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Web Radio: Its Influence on the Radio Listening Experience and its Impact on the Advertiser-Supported Model of Radio Consumption
(Under the Direction of DEAN M. KRUGMAN)

A modified Delphi survey and in-depth interviews of a panel of radio broadcasters whose stations are also webcasting were used to examine: 1) why consumers are choosing to listen to Web Radio, 2) what influence Web Radio is having on the radio listening experience, and 3) what impact Web Radio is having on the advertiser-supported model of radio consumption.

Two rounds of the Delphi survey were conducted. Analysis of the central tendencies (mean, mode and standard deviation) showed consistent results from Round I to Round II. Therefore, no further rounds were conducted. The panel was sub-divided into four groups: Large Market/New Broadcasters, Large Market/Long Time Broadcasters, Small Market/New Broadcasters and Small Market/Long Time Broadcasters. For most of the items in the Delphi survey, opinions expressed by the panel members were consistent across the sub-groups. However, in seven key areas there were definite differences of opinions.

The panel feels they know why consumers are listening to Web Radio. What the panel is much less certain of is how Web Radio is influencing the radio listening experience and what impact Web Radio will have on the advertiser-supported model of radio consumption. The panel feels that Web Radio's effect on traditional radio is minimal at this point in time. However, the panel feels that Web Radio will have a substantial effect on traditional radio in five to ten years.

The in-depth interviews of the panel members were conducted by the researcher as part of the first round of the Delphi survey. Constant comparative analysis was used to

analyze the data from the interviews. The first level of analysis resulted in nine open coding categories.

Axial coding resulted in two categories. The first category was labeled *Influences on the Radio Listening Experience*. The second category was labeled *Impact on the Advertiser-Supported Model of Radio Consumption*.

The core category, the central phenomenon around which all other categories are integrated, was identified as *The Way Web Radio Was Being Delivered to the Listener*. The Internet is providing a whole new distribution system for audio programming. The impact of this new delivery system is just beginning to be felt by the traditional, over-the-air radio delivery system.

INDEX WORDS: Web Radio, Emerging new technologies, Internet, Discontinuous innovations, Radio

WEB RADIO: ITS INFLUENCE ON THE RADIO LISTENING EXPERIENCE AND ITS IMPACT ON THE ADVERTISER-SUPPORTED MODEL OF RADIO CONSUMPTION

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DEDICATION

This work is dedicated to my family. The support of my wife, Tara, and the constant encouragement from our two daughters, provided me with the motivation to see this task to its completion. My father, A. R. Van Cantfort, backed my efforts in more ways than one. He has always supported me in whatever undertaking I have chosen. In addition, this work is dedicated to the memory of my mother, Ellen Myer Van Cantfort. She did not live to see me complete this task, but I know she is proud of what I have done.

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TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

This study uses in-depth interviews and a modified version of the Delphi method to explain the current and future influence that Web Radio is or will have on the radio listening experience as well as what impact it may have on the advertiser-supported model of radio consumption. A recruited panel of current radio broadcasters whose operations include webcasting is used in this study. The sample was purposely selected in order to have an equal number of large-market broadcasters and small-market broadcasters. Also included in the sample were an equal number of long-time broadcasters and broadcasters who are relatively new to broadcasting but have considerable experience in emerging new technologies. This study seeks a phenomenological understanding of how providers of radio programming perceive the function of this new technology and how it might impact the radio listening experience. Three central questions guide the research: (1) Why are consumers listening to Web Radio? ; (2) How is Web Radio influencing the radio listening experience? ; and (3) Is Web Radio having an impact on the advertiser-supported model of radio consumption?

Web Radio, for the purposes of this study, is defined as streaming audio delivered via the Internet in a format similar to that of traditional, over-the-air radio. The delivery of music, news or sports via the Internet making use of an announcer/host combined with the presence or potential presence of commercial announcements within the streamed program would qualify as a Web Radio broadcast.

The three central questions serve as starting points for understanding the current or potential influence of Web Radio on the radio listening experience. Their role is to generate thoughtful consideration and discussion of the influence and impact Web Radio is having or might have on the radio listening experience and its advertiser-supported model of consumption. In addition, a series of 36-scaled statements is used to help determine where the panel of experts feels Web Radio currently is and how it might develop over the next five years (a more detailed discussion of this method takes place in Chapter Three).

Justification

The delivery of streaming audio over the Internet is a relatively new and rapidly expanding means of delivering radio programming on a global scale. According to BRS Media, only 56 Web Radio stations existed in April of 1996. By April 2001, the number of Web Radio stations had grown to over 5,000 (BRS Media, 2001). The universe of potential listeners for online radio is expanding rapidly. According to a recent study by Arbitron/Edison Media Research, roughly 57 million people listened to radio stations online in July 2000. A recent survey by Forrester Research found that 56% of Internet users receive audio on their PC's at least once a week (Raphael, 2000). According to Arbitron's most recent Internet study (Arbitron, 2001), in January 2001, 13 per cent, or 29.5 million Americans, used Internet audio at some point during the month, compared to 10 per cent in January 2000. This same study shows that Americans who have ever listened to radio stations online had more than tripled over the past two years. The study also shows that the proportion of Americans who have listened to Web Radio in the past seven days increased from 2.1 per cent in January 2000 to 3.4 per cent in January 2001.

This represents a 62 per cent increase over the past 12 months. The small percentage (3.4%) of Americans who have listened in the past week is also a good indicator that Web Radio is in the early adoption phase of the product life cycle.

Because Web Radio is so new, little scholarly research has been conducted concerning audience use of Web Radio and the impact such usage may have on traditional, over-the-air radio. A recent search of the major communication and advertising journals found numerous studies of websites but only three studies that involved Web Radio. Unlike traditional radio, Web Radio requires no license from the government. That fact, combined with the relatively low cost (under $10,000) of establishing a web site with streaming audio, allows for easy entry into the market, a market that is truly global since the Internet can be accessed from most every country in the world. With this ease of entry into the market and the global reach of the Internet, Web Radio offers the potential to have a major impact on how radio is consumed. The lack of scholarly research combined with the ever growing use of the Internet provide the justification for a study of how and why consumers are choosing to tune in to Web Radio.

The technological ability to stream audio over the Internet was developed just five short years ago. In this brief time period Web Radio has begun to change the way we listen to radio and how it is delivered to our ears. Right now the audience for Web Radio across the United States is relatively small. According to the most recent Arbitron/Edison Media Research Study (2001), only about four million listeners tune in to Web Radio each week. This compares to the size of the Philadelphia, Pa., regular radio market. Over 5,000 “stations” broadcast over the Web, but the number grows by over 100 every month according to BRS Media (2001), an Internet company that tracks Web Radio stations.

Most of these sites are re-broadcasts of existing over-the-air stations, but approximately 500 sites are now web-only radio stations (Simon, 2000).

Web Radio is a powerful new means of delivering audio. In the past, radio has been limited by space and time. Traditional radio signals can only be received for a certain distance from the transmitting site and traditional radio stations must present their programming in sequence. Web Radio is not limited by either of these factors as it does away with geographic restrictions and, with ever increasing capacity to store audio, Web Radio can archive programs indefinitely and offer access to them at any time. Just as important, Web Radio is exempt from FCC licensing and restrictions. Anyone is free to set up a site and listeners will be able to tune in from around the world (Simon, 2000).

Though Web Radio's audience is small, it is growing and traditional broadcasters are beginning to take notice. David E. Kennedy, President and C.O.O. of Susquehanna Radio Corp., stated his opinion in a recent interview:

> "Despite the fact that the Internet has existed for a few years, most of us in radio are just beginning to take it seriously. At Susquehanna, we recognize the potential threat that the Internet represents to our business but we are far more excited by the many opportunities it presents." (Keith, 2000, p.1)

The rapid advancements characterizing changing media create a gap in our understanding about their function. Little research exists that examines the role that "new media", particularly interactive media, play in the lives of their users and what impact the "new media" may have on the old media. Howkins (1987) noted that new technologies (particularly the home computer) are affecting the way people learn and entertain. Understanding how advanced media technologies factor into this cultural shift is necessary to assess their sociological implications.

Because many advanced media technologies differ radically from traditional media, current mass communication theories may not be appropriate to explain their role. Salvaggio (1989) noted that unique characteristics of new media technologies challenge the relevance of traditional mass communication theories. Similar sentiments were expressed by Heeter (1989) who observed that communication scholars have recognized the need to re-conceptualize communication in the light of new telecommunication technologies and that alterations in intellectual thought are necessary to understand changes in communication behavior. Williams and Rice (1983) made note of the need to rethink current mass communication theories and paradigms because of the tendency of new media to blur the lines of interpersonal and mass communication.

Method

To better understand the role of Web Radio and to help forecast its future impact, the study employs both a qualitative and a quantitative approach using in-depth interviews of a panel of experts and a modified Delphi survey of the same panel. Williams and Rice (1983) advocated the use of more qualitative research designs to account for context when examining new media technologies. A qualitative approach is particularly appropriate for studies that seek to understand and describe a phenomenon from the perspective of its actors, in this case the providers of programming of the advanced media technology. In this study a panel of 20 experts is interviewed either in person or via the telephone. Each participant is asked to respond to the three general research questions with follow-up questions asked based on their initial responses. Additionally, as the Delphi survey is administered in round one, the participants are asked to explain their responses to the scaled items. Each interview was recorded and

then transcribed. The panel was also provided an opportunity to respond to the open-ended questions during the second round of the Delphi survey but this time the panel wrote out their responses and returned them via email. The qualitative data analysis comprises three parts: (a) open coding; (b) axial coding; and (c) selective coding.

Classical forecasting techniques are difficult to apply to a product like Web Radio, which has no history. This means that some judgmental method must be used. One such method is the Delphi. This method, developed by the Rand Corporation in the 1950's, uses an independent surveying of a group of experts. The results, including key comments, are fed back anonymously to the experts for subsequent rounds of their projections which they may modify because of their view of the consensus. The independence, not seeing who projected what but just seeing the consensus average and range, avoids the pitfalls of bias transfer and intimidation (Goldfisher 1992).

The Delphi method has been used for many years. Gerstenfeld (1971) found that over 10% of the firms in his sample of Fortune's 500 had used Delphi. McHale's (1973) survey of organizations engaged in futures research found that Delphi was one of the most popular techniques used. Hayden (1970), in a survey of 65 progressive companies, found 26% of them used Delphi and of these 71% claimed that it was useful. Ono and Wedemeyer (1994) assessed the validity of the Delphi technique in forecasting developments and trends in the telecommunications industry in the state of Hawaii. Their research showed strong support for the Delphi method as a valid technique for long-range forecasts.

Two rounds of the Delphi survey were administered. A 90% retention rate was obtained in round two as 18 of the 20 panel members responded to the second survey.

The quantitative data analysis comprises four parts: (a) frequency distribution; (b) mean; (c) mode; and (d) standard deviation. The final data should give a detailed insight as to what Web Radio producers think will be the impact of Web Radio on the radio listening experience and on the advertiser supported model of radio consumption.

Exploratory Nature of the Study

This is a stand-alone study that is exploratory in nature. It is an attempt to understand and explain how certain Web Radio providers think Web Radio is influencing the radio listening experience and what future impact it may have on the advertiser-supported model of radio consumption. Such an understanding should lead to a better comprehension of the role advanced technologies play in the communication process. The study is not a generalizable examination of the effects of Web Radio on the radio listening experience, nor is it representative of all Web Radio producers.

Outline of the Study

Chapter One provides an overview of the study.

In Chapter Two, new media technologies as they relate to radio are defined using a typology developed by Robertson (1971), and later modified for video technologies by Krugman (1985), to categorize marketing innovations. Modifications to the typology aimed at creating a better definitional framework for the current study are discussed and described. The technologies are designated into groups by degrees of innovation. The previous literature on diffusion of innovations including continuous to discontinuous innovations in media are examined as well as an examination of past studies of radio.

Chapter Three details the research approach. A conceptual overview and the rationale for conducting the study are provided, as is a detailed explanation for using the

combination of in-depth interviews and a modified Delphi survey. The research design, instrumentation, selection of the panel and administration of the survey will all be discussed in detail.

Chapter Four details the results of the study. Both open, axial and selective coding are described. Frequency distributions, means, mode and standard deviations for all 36 scaled-items are provided. Key findings are discussed as are the differences between certain sub-groups with-in the panel of experts.

Chapter Five provides discussion of key findings from both the in-depth interviews and the Delphi survey. Predictions for Web Radio development are provided based on the analysis of the data distilled from both the interviews and the Delphi survey. Limitations of the study and directions for future studies of Web Radio are also provided. Implications for current Web Radio broadcasters are also discussed.

CHAPTER 2

REVIEW OF LITERATURE

This chapter presents literature relevant to the diffusion of advanced media technologies and in particular looks at studies involving the impact of technological advances on the consumption of radio. Initially, the literature review examines studies of radio listenership. The literature is broken into three sections, pre-television, post-television and the digital era, based on the assumption that emerging technologies have influenced the consumption of radio and have impacted the advertiser-supported model of radio consumption.

Additionally, the chapter describes a typology for classifying media innovations for understanding the role of new media technologies (Robertson 1971). Literature using this classification scheme (Krugman 1985; 1989) is reviewed and placed in context for this study. Web Radio and other advanced media technologies (used or proposed to be used for the delivery of radio programming) are identified, defined and designated as either continuous/dynamically continuous or discontinuous using the typology. The literature (Robertson & Gatignon 1985) demonstrates a need for understanding why advanced media technologies can be expected to facilitate change in the consumption of radio programming.

