.
Importance-Traffic Reports	.02	n.s.
Importance-DJs/Personalities	-.02	n.s.
Importance-Music	.01	n.s.
Importance-Sports	.01	n.s.
Importance-Contests	.01	n.s.
Mood		
Variable	r	p
Station Repertoire	-.31	.001
Satisfaction	.19	.001
Loyalty	.17	.001
Time Spent Listening	.11	.01
Importance-Weather	.10	.01
Importance-Traffic Reports	.09	.01
Importance-Ltd Commercials	-.07	n.s.
Importance-Stereo	-.07	n.s.
Importance-News	.05	n.s.
Importance-Talk Shows	.05	n.s.
Importance-Sound Quality	.04	n.s.
Importance-Comm. Involvement	.04	n.s.
Hierarchy Score	-.04	n.s.
Importance-Reception	-.04	n.s.
Importance-FM	-.04	n.s.
Importance-Contests	.03	n.s.
Importance-Sports	.02	n.s.
Importance-Play by Play	.02	n.s.
Importance-Music	-.01	n.s.
Importance-DJs/Personalities	-.01	n.s.

Loyalty and satisfaction have strong correlations with less dial switching for any reason, while a larger set of stations correlates with more switching, something the reader would expect. Time spent listening correlated significantly with four of the change situations. As for individual importance elements, weather is a standout. The more important weather is to an individual, the less likely they are to switch around for any reason except personalities. Oddly enough, FM and stereo importance are correlated with more switching as a result of talk.

TABLE 39

Causes of Change by Age

Change Cause	18-24	25-34	35-44	45-54	55-64	65+	F	df	p
Reception	2.6	2.7	2.8	3.2	3.3	3.3	14.90	872	.001
Mood	2.7	2.8	2.8	3.2	3.2	3.3	11.13	871	.001
Talk	2.3	2.4	2.5	3.1	3.0	3.1	14.64	875	.001
Commercials	2.6	2.7	2.8	3.2	3.1	3.2	8.37	874	.001
Music	2.6	2.7	2.7	3.2	3.0	3.1	6.98	874	.001
DJs/Personalities	3.2	3.1	3.1	3.3	3.4	3.3	2.44	874	.033

TABLE 40

Causes of Change by Education

Change Cause	<H.S.	H.S. Grad	Some Coll.	Coll. Grad	Post Grad	F	df	p
DJs/Personalities	3.4	3.3	3.2	3.0	3.2	4.19	898	.003
Music	3.0	2.9	2.8	2.6	2.8	4.11	898	.003
Mood	3.2	2.9	2.8	2.8	2.8	3.35	896	.010
Reception	3.1	3.0	2.8	2.7	2.9	2.39	896	.050
Talk	2.8	2.6	2.6	2.5	2.5	0.86	899	n.s.
Commercials	3.0	2.9	2.8	2.8	2.7	0.73	898	n.s.



TABLE 41

Causes of Change by Income

Change Cause	<\$10K	\$10K- \$20K	\$20K- \$30K	\$30K- \$40K	\$40K- \$50K	\$50K+	F	df	p
Music	2.9	2.8	2.8	2.8	2.6	2.5	2.08	763	n.s.
Mood	3.0	2.9	2.9	2.8	2.8	2.7	1.34	762	n.s.
Reception	3.0	2.8	2.9	2.8	2.7	2.7	1.06	762	n.s.
DJs/Personalities	3.3	3.2	3.1	3.1	3.2	3.1	1.04	764	n.s.
Talk	2.8	2.6	2.5	2.6	2.6	2.5	1.02	764	n.s.
Commercials	2.9	2.9	2.8	2.8	2.7	2.6	0.98	763	n.s.

TABLE 42

Causes of Change by Gender

Change Cause	Male	Female	t	p
Commercials	2.6	3.0	5.79	.001
Talk	2.4	2.8	5.07	.001
Music	2.6	2.9	4.61	.001
Reception	2.7	3.0	3.99	.001
Mood	2.8	3.0	3.62	.001
DJs/Personalities	3.1	3.3	3.41	.001

TABLE 43

Causes of Change by Market Size

Change Cause	Large	Medium	Small	F	df	p
Reception	2.7	2.9	3.0	8.45	899	n.s.
Commercials	2.7	2.8	2.9	2.16	901	n.s.
Talk	2.6	2.5	2.7	1.79	902	n.s.
DJs/Personalities	3.2	3.1	3.2	1.68	901	n.s.
Mood	2.8	2.9	2.9	0.43	898	n.s.
Music	2.8	2.8	2.8	0.25	901	n.s.

Looking at the demographic comparisons in tables 39 through 43, every gender comparison is significant and in every case, men tune out more often than women. The t values range from 3.41 for personalities to 5.79 for commercials, but once again, men switch stations more often in every case.

Income offered no significant differences in the dependent variables, but education did. Personalities (F=4.19, p=.003), music (F=4.11, p=.003), reception



($F=2.39$, $p=.050$), and mood ($F=3.35$, $p=.010$) all showed significant differences between the groups. In the case of personalities, the less than high school and high school diploma cells both switched significantly less often than the college degree group. This goes along with the earlier finding that less educated respondents rated disc jockies as much more important than did more educated respondents. The same outcome occurred for music. While Scheffe tests on reception showed no significant differences, mood showed differences between the less than high school group and the some college, college degree, and post graduate work cells. The lesser educated group was less likely to change.

Market size showed significant differences only for reception ($F=8.45$, $p=.001$) with listeners in the major market more likely to switch because of reception than respondents in the medium or small markets. With only three markets, it is hard to say whether this is measuring some anomaly in the one market or if this is a characteristic of larger population markets that may have greater impediments to radio signals (taller buildings, other radio interference, etc.). Another possibility is that listeners in the smaller markets have no other format choices and may continue to listen to lower quality reception.

The generation gap showed itself again in the six ANOVAs for age as all were significant. There were no differences between groups in the Scheffe tests for personalities (ANOVA $F=2.44$, $p=.033$), but talk did yield some solid differences ($F=14.64$, $p=.001$). This comparison showed an age break at 45. The three groups that comprise listeners 45 and older all changed stations significantly less often because of talk than did all three cells containing listeners under 45.

In terms of commercials ($F=8.37$, $p=.001$), the 45 plus groups all switched

less often than the 18-24 year olds. The 65+ group also switched less often than the 25-34 group. Music ($F=6.98$, $p=.001$) was not as similar. The 45-54 group switched less often than any of the under 45 cells, however no other differences appeared. Reception ($F=14.90$, $p=.001$), was nearly the same as talk with the 45+ groups changing significantly less often than the 18-44 cells. One exception to this did appear: the 45-54 cell was not different than the 35-44 group. Finally, mood ($F=11.13$, $p=.001$) also had the same profile as talk, with the generation gap falling at 45 years old.