The literature is broken into three sections based on an assumption that emerging technologies have influenced the audiences' use of radio. The first section looks at radio studies before television became available (pre-television), the second section looks at

radio after television became established (post-television) and the third section looks at the influence of the Internet on radio usage (emerging new media).

At the beginning of the 20th century, virtually no one in the scientific, amateur, military or corporate communities expected broadcasting to become the main use of wireless technology. The sending of uncoded messages to an undifferentiated audience transformed wireless into a popular medium of communication. Toll broadcasting, the hiring of radio facilities by advertisers, began as an experiment of AT&T. In 1922, AT&T started "selling time" to advertisers for its station, WEAF, in New York City. However, much debate took place in Washington, D.C., and across the nation on just what model of radio broadcasting would become the standard in this country. In 1924, Herbert Hoover stated that if broadcasters tried to sell "some brand of shoes or anything else over the radio, you'll have no radio audience. People won't stand for that. It would kill the radio industry as quickly as anything you can think of" (Rothafel, 1925).

Though this debate would continue for another ten years, by the mid-1930's advertising had established itself as the basis for American broadcasting. Commercial radio added a totally new dimension to modern communication; it brought the outside world into the individual home on a real time basis. Unlike any previous medium of communication, commercial radio formed a perpetual part of every day life during the 1930's. Through both entertainment and news programs it became a household necessity by linking the private sphere of the individual and family with the world "out there". By 1939, less than twenty years after the first commercial broadcast, a *Fortune* magazine survey found that 70% of Americans relied on the radio as their prime source of news. In addition, 58% of Americans thought radio news was more accurate than the printing press (Czitrom, 1982).

World War II delayed any thoughts of researching the use of commercial radio. The war, and the way it was reported on radio, demonstrated radio's ability to provide a sharper sense of urgency and immediacy than had any previous means of mass

communication. It was in this setting that Frank Stanton, Paul Lazarsfeld and Patricia Kendall conceived the idea of a periodic survey of the public's attitudes toward radio. The next section looks closely at the results of the 1947 study that was published in a book entitled Radio Listening In America (Lazarsfeld & Kendall, 1948).

Pre-Television

Conducted by the National Opinion Research Center at the University of Chicago and sponsored by the National Association of Broadcasters (NAB), the 1947 nationwide survey was one of the first such surveys that attempted to develop a body of knowledge about specific radio listening habits of the audience. The 1947 survey was actually a follow-up survey to a 1945 study also conducted by the National Opinion Research Center. Because of numerous criticisms of the first report by a group of social scientists, the second survey included a number of improvements in question design. It was also thoroughly pre-tested and revised to help improve both reliability and validity (Lazarsfeld & Kendall, 1948).

The 1947 survey was essentially a study of the radio audience, but it did provide an overall picture of the general communications behavior of the American population. Respondents were not only asked about radio listening but also about their book reading, movie attendance and the regularity of their newspaper and magazine readership. This was done to enable the researchers to distinguish between "fans", "average consumers", and "abstainers" for any class of mass media. It also allowed the researchers to characterize these different groups (Lazarsfeld & Kendall, 1948).

The Lazarsfeld & Kendall Study examined both the quantity and quality of exposure to radio. Quantity was described as the amount of time spent with radio while quality described what types of programs the audience chose to listen to during the time spent listening. The factor with the most far-reaching implications in this study was the one that they labeled socio-economic. It was their assumption that education level best measured this difference. The respondents were divided into three groups based on the

level of education. Group A consisted of those who had not gone beyond grade school. Group B consisted of those who had attended high school and group C was comprised of those who had at least some college education. In 1947, approximately 55% of adults in America were in group A, 23% of adult Americans were in group B and just 12% of adult Americans were in group C. Five broad categories of programming cut across all three levels of education. These broad areas were comedy, news, sports, popular music and mystery theater. These five areas of programming were equally liked by all strata and interestingly, were the type programs that constituted the vast majority of programming on network radio in 1947. However, the social differences were significant in several key areas. Programs of serious music and discussions of public issues were selected as favorites twice as frequently in the college group as in the grade school group. In addition, "hillbilly" music, religious programs and daytime serials were much more popular with the grade school group than with either of the two higher strata of listeners. Finally, quiz programs were more popular with the middle group than with either the higher or lower educated listeners (Lazarsfeld & Kendall, 1948). This research highlighted a problem that broadcasters still face today in both radio and television programming. It is the problem of deciding whether or not to program for a mass audience or a niche audience. In 1948, the need of the commercial broadcaster was to reach as large of an audience as possible in order to compete effectively with the more established print vehicles of mass communication for the limited advertising dollars available.

The Lazarsfeld & Kendall survey asked the respondents to give an overall appraisal of radio, newspapers, and local government. The respondents could choose either excellent, good, fair, poor or don't know. Fourteen percent of the respondents said radio was doing an excellent job, while only 9% thought newspapers were doing an excellent job and just 4% thought their local government was doing an excellent job. When you combine "excellent" with "good" ratings, radio received a 70% approval

rating while newspapers got a 63% approval rating and local government got only a 42% approval rating. Additionally, radio received high marks for fairness. Nearly 80% of respondents said radio was fair in presenting both sides of an issue (Lazarsfeld & Kendall, 1948).

Though more than two out of every three adults rated radio favorably, they did have some criticisms of the medium. Some of these criticisms are ones that we still hear today. The 1947 study showed that the #1 source of annoyance was advertising, noted by 26% of listeners. Some respondents criticized the amount of advertising, others the content and still others the timing and form of presentation of advertisements.
Next highest on the annoyance list was program content. Fifteen percent of the radio audience criticized both mystery and crime programs as being "bad" or "too exciting" for young people. It was suggested that such programs not be broadcast until after 9:00 p.m., "when children have gone to bed (Lazarsfeld & Kendall, 1948). For both radio and television networks, these program content criticisms would only grow louder in the coming decades.

Socio-economic differences were once again a major factor in explaining the amount of criticism of radio. Those with the highest education were most likely to think radio was doing only a fair or poor job, that radio was unfair, that they sometimes felt like criticizing radio, that they "put up with" radio advertising or would like it off the air and displayed the highest overall radio criticism score. In summarizing this criticism in his presentation of this study to the NAB, Paul Lazarsfeld stated:

> "It has been said that radio, like all other modern media of mass communication, plays a triple role today; as a craft, as a business and as a social force. Your critics admire your craftsmanship; they are sure you are good businessmen. When they think of radio as a social force they keep their fingers crossed. No doubt these reformers are often difficult to get along with and because they listen less to the radio, they seem negligible as an audience. But don't be deceived. Even if there are only a few in some of your communities, taken together they are a formidable public force and have won many battles. You and your critics will somehow have to come to terms - for the good of the country, as well as for your own peace of mind" (Lazarsfeld & Kendall, 1948, p.148).

This 1947 study was based on a survey of 3,529 randomly selected respondents of which 3,225 (91%) had working radios. Forty-nine percent of the respondents were male and 51% were female. All respondents were 21 years of age or older. It was estimated that the survey had a margin of error of +/- 2%. It is also important to note that this survey was conducted before the advent of commercial television and during a time period when radio programming was dominated by three major networks. It was also a time period when most listening was done during the evening hours and was usually done in a group setting (Barfield, 1996).

By 1949, national radio service had turned out rather differently than had been anticipated when broadcasting began in 1920. The large radio manufacturing companies had believed national radio would rationalize broadcasting and help increase profits, but they did not expect that broadcasting could directly make money. Intellectuals and futurists of the 1920's had seen radio as a means of improving morality and building a sense of nationhood. Many ordinary people had thought that national radio would be a way to maintain ethnic and regional loyalties (Smulyan 1994). Instead, the form radio took in the United States proved to be directly commercial, passive, and homogenized, promoting consumption as the way to happiness. It had become and would continue to be an advertiser-supported model of radio consumption.

Post-Television

Just six short years after the Lazarsfeld Study, radio was impacted by that new medium, television. The impact was so strong and so sudden that many in the radio business felt that television might well be the "death" of radio. If not the "death" of radio, then at least television would impact how the audience would use radio and what was to be programmed by the radio station operators. In an article that appeared in the February 2, 1953, edition of *Broadcasting Magazine*, Elmo Ellis, then program director of WSB radio in Atlanta, Georgia, suggested nine ways to remove the rust from radio. His promotional efforts would win a Peabody Award for WSB radio later that year. Ellis

pointed out that neither daytime nor nighttime radio would die because of television's impact. Radio was undergoing a transformation and Ellis advocated researching the listeners to find out what they wanted to hear on "their station". He recognized that a radio station could not simply ride the coattails of a network. Radio programmers had to get the job done in their own backyard. In other words, they had to become much more flexible, adaptable and most importantly, more locally oriented (Ellis, 1953). Television added another competitor for the eyes and ears of the consumer. No longer would the family gather round the radio set for a night of entertainment. Instead, radio would fragment into more narrowly targeted formats and would focus its attention on daytime programming of music and local information. National advertising dollars quickly moved to network television while radio stations turned their attention to securing more and more local advertising dollars.

During the next twenty years, radio would become a more personal medium, with people listening to news and music rather than drama or comedy programs. Much of this listening would be done alone in the car or in the home. Radio programmers reached out increasingly to more diverse and particularized audiences. Radio's move toward specialized formats was closely tied to an emphasis within the advertising industry on market research. As the market for consumer goods grew after World War II, advertisers worked to sell more services to manufacturers. Advertising professionals found demographic information particularly useful in explaining what advertising could do (Smulyan 1994). The advertiser-supported model of radio consumption would continue to exist but a shift to a more targeted audience and the use of radio advertising by more regional and local businesses was occurring.

Though television diffused quite rapidly in the 1950's, there were still communities in North America that did not receive any television reception. In 1959 a study of two communities of comparable size in Canada was undertaken (Parker 1961). One community had television reception available to it (TVtown) and one was still

without television reception (Radiotown). Parker examined what happens to the other mass media when television becomes established in a community. He wanted to see if changes in attention habits developed among the members of the potential audiences. Parker noted the Lazarsfeld studies in the 1940's had shown that radio had not impaired the reading habits of the population. The reason given by Lazarsfeld for the lack of a relationship between reading and radio listening was that these two media performed different functions. In his introduction, Parker cites a 1959 study by Bailyn, in which she found a negative correlation between television viewing and radio listening. She also found a positive correlation between radio listening and book reading. She concluded, "radio has taken on a new role, most likely because of the advent of television. It now forms a unit with books. The pictorial media- movies, comic books and television, stand in a separate group" (Parker, 1961).

Parker collected data from over 600 children in sixth and tenth grades. Approximately half lived in TVtown and half in Radiotown. The two communities both had approximately 5,000 residents, had similar transportation systems, school systems and both were located in the same province of Canada. The only major difference was that one community had television reception (CBC and the three American networks) while the other community did not receive any television. Both towns were served by numerous radio signals originating in Canada and America. The results proved interesting. On average, the Radiotown children were found to listen to radio for more than three hours a day while TVtown children listened less than two hours a day. This provided further evidence of the displacement of radio listening by television viewing. The results from Parker's study did not support Bailyn's earlier findings that radio listening correlated negatively with television viewing. Plus, at only one grade level, in one community, was Parker's study able to support Bailyn's previous findings that showed a positive relationship between radio listening and book reading. One additional finding from Parker's study was evidence of an increase in "doing other things while

listening to radio" in TVtown. At least for children, this may have signified a changing function for radio. Parker concluded that this increased use of radio as background sound represented a shift from using radio as a provider of fantasy material that requires full attention to a function of "half-listening" that permits moments of escape from the conflicts of real life into the fantasy world of popular music (Parker, 1961).

As television usage continued to increase throughout the 1960's and '70's, additional studies of radio usage were conducted. Troldahl and Skolnik (1968) examined how people were using radio since television entered the scene. The study was designed to increase insight into the functions and images of radio at that moment in time. The study began with a simple random sample of 148 households in Lansing, Michigan, using a very non-directive telephone questionnaire. From these non-directive surveys 27 statements were selected that typified all the different responses produced by the non-directive interviews. Once this meaningful sample of radio attributes was identified a second telephone questionnaire was developed in an effort to measure how positively or negatively respondents surveyed would react to the 27 attributes. Factor analysis was used to identify possible patterns of responses. Patterns were sought only in the agree/disagree responses. About half of the variability could be accounted for in six general patterns of responses. The strongest pattern was labeled "companionship", which included positive responses to such things as "radio cheers me up" and "radio music makes me feel like someone is home with me." The next strongest factor was labeled "program evaluation" and was the only factor that dealt directly with content. A person who exhibited this pattern agreed that "there is too much talk and not enough good music on radio", "there is too much silly stuff on radio now", "the music on radio nowadays is rotten", and "radio has better weather coverage than television does." These first two factors were somewhat stronger than the last four dimensions that were labeled "worldly awareness", "portability", "pleasant environment", and "abrasiveness" (Troldahl & Skolnik, 1968).