This radio "generation gap" may have a couple of possible causes. For one, even in larger markets, few stations program to older audiences, meaning that listeners are not offered a choice of changing to another station if something irks them. The choice may be to listen or not listen. On the other hand, psychological factors may be at work. It is a question of market factors versus personality factors and both probably play some role.

Inter-item correlations show that listeners that change for one reason are very likely to change for other reasons. This leads to the possibility that there are listeners who are "changers" and listeners who are "loyalists." Each correlation below was significant at at least the .001 level.

TABLE 44

Inter-Item Correlations for Change Behavior

	DJs	Talk	Spots	Music	Reception	
Talk	.46					
Spots	.37		.53			
Music	.35		.44	.38		
Reception	.33		.44	.33	.49	
Mood	.40		.47	.42	.49	.41

Multiple regressions were run using each of the "switching questions" as a dependent variable. Unlike previous regressions where all previously discussed

variables were added as independent variables, the switching by listening environment questions were not used. Switching causing switching is circular logic.

TABLE 45

Regressions on Possible Causes of Station Changes

Personalities/Disc Jockies

Variables	B	t	Sig t
Satisfaction	0.18	5.70	.000
Station Repertoire	-0.13	4.70	.000
Imp-FM	-0.04	2.87	.004
Time Spent Listening	0.05	2.58	.010
Imp-Music	0.07	2.63	.009
Small Market	-0.13	2.09	.037
Constant	2.08	7.90	.000
F=16.02 R ² =.12			

Talk

Variables	B	t	Sig t
Station Repertoire	-0.26	7.67	.000
Age	0.12	4.79	.000
Loyalty	0.02	4.62	.000
Imp-FM	-0.07	4.29	.000
Imp-Talk Shows	0.04	2.26	.024
Constant	2.51	11.64	.000
F=31.00 R ² =.17			

Commercials

Variables	B	t	Sig t
Station Repertoire	-0.26	7.35	.000
Gender (M=1, F=0)	-0.31	4.17	.000
Loyalty	0.02	4.04	.000
Age	0.10	3.93	.000
Constant	2.79	12.63	.000
F=33.52 R ² =.15			

TABLE 45 (Cont'd.)

Music			
Variables	B	t	Sig t
Loyalty	0.31	7.30	.000
Station Repertoire	-0.22	6.69	.000
Age	0.08	3.12	.002
Time Spent Listening	0.07	2.69	.007
Imp-Stereo	-0.05	2.66	.008
Imp-Comm. Involve	0.05	2.48	.013
Constant	1.93	8.89	.000
F=29.33 R ² =.19			
Reception			
Variables	B	t	Sig t
Age	0.15	5.97	.000
Loyalty	0.02	4.76	.000
# Of Stations	-0.15	4.61	.000
Small Market	-0.28	3.78	.000
Imp-FM	-0.06	3.39	.001
Time Spent Listening	0.06	2.25	.025
Constant	2.35	10.92	.000
F=22.99 R ² =.16			
Mood			
Variables	B	t	Sig t
Station Repertoire	-0.23	7.72	.000
Satisfaction	0.06	1.79	n.s.
Age	0.08	3.44	.001
Time Spent Listening	0.05	2.37	.019
Income	-0.05	2.17	.031
Imp-Traffic Reports	0.03	1.97	.050
Imp-Stereo	-0.04	2.27	.024
Loyalty	0.01	1.99	.047
Constant	2.70	10.14	.000
F=16.93 R ² =.16			

All of the regressions were similar in explaining about one sixth of the variance in any dependent variable. Important variables included time spent listening and loyalty, both of which would decrease switching as their values increased, and the number of stations which had the opposite effect. Surprisingly, the importance of FM and stereo had occasional effect, where greater importance increased switching in the equations they appeared in. In

two equations, the presence of small market variable appeared, which increased switching. This seems strange as small market listeners have less to switch between.

The Process of Finding Another Station

Having discussed the frequency of changing in two listening environments and then having explored some possible causes of the changes, the next and final area to look at is the process the listener uses to find another station. As discussed earlier, there is support for the notion that listeners use a hierarchical approach to generating a station set; however, this is for an initial set of stations. This study has also hypothesized that it is unlikely that listeners use such a cumbersome approach in day-to-day listening, rather that a first best choice method is used when switching is triggered.

Respondents were asked if, when they changed, they knew ahead of time the station they would switch to, if they listened to the first station that met their desires, if they checked a number of stations and then chose one, or if they used some other approach. "Never change" was also accepted as an answer. The question was asked for both the home and car listening environments.

TABLE 46

Method of Change

Method	At Home		In Car	
	N	Pct	N	Pct
Know Ahead of Time	418	55.8	393	52.7
Listen to First One	163	21.8	173	23.2
Check Before Choosing	168	22.4	180	24.1

The results are very similar for both listening environments, leading to a conclusion that listening environment has no effect on the method used to find another station after a change has been triggered. The "know ahead of time"



choice had a plurality of the votes and shows that nearly half of the listeners stay with their repertoire of stations. Rather than listen to a new station even by accident, these listeners will tune to only the stations that they usually listen to.

As these two variables yielded nominal level data, chi squares were performed to get information about possible effects of the various independent variables. For the at-home changing, only the size of the station repertoire showed significance ($X^2=14.7$ with 6 d.f., $p=.023$). For in-car changing, station repertoire is again significant ($X^2=18.9$ with 6 d.f., $p=.004$) and now gender shows significant differences ($X^2=6.6$ with 2 d.f., $p=.037$).

While the largest group for each size of station repertoire said they knew ahead of time which station they would change to, a larger percentage of those with station repertoires of four or more said they checked before choosing another station. This may indicate that the larger repertoire listeners take even the incidental choice process very seriously, going through a more complex process before making a change, while others have a simplified change process. In the case of gender, a higher percentage of men said they knew ahead of time what station they would change to while more women answered that they listened to the first good alternative. This is interesting in that no difference appeared between the sexes in at home change habits. A closer look at the figures in tables 48 and 49 shows that some of the female respondents said that they knew ahead of time which station they would switch to at home, but switched to other strategies in the car. The men remained virtually constant in their strategies in both situations.