By 1970, "Top 40" radio had become the programming format of choice for many radio stations. Such a format targeted teenagers and young adults. Mendelsohn (1964) concluded that: "To the teenager who is particularly in need of approved social cues, radio's role in providing him with such cues is significant." Weintraub (1971) also noted the Troldahl and Skolnik factor-analytic study of adults. Weintraub used methods very similar to those used by Troldahl and Skolnik. The difference was in the fact that the resulting questionnaire was administered in two high schools representing different socio-economic levels. The purpose of the study was to determine the psychological meanings of radio for teenagers. After performing factor analysis, a little over half of the variability was accounted for in eight general patterns of response. The top-loading factor was labeled "verbal personality" and suggests that teenagers are very conscious of the verbal personality of radio. They like "DJ chatter" and "dumb jokes." The other factors were labeled "relevancy", "worldly awareness", "source-message distinction", "portability", "programming evaluation", "time-filling", and "music." Three of the eight factors corresponded directly with the earlier findings in the Troldahl-Skolnik research; however, there was no corresponding factor for the top-loading factor of "verbal personality" (Weintraub, 1971).

Dominick (1974) took a further look at how radio was becoming a "best friend" of teenagers. The study theorized that for many young people in our society, radio might be an important channel of socialization. Dominick felt that youth oriented stations may be a significant source of socialization since they occupy the attention of many young people for significant periods of each day. As such, radio may have become a portable friend and an instant advisor available at the flick of a switch. Dominick felt that, for those young people who for one reason or another did not have a high degree of contact with peer groups, radio might represent an important source of information and advice about youth related topics. After surveying over 200 boys and girls in the sixth grade at two New York City public schools, Dominick found that youngsters with few peer group

contacts used radio more for informational reasons and less for entertainment than young people with more peer group contacts. In addition, children with low peer group membership listened more to radio than children with high peer group contacts. Dominick also indicated that more current research was needed into the social effects of radio. Dominick stated that:

> "Much of the research done during the 1940's and early 1950's, when radio was in its ascendancy, is outdated now and of little social utility. Not only has society changed, but also radio itself has become radically different. The proliferation of locally oriented stations, the variation in formats and the increased popularity of the FM-band have created a radio system quite different from the one that existed 20 or 30 years ago." (p. 169)

Dominick went on to say that radio itself is now a new communication medium, and as such, deserves detailed new studies (Dominick, 1974). Unfortunately, the dominance of television and the emergence of cable-TV and the VCR took the attention of most mass communication scholars and radio research was to lie dormant for most of the 1970's and 1980's.

Emerging New Technologies

By the decade of the 1990's, much had changed in radio and mass communication. AM radio, so dominant in the 1960's, now accounted for only a third of the overall radio audience and even less of the teenage audience. The use of cassettes and CD's were commonplace, giving audiophiles more choices. In addition, cable-TV had penetrated into over two-thirds of American households and the Internet had just begun its rapid growth. Competition for advertising dollars was stronger than ever. Yet, according to the Radio Advertising Bureau (2000), radio's share of ad dollars had increased slightly during the ten-year period from 1990-1999. Most of this growth could be attributed to an increase in local and regional advertising expenditures (RAB 2000).

Carroll et al, (1993) revisited the issue of the meaning of radio to teenagers in light of all the new technological advances (cassette players and CD's). Carroll's identified eight factors accounting for 56% of the variance. His heaviest loading factor was labeled "solitary radio user." This factor got positive responses to the statements "listen while doing homework", "listen while getting ready to go out", "listen while alone in my room", and "I wake up to radio." The other factors were labeled "inter-active radio listener", "cassette tape and CD listening as an alternative to radio", "social radio listener", "abrasiveness", "companionship", "program evaluation", and "television viewer." When compared to the Troldahl and Skolnik study and the Weintraub study, the Carroll study shows that a considerable shift in the meaning of radio had taken place over the twenty-year span of time. The issues of relevancy and worldly awareness, which both appear in the earlier studies, are not found in the current results. In fact, the only variable pertaining to issues or current events that received a significantly high factor loading in the Carroll study was that there is too much news on radio. This indicates that teenagers in the early 1990's were not as interested in news and world affairs as were teenagers two decades ago. Additionally, no such factors as "solitary radio user" or "inter-active listener" appeared in the earlier studies, but they were the two highest loading factors in this study (Carroll, et al, 1993).

Carroll's study also found that female teenagers are more involved radio listeners than are male teenagers. The study also indicated that teenage listening peaks during the 14-15 years of age time span and then begins to decrease as older teens turn to tapes and CD's as listening alternatives. Carroll suggests that teenage listeners are members of an evolving audience, characterized by psychological development, cultural affiliation and even the changing media environment in which choices become more accessible (Carroll, et al, 1993).

The latest technology to impact radio is the Internet. The technological ability to stream audio over the Internet was developed just five years ago. In this brief time period,

Web Radio has begun to change the way we listen to radio and how it is delivered to our ears. Right now the audience for Web radio across the nation is relatively small. According to the most recent Arbitron/Edison Media Research Study (2001), only about 7 million listeners tune in to Web Radio each week. This is approximately 3.2% of all Americans. However, this number represents nearly an 80% increase over the average weekly Web Radio audience in July of 1999. Nearly 4,500 "stations" broadcast over the Web, but that number grows by over 100 every month according to BRS Media, an Internet company that tracks Web stations. Most of these sites are re-broadcasts of existing over-the-air stations, but approximately 300 sites are now Web-only radio stations (Simon, 2000).

Web Radio is a powerful new means of delivering audio. In the past, radio has been limited by space and time. Traditional radio signals can only be received for a certain distance from the transmitting site and traditional radio stations must present their programming in sequence. Web Radio is limited by neither of these factors. It does away with geographic restrictions and with ever-increasing capacity to store audio, Web Radio can archive programs indefinitely and offer access to them at any time. Just as important, Web Radio is exempt from FCC licensing and restrictions. Anyone is free to set up a site and listeners will be able to tune in from around the world (Simon, 2000).

Though Web Radio's audience is small, it is growing and traditional broadcasters are beginning to see that Web Radio provides them a way to extend their brand. David E. Kennedy, President and C.O.O. of Susquehanna Radio Corp., stated his opinion in a recent interview.

> "Many of our stations also have found that their Internet sites permit them to expand and extend their programming in ways never before possible." (Keith, 2000, p.1)

This brand extension that Kennedy speaks about could also impact the business model. Some stations have already begun to sell their programming twice. First they sell the

airtime to the "over-the-air" client and then a second time to an Internet only client. Additionally, program providers like Major League Baseball are now using the subscription model to generate revenue from Internet listeners who choose to log-on to the webcast of their favorite team's live game broadcast. A broadcast that is available free-of-charge to those listeners who can be reached by the over-the-air signal.

According to *Duncan's American Radio*, a decline in the population listening to radio during any given quarter hour has occurred over the past decade. In 1990, 17.5% of the U.S. population, age 12+, were tuned into radio in any given quarter hour. By 1998, that figure had fallen to 15.9%. The reasons cited in the report as possible causes of this listening loss included increased commercial loads, a trend away from local programming, over-fragmented stations and a failure to serve listeners outside the 25-54 demo. Web Radio listening was not even presented as a possible cause of any portion of this listening loss (Schiffman, 1998). Other recent research seems to support the idea that to date Internet use and Web Radio are not having a negative impact on traditional radio listenership. In Arbitron's most recent study of Internet usage it found that "listening to the radio" was the #1 companion activity to Web surfing. Forty-three percent of Web surfers stated that they listen to radio while on the Internet. Radio listening, as a companion activity to Web surfing was favored over other activities such as listening to CD's, talking on the phone, or watching television (Arbitron, 2001).

A study of the relation of the use of the Internet to changes in media use from 1995 to 1999 shows that while Internet use in America grew substantially over the four-year period it did not cause a decline in radio usage. In fact, Internet users were more likely than non-users to be regular listeners of radio news. The study (Stempel et al

2000) examines ten different types of media. The results showed only Internet use and radio listening increasing over the four-year time period. The other media vehicles that showed a decrease in regular use over the four-year period included local TV news, network TV news, daily newspapers, news magazines, grocery store tabloids and political magazines. The authors concluded that there is a complementary rather than competitive relationship among Internet news and radio news usage. Information seekers can listen to the radio while they are using the Internet. One involves seeing and the other listening, so both can be used at the same time (Stempel et al 2000).

It also appears that to date radio broadcasters have not taken full advantage of this complementary relationship between the Internet and radio. A recent study (Lind and Medoff 1999) shows that most commercial radio broadcasters in America are not fully utilizing their websites. In 1999 as few as 25% of commercial stations had websites. Of those stations that did have websites in 1999, only 25% indicated that they offered any kind of streaming audio. The data also indicated that radio stations were not aggressively pursuing income generation from their websites. The study concluded that the functions broadcasters fill over the air are rapidly becoming feasible via the Web. The Web offers traditional radio stations a way of strengthening brand loyalty while offering services not easily provided through traditional broadcasting (Lind and Medoff 1999).

A recent Arbitron study also found that online listeners, also known as "Streamies", are highly responsive to "dotcom" advertisements and purchase more on the Web than Internet users who are not listening online. The study showed that 79% of Web Radio listeners are likely to visit a Web site advertised on their favorite radio station and 60% have made a purchase from the Web site. Additionally, Web Radio listeners spend nearly 50% more time online than the average Internet user, averaging over 11 hours per week on the Web. Twice as many online listeners come from homes with an annual

income of $100,000 or more (18% vs. 8%) compared to those on the Internet who are not listening online. Educationally, 15% of streamies have attended some graduate school; nearly double the amount of those Internet users who don't listen online. Bill Rose, Vice President/General Manager, Arbitron Internet Information Services concluded from this research that, "Broadcasters and Internet audio channels, who are streaming media on the Internet, have a chance to deliver advertising to a highly valuable new breed of consumer, streamies, who are more Web-savvy, buy more online and have more disposable income."(Arbitron, 2001).

Web Radio, with its thousands of different formats and its ability to allow for listener and producer interactivity along with the availability of direct response to an advertiser's message, will almost certainly have an influence on the advertiser-supported model of radio consumption. Today, most broadcasters are looking for an answer to the question of how big of an influence will Web Radio have on the advertiser-supported model of radio consumption.

Diffusion of Innovations

Rogers (1983) has described innovation, in part, as a change made in the established way of doing things. Web Radio certainly fits that description, as it quite obviously is a change in the established way of delivering radio broadcasts. How innovations, such as Web Radio, are diffused has been studied extensively. In fact, one of the more widely used theories of communication is Diffusion Theory. Diffusion literature has developed across a number of disciplines and has been of value explaining the flow of information, ideas, practices, products and services within and across cultures and subcultures or markets and market segments. Diffusion's theoretical roots are found in rural sociology (Rogers 1983), geography (Brown 1981), medical sociology (Coleman,

Katz and Menzel 1957), cultural anthropology (Barnett 1953) and industrial economics (Mansfield 1961).

As a theory of communications, Diffusion Theory's special focus is on interpersonal communications within social systems. The diffusion perspective was introduced to the emerging consumer behavior literature in the 1960's (Arndt 1967; King 1963; Robertson 1967 and Silk 1966). In the ensuing years, consumer behavior scholars have frequently looked to Diffusion Theory for guidance on the dissemination of new technologies, new products and new services. The concepts of diffusion have proven useful to managers and change agents. Diffusion is a major focus of thinking regarding new product marketing (Rogers 1976; Urban and Hauser 1980; Wind 1982) as well as advertising (Aaker and Myers 1982; Ray 1982).

The classic attributes of diffusion identified by Rogers (1983); relative advantage, compatibility, complexity, trialability and observability, are a good basis for evaluating the diffusion prospects of a new technology such as Web Radio. These five attributes affect the rate of adoption of the new technology and all five are based on consumers' perceptions.

Objective advantages, based on quantifiable measures of performance, can enhance diffusion only to the extent that they are perceived as advantages by users (Weiss and Dale 1998). In Roger's five attributes of adoption, relative advantage is the degree to which an innovation is perceived as being better than the idea or product it supersedes. Compatibility is the degree to which an innovation is perceived as consistent with existing values, past experiences and needs of potential adopters. Complexity is the degree to which an innovation is perceived as relatively difficult to understand and use.

Trialability is the degree to which an innovation may be experimented with on a limited basis. Observability is the degree to which the results of an innovation are visible to others (Rogers 1983). Recently, Weiss and Dale (1998) have tried to simplify this process by evaluating the new technology on just two primary factors, the relative performance advantage and the degree of "operational novelty" introduced by the new technology relative to its advantage. "Operational novelty" is defined as a contraction of the innovation attributes of complexity and compatibility. Weiss and Dale (1998) theorize that challenging a mature, established technology with a product based on new technology is risky, although that risk can be moderated by high performance advantage and low operational novelty. They give as an example the CD player. These devices are based on a technology that differs completely from that of its predecessor, the analog LP phonograph. However, the radical technical difference is largely transparent to the user, who operates the new device in a fashion very similar to the old one. Operational compatibility creates comfort; its opposite, operational novelty, generally creates anxiety (Weiss and Dale 1998).

Robertson, (1971), stated that the critical factor in defining a new product or innovation should be its effect upon established patterns of consumption. He proposed a continuum for classifying new products by how continuous or discontinuous their effects are on established consumption patterns. This continuum moves from a continuous innovation that has the least disrupting influence on established consumption patterns to dynamically continuous innovation that has more disrupting effects but still does not involve new consumption patterns to a discontinuous innovation that involves the establishment of new consumption patterns and the creation of previously unknown

products (Robertson 1971). While continuous innovations are strictly alterations to a product, dynamically continuous innovations can include the creation of new products. Robertson cites as examples annual new-model automobile changeovers (a continuous innovation) and electric toothbrushes (a dynamically continuous innovation). At the opposite end of the continuous innovations on Robertson's continuum are discontinuous innovations. These innovations involve the creation of previously unknown products or the establishment of new consumption patterns. Robertson cites television (at its introduction) as well as computers as examples of discontinuous innovations.