TABLE 47

Chi Squares for Change Strategies At Home
(Percentages in Parentheses)

By Station Repertoire

Size of Repertoire	Know Ahead of Time	Listen to First One	Check Before Choosing
1 Station	36 (4.8)	23 (3.1)	12 (1.6)
2 Stations	128 (17.1)	35 (4.7)	45 (6.0)
3 Stations	132 (17.7)	43 (5.8)	46 (6.2)
4 or more	121 (16.2)	61 (8.2)	65 (8.7)
$X^2=14.7$ df=6 p=.023			

By Age

Age Group	Know Ahead of Time	Listen to First One	Check Before Choosing
18-24	87 (12.0)	41 (5.6)	51 (7.0)
25-34	117 (16.1)	45 (6.2)	43 (5.9)
35-44	97 (13.3)	41 (5.6)	33 (4.5)
45-54	48 (6.6)	8 (1.1)	11 (1.5)
55-64	40 (5.5)	10 (1.4)	14 (1.9)
65+	19 (2.6)	12 (1.7)	10 (1.4)
$X^2=16.6$ df=10, p=n.s.			



TABLE 47 (Cont'd.)

By Time Spent Listening

TSL Group	Know Ahead of Time	Listen to First One	Check Before Choosing
10 or less	66 (8.9)	39 (5.2)	41 (5.5)
11-20	121 (16.2)	50 (6.7)	43 (5.8)
21-30	80 (10.7)	26 (3.5)	33 (4.4)
31-40	48 (6.4)	19 (2.6)	20 (2.7)
41+	101 (13.6)	28 (3.8)	30 (4.0)

$X^2=12.1$ df=8 p=n.s.

By Hierarchy Score

Hierarchy Group	Know Ahead of Time	Listen to First One	Check Before Choosing
41 or less	49 (6.5)	19 (2.5)	14 (1.9)
41-42	9 (1.2)	2 (0.3)	5 (0.7)
43-44	24 (3.2)	12 (1.6)	12 (1.6)
45-46	18 (2.4)	9 (1.2)	3 (0.4)
47-48	23 (3.0)	8 (1.1)	12 (1.6)
49-50	34 (4.5)	12 (1.6)	8 (1.1)
51-52	58 (7.7)	11 (1.5)	26 (3.5)
53-54	49 (6.5)	28 (3.7)	32 (4.3)
55	154 (20.6)	62 (8.3)	56 (7.5)

$X^2=21.0$ df=16 p=n.s.



TABLE 47 (Cont'd.)

By Gender

Gender	Know Ahead of Time	Listen to First One	Check Before Choosing
Male	207 (27.6)	76 (10.1)	93 (12.4)
Female	211 (28.2)	87 (11.6)	75 (10.0)
$X^2=2.7$ df=2 p=n.s.			

By Education

Educational Level	Know Ahead of Time	Listen to First One	Check Before Choosing
Less than H.S.	28 (3.8)	12 (1.6)	8 (1.1)
High School	106 (14.2)	46 (6.2)	54 (7.2)
Some College	137 (18.4)	53 (7.1)	55 (7.4)
College Grad	92 (12.3)	39 (5.2)	26 (3.5)
Post Grad	55 (7.4)	13 (1.7)	22 (2.9)
$X^2=9.2$ df=8 p=n.s.			

By Income

Income Level	Know Ahead of Time	Listen To First One	Check Before Choosing
<\$10K	33 (5.1)	15 (2.3)	15 (2.3)
\$10K-\$20K	73 (11.4)	35 (5.5)	28 (4.4)
\$20K-\$30K	94 (14.6)	35 (5.5)	40 (6.2)
\$30K-\$40K	77 (12.0)	22 (3.4)	33 (5.1)
\$40K-\$50K	36 (5.6)	16 (2.5)	15 (2.3)
>\$50K	45 (7.0)	16 (2.5)	14 (2.2)
$X^2=4.8$ df=10 p=n.s.			



TABLE 48

Chi-Squares for Change Strategies in the Car
(Percentages in Parentheses)

By Station Repertoire

Number of Stations	Know Ahead of Time	Listen to First One	Check Before Choosing
1 Station	36 (4.8)	27 (3.6)	11 (1.5)
2 Stations	109 (14.7)	44 (5.9)	48 (6.5)
3 Stations	131 (17.6)	40 (5.4)	47 (6.3)
4+ Stations	116 (15.6)	61 (8.2)	74 (9.9)
$X^2=18.9$ df=6 p=.004			

By Gender

Gender	Know Ahead of Time	Listen to First One	Check Before Choosing
Male	212 (28.4)	74 (9.9)	97 (13.0)
Female	181 (24.3)	99 (13.3)	83 (11.1)
$X^2=6.6$ df=2 p=.037			

By Age

Age Group	Know Ahead of Time	Listen to First One	Check Before Choosing
18-24	77 (10.6)	45 (6.2)	51 (7.0)
25-34	108 (14.9)	58 (8.0)	55 (7.6)
35-44	98 (13.5)	38 (5.2)	37 (5.1)
45-54	42 (5.8)	7 (1.0)	13 (1.8)
55-64	36 (5.0)	14 (1.9)	14 (1.9)
65+	20 (2.8)	7 (1.0)	6 (0.8)
$X^2=15.5$ df=10 p=n.s.			

TABLE 48 (Cont'd.)

By Hierarchy Score

Hierarchy Group	Know Ahead Of Time	Listen to First One	Check Before Choosing
40 or less	45 (6.0)	19 (2.5)	21 (2.8)
41-42	7 (0.9)	2 (0.3)	4 (0.5)
43-44	21 (2.8)	14 (1.9)	12 (1.6)
45-46	16 (2.1)	10 (1.3)	2 (0.3)
47-48	29 (3.9)	9 (1.2)	11 (1.5)
49-50	27 (3.6)	11 (1.5)	14 (1.9)
51-52	56 (9.4)	9 (1.2)	25 (3.4)
53-54	48 (6.4)	31 (4.2)	32 (4.3)
55	144 (19.3)	68 (9.1)	59 (7.9)
$X^2=2.5$ df=16 p=n.s.			

By Income

Income Group	Know Ahead of Time	Listen to First One	Check Before Choosing
<\$10K	25 (3.9)	16 (2.5)	18 (2.8)
\$10K-\$20K	59 (9.2)	38 (5.9)	33 (5.2)
\$20K-\$30K	92 (14.4)	40 (6.3)	38 (5.9)
\$30K-\$40K	75 (11.7)	32 (5.0)	33 (5.2)
\$40K-\$50K	36 (5.6)	14 (2.2)	15 (2.3)
>\$50K	47 (7.4)	10 (1.6)	18 (2.8)
$X^2=11.0$ df=10 p=n.s.			

TABLE 48 (Cont'd.)

By Education

Educational Level	Know Ahead of Time	Listen to First One	Check Before Choosing
Less than H.S.	27 (3.6)	10 (1.3)	9 (1.2)
High School	102 (13.7)	54 (7.3)	52 (7.0)
Some College	120 (16.2)	55 (7.4)	63 (8.5)
College Grad	90 (12.1)	38 (5.1)	30 (4.0)
Post Grad	54 (7.3)	15 (2.0)	24 (3.2)
$X^2=7.8$ df=8 p=n.s.			

By Time Spent Listening

Hours	Know Ahead of Time	Listen to First One	Check Before Choosing
10 or less	78 (10.5)	35 (4.7)	35 (4.7)
11-20	107 (14.4)	54 (7.3)	48 (6.5)
21-30	78 (10.5)	29 (3.9)	37 (5.0)
31-40	43 (5.8)	20 (2.7)	21 (2.8)
41+	85 (11.5)	34 (4.6)	38 (5.1)
$X^2=1.9$ df=8 p=n.s.			

Chapter 4

Conclusions

This final chapter will consider what has been found and how the results of this study can be used. In reality, the present research serves two masters: the research and academic community in the attempt to model radio choice procedures by individuals, and the radio industry in the attempt to find out more information to help stations more successfully serve their audiences. For that reason, this chapter will be divided into two segments: implications for research that will deal with the theoretical aspects of the study and implications for broadcasters for programming and strategic purposes.

Implications for Broadcasters

Theoretically, the broadcaster has one primary goal: maximizing profit within the parameters of his/her license. Deregulation aside, the broadcaster continues to be "controlled" by an agency of the federal government, specifically in technical areas (power, antenna height, frequency, etc.) and in other realms including commercials (sponsor identification rules, lotteries) and equal employment (FCC equal employment rules). The broadcaster also does not have the ability to move to another city in order to improve his/her market position. For example, broadcasters cannot move their stations to the Sunbelt in order to take advantage of lower wage rates or growing economies. The broadcaster cannot "outsource" his/her station overseas to cut costs (although satellite delivered programming may be considered a similar action), and though he/she may sell the station and buy another in a more desirable location, the station and the license remain in the same location. The station licensed to

Buffalo remains in Buffalo, ownership notwithstanding.

This points to the proposition that broadcasters attempt to maximize profit with some limitations. Pouring some money and effort back into the community or producing programs that serve limited audiences but generate goodwill are not part of a short term profit maximization strategy, but may help in the long-run.

⤵ The most direct way to maximize profits is to be able to charge the most money for inventory (number of commercial slots available to be sold) and to also be able to sell as much inventory as possible. At the simplest level, the way to charge the most money is to deliver the largest audience. While an argument can be made that many stations charge "more for less," meaning that they deliver a smaller audience of "more desirable" listeners, such as those with higher incomes (and this occurs in many markets), the analysis presented here will deal with simple audience maximization, regardless of demographics.]

This study offers some new insights for audience maximization in a competitive radio environment. The first insight deals with the hierarchical choice model. In the previous chapter, the data show support for the proposition that most listeners use a hierarchical choice process known as elimination by aspects to decide on their initial set of stations.

What are the implications of an EBA process for broadcasters? It may mean that a radio station should do one thing well and do it better than any one else. EBA hypothesizes that once one possible choice is considered better than all others, that choice will be made. There is no averaging of multiple aspects, so that hurts a choice that is good in many things but great at none. For new entrants to the market (including stations that change formats as for all intents and purposes, they are new), this suggests that the best programming

strategy is to be the "best" music station or the best "news" station or the best "contest" station in the market, providing the market segment the station chooses to pursue is large enough to support the station economically. There is little sense in being the best polka music station in town if only one hundred listeners consider polka music more important than any other aspect. Another strategy is to match other major competitors on their key elements and then be the best at some other element. The logic behind this action is to win on a lower level of the preference tree, tying the competitors on the other, more important elements.

In fact, the results here may give a good insight into the demise of AM radio. Reception was the most important radio element to listeners. Sound quality and stereo sound came in third and fourth, respectively. At this time, AM stations simply cannot compete with FM stations on these aspects. Even the best engineered AM stations lose once the signal reaches the receiver. Listeners to AM stations must have hierarchies in which some aspect(s) are rated higher than those relating to the quality of the reproduced signal.

The strategy of serving one audience very well has been advocated by others in the radio industry, notably Ries and Trout in their Positioning: The Battle for Your Mind (1981) and more recently in Balon (1988). Ries and Trout advocated finding a "niche" in the mind of consumers and then filling it, by being the best at that one aspect. Balon advocates a similar strategy of creating "benchmarks" for listeners. The stations with the strongest benchmarks (not necessarily more than one) will usually be the market leaders and hence, the most profitable stations.

It all seems rather simple. In order to be a market leader, just determine what is the most important aspect to listeners. Unfortunately, the results do

not point clearly to which element hierarchical listeners would be most attracted. No element importance score registered a statistically significant positive correlation with hierarchy score, although a number turned up significantly negative. Among these were news, weather, disc jockies, contests, community involvement, and traffic reports. Importance of music showed no correlation with degree of hierarchy (less than .01). Thus, hierarchical listeners were either indifferent or negative on all the "parts" of radio programming. This indifference and negativity reveals something many in the industry take for granted: many people do not consider radio an important part of their lives. This returns us to the earlier discussion of involvement. Radio is a low involvement "product" for many listeners because it is free and extracts no penalties for a "mistaken purchase." In this case, it appears that the negative correlations exist for certain elements simply because there is variance in these scores. The respondents that supplied much of the variance are more likely to be those that treat radio as a high involvement product and thus, were more interested in responding to a study about radio. Those who simply gave scores of six or seven for nearly every element were more likely to be those who are not involved with radio. All the items that scored high on importance showed weak correlations because there was no variance in the scores. These were elements that were important to all respondents. This shows another key point: hierarchical listeners are more likely to treat radio as a low involvement product and conversely, non-hierarchical listeners are more likely to treat radio as a high involvement product and use another strategy for making initial listening choices. The problem for broadcasters is that hierarchical (low involvement) listeners make up a majority of the potential audience.

This proposition is supported by other data in the study. For example,

hierarchy score correlates negatively with time spent listening, satisfaction, and loyalty. Hierarchical listeners spend less time with radio, are less satisfied with their favorite stations, and are less loyal, hallmarks of low involvement behavior. The EBA-style listeners also showed a positive, albeit non-significant, correlation with station repertoire. While they are not that involved with their radio listening, they don't care enough to go switching around the dial to find something they might become more involved with. This presents some interesting problems for station operators and programmers. The conclusion is that most users of radio have a hierarchical choice process and are low involvement listeners. High involvement radio listeners make up a minority of the audience but generally use some other method of selecting stations, probably one that involves some averaging of multiple format elements or other elements not tested here but involved in the choice of radio stations.

This conflicts with the reasoning behind the model. It was proposed that listeners use EBA because radio is a high involvement "product" for the initial choice, then becomes low involvement after the EBA process is used. It appears that the reverse may be true; EBA is used because radio is low involvement at all stages. One of the advantages of EBA over other choice models is its simplicity. Given this, the model remains valid even if the reasoning was faulty.