Advanced media technologies can be categorized into two groups under Robertson's typology: (1) continuous/dynamically continuous or (2) discontinuous (Robertson, 1971). Continuous and dynamically continuous may be collapsed into one because, as Robertson noted, the differences between continuous and dynamically continuous groups are small. In both cases innovations are minor and do not result in new consumption patterns. However, new consumption patterns are observed with discontinuous innovations and therefore they remain a separate group.

Robertson's early work with classifying technologies included studies into a communications innovation, the touch-tone phone (1968). Robertson analyzed the diffusion of innovations model in terms of how it explained adoption or non-adoption of new technologies such as the touch-tone phone (a dynamically continuous innovation). Robertson concluded that the adoption of the technology was largely determined by the affective and conative behavioral components of consumer behavior. This study of a communications innovation provided the basis of Robertson's subsequent research into the classification of innovations. In that research (Robertson and Gatignon 1985) it is

theorized that innovations can be classified on two dimensions, symbolic and technological. A symbolic innovation communicates a new social meaning, whereas a technological innovation provides new tangible features.

Krugman (1985; 1989) utilized the model of consumption to show how innovation in video technology was impacting television consumption. Krugman's model showed how television consumption has moved from over-the-air TV (standard consumption) to basic cable consumption (continuous consumption) to pay cable (dynamically continuous consumption) to interactive services such as VCR's, home computers and home shopping (discontinuous consumption). Reagan (1987) evaluated Krugman's model for its ability to predict the impact of new technologies on traditional media. Reagan concluded that the Krugman model (which Reagan termed the "disruption" model) had external validity because it reasonably predicted "new patterns of use". A further study of the impact of new technology on TV consumption showed that VCR rentals caused a reorganization in the way consumers come to view established media (Krugman and Johnson 1991). The authors went on to state that VCR rentals have created a genre of viewing that is different from traditional broadcast TV or standard cable viewing. Krugman demonstrated that over time VCRs migrated from being discontinuous innovations to being continuous/dynamically continuous innovations. The reason for the shift in classification was the VCR's penetration among the general public and the length of time in the marketplace. Currently, nearly 90% of U.S. households own a VCR (Times Mirror Center, 1999) and the technology is two decades old. Changes in consumption associated with the technology are no longer considered "new".

A similar schema for distinguishing between advanced media technologies is offered by Baer (1985). Baer designated two categories of home information technologies: (1) stand-alone, or one-way, receiving units; and (2) communicating, or networked, units. Specifically addressing media technologies, Baer grouped television receivers, radios, audio systems, VCRs, videodisc players, video games, cable TV converters, satellite TV receivers and stand-alone personal computers as one-way receiving units. Into the second group Baer designated interactive cable TV terminals and PCs with two-way communications capabilities. Implying that the two types of technologies promote different patterns of usage, Krugman (1985; 1989) and Baer (1985) both stressed the inclusion of two-way, or interactive, technologies in a separate category from media with more minor advancements. In light of this, it is useful to consider what is meant by "interactivity." Rice (1987) noted that the term "interactivity" is used loosely and rarely operationalized, which leads to ambiguity regarding meaning. Heeter (1989) observed that interactivity is often cited as a determining characteristic of new technologies but the term is rarely defined. Despite the lack of a commonly accepted definition, an overriding theme exists when the term interactive is used: in some way participants have control over (Rice, 1987) or can exchange roles in the communication process (Williams, Rice, & Rogers, 1988). Interactivity, then, makes communication a two-way process with receivers being active participants. Interactivity might well be thought of as a multi-dimensional concept, encompassing aspects of complex available choices, effort exerted on the part of users, degrees of responsiveness and facilitation of interpersonal communication (Heeter, 1989).

Based on the evidence presented from the literature (Baer 1985; Krugman 1985 & 1989; and Reagan 1987), the following advanced radio technologies have been identified as continuous/dynamically continuous (one-way) and discontinuous (two-way or interactive) advanced radio technologies (see Table 2.1, Emerging Radio Technologies Model). The groupings and definitions of each of the technologies included in them are as follows:

Continuous/dynamically continuous (one-way) radio technologies –

Satellite Radio – Radio programming distributed on a national or multi-national basis through the use of satellite technology using a subscription-based economic model. Two firms are licensed to provide programming in the USA. Receivers will be available in some new cars by fall of 2001 and in homes by early 2002. Programming is set to begin before the end of 2001. It will provide 100 channels of programming for a flat monthly fee. Satellite radio will provide listeners with more narrow, niche programming that will be available across all of North America. The listener can "lock on" to their favorite format and take it with them where ever they go.

Digital Audio Broadcasting (DAB) – Terrestrial as well as satellite delivered radio programming that is transmitted and received in a digital format. It is currently available in parts of Europe but not in the USA. After more than 10 years of hearings and field tests the Federal Communication Commission has not set a standard for such a system. Once a standard is approved it will replace the current analog system of over-the-air delivery of radio programming. Depending on the system that is finally approved, DAB may require listeners to acquire an entirely new receiver in order to listen to over-the-air signals. The digital technology will allow more than one signal to be delivered

from each transmitter. This will make it possible to provide additional channels of programming or data transmissions. If the in-band system is approved by the FCC then "listening" will not be changed in any substantial way.

Discontinuous (two-way, or interactive) radio technologies –

Web Radio – Web Radio consists of streaming audio files that are available through the Internet in a format similar to traditional radio. Currently most Web Radio stations are re-broadcasts of over-the-air signals. Some are available only through the Internet. Most Web Radio broadcasts are accessed through a personal computer (PC) or by using a special receiver that will allow the audio to be processed through a stereo receiver after the streaming audio files have been retrieved through a "hard-line" connection with the Internet. Web Radio does offer the potential for interaction between the listener and the program provider. Certain Web only stations allow the listener to select the songs or type of programming that will be streamed. Web Radio has been available since 1995. It is global in reach and does not require a government license to operate. A recent survey of over 3,000 Americans (Arbitron 2001) shows that 52% of Web Radio listeners say they tune in to hear local stations on the Internet. However, the same survey shows that 37% of Web Radio listeners say they listen to stations originating from other parts of the United States and 7% say they listen to stations originating from other countries. This represents a listening experience that was not feasible before the development of the Internet.

Wireless Web Radio – Delivery of streaming audio from the Internet without the use of a "land-line" delivery system. Would make Web Radio truly portable and competitive with traditional radio. The basic technology has already been developed.

What is still needed is an efficient delivery system with enough bandwidth to stream "CD quality" sound. Could be a reality by 2005. Some media experts think it will allow for the "personalization" of radio through the use of interactivity and data collection.

Of these four emerging radio technologies, Web Radio was selected for the current study because: (1) It is in use and that use is rapidly growing, (2) It is assumed to be a discontinuous innovation, and (3) A group of practioners who are knowledgeable in the development of Web Radio can be identified and accessed for research into the diffusion of this technology.

Summary of Literature

As the research above shows, radio has been shaped and re-shaped a number of times over its 80-year history. It is once again being re-shaped by the Internet. How much impact Web Radio will have on traditional radio is not known. What is known is that the delivery of streaming audio over the Internet is a relatively new and rapidly expanding means of delivering radio programming on a global scale. The universe of potential listeners for Web Radio is expanding rapidly. Because Web Radio is so new, little scholarly research has been conducted concerning audience use of Web Radio and the impact such usage may have on traditional, over-the-air radio. With the ease of entry into the market and the global reach on the Internet, Web Radio offers the potential to have a major impact on how radio is consumed. The lack of scholarly research combined with the ever-growing use of the Internet provides the justification for a study of how Web Radio is influencing the radio listening experience and how it is impacting the advertiser-supported model of radio consumption.

The existing literature suggests that varying degrees of advancement in present media technologies may be classified using a typology conceived by Robertson (1971).

Discontinuous technologies, by virtue of their interactivity, may create altogether new ways of consuming media. Based on the literature review, three basic research questions were generated. These research questions will be examined using in-depth interviews and a modified Delphi survey of a panel of broadcasters who have substantial experience in webcasting.

The key to understanding the role of advanced media technologies, such as Web Radio, lies in our ability to generate an understanding from data grounded in the empirical world. In the face of a dynamically changing media environment, it is incongruous to rely on existing communication assumptions. This reality provides strong justification for the main research questions of this study: **(a) Why are consumers listening to Web Radio? ; (b) How is Web Radio influencing the radio listening experience? ; and, (c) Is Web Radio having an impact on the advertiser-supported model of radio consumption?**

Table 2.1

Emerging New Technologies Model

Standard Consumption	Continuous Consumption Least Disruptive Influence	Dynamically Continuous Consumption More Disruptive Influence	Discontinuous Consumption New Pattern of Consumption
Over-the-Air Radio Standard radio literature applies. Available "everywhere" in signal coverage area. Ad-supported.			
Satellite Radio Distributed by satellite to special pay-to-listen receivers. Available in certain cars in late Fall 2000…in homes by the end of 2001. Monthly fee for 100 or more channels of music, news or sports. Most channels not over-the-air signals. Initial model not advertiser-supported.			
Web Radio Distributed over the Internet. Streaming audio, formatted like traditional radio. Currently most Web Radio stations are re-broadcasts of over-the-air signals. Some are Internet-only stations. Access is through the PC, however, several manufacturers have just introduced a special Web Radio receiver that can access the streaming audio sources without using a PC, but still requires a hard line connection to the Internet. Most Web-only radio stations are not airing in-program commercials. Most do offer advertising on their websites. Has not displaced traditional over-the-air listening. Provides interactivity that has not previously been available to radio listeners. Some sites are ad-supported, others are used to promote music consumption and purchase.			
Wireless Web Radio Delivery of Internet streaming audio that is not tied to a "land-line" delivery system. Makes Web Radio truly portable and competitive with over-the-air radio as far as reach is concerned. Will allow the listener to "hear" signals from all over the globe. Best estimate is that it will be available to users as early as 2004. It will most likely be advertiser- supported in some fashion and will allow for interaction between the listener, the advertiser and the programmer. It could allow the listener to be the programmer.			
Digital Audio Broadcasting Over-the-air and/or satellite delivered. Recently introduced in Europe. FCC has not set a standard in the U.S. after ten years of hearings and experiments. Eventually should replace the analog system currently used by over-the-air broadcasters. Offers better sound and more services than the current AM/FM delivery system. Still don't know if it will be an in-band or out-of-band delivery system. Will be an advertiser-supported system.			

CHAPTER 3

RESEARCH APPROACH

This research is an exploratory study of Web Radio and in particular the adoption and application of an emerging new communication technology. Web Radio is anticipated to be perceived by potential adopters as an addition to an already existing range of audio options. This chapter will present a conceptual overview of the research; provide a rationale for conducting the study; and justify the use of the in-depth interview and the modified Delphi survey as effective means by which to address the three basic research questions. Additionally, criteria for participation and the recruitment of participants are described.

Conceptual Overview

This study is grounded in the marketplace model of audience consumption (Webster and Phalen 1994). The audience is viewed as consumers of media. According to this model, the audience is sovereign. They can freely pick and choose which media best meet their needs. If the audience demands diverse content, then the marketplace will provide it in its most appropriate forms, especially if people can pay for programming and no provider is prohibited from entering the market. The elements of the marketplace model are as follows:

1. Audience members are rational, well-informed individuals who will act in their own self-interest.
2. Audience members come to the media with well-informed program preferences that cause them to choose specific content.
3. The public interest is served by a media system that is responsive to audience preferences as revealed in their program choices (p. 27).

In this model exposure to a "new" medium (Web Radio) might have an influence on how the "old" medium (traditional radio) is consumed. How the new medium is used might impact on the old medium. The more a product or service changes the more the users are required to alter their consumption patterns. The critical factor in defining a "new" medium should be its effect upon established patterns of consumption.

Rationale for Conducting the Study

Most studies examining the impact of new media technologies on traditional media have been quantitative in nature. For example, quantitative studies of new media technologies were prevalent during the 1980's for studying the impact of cable and pay cable television on traditional media (Agostino, 1980; Webster, 1983; Becker, Dunwoody and Rafaeli, 1983). However, there exists a gap in the literature on new media technologies, particularly radio technologies, which examines their effect on consumption and the advertiser-supported business model. Morley and Silverstone (1991) noted that in order to understand media use, we must specify the ways in which communication technologies come to acquire meaning and be used in different ways. The current study is an attempt to reach such an understanding.

The current study uses a combination of in-depth interviews and a modified Delphi survey of a group of traditional radio broadcasters who are also webcasting. This resulted in both quantitative and qualitative data that, once analyzed, can best address the three basic research questions.

There is some precedence for employing a combination of both quantitative and qualitative methods of study of discontinuous technologies. Greenberg (1989) initially used a random quota sample but later followed up with family interviews to examine how and why teletext was used in England during the mid-1980's. Caron, Giroux and Douzou (1989) used a combination of mail survey and in-depth interviews to examine the "phenomenon" of home computing. In their study, 18 families with home computers

were interviewed to examine use of technology across ten variables including media consumption.

This study also employs Strauss and Corbin's (1990) grounded-theory approach, using in-depth interviews with experts in the field of broadcasting and webcasting. Grounded theory takes as its premise the importance of discovery. Strauss and Corbin (1990) describe this method as an inductive approach that allows important concepts to emerge out of the data. Grounded theory strives to move beyond description to a conceptual explanation of the central phenomenon under study.