How does a station reach and motivate these low involvement listeners? How does one overcome the lack of inertia on the part of these people and get them to spend more time listening to a particular station? This work presents no answers or suggestions, however the person that figures it out will certainly become very wealthy. The idea of a "conversion" process from low to high involvement suggests that instead of the usual strategy of stealing from

competitors, $\left\{ \begin{array}{l} \text{it will mean "adding" new audience, or increasing the pie rather} \\ \text{than trying to reduce someone else's piece. In radio jargon, this is referred to} \\ \text{as converting cume into quarter hour in such a way that the persons using} \\ \text{radio (PUR) levels in a market are increased.} \end{array} \right\}$ In English, it means converting a listener who only samples (small amounts of listening in an average week) to one that listens heavily. By increasing the overall amount of listening in a market, the PUR figure goes up. The increase comes from listeners who previously were uninvolved. These new "involved" listeners will listen much longer, presumably to the station that recruits them. A typical market will have a total week (Monday-Sunday 6AM-Midnight) PUR of between 15 and 20 percent, meaning that fewer than one of five people are listening to radio during any given fifteen minute segment. This PUR number is the "pie" that station shares come from. A station that could cause an increase in PUR by two percentage points and claim nearly all of that increase would have approximately a ten share, considered very successful in most markets. The author is unaware of any station that has knowingly pursued such a strategy, although it may have occurred by accident in some cases. Research to design such a strategy is a useful goal.

Another part of this study that is relevant to broadcasters is the loyalty scale. While others in the industry have undoubtedly measured loyalty in some other form, this is the first time that such a tool has been tested and placed in the public domain. It is suggested that future studies look at improving the scale as well as examining the results with various formats. This initial test of the scale shows both good reliability ($\alpha=.80$) and validity. Taking the previous discussion into account, a new entrant into a radio market can use such a scale to measure which station is the most vulnerable to "attack" (the

one with the least loyal listeners). This aids in the more traditional strategy of taking away audience from a weak (or perceived weak) competitor. The scale can also be used by a station management to determine the strength of listeners' ties to the station. If the station is doing poorly in loyalty among listeners, yet is strong in share, some fine tuning of the format may be in order to increase loyalty among listeners, thus fending off forays by new entrants. This may be easier said than done as it probably converting some low involvement listeners to high involvement status, but a loyalty measure should be part of a station "research checkup" performed on a regular basis. Along with loyalty, the present research looked into willingness to try new stations based on the amount of information available to the respondent. Respondents were asked how likely they would be to try a new station they knew nothing about and how likely they would be to try a new station that sounded similar to their favorite station. As one would expect, the respondents scored the latter option higher although there was not very much difference between the two scores and, of course, the two scores were highly correlated ($r=.47$) suggesting that some listeners will try a new station regardless and some will not try new stations under any circumstances. It is a question of loyalty but not a question of involvement. When willingness to try a new station under either condition is paired with hierarchy score, the correlations are nonsignificant. Thus, both hierarchical and non-hierarchical listeners are equally willing (or unwilling) to try new stations in their markets.

Another useful piece of information for broadcasters to surface from this study is the change behavior exhibited by radio listeners. There is a striking difference in at home and in-car change behaviors exhibited by certain age groups. Specifically, listeners in the 25-44 age bracket act the same as older

adults in their at home change behaviors. When they get behind the wheel, they resemble 18-24 respondents. They change stations much more often in the car than at home. Around the age of 45, listeners change less often in the car, apparently settling in with one station. This may also be a function of the number of format choices available to the 45+ audience, such that this age group has very few choices so there is little reason to change often. While this may be true, it is also likely that the ease of changing in the car combined with the tedium and privacy of driving (much driving is done alone) and a plethora of format choices makes for more button punching.

What this means to station programmers is that greater attention must be kept on the things that can cause tuneout during drive times, the times when the largest percentage of the audience is in the car. Nearly every station would like to claim that the 25-44 group is a key part of their audience. In addition, { nearly every station makes some changes to their format during morning drive, keeping in mind the activities of their audience during that time, but these data also suggest that more attention should be paid to afternoon drive, due to the change behavior of this key demographic group. }

Another important demographic finding showed up another "generation gap." News is significantly more important to the 35+ age group. { Listeners under 35 simply don't find news all that important, at least not on radio. Whether they care about news at all or simply wish to receive it from some other media source is not clear. What is clear is that a station planning to provide a strong news emphasis while appealing to listeners under 35 is not making a smart move. This takes on added importance with the value of the 25-34 demographic to radio stations. This group is pivotal in that they appear in three of the major age groups prized by advertisers, 18-34, 18-49, and 25-54. }

As go the 25-34 year olds, so go many of the dollars in a market. The direct advice here is save the money intended for the news department and use it elsewhere.

The very low r^2 results for nearly all the regressions suggests that something else is driving the choices and habits of radio listeners other than the components of a radio station's sound. Certainly for some listeners, peer pressure may be part of the equation while for others it may be simply force of habit. There are probably other variables, likely psychological and sociological ones, that need to be investigated in future studies. Technological issues may also be involved, such as dial location and audio processing.

Another interesting finding was the relationship of contests, education, and listening. The lowest educated group (less than high school graduate) generally rated almost every element of radio higher than all other groups. One very important variable was contests. Almost all other groups (educational and otherwise) rated contests rather low on the scale while this lower educated group found them very important. (Yet the high contests scores translated into high loyalty scores, suggesting that loyalty can in fact, be "bought.")

One other programming element was shown to produce higher loyalty scores. The much-maligned disc jockey can increase loyalty to a station, although the reality is probably the well known morning jock rather than the person reading the liners at the "more music" station. A station that has a well known lineup of air personalities, especially those who get involved in the community, can inspire higher loyalty to their stations, probably making their higher salaries a good investment. (However, news, sports, and most notably, limited commercials, do nothing to increase loyalty to a radio station.) Conversely, weather does help, making investments in special weather services such as Accuweather, a

worthwhile move for some stations.

C Finally, the differences between the two sexes is worth highlighting. Men are more volatile radio listeners than women. They are less impressed with nearly all elements of a radio station, less likely to be loyal to their favorites, and faster to change stations when something displeases them. Thus, a station that is strong in men may be more vulnerably to "attack" from another station than one that is stronger in women. However, the station trying to take the men away, if successful, will have the same problem with loyalty as the station that had them previously. }

Implications for Research

The key finding from the theoretical side is the same as for the broadcasters. It is the empirical support for the hierarchical EBA model of listener choice for most radio listeners. As detailed above, the majority of respondents were shown to use the proposed hierarchical EBA model for their initial radio listening choices. The modal value for the test equated to a perfect hierarchy.