McCracken (1988) describes qualitative method as one "not to discover how many, and what kinds of, people share a certain characteristic. It is to gain access to the cultural categories and assumptions according to which one culture construes the world." Grounded theory pushes qualitative methods a step further. It allows the researcher to assess new trends and new ideas for current researchers to substantiate, as well as providing a springboard for future research.

Interviews for the current study were conducted in a semi-structured manner. In a semi-structured interview, the researcher can steer the conversation based on the topics to be explored. However, the semi-structured interview allows for topics to "emerge". This flexibility is particularly important in studies of an exploratory nature in which all dimensions of a subject cannot be known ahead of time. Lincoln and Guba (1985) entitle such strength an "emergent design". The general idea behind an emergent design is that succeeding steps in the research process are based upon the results of steps already taken. Emergent designs are in keeping with one of the basic philosophies of qualitative research: the researcher is continuously interacting and interpreting the data and can adapt so as to better examine the phenomenon.

The Delphi Method

The Delphi method was invented nearly 50 years ago by researchers doing defense work at the Rand Corporation. "Project Delphi" was the name given to a

forecasting study sponsored by the United States Air Force. The Delphi method has been used for many years. Gerstenfeld (1971) found that over 10% of the firms in his sample of Fortune's 500 had used Delphi. McHale's (1973) survey of organizations engaged in futures research found that Delphi was one of the most popular techniques used. Hayden (1970), in a survey of 65 progressive companies, found 26% of them used Delphi and of these 71% claimed that it was useful. Ono and Wedemeyer (1994) assessed the validity of the Delphi technique in forecasting developments and trends in the telecommunications industry in the state of Hawaii. Their research showed strong support for the Delphi method as a valid technique for long-range forecasts.

This study employes special techniques to make use of expert opinions in the process of structured group communication (Dalkey and Helmer 1963). Delphi studies typically do not employ random sampling methods. Instead, a universe of "experts" is operationalized and then a purposive sample is drawn from this universe. The sample is selected such that those members of the population who are the most expert with respect to some phenomena, tend to be selected. The participants in a Delphi study are asked to make expert judgments regarding some set of phenomena. Individual estimates are then aggregated to produce a group estimate. The goal of the group estimation process in a Delphi study is to use a group of knowledgeable respondents to produce a reliable and valid estimate of an unknown quantity. This quantity might be a physical entity, such as a date; probability of an event; income generation; or other performance levels. The quantity to be estimated might alternatively be an abstract entity such as a normative judgment that identified value structures (Dalkey 1975).

The underlying philosophy of the Delphi method is that the judgments of individual experts can be improved by exposing each individual to the thoughts of their peers. This process of group communication is structured such that after an initial round of data collection, the data are summarized and then the data are presented to the experts to examine the distribution of estimates. The nature of the feedback can assume various

forms. The type of feedback that is presented to group members can affect their responses in subsequent rounds (Dalkey 1975).

The intent of presenting feedback that summarizes item distributions from the previous round is that once exposed to this information, participants may wish to refine their previous judgments. The feedback process may stimulate any of several reactions by group members. Participants may choose to ignore the feedback and remain with their initial estimates. Group members may also react against the feedback and present new estimates that are deliberately skewed in an attempt to affect the central tendency of the distribution in a direction they desire. Or, group members may seek consensus with overall group opinion by revising their original estimates to conform to the central tendency of the distribution. There is some evidence that feedback does in fact tend to stimulate consensus within an expert group (Scheibe et al 1975).

Combining a qualitative method (the in-depth interview) with a quantitative method (Delphi survey) allows this study to explore an emerging new technology (Web Radio) in a way that provides data that are helpful in answering why the new technology is being adopted, as well as providing a forecast as to where the new technology may be leading both the consumer and the marketer. Web Radio has been in existence for less than 6 years. With only 3.4% of Americans listening to Web Radio in any given week (Arbitron 2001), Web Radio can best be described as being in the early adoption phase of the product life cycle. Trying to reach a random sample of these early adopters in order to conduct a survey to determine why they listen to Web Radio was not feasible. Instead, it was determined that the use of a panel of experts would the best source for gathering data about current use of Web Radio and for forecasting the future trends for Web Radio. In making use of the Delphi technique this study is using a method that has been shown to provide valid forecasts of trends and developments in the communication industry (Ono and Wedemeyer 1994).

A modified Delphi method was used to survey a group of broadcast experts who are knowledgeable about both traditional radio and Web Radio. Members of this group were asked to judge the extent of influence or impact that Web Radio is having or soon will have on the radio listening experience and the advertiser-supported model of radio consumption. A comprehensive instrument (Appendix A) was designed to collect data regarding Web Radio and its impact on the broadcast industry.

There are five basic steps to be followed in the Delphi method (Goldfisher 1993):

1. Select "experts" in the area. The selection criteria are primarily intuitive. The panel should be made up of persons experienced in some phases of the planning, execution or measurement of the new product process. Varied representation is a desired feature and their biases are acceptable. The panel size should be in the 15-25 range.
2. Contact the selected experts and ask them for their forecasts of the product you are interested in. this is round one.
3. Compute the average and range of forecasts of the panel. The average is called the consensus forecast.
4. Contact the panel again and provide the consensus and range of forecasts, asking them if they wish to revise their forecasts because of this information. This is round two.
5. Compute the average and range of their revised forecasts. Repeat steps 4-5 if more rounds are desired. Past studies show that improvement in forecast accuracy falls off sharply after 2 to 3 rounds. The goal is for the second round consensus to converge to a more accurate set of projections.

The Delphi method was utilized in this study of Web Radio as outlined below:

1. A panel of 20 radio experts was recruited from across the state of Georgia. The experts are all radio broadcasters who have begun webcasting. They are either managers or programmers of Web Radio sites who have first-hand knowledge of what their organizations are attempting to accomplish with their webcasts.
2. These panelists were interviewed in-depth as well as asked to complete a structured questionnaire.
3. After completing the initial round of contacts with the panel, the average and range of the forecasts were computed.
4. The panel was contacted again and provided with a consensus of the forecasts. They were asked if they wished to revise their own forecasts based on the consensus.
5. A new consensus was computed based on the revised forecasts provided in round two.

Researchers commonly apply inferential statistics to data obtained from randomly selected samples. Researchers assume this practice of aggregating data to produce estimates of population parameters is justified. The basis for this justification is an application of probability theory to the sampling process. Since Delphi research does not employ probability sampling some other justification is required for the practice of aggregating data to produce a group estimate.

There are several theoretical approaches that have been presented to offer justification and a formal means for aggregating data in Delphi research. The most promising approach is the "theory of errors"(Dalkey 1975). Among other things, this approach offers a mathematical rule for deriving a group estimate from a set of individual responses. In the theory of errors approach, individual judgments are treated as though they were a set of readings taken from a single instrument that was subject to random error. In this circumstance, the best estimate of an entity should be a measure of the central tendency of the distribution of obtained readings. Additionally, a measure of dispersion, such as the standard deviation, might be useful to construct a confidence interval about a central value.

The theory of errors approach assumes that the judgments of experts are erratic and plagued with random error (Dalkey 1975). It also assumes that there is a single underlying "true" parameter that can be estimated by applying human judgment. The theory cannot accommodate the case where there may be two equally valid but different estimates based on different assumptions. In this case, where the distribution may be bimodal, it may be best to proceed as though there are two separate distributions but

under mutually exclusive sets of circumstances. If there is no group consensus, this may be due to a totally unreliable set of readings, or it may indicate that no valid measure can be obtained for various reasons. Perhaps the current state of knowledge is insufficient to support any type of consensus. Despite a lack of strong theoretical underpinnings, the theory of errors approach is recommended over other alternatives that have been considered. The theory of errors model can usually provide a better fit of accumulated data to point estimates than these other alternatives.

Finally, the theory of errors approach is intuitively attractive because it has the desirable feature of demonstrating the advantage of using the group response over an individual response irrespective of the physical nature of the process being estimated. In the present research, the theory of errors model is assumed to be operative in the aggregation of individual estimates to produce a group estimate regarding the influence of Web Radio on traditional radio.

The number of iterations a Delphi study goes through is a function of the variability of responses and the feedback process. One effect of the Delphi method is a convergence facilitated by the iteration process. Convergence can be defined as the extent to which greater agreement occurs on successive rounds of data collection. However, some would argue that consensus measures do not take advantage of all the information in the distribution (Scheibe et al 1975). According to this line of reasoning, a measure of stability is more informative than consensus measures. When using consensus measures, iterations are continued until a consensus is approximately achieved. This is the operational definition of the best possible group estimate. The use of stability measures would have iterations continue until the distribution of scores was relatively invariant

across two successive rounds. When two successive rounds are similar, even without a consensus, this represents the best judgment of the group. As an avenue of further research, the reasons for a lack of consensus might be explored.

In this study, one iteration was performed. Two major factors contributed to the decision to limit the data collection process to two rounds. First, a visual inspection of the data presented in the next chapter (Table 4.1) reveals some movement in the central tendencies of the item distributions. The measure of dispersion used, the standard deviation, decreased in nearly every case. This presents a convincing case that greater consensus was being achieved in the second round. The second factor is that, historically, improvement in forecast accuracy of Delphi studies falls off sharply after round two (Goldfisher 1992). Goldfisher's (1992) review of past studies that employed the Delphi technique showed that for the typical new product forecasting solution, a well-developed system needs only two rounds.

In-Depth Interviews

Modifying the Delphi technique to include in-depth interviews with the members of the expert panel allows this study to explore their responses further by asking "why". This constant questioning of why is the central focus of grounded-theory and provides this study with the insight it needs to better understand the influence and impact that an emerging new technology such as Web Radio may have on both the consumer and the producer.

The technique used to analyze the in-depth interview data was constant comparative analysis. Glaser and Strauss introduced the technique in 1967 in their seminal work The Discovery of Grounded Theory. Constant comparative analysis

functions as a general data analysis technique. Glaser and Strauss point out that researchers in all professions use it extensively.

Constant comparative analysis can also be used as a strategic method for generating theory, the term for such theory is “grounded theory” (Glaser and Strauss, 1967). As opposed to comparing individual findings that might vary from one instance to the next, constant comparative analysis, when used with a grounded theory approach, is concerned with generating conceptual categories or their evidence. After categories have emerged, they are developed and provisionally verified. The theory that emerges is generated by exploring and exhausting relationships between categories and is usually built around a core category that unifies all other categories (Strauss and Corbin, 1990). Because the ultimate goal is to build a theoretical model to explain the influence of Web Radio on the radio listening experience and its impact on the advertiser-supported model of radio consumption, the use of constant comparative analysis was determined to be appropriate.

Grounded theory requires that the data be broken down and analyzed in three steps: open, axial and selective coding. By following this coding scheme, categories are identified, developed and collapsed, until they are explained relative to a main, or core, category.

The first step, open coding, involves conceptualizing the data by breaking it down into discrete parts. It involves taking apart an observation, a paragraph, a sentence and giving each discrete incident, idea, or event a name (Strauss and Corbin, 1990). Deconstruction of this sort allows the data to be put back together, grouped around

concepts that are similar to each through the process of categorizing. Concepts are the base units of analysis under the grounded theory approach (Corbin and Strauss, 1990).

As categories are developed, Strauss and Corbin (1990) stress the importance of writing memos. The authors identify several types of memos, but the first is usually code notes, simple memos that represent abstract thinking about the data. Code notes are essentially observations that are written down as the data is in the initial steps of coding.

To begin the first level of analysis in the current study, one transcribed interview was coded following the procedures suggested by Strauss and Corbin (1990). Categories were named so as to be memorable and identifiable to the researcher. After the initial categories emerged, the remaining nineteen interviews were coded following the same procedure. All twenty interviews were coded by examining transcripts line-by-line and recording data that was related to the three main research questions. The use of a word-processing program with cut and paste functions was used to sort specimens into appropriate categories.

The second phase of analysis, axial coding, involved putting the categories developed back together in a way that related emerging concepts to each other. Connections were made between categories. In axial coding, categories are higher in level and more abstract than the concepts they represent. The process of developing these higher order categories is much the same as that used in open coding. Comparisons are made between the categories that highlight their similarities and differences. Because these categories are more conceptually developed than those that emerged during open coding, they form the "cornerstones" of the developing theory by providing the means by which the theory can be integrated (Corbin and Strauss, 1990).

Axial coding is concerned with asking questions about the relationships between categories. Open coding categories are compared against one another with an eye on comparing the conceptual labels developed in open coding and not necessarily specific

incidents. Corbin and Strauss (1990) note that axial coding is a natural artifact of the coding process. When coding occurs, the process of identifying and questioning relationships is a natural occurrence, albeit one that must be purposefully recognized to be useful.

Instrumentation

The first round of the modified Delphi survey was conducted in conjunction with the in-depth interviews. Fifteen of the twenty surveys were conducted in person with the remaining five surveys being conducted via the telephone. The Round I instrumentation is presented in Appendix B. Round II was conducted via email with 14 of the 18 participants. The other four participants responded to hand delivered surveys. The instrumentation for Round II is contained in Appendix C. Both these appendices include a letter and the survey instrument.