In addition to utility as a programming tool, the results raise the question of "Why?" How does such a model, if supported in future studies, fit in with other models of media use? Although one purpose of this study was to add to the very limited body of research on "modern" radio, it must take a place with the other mass media, especially the other primary electronic mass medium, television. Is this support for a notion that television and radio programming are completely different in the way users approach them? The goal of this study was to determine if support existed for a radio choice model. This model has not been tested for television, but should be.

The results concerning research question two are not so clear-cut. This

question concerns the causes for listeners adding or removing stations from the station repertoire once an initial choice has been made. While a loyalty scale was devised that showed a good reliability coefficient, and satisfaction was also measured, it is still far from certain as to why listeners add or delete a station beyond the obvious, such as a station changing format.

While most listeners scored reasonably high on loyalty and satisfaction with their favorite stations, most also gave high ratings to their willingness to try a new station, whether or not it had a format similar to their favorite. It is simply not clear from this research what specific things build listener loyalty and what decrease it.

There may also be a measurement problem. A listener who is not very satisfied with his/her favorite radio station may not wish to tell an interviewer. The respondent may feel stupid saying that a station is his/her favorite yet it rates a 2 on a scale of one to seven in personal satisfaction, a form of response bias. There may have to be some other indirect measure used to get at true satisfaction.

The third research question involved day to day changes in listening and how these occur. A "first acceptable option" method, was proposed as the way listeners make changes during everyday listening. While some listeners did say they changed this way when asked directly, a majority of respondents said they knew ahead of time what station they would switch to. Another group, about equivalent in size to the first group, said they checked a number of stations before choosing one to switch to. Thus, there is no real support for the "first acceptable option" model and this is rejected. A majority of listeners know the station they will listen to next, presumably one from their station repertoire. Checking the relationship between hierarchical initial choice and short term

changing does not give any indication that hierarchical listeners approach this choice decision any differently than non-hierarchical listeners.

One very interesting finding is that the respondents claimed they changed most often due to talk, yet disc jockies scored low in importance. Logically, all a disc jockey can do is talk, yet this does not drive listeners to change, while talk does. Apparently, listeners can and do differentiate between forms of talk, possibly identifying it as commercials, public services announcements, news, sports, weather, or just about anything not delivered by the on-air personality and they don't find it nearly as enjoyable as disc jockies. It may also give some insight into the unique definition of the term "disc jockey" in American popular culture. Without entering that body of literature, disc jockey may refer to any on-air person in some listeners' minds, while for others it is the outrageous morning person or top 40 personalities, yet not the on-air person who does the breaks at the all-music easy listening or adult contemporary station. This is an area that may be worthwhile for further research as to just what is a disc jockey, what is the meaning of the term, and how listeners react to different styles in the contexts of different radio formats. Disc jockies may be the most personal media personality, considering radio's ability to facilitate "one on one" communication. Research should focus on what extent the personality of the disc jockey is linked with the "personality" of the station and for that matter, the personalities of the individual listeners.

The second subquestion regarding the propensity of different groups to change confirmed the obvious, which is that younger listeners change more often than older listeners and listeners tend to change more often in cars than at home, probably due to the ease of changing with pushbutton car radios and

the physical proximity of the listener to the radio while driving.

The most important demographic breakdown finding of this section was highlighted earlier, that of the different behavior of 25-44 year olds at home and in the car. It would be interesting to see a cohort study of these measures in ten to fifteen years to determine if the current younger generation of radio channel changers stop changing as much when they reach 45, or if changing ceases to be related to age.

Overall, there were other important findings from this research. First, in this study, it appears that much of the variance in listener behavior is explained by factors other than those that the radio station can control, in other words, aspects of the station's sound. With only one exception, regression analyses yield r^2 figures in the .05 to .15 range meaning most of the variance results from other factors. It would be interesting to see if psychological profiles of a group of listeners could be developed and then meshed with radio usage data to determine if personality traits can explain more of the variance.

The overall implications for research are first, a model has been developed and used to describe a relationship that people have with a mass medium. Second, the model has withstood an initial empirical test. It becomes the only model in the literature that describes a specific user reaction to one particular electronic mass medium, radio. As with any model, it needs further testing to determine if this single result was generalizable or an anomaly. Next, a new model needs to be developed to describe the change process once the initial station repertoire has been chosen as the second part of the two-stage model proposed here failed to meet the empirical test. However, there is support for the notion that listeners know what station they will switch to when the time

comes to make a change.

Whatever the model may be that will better describe the second stage of the radio choice process, it is necessary to pursue this field of study by building a theoretical base. Considering that the average American twelve years of age or older spends around three hours a day with the medium and over ninety six percent of all Americans twelve and older tune in during an average week, it is inconceivable that there is no reason to study this medium. Some scholar must have an interest in building theory that can be applied to the aural medium.

This study also adds a new scale to the literature that may be used (perhaps with some refinement) as a measure of listener loyalty to a radio station. This may prove to be a good tool for radio programmers in their attempts to find a niche in their markets. In addition, while probing for the reasons behind those changes in loyalty and changes during daily listening, it points a direction to sources other than the radio station's programming, a fruitful area for future research.

Strengths and Weaknesses of the Study

As with any study, there are certain strengths and weaknesses present. On the positive side, thanks to a grant from the National Association of Broadcasters, the study had a large enough sample to avoid suffering from sampling error. The study had initially been proposed with 1200 respondents, but even with financial support, the sample was cut to 900. This still allowed the sampling error to be kept down to a reasonable level, even with the subsamples that provide some of the best insights.

The financial support also allowed the study to be conducted in three markets, rather than one. While not nationally projectable (a minor weakness

considering the exploratory nature), it did allow the market size factor to be ruled out of many of the differences that were found between groups. Market size generally played a role only in differences that would be obvious, such as the importance of traffic reports in a market that doesn't have traffic problems.

The questionnaire design was a positive side of the study. Even a year after the study, there is little that the author would change about the questionnaire. There is little else that needed to be asked, although it would have been desirable to shorten the questionnaire a bit. It was longer than had been anticipated, averaging around 15 minutes, which, while in the bounds of good telephone questionnaires, pushed the limits and caused some terminations.

The telephone methodology was a mixed blessing. It was positive in that a great amount of information could be gathered and the most important tests conducted were amenable to telephone survey methodology. However, the problems of student interviewers dealing with the general public and the decreasing response rates for telephone surveys nationwide did hurt. Given 20/20 hindsight, the training program for interviewers should have been more rigorous or else only professional interviewers should have been used. The questions involved here still lent themselves best to the telephone methodology compared to mail or the very expensive in-person techniques.

One weakness was the inability to tie the results to individual stations that the listeners said were their favorites. In each market, the subgroups listening to one station were so small that the error involved would be unacceptable. Still, it would be interesting for example, to see if the leading station in the market was "vulnerable" based on the loyalty scale. Another interesting comparison could be between what listeners stated were the most important elements and what the stations considered their strongest programming elements.

This would be an advantage of conducting a large sample study in one market.

On the other hand, it would be exciting to see how a national probability sample would come out. Without the national projectability, it is hard to confidently generalize from what has been presented here. However, a national sample would add very strong support for the hierarchical EBA model (assuming it had the same support as found here). The loyalty scale could also be replicated to further determine its validity and the potential value of its use in local markets.

Suggestions for Future Research

A number of research ideas were mentioned in passing above. There are seven areas worth looking at:

- 1) Compare the findings with television research to see if radio is truly a different medium compared to television in the minds of users. Does the hierarchical choice process work with television or is the visual medium so "program oriented" that it is impossible for a viewer to have "brand loyalty" in the way radio listeners can interact with radio stations.
- 2) Why do listeners add or delete radio stations from the set beyond the obvious situations when a station changes format? Is the EBA process restarted or does the station repertoire simply shrink (assuming it was initially larger than one)?
- 3) What factors build loyalty to stations? Is it similar to studies of brand loyalty for packaged goods or services or does radio have a unique nature that makes it different? Now that a loyalty scale exists to measure the amount of loyalty, what are the variables that make for different scores? What control do the stations have over the loyalty of their listeners?
- 4) The "quick change" process must be modelled in some other fashion. There

was no support for the model proposed here, but there may be some problem in the measurement of the construct. It needs to be studied again.

- 5) What is the difference between "talk" and "disc jockies?" The two concepts were viewed very differently by the respondents, yet disc jockies must talk. Is talk "information" or is talk simply an annoyance to listeners? What can stations do to make the necessary talk more palatable to listeners?
- 6) A cohort study of 25-44 year old listeners would be very interesting. Will these listeners become the same as today's 45+ listeners or will they maintain their listening habits, especially their youthful button-pushing in the car? Some tracking of this group over the next few years will give some ideas as to how future generations of listeners will react to the youth formats of today.
- 7) Despite the ability of a radio station to control all the factors involved in the programming and the meticulous attention paid to these factors by the most successful stations, what variables determine the other 85 to 95 percent of the variance that could not be explained by the regressions on dependent variables such as loyalty and satisfaction? What are the other variables and how can a radio station control them? Is it even possible to identify these variables on a general level?

All of the above could make interesting research projects and be extremely valuable to the radio industry. At the same time, some of them offer the chance to help build a body of theory for the radio medium.

In sum, this study has presented the basis for further study of listener choice habits as well as closer looks by scholars into radio as a medium. The medium deserves better from researchers; it has much to offer when compared to the other mass media. Just recently, the author had reason to review The People Look at Radio by Lazarsfeld and Field. Published in 1946, it was

probably the last national study of public attitudes toward radio done by academics (although it was funded by the National Association of Broadcasters). Perhaps this small beginning will help to end over forty years of near total neglect since Lazarsfeld and Field.

APPENDIX

APPENDIX

Questionnaire

The questionnaire administered is presented in this appendix. The version shown here is generic in that no specific market is listed. Versions used by the interviewers were specific to each market (Seattle-Tacoma, Greenville-Spartanburg, Fargo). This version has also been changed to fit the margins required by the binding of the dissertation.

RADIO LISTENER CHOICE QUESTIONNAIRE

DATE _____ TIME _____ INTERVIEWER _____

PHONE (_____) _____ CASE NUMBER _____

CALL THE DESIGNATED NUMBER AND ASK FOR A MALE OVER 18. IF NO MALE IS AVAILABLE, TALK TO WHOMEVER YOU HAVE ON THE PHONE AS LONG AS THEY ARE 18 OR OLDER. AFTER YOU HAVE DETERMINED THAT YOU HAVE THE PROPER PERSON, READ THE FOLLOWING...

My name is _____ and I'm calling from Michigan State University. We're conducting a study on radio listening habits in (name of market) and your phone number has been chosen at random to be a part of our survey. This survey will take just a few minutes of your time and no one will try to sell you anything. All your answers will be kept confidential.

S1. Do you or any member of your immediate family work for a radio station? (IF YES, THANK RESPONDENT AND HANG UP. IF NO, CONTINUE WITH INTERVIEW).

S2. Do you listen to radio on a regular basis, that is, at least two hours a week? (IF YES, CONTINUE INTERVIEW. IF NO, THANK THE RESPONDENT AND HANG UP.)

1. What radio stations do you listen to on a regular basis in the _____ area? (LIST ALL THOSE MENTIONED BELOW...PROBE TWICE...Any others?...REMEMBER TO PROBE)

2. How many other stations do you listen to just once in a while?

3. Which one of the stations you mentioned is your favorite? (IF THE RESPONDENT CLAIMS TO HAVE NO FAVORITE, ASK WHICH ONE HE/SHE LISTENS TO MOST OFTEN.)

4. How many years have you been listening to (favorite)?

 YEARS

5. Please rate how satisfied you are with your favorite station. If 7 is very happy and 1 is very unhappy, how does this station rate with you?

6. How many hours do you listen to radio during a normal weekday?

_____ HOURS

7. How many hours do you listen to radio on a typical weekend day...Saturday or Sunday?

8. Next, I'm going to read you a list of different things a radio station can offer its listeners. For each one, please rate between one and seven how important it is to you personally. One stands for not important at all. Seven means it is extremely important to you. If you are right in the middle, answer four.

- | | |
|--------------------------------------|-------|
| A. Music | _____ |
| B. Personalities or disc jockies | _____ |
| C. News | _____ |
| D. Weather | _____ |
| E. Sports reports | _____ |
| F. Your reception of the station | _____ |
| G. Contests | _____ |
| H. Play by play sports broadcasts | _____ |
| I. A limited number of commercials | _____ |
| J. The sound quality of the station | _____ |
| K. Phone-in talk shows | _____ |
| L. Traffic reports during rush hours | _____ |
| M. If the station is FM | _____ |
| N. Stereo sound | _____ |
| O. Community involvement | _____ |

9. Now I'm going to ask you about these elements again, but I'd like you to tell me how well your favorite station performs on each one. Once again, use any number between one and seven...one means poor and seven is excellent.

- | | |
|--------------------------------------|-------|
| A. Music | _____ |
| B. Personalities or disc jockies | _____ |
| C. News | _____ |
| D. Weather | _____ |
| E. Sports reports | _____ |
| F. Your reception of the station | _____ |
| G. Contests | _____ |
| H. Play by play sports broadcasts | _____ |
| I. A limited number of commercials | _____ |
| J. The sound quality of the station | _____ |
| K. Phone-in talk shows | _____ |
| L. Traffic reports during rush hours | _____ |
| M. Stereo sound | _____ |
| N. Community involvement | _____ |

10. Now I'm going to give you pairs of these elements. Think about setting up a new radio station that would be the ideal station for you and tell me which of the two elements you would want in your station first.