The recruitment letter for Round I administration identified the nature of the project, its sponsor and the purpose of the research. The process of a typical Delphi study was briefly explained and an example was cited from the research literature with which most respondents would be familiar. The output expected from participants was explained. A follow-up telephone call was made to everyone in the sample about a week after the cover letter was sent in order to confirm his or her agreement to participate in the study and to schedule a time for the interview/survey to be conducted.

The survey instruments for the two rounds of data collection were designed to measure four areas. First, each respondent was asked to provide some basic demographic information and rate their own knowledge of traditional radio as well as the emerging new technologies, including Web Radio. Second, respondents were asked to reply to the first of three basic research questions as part of the in-depth interview. This was followed

by a series of additional probing questions asking the respondents to further explain their answers. After providing the respondents sufficient time to explain their answers each respondent was asked to indicate their degree of agreement or disagreement with a series of specific statements related to the basic research question. Respondents were asked to explain why they agreed or disagreed with each statement. This same process, an open-ended question with follow-up probes and then a series of specific statements, each with a follow-up probe, was repeated for the other two basic research questions. Before concluding the session, the respondents were asked if they had any other comments to make concerning Web Radio. Each session in Round I was recorded and then later transcribed by the researcher.

The instruments for Round I and Round II were pre-tested, and based on the results of the pre-tests, some wording as well as the lay-out of the documents were slightly changed in the final instruments. A complete interview was conducted in order to pre-test the Round I instrument. From that pre-test it was determined that the length of time it took to conduct the interview (approximately 45 minutes) did not affect the quality of responses from the interviewee. Additionally, The Round II survey was pre-tested as an e-mail memo to assure that the e-mail could be properly read and responded to by the participants. E-mail was used for Round II because the vast majority of respondents in Round I had indicated that e-mail was the best way to communicate with them. The pre-test of Round Two in the e-mail format alerted the researcher to problems of message formatting and the ability, or lack thereof, to respond to the survey in a simple and effective way. After making several changes to the document format it was determined that a Microsoft Word document sent as an e-mail (not an attachment) could be read and

responded to by the survey participants if they accessed the e-mail using a computer with at least Windows 98 software. In follow-up phone calls, participants who chose to respond to Round II using e-mail reported no problems either in reading or responding to the e-mail.

Selection of the sample

As mentioned previously, the task for the experts in this modified Delphi study was to make a set of judgments regarding the impact or influence that Web Radio might have on traditional radio. Thus, the expert group would need to be familiar with both Web Radio and traditional radio. The universe of experts operationalized in this study was a major state broadcast association (Georgia Association of Broadcasters). The state of Georgia was chosen by the researcher both for its convenience and because the state provides a good cross section of radio markets and Internet access. Georgia has both large and small market radio operations that offer webcasting. The Atlanta metropolitan area offers above average access to high speed connectivity with the Internet while many parts of rural Georgia are limited to the much slower telephone dial-up connectivity (Holsendolph 2001).

A purposive rather than a probability sampling technique was used in the sample selection process. In this case, the researcher, in consultation with the president of the GAB, selected from the sampling frame of over 300 member organizations, those radio organizations thought to be broadcasting both over-the-air and on the Internet. This produced a list of 96 radio stations that were also webcasting as of January 1, 2001. Further investigation determined that these 96 stations were operated by 42 different

business organizations. After contacting the 42 business organizations, 20 respondents indicated they had the expertise and willingness to participate.

Since the function of this study was to substitute expert judgments for direct knowledge, the relative expertise of the respondents was an important issue. The sample was selected on a basis that the individuals had to have direct experience in both traditional radio and Web Radio. As an additional check, one section of the instrument was used to collect a set of ratings regarding the respondents' own self-perceived expertise in the various areas of interest.

Additionally, the researcher purposively balanced the sample in Round I so that an equal number of small-market and large-market broadcasters were included as well as an equal number of long-time broadcasters and new broadcasters. Small-market and large-market broadcasters were operationalized using Arbitron's (2001) latest ranking of radio markets. A respondent is considered a large-market broadcaster if their traditional station broadcasts in one or more of Arbitron's top 100 markets. Otherwise the respondent is considered to be a small-market broadcaster. A respondent is considered a long-time broadcaster based on the fact that they were working in broadcasting before the advent of Web Radio. Since streaming audio on the Internet did not exist seven years ago, any respondent who indicated that they had seven or more years of experience in the broadcast industry has been labeled a long-time broadcaster while those respondents with less than seven years experience in broadcasting were labeled new broadcasters. Both of these sub-groupings were done based on an assumption by the researcher that size of market and years in the business might have an effect on the judgments of the experts.

Administration of the study

The first round of this study was conducted by mailing an invitation to participate letter to the sample of forty experts identified above. This mailing went out January 22, 2001. The next week the researcher was able to contact 36 of the 40 experts by phone in an attempt to determine the willingness of the experts to participate in the study. Based on a combination of factors including willingness to participate, accessibility, size of market, years of work in the business and degree of expertise in the areas of study a group of 20 participants were selected. Each respondent in Round I participated in an in-depth interview that lasted an average of 45 minutes. As part of that interview the Delphi survey was administered.

Round I data were tabulated and summarized in a convenient form to be presented to the participants as feedback to begin the Round II process. Measures of central tendency were provided for each item. The Round II questionnaire was e-mailed to all participants on April 3, 2001. Later that same day, a phone call was placed to each participant letting him or her know that the Round II survey had been sent to him or her. Twelve questionnaires were returned by e-mail within 48 hours. An additional six questionnaires were returned either by U.S. mail or were hand-delivered. Two subjects who participated in Round I did not take part in Round II. One of these subjects was no longer working for the radio station and could not be located to continue his participation. The other subject failed to respond to repeated contacts made by the researcher to his office. The subject's secretary eventually notified the researcher that the subject did not wish to participate in Round II. This yielded an effective response rate of 90%.

CHAPTER 4

RESULTS OF THE STUDY

This chapter explains how the data collected from both the in-depth interviews and the modified Delphi survey are analyzed. The Delphi survey data are analyzed using the central tendency measures of mean and mode along with the standard deviation from the mean. Frequency of distribution is also used to show how similar or dissimilar are the opinions of the panel of experts. The data is also broken down into sub-groups, which allows for even further analysis.

The in-depth interviews are analyzed using the Grounded Theory approach that is detailed in Chapter Three. The first two levels of analysis, open coding and axial coding, along with their results, are described.

The Delphi Study Round I

The central tendencies of the responses to the 36 scaled statements that were presented to the respondents in both Round I and Round II are detailed in Table 4.1. Table 4.2 shows the frequency distribution for each statement in both Round I and Round II.

As with most futures research there are statements in the present research that found unanimous or near unanimous agreement and statements upon which the respondents could not agree. The areas that generated the most agreement included why consumers listen to Web Radio, where they listen to Web Radio and the growth of Web Radio listenership over the next five years.

The data outlined below are organized around the three research questions and allied areas.

Why are consumers choosing to listen to Web Radio? The respondents were in unanimous or near unanimous agreement on the following statements regarding research question number one:

- Consumers are listening to Web Radio because they cannot find the programming they like to listen to on traditional radio stations.
- Consumers are listening to Web Radio as a companion activity while making other uses of the Internet.
- Consumers who listen to Web Radio are mostly listening to retransmissions of traditional radio stations.
- In five years, Web Radio's total audience will have grown by more than 50%.
- I can describe today's "typical" Web Radio listener.

The respondents feel they know who is listening to Web Radio today and why those consumers are choosing to listen to Web Radio today, but the respondents are not sure who might be listening to Web Radio in five years. Eighteen of the twenty respondents in Round I either agreed or strongly agreed with the statement, "I can describe today's typical Web Radio listener." Furthermore, trying to describe the future Web Radio listener proved harder to do as thirteen of the twenty respondents in Round I either disagreed or strongly disagreed with the statement, "I can describe what the typical Web Radio listener will be like in five years."

How is Web Radio influencing the radio listening experience? The respondents were in unanimous or near unanimous agreement with the following statements regarding research question number two:

- Web Radio has made it easier for consumers to listen to radio programming while at work.
- Web Radio has made it easier for consumers to listen to radio programming while at home.
- Web Radio has made it easier for the consumer to interact with the program provider.
- Web Radio has made it possible for the consumer to access programming that was not previously available to them.

In addition, all twenty respondents either disagreed or strongly disagreed with the following statement, "Web Radio has made it easier for consumers to listen to radio programming while in the car."

As far as other emerging technologies are concerned, the majority of the respondents do not think that these technologies will have as much impact over the next five years on the radio listening experience as will Web Radio. For example, eighteen of the twenty respondents in Round I either disagreed or strongly disagreed with the statement, "In five years, DAB (digital audio broadcasting) will have more of an impact on the radio listening experience than will Web Radio." DAB is a way to transmit audio in digital form rather than the analog system of audio delivery that is currently used by terrestrial broadcasters in the United States. The Federal Communication Commission has been considering the adoption of a digital standard for over ten years.

There was a lesser degree of consensus about the impact of the other two emerging technologies, satellite radio and the wireless web. Thirteen of the twenty respondents in Round I either disagreed or strongly disagreed with the following two statements, "In five years, satellite radio will have more of an impact on the radio

listening experience than will Web Radio." And, "In five years, wireless web radio will have more of an impact on the radio listening experience than will Web Radio."

Is Web Radio having an impact on the advertiser-supported model of radio consumption? The respondents were in unanimous or near unanimous agreement with the following statements regarding research question number three:

- Within five years, Web Radio will be an income-generating vehicle for your business organization.
- Web Radio will be advertiser-supported but its main source of income will not be from spot ads but rather from on screen advertisements and direct response advertising.
- In five years, the total income generated by Web radio will have increased by more than 100%.
- Web Radio is a brand extension for my organization.

The respondents also think that Web Radio will have an impact on the advertiser-supported model of radio consumption but the respondents cannot describe what the "typical" Web Radio station's business model will look like in five years.

Two areas of interest, audience share and advertising revenues, show a marked difference of opinions among the respondents. In Round I, eleven of the twenty respondents either disagreed or strongly disagreed with the following statement, "Web only radio stations can successfully compete against traditional/web operations for audience share." The other nine respondents all agreed with the above statement. Asked about advertising revenues, thirteen of the twenty respondents in Round I either disagreed or strongly disagreed with the following statement, "Web only radio stations can successfully compete against traditional/web operations for advertising revenues." The other seven respondents in Round I all agreed with the above statement.

In looking toward the future, in regards to audience share, there is also a good deal of disagreement. In Round I twelve of twenty respondents either agreed or strongly agreed with the statement, "In five years, Web Radio will be a major competitor, as far as audience share is concerned, to traditional, over-the-air radio." The other eight respondents all disagreed with the above statement.

Sub-Groups in Round I

In order to better reflect the differences and changes in the way that radio stations are owned and operated, four distinct sub-groups were identified within the overall sample of experts. This was done under the assumption that the sub-groups might respond differently to certain items in the Delphi survey. The sub-groups are listed and identified below:

1. Large Market Broadcaster (LM) – One who works in a local radio market rated in the top 100 markets in the United States by Arbitron.
2. Small Market Broadcaster (SM) – One who works in a local radio market not rated in the top 100 markets in the United States by Arbitron.
3. Long Time Broadcaster (LB) – One who has worked in broadcasting seven or more years.
4. New Broadcaster (NB) – One who has worked in broadcasting less than seven years and has 2 or more years of experience in developing products or services for the Internet.

In Round I each respondent was identified either as a Large Market Broadcaster or a Small Market Broadcaster as well as either a Long Time Broadcaster or a New Broadcaster. Based on the definitions listed above, Round I had 10 Large Market

Broadcasters, 10 Small Market Broadcasters, 10 Long Time Broadcasters and 10 New Broadcasters (Table 4.3). Four Large Market/New Broadcasters, six Large Market/Long time Broadcasters, six Small Market/ New Broadcasters and four Small Market/Long time Broadcasters participated in Round I.

For most of the items in the Delphi survey respondents remained consistent in their opinions regardless of their sub-group status. However, after analyzing the Round I data, there appears to be a definite difference of opinions in seven specific areas (Table 4.4).

"Consumers are listening to Web Radio because there is little or no commercial interruptions in the programming." All of the Large Market Broadcasters and all of the Long time Broadcasters either disagreed or strongly disagreed with the statement listed above. In contrast, eight of the ten Small Market Broadcasters and eight of the ten New Broadcasters either agreed or strongly agreed with the above statement.

"In five years, Web Radio will be a major competitor, for audience share, to traditional radio." Eight of the ten Large Market Broadcasters and eight of the ten Long Time Broadcasters disagreed with the statement listed above. Yet all ten New Broadcasters and all ten Small Market Broadcasters either agreed or strongly agreed with the above statement.

"In five years, satellite radio will have more of an impact on the radio listening experience than will Web Radio." Nine of ten New Broadcasters and nine of ten Small Market Broadcasters disagreed with the above statement. However, six of ten Long Time Broadcasters and six of ten Large Market Broadcasters agreed with the above statement.

"Web Radio is currently an income-generating vehicle for your business organization." All ten Small Market Broadcasters disagreed or strongly disagreed with the statement above. On the other hand, six of ten Large Market Broadcasters agreed with the above statement.

"Web Radio is a whole new product offering for my organization." All ten of the Long Time Broadcasters disagreed with the statement above. Meanwhile, five of the ten New Broadcasters agreed with the above statement.

"Web only radio stations can successfully compete against traditional/web operations for audience share." Nine of ten Large Market Broadcasters and nine of ten Long Time Broadcasters either disagreed or strongly disagreed with the statement above. However, eight of ten Small Market Broadcasters and eight of ten New Broadcasters agreed with the above statement.