- | | | | |
|--|-------------|-------------|---------------|
| A. Music or news | MUSIC _____ | NEWS _____ | NO DIFF _____ |
| B. Music or weather | MUSIC _____ | WEAT _____ | NO DIFF _____ |
| C. News or sound quality, meaning a combination of reception, stereo sound, and FM | SQ _____ | NEWS _____ | NO DIFF _____ |
| D. Limited commercials or music | COMM _____ | MUSIC _____ | NO DIFF _____ |
| E. Disc jockies or music | DJS _____ | MUSIC _____ | NO DIFF _____ |
| F. News or weather | NEWS _____ | WEAT _____ | NO DIFF _____ |
| G. Sound quality or music | SQ _____ | MUSIC _____ | NO DIFF _____ |
| H. Limited commercials or news | COMM _____ | NEWS _____ | NO DIFF _____ |
| I. Disc jockies or sound quality | DJS _____ | SQ _____ | NO DIFF _____ |
| J. News or disc jockies | NEWS _____ | DJS _____ | NO DIFF _____ |
| K. Weather or disc jockies | WEAT _____ | DJS _____ | NO DIFF _____ |
| L. Disc jockies or limited commercials | DJS _____ | COMM _____ | NO DIFF _____ |
| M. Weather or limited commercials | WEAT _____ | COMM _____ | NO DIFF _____ |
| N. Sound quality or limited commercials | SQ _____ | COMM _____ | NO DIFF _____ |
| O. Weather or sound quality | WEAT _____ | SQ _____ | NO DIFF _____ |

11. The next part is a series of statements that concern you and your favorite radio station. Please rate each statement on a one to seven basis...one means you strongly disagree with the statement and seven means you strongly agree. If you are in the middle, answer four.

A. I can't imagine any other station would sound better than my favorite station.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

B. I feel like I know the people at my favorite station.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

C. Listening to my favorite station makes me feel good.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

D. I get involved with my favorite station by calling the station, entering contests, or going to events sponsored by the station.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

E. I tell friends about my favorite station.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

F. My favorite station cares about what I want to hear.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

G. There are some things my favorite station could do better.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

H. The music my favorite station plays is the same kind of music I like best.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I. The thing I like best about my favorite station is something other than the music they play.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

J. I find that I often change from my favorite station for one reason or another.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

12. When you listen to radio at home, would you say you change stations very often, somewhat often, not very often, or never?

VO _____ SO _____ NVO _____ NEVER _____ DK/RF _____

13. When you listen to radio in the car, would you say you change stations very often, somewhat often, not very often, or never?

VO _____ SO _____ NVO _____ NEVER _____ NO CAR RADIO _____

DK/RF _____

14. Are the stations you listen to in the car the same ones you listen to at home?

YES _____ NO _____ NOT SURE _____ DK/RF _____

15. When you change stations at home, do you know ahead of time which station you will change to, do you listen to the first station that sounds good to you, or do you check a number of stations before picking the next station to listen to?

KNOW AHEAD OF TIME _____ LISTEN TO FIRST ONE _____

CHECK BEFORE CHOOSING _____ NEVER CHANGE _____ DK/RF _____

OTHER (WRITE OUT) _____

16. When you change stations in the car, do you know ahead of time which stations you will change to, do you listen to the first station that sounds good to you, or do you check a number of stations before picking the next station to listen to?

KNOW AHEAD OF TIME _____ LISTEN TO THE FIRST ONE _____

CHECK BEFORE CHOOSING _____ NEVER CHANGE _____ DK/RF _____

NO CAR RADIO _____

OTHER (WRITE OUT) _____

17. How often do you change from a station you usually listen to because of the personalities (disc jockies), very often, somewhat often, not very often or never?

VO _____ SO _____ NVO _____ NEVER _____ DK/RF _____

18. How often do you change from a station you usually listen to because there is too much talk, such as the disc jockies, news, sports, or other talk...very often, somewhat often, not very often, or never?

VO _____ SO _____ NVO _____ NEVER _____ DK/RF _____

19. How often do you change from a station you usually listen to because of a commercial you don't like...very often, somewhat often, not very often, or never?

VO _____ SO _____ NVO _____ NEVER _____ DK/RF _____

20. How often do you change from a station you usually listen to because of the music...very often, somewhat often, not very often, or never?

VO _____ SO _____ NVO _____ NEVER _____ DK/RF _____

21. How often do you change from a station you usually listen to because of the quality of the reception in your local area...very often, somewhat often, not very often, or never?

VO _____ SO _____ NVO _____ NEVER _____ DK/RF _____

22. How often do you change from a station you usually listen to because of a change in your mood...very often, somewhat often, not very often, or never?

VO _____ SO _____ NVO _____ NEVER _____ DK/RF _____

23. Are there any other things a radio station does that make you tune to another station or shut the radio off?
(WRITE DOWN VERBATIM)

24. If a new station were to come on the air in your city that you didn't know anything about, how likely would you be to try listening to it? If 7 is "definitely would listen" and 1 is "definitely would not listen", what number would approximate what you would do?

25. If a new station were to come on the air that sounded similar to your favorite station, how likely would you be to listen to it? If 1 is "definitely would not" and 7 means you definitely would listen, what number would you say approximates what you would do?

26. Just a few more questions now...do you own a videocassette recorder?

YES _____ NO _____ RF _____

27. Do you own a personal computer?

YES _____ NO _____ RF _____

28. Do you own an AM radio?

YES _____ NO _____ DK/RF _____

29. Now a few questions about you...how many years have you lived in the
_____ area?

_____ YEARS

30. What is the highest level of education that you have completed?

LESS THAN H.S.	_____	HIGH SCHOOL (INCLUDES VOCATIONAL)	_____
SOME COLLEGE	_____	COLLEGE DEGREE	_____
POST B.A./B.S.	_____	REFUSED	_____

31. Would you please tell me your age?

(WRITE RF FOR REFUSED)

32. I'm going to read you some categories of total yearly household income. Was your total annual household income last year...

Under \$10,000	_____	DK/RF _____
Between \$10,000 and \$20,000	_____	
Between \$20,000 and \$30,000	_____	
Between \$30,000 and \$40,000	_____	
Between \$40,000 and \$50,000	_____	
More than \$50,000	_____	

33. Finally, what is your race?

WHITE/CAUCASIAN _____ BLACK _____ HISPANIC _____ OTHER _____
RF _____

Thank you very much for your time.

RECORD SEX OF RESPONDENT: MALE _____ FEMALE _____

BE SURE TO FILL IN INFORMATION AT TOP OF PAGE 1.

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