"Web only radio stations can successfully compete against traditional/web operations for advertising revenues." Nine of ten Large Market Broadcasters and nine of ten Long Time Broadcasters either disagreed or strongly disagreed with the statement above. On the other hand, six of ten Small Market Broadcasters and six of ten New Broadcasters agreed with the above statement.

This data shows that Large Market Broadcasters and Long Time Broadcasters have similar opinions about the importance of no commercial interruptions in the programming on Web Radio as well as how competitive Web Radio is or will be in the next five years when compared to traditional radio. In contrast, the majority of Small Market Broadcasters and New Broadcasters have opinions on these issues that are similar

to one another yet are different from those voiced by the Large Market Broadcasters and the Long Time Broadcasters.

To Long Time Broadcasters, Web Radio is considered to be an extension of their traditional radio offering. However, to at least half of the New Broadcasters, Web Radio is something they consider to be an entirely new product offering. This difference in how the two sub-groups perceive Web Radio's product offering could have an effect on both programming and promotional decisions.

Additionally, over the next five years, both Small Market Broadcasters and New Broadcasters think that Web Radio will have more of an impact on the radio listening experience than will satellite radio. In contrast, a majority of Long Time Broadcasters and Large Market Broadcasters think satellite radio will have more of an impact on the radio listening experience than will Web Radio. One possible reason for this difference is that Large Market Broadcasters and Long Time Broadcasters have become very dependent on "drive-time" ratings. Such broadcasters know that satellite radio's number one target segment will be the "in car" listener while Web Radio's current listeners are mainly in the office or at home.

As far as generating income from the sale of airtime, only the Large Market Broadcasters have attempted to sell Internet only advertisements. All of the Small Market Broadcasters indicated that they are either "giving" the Internet airtime away or are including it in an advertising package as a value added component. Reasons given by the Small Market Broadcasters for not trying to sell the Internet airtime as a separate offering included lack of demand, lack of insertion technology and lack of effort from the sales department.

The Delphi Study Round II

Except for one item, there was no major shift in the opinions expressed by the panel of experts from Round I to Round II. The one exception was item number seventeen (Table 4.2). In Round I, twelve of the twenty respondents either agreed or strongly agreed with the statement, "In five years, Web Radio will be a major competitor, as far as audience share is concerned, to traditional, over-the-air radio." In Round II, only eight of the eighteen respondents either agreed or strongly agreed with the above statement. This was the only item in which the majority opinion moved from an agree/strongly agree position in Round I to a disagree/strongly disagree position in Round II.

The panel of experts continued to be in agreement with the fourteen items detailed in the Round I section above. In fact for Round II, 20 of the 36 items in the Delphi study saw at least 16 or more of the 18 respondents expressing the same type of opinion (Table 4.2).

Looking at the central tendencies detailed in Table 4.1 it is easy to see that the standard deviation grew smaller for almost all of the statements in Round II. In fact, for two of the statements in Round II the standard deviation was zero. The overall consistency of the means and modes from Round I to Round II provide strong statistical support for not conducting a third round of data collection.

The differences between sub-groups continued in Round II. The same seven items of disagreement that were apparent in Round I continued to show a substantial amount of disagreement in Round II (Table 4.4).

The In-Depth Interviews

This section details the results of the first two levels of coding, open and axial. During the open coding portion of the results, attempts are made to link the data with the three research questions generated from the literature review. Research questions are examined in the context of open coding because it is the simplest level of coding where themes emerge. Concepts generated during open coding are more concrete than in later levels of analysis and descriptions of participant behavior are more readily transferred to the specificity of some of the research questions. During axial and selective phases, coding is handled by restructuring data with theoretical modeling in mind. At this point, the data are much more abstract in nature and not as amenable to specific research questions. Because of this, attempting to answer the research questions seemed more appropriate to do while the analysis was at a lower level of conceptualization. Table 4.5 reviews the research questions from the study. Table 4.6 lists categories from open coding along with the research question(s) each category directly/indirectly relates to.

Included in this section, at the open coding level of results are quotations from the in-depth interviews. These are included to support and illustrate themes that are emerging. Where passages are used, participants are introduced by initials only and then identified by sub-groups. An audit trail, appearing as the interview number followed by the page of the interview where the passage occurs, immediately follows the quotation. Lincoln and Guba (1985) recommend the use of an audit trail as a means of confirming the trustworthiness of an analysis.

When conducting the first level of analysis, eleven categories emerged. The open coding categories are described relevant to the order of the research questions that they

most directly address (for a list of questions, see Table 4.5). Overlap, instances where a portion of a category emerges and relates to another research question, does exist. In these cases the research questions relative to the category are also discussed. In order to clarify the findings of this level of analysis, the majority of discussion about the research questions takes place in the category to which they are most related. Relationships between categories and answers to research questions are later elaborated on during axial coding.

Extending the market -

Research question number one asks why consumers are choosing to listen to Web Radio. It is directly related to the category "extending the market". All twenty respondents made some type of reference to the fact that consumers are now listening to their station on-line in locations where the consumer, previous to Web Radio, could not have listened to that broadcast. These may be consumers who have relocated from one local market to another or they may be living or working in a section of the local market where the over-the-air signal is unable to penetrate with a listenable signal. For example, when asked why are consumers choosing to listen to Web Radio, RJ (LM, NB) replied:

> "In our instance it has to do with the strength of the signal. Sometimes the listener moves on in our economy. People get jobs somewhere else. They like to listen to keep up with where they used to live and what is going on in their hometown" (1,1).

When asked if he was referring to out-of-market listening, RJ went on to explain that he was not just referring to consumers outside the local market.

> D: Are you referring to out-of-market listening?
> RJ: Absolutely! We have a large number of listeners that do that. Some are trying to keep in touch with what is going on back home. Maybe they, you know, became addicted to that format and can't find it in their new town. Another one is

> even in a local market maybe the signal isn't so good or they work in a building that does not allow FM radios or AM radios. That is another reason why they listen (1,1).

Similarly, NW (LM, LB) noted the lack of signal coverage provided by the over-the-air transmission was the number one reason consumers are tuning in to Web Radio:

> "The number one reason is signal strength. In other words, I will give you two examples. Our FM does not get the whole city. It does not reach the whole city effectively and people who like that format can now click on their computers and get it either at home or at work. The second is the AM. AM to FM and the way the waves work they can't get AM inside many businesses. This one (their own building) for instance where you can't pick up WWWW (their own station) in parts of the building, but you can do it on your workstation. So that is probably the main reason that people are doing streaming" (3,1).

Niche programming -

When replying to research question one (Why are consumers choosing to listen to Web Radio?), the second most mentioned reason for listening to Web Radio was niche programming or programming that was not available from traditional, over-the-air radio. Fifteen of the twenty participants made mention of niche programming or of programming that was not available from over-the-air stations as a reason why consumers are choosing to listen to Web Radio. RB (SM, LB) noted:

> "If someone wants to listen to Salsa they may not be able to hear it in their locale but they can find it on the Internet. That does not mean that they would only listen to a format they cannot get in their area. They may like somebody doing it differently or better than what is available locally" (12,1).

JDM (SM, NB) expressed similar thoughts when he noted:

> "Their market may not have what it is that they like or maybe the station they are listening to (on traditional radio), maybe they have not heard what they want to hear in a while, their song or something, so they go to the net" (5,1).

Another way to describe it is variety as DW (SM, NB) points out:

> "Second, I would say is to be able to find what they cannot find anywhere else. Variety, I guess is what you would call that. And in our case that situation would be, for example, we are playing classical music in the afternoons and NPR is broadcasting Talk of the Nation. Folks can go to the web and listen to Talk of the Nation if they want to" (6,1).

As more than one participant noted, you can afford to more narrowly format your Web Radio station because your potential audience is not limited to any one local geographic area.

Convenience -

The third most frequently mentioned reason for consumers choosing to listen to Web Radio was convenience. Included in this category are such things as ease of use and multi-tasking. Fourteen of the twenty participants made some mention of convenience in their comments on why consumers are listening to Web Radio. At least one participant thinks it's the main reason consumers are choosing to listen to Web Radio.

JDM (SM, NB) stated:

> "Probably because it is convenient. A lot of people like me who use their computers a lot. It's more convenient than having a regular radio turned on. They can log on to a website and listen to radio. There is so much to listen to. There is commercial radio like ours that stream everything and then there are some sites that are just music. That is the main reason right now, convenience and being at their computers for whatever reason" (5,1).

Several participants made mention of how easy it is to listen to Web Radio at work, particularly if your work keeps you at the computer a great deal of the time as JD (LM, NB) noted:

> "Most of the time it is a convenience thing. We have a pretty large audience that listens for instance during the day at work. They don't or can't have a radio at work. Just about everybody in the Atlanta area has a computer. Just about everybody that has a computer has some form of Internet connectivity; often times it is high speed. So they can multi-task by having the Real Player or Media

> Player playing at the same time that they are working with their spreadsheet or using the Internet" (4,1).

Novelty -

One additional reason for choosing to listen to Web Radio that was mentioned by several participants was the novelty factor. Web Radio is a new way of accessing audio programming and therefore attracts the innovators and those consumers who like to try something new and different. As described by NW (LM, LB) these listeners are the gadget freaks:

> "A second reason is that people who do streaming are gadget freaks anyway at this point. It has not hit the major, mainstream. Well all the people who wanted the gadget first figured out how to do it. I mean they could just as well, in many cases, move a clock radio into the room or turn on the stereo. They love the fact that they can bring it up on the computer and then tell people they were listening to their favorite station while working on the computer. … There are those who just want to experiment. Who want to see what is out there" (3,1).

This would appear to be the radio version of "surfing the net" as consumers search through the Internet in a fashion similar to hitting the scan button on the car radio just to see what is out there.

Interactivity -

Research question number two asks, "How is Web Radio influencing the radio listening experience?" The category that was most often mentioned in response to this question was interactivity. The participants mentioned the increase in interactivity between the consumer and the producer. This type of interaction either was not possible or practical to accomplish before the advent of the Internet. When asked if he was referring to interactivity in his comments about research question number two, RJ (LM, NB) responded:

> "Absolutely, I think, right now, with radio there is not a whole lot of listener interaction. Its all based on numbers received from some report. The Internet and streaming have really (pause). It is going to allow the radio industry to interact fully with the listeners. It offers loads of interactivity with the listeners which has never been able to be achieved other than going out and throwing out t-shirts and the like" (1, 3).

Additionally, several participants felt that the industry as a whole has not taken advantage of this new way of communicating with their listeners as RJ (LM, NB) noted in the following exchange:

> D: Web Radio has made it easier for the consumer to interact with the program provider.
> RJ: I strongly agree. However, it has not been fully tapped into by the radio stations.
> D: Is that because the broadcasters just don't know how to or is it an "outside the box" kind of thing?
> RJ: I think it is "outside the box". And it is also time consuming. I mean that is almost a full-time position, just interacting with the on-line listeners. But it is mostly an "outside the box" kind of thing.

Every participant agreed that interactivity between the consumer and the producer will only increase in the coming years.

Listener control -

This category received fewer mentions than interactivity and that may be due in part to the fact that some broadcasters saw it as part of the influence that interactivity is having on the radio listening experience. Listener control is similar to interactivity because it allows for the listeners to have more control over what they listen to and when they listen to it, but it does not require any direct interaction with the program provider. Talking about the influence the consumer can have on Web Radio RJ (LM, NB) noted:

> "They (the listeners) might even begin to program their own programming. Pick the songs they want to hear, when they want to hear them. It's going to have a huge impact" (1,3).

When asked about archived programming most of the participants felt that this feature of Web Radio gives the listener more control over what they listen to and when they would listen to it.

Subscription model -

In response to research question number three (Is Web Radio having an impact on the advertiser-supported model of radio consumption?); several participants indicated that some form of a subscription model of radio consumption would begin to develop on the Internet. It may be the quickest way to the break-even point for webcasters as JB (SM, NB) noted:

> "Well I think the Internet model is changing. A year ago it was all free and advertiser-supported, now it is p-to-p, plan to profit. Everybody is making free services into paid services. … Now the straight up, $9.95 for what you want to hear model is a lot easier to implement. All you have to do is provide the content. That is easy to do. It might be the $9.95 model is the way we build into the personalized advertiser-supported model" (8,4).

It is interesting to note, that within 30 days of completing the in-depth interviews for this study, Major League Baseball announced that it would begin charging a flat fee to access the radio play-by-play webcasts of all 32 major league teams during the 2001 season.

Video added -

Several of the participants expressed the idea that the video component of the website where the consumer actually logs on to the Web Radio station is having an impact on the advertiser-supported model of radio consumption. As expressed by RB (SM, LB), the video component gives the advertiser another chance to communicate with the consumer:

> "If you go to a site and are able to captivate their eyes as well as their ears with graphics or videos or whatever the radio station decides to do, then there is the opportunity for not only what is now almost a dirty word, banner ads, or

> whatever, there is also a chance for them to be able to link you to other sites or advertisers' sites while you are listening. Whether it's an offer or a coupon or idea or a sales event. So yes, it will change the model" (12, 5).

Not yet -

Comments in this category appeared most often when participants responded to research question number three. However, all the participants made some mention of the potential for greater impact or influence of Web Radio on either the radio listening experience (research question two) and/or the advertiser-supported model of radio consumption (research question three) in the years to come. One example of this type of comment came from RJ (LM, NB) in his response to the following question:

> D: Is Web Radio having an impact on the advertiser-supported model of radio consumption?
> RJ: I would say right now, no, for the simple reason most of them are simulcast. Most, I think, most stations are throwing it (Web Radio) in as value added. Your message is also getting heard here. So it is really not being pushed as a revenue model right now. That will definitely change (1, 4).

As to the current or potential impact or influence Web Radio might have on traditional radio, NW's (LM, LB) comments best sum up the thoughts expressed by the participants:

> "Oh it is. Its taking nicks out of it right now. The fear is what is it going to do in five to ten years?" (3, 3).

This appears to be an over-riding concern of all the participants, knowing that there are going to be changes brought about by emerging new technologies, but not knowing exactly what those changes will be.

Axial Coding

During axial coding, sub-categories were linked to a larger category by examining relationships between the category labels that emerged during open coding. Instead of examining specific incidents as was done during the first level of analysis, axial coding

involves making more abstract comparisons between open coding categories, with the intent of seeing how categories relate to each other (Strauss and Corbin, 1990).

Axial coding resulted in the nine open coding categories being incorporated into new broader-based categories. Based on open coding and subsequent axial analysis, the following open coding categories were linked together under the new category:

Influences on the Listening Experience -

Extending the Market
Niche Programming
Convenience
Novelty
Interactivity
Listener Control
Not Yet

The open coded categories that developed out of the research question, why are consumers choosing to listen to Web Radio, are contained in the above listing because the researcher feels they have an influence on the radio listening experience. To really know why consumers are choosing to listen to Web Radio may require data collection from the listeners themselves. The remaining two open coding categories were linked together along with an overlapping category to form a second new category:

Impact on the Advertiser-Supported Model of Radio Consumption

Subscription Model
Video Added
Not Yet

The following discussion outlines the relationships between the open category labels and the two new axial categories that emerged.

Influences on the listening experience -

Extending the Market The category, influences on the listening experience, is based on the concept that an emerging new technology, such as Web Radio, presents the consumer with new choices and options that may well influence their listening experience. Web Radio offers a new choice to radio listeners, the choice of listening to an over-the-air radio station that was not previously available to them. This may be a radio station that they listened to in their old hometown but that they could no longer listen to because they had moved from that geographical location. Listening to the webcast of that station keeps the consumer "in touch" with what is happening back home. Additionally, Web Radio makes it possible for the consumer to listen to a local, over-the-air radio station in places within the local market where the over-the-air signal cannot penetrate. Web Radio has now made it possible for these types of reception problems to be over come and thus having a possible influence on the listening experience.

Niche Programming Before the advent of Web Radio, the radio consumer was limited to a relatively few choices as far as programming was concerned. This was in part due to the advertiser-supported model and in part to the fact that (in the United States) only a small number of radio broadcast licenses are authorized per community. The advertiser-supported model requires stations to offer a programming format that will generate the largest possible audience in order to secure sufficient advertising revenues to be profitable. This often eliminates certain format choices because there is not a large enough target market in that geographical location to support those types of formats. Because the government has limited the spectrum space available for radio transmissions in any one market while at the same time allowing for ownership of multiple stations in

any one market, only a relatively few organizations or individuals actually own over-the-air radio stations in the United States. Web Radio is not encumbered by these restrictions. Thousands of Web Radio stations exist. Many of these stations offer unique formats that cannot be found on the traditional radio dial. These niche broadcasts can survive because of the low cost to operate and because they can aggregate the small number of potential listeners from a number of local markets into one "global" market of consumers who are seeking their specific programming.

Convenience At some point in every in-depth interview the term multi-tasking was used to describe how the consumer was making use of Web Radio. This should not be a surprise to those who study radio. Since its earliest days radio has been consumed while the listener has been doing other things. What Web Radio is doing is making it more convenient for the consumer to access audio programming both at work and at home. Particularly in offices and homes that have high speed Internet access, the consumer can log on to a Web Radio station and still do a number of other tasks on their computer. The consumer does not need to have another device to receive the signal. There is no need for a receiving antenna. Plus, the consumer now has many more stations from which to choose. All this is having an influence on the radio listening experience.

Novelty As with any emerging technology, there are those early adopters who try out the new technology simply because it is new. This is true with Web Radio. Some consumers are experimenting with Web Radio just to see what is out there. Some of these experimenters end up finding something they like and stick with it. At the very least this experimentation by the early adopters is influencing their radio listening experience and

that type of experimentation with new technologies has shown to be helpful in the diffusion of the emerging technology.

Interactivity Web Radio is taking the radio listening experience to a new level of interaction between the consumer, the programmer and the advertiser. Through the website where the consumer logs on to the Web Radio station, it is possible to communicate with the programmer. The consumer can give instant feedback on what programming he/she likes or dislikes and in some cases can even program what they want to hear on the Web Radio station. Additionally, the consumer can "click and buy" any number of items that are advertised on the Web Radio broadcast. This is done through links appearing on the host website. This degree of interaction had not been possible before the advent of the Internet and it is having an influence on the radio listening experience.

Listener Control Web Radio provides a way for the consumer to have more control over what he/she listens to and when he/she listens to it. Over-the-air, traditional radio requires real time listening. If you want to hear the morning news that is broadcast at 7am by a traditional radio station, then you have to be listening at 7am. This is not so with Web Radio. Some Web Radio stations are archiving news programs, concerts and other shows or live events so that the consumers can listen to that programming at a time when it is convenient for them. Some programmers refer to this as time shifting and have seen it occur in television through the use of the VCR. Now with the ability to archive audio programs on the Internet, it is possible to do with radio programming. In addition, at some Web Radio sites the consumer is allowed to choose the genre(s) of music and the mix of those selections to in effect "personalize" the Web Radio station programming.

These two features, time shifting and personalization, give the consumer more control and thus influence the radio listening experience.

Not Yet This sub-category appears under both of the axial coding categories because it is looking to the future of Web Radio. Some experts feel that, to date, the influence of Web Radio on the radio listening experience has been minimal. However, the consensus of the group is that the influence will grow substantially over the next five to ten years. Such things as increased access to broadband delivery and the possibility of wireless web radio were mentioned as reasons why the influence of Web Radio on the radio listening experience will increase substantially over the next decade.

Impact on the advertiser-supported model of radio consumption -

Subscription Model Web Radio broadcasters are struggling to find a way to make Web Radio profitable. Very few of the participants indicated that their Web Radio operation is currently generating income. Even fewer participants feel that they can describe what the Web Radio business model will be like in five years. What the majority of participants do think is that Web Radio will have an impact on the advertiser-supported model of radio consumption. One possible change in that model is subscription radio. In this model the consumer pays a fee to access the content. This goes against the long-standing idea in this country that radio is "free". However, the subscription model has been proven to work for video programming (cable TV, satellite TV) so some radio operators feel it can work for audio programming as well. As with TV, Web Radio operators do not see it as being just a subscription model or just an advertiser-supported model but rather combining the two models into a model that works for both the consumer and the program provider.

Video Added The addition of the video element to the Web Radio broadcast is allowing the broadcaster another way to communicate with the consumer without interrupting the program content. The video element enhances the opportunity for direct response advertising and makes it easier for the consumers to respond to any commercial message that is made available to them either within the programming or one that might appear just on the website. This type of communication should only enhance the effectiveness of the advertiser-supported model of radio consumption.

Not Yet Responses that fit into this sub-category appeared most often when the experts were discussing the impact of Web Radio on the advertiser-supported model of radio consumption. Most of the experts on the panel expressed the opinion that the impact, to date, was minimal. What appears evident from their comments is that Web Radio will have an impact on the advertiser-supported model of radio consumption over the next five to ten years. What the experts fear most is the fact that no one seems to know for sure what that impact will be or how broadcasters should proceed in preparation for that impact.

Sample Demographics

The demographic data for the respondents participating in Rounds I and II are presented in Table 4.7. Although the second round of data collection had only 18 participants, compared with 20 people in Round I, the demographics for each round are quite similar. The variables measured in this section provide some insight to the type of people who participated in this study.

The respondents are predominately male and over forty years of age. The balance between sub-groups has been maintained between Rounds I and II. Of the two

participants who failed to respond in Round II, one is a large market, longtime broadcaster and the other is a small market, new broadcaster.

Self- Rating Data

Data regarding the self-perceived expertise of the sample are presented in Table 4.8. Respondents were asked to rate their own knowledge of radio programming and radio sales, as well as their knowledge of four emerging new technologies (including Web Radio) in the radio industry. The self-ratings were done using a five point rating scale (1 = not knowledgeable; 5 = very knowledgeable). To be considered experts for this study the respondents had to self-rate themselves at the mid-point or higher for knowledge of radio programming, radio sales and Web Radio. The operationalization of an "expert" to be any respondent rating himself or herself above the midpoint of the scale is somewhat arbitrary. Hopefully, the value of this procedure is evident in terms of trying to identify the most expert respondents possible.

Table 4.1

Central Tendencies of the Delphi Study

Item	Mean Round I	Mean Round II	Mode Round I	Mode Round II	STD Round I	STD Round II
1.Consumers are listening to Web Radio because they cannot find the programming they like to listen to on traditional radio stations.	3.2	3.05	3	3	0.6959	0.6391
2.Consumers are listening to Web Radio because there are little or no commercial interruptions in the programming.	2.2	2.17	3	2	0.8944	0.7859
3.Consumers are listening to Web Radio because it provides better quality sound than do many of the traditional radio stations.	2.5	1.89	2	2	0.8272	0.3234
4. Consumers are listening to Web Radio as a companion activity while making other uses of the Internet.	3.7	3.78	4	4	0.4702	0.4278
5. Consumers who listen to Web Radio are mostly listening to retransmissions of traditional radio stations.	3.25	3.22	3	3	0.6387	0.5483
6. In five years, Web Radio's total audience will have grown by more than 25%.	3.7	3.72	4	4	0.4702	0.4609
7. In five years, Web Radio's total audience will have grown by more than 50%.	3.5	3.61	4	4	0.6882	0.5016
8. In five years, Web Radio's total audience will have grown by more than 100%.	3.3	3.5	4	4	0.9787	0.6184

Item	Mean Round I	Mean Round II	Mode Round I	Mode Round II	STD Round I	STD Round II
9. I can describe today's "typical" Web Radio listener.	2.95	2.78	3	3	0.3940	0.4278
10. I can describe what the "typical" Web Radio listener will be like in five years.	2.3	2	2	2	0.5712	0.4851
11. Web Radio has made it easier for consumers to listen to radio programming while at work.	3.9	3.78	4	4	0.3078	0.4278
12. Web Radio has made it easier for consumers to listen to radio programming while at home.	3.3	3	3	3	0.4702	0.0000
13. Web Radio has made it easier for consumers to listen to radio programming while in the car.	1.4	1	1	1	0.5026	0.0000
14. Web Radio has made it easier for the consumer to interact with the program provider.	3.3	3.22	3	3	0.4702	0.4278
15. Web Radio has made it possible for the consumer to access programming that was not previously available to them.	3.75	3.89	4	4	0.4443	0.3234
16. To date, Web Radio has not had an adverse effect on the number of consumers listening to traditional radio.	2.95	3.28	3	3	0.6256	0.4609
17. In five years, Web Radio will be a major competitor (for audience share) to traditional radio.	2.65	2.56	3	2	0.5871	0.7048

Item	Mean Round I	Mean Round II	Mode Round I	Mode Round II	STD Round I	STD Round II
18. In five years, DAB (digital audio broadcasting) will have more of an impact on the radio listening experience than will Web Radio.	1.95	1.89	2	2	0.5104	0.4714
19. In five years, satellite radio will have more of an impact on the radio listening experience than will Web Radio.	2.4	2.22	2	2	0.5982	0.5483
20. In five years, wireless web radio will have more of an impact on the radio listening experience than will Web Radio.	2.25	2.17	2	2	0.7164	0.3835
21. Web Radio is currently an income-generating vehicle for your business organization.	2.05	2.06	2	2	0.7592	0.6391
22. Within five years, Web Radio will be an income-generating vehicle for your business organization.	3.4	3.22	3	3	0.5982	0.5483
23. Web Radio's main source of income will be derived from the sale of 30 and 60 second spot announcements aired within the programming.	2.15	2.06	2	2	0.6708	0.4162
24. Web Radio will be advertiser-supported but its main source of income will not be from spot ads but rather from on screen advertisements and direct response advertising.	3.05	2.94	3	3	0.6863	0.4162

Item	Mean Round I	Mean Round II	Mode Round I	Mode Round II	STD Round I	STD Round II
25. Web Radio will have no impact on the advertiser-supported model of radio consumption.	1.55	1.61	1	1	0.6048	0.6978
26. In five years, the total income generated by Web Radio will have increased by more than 25%.	3.5	3.5	3	4	0.5130	0.5145
27. In five years, the total income generated by Web Radio will have increased by more than 50%.	3.4	3.39	3	3	0.5982	0.5016
28. In five years, the total income generated by Web Radio will have increased by more than 100%.	3.3	3.44	4	3	0.7327	0.5113
29. To be financially successful, Web Radio will have to generate income using the same business model that traditional radio stations use.	2.15	2.11	2	2	0.6708	0.4714
30. I can describe what the "typical" Web Radio station's business model will look like in five years.	1.95	1.78	2	2	0.6048	0.5483
31. Web Radio is a brand extension for my organization.	3.4	3.56	3	4	0.5026	0.6157
32. Web Radio is a whole new product offering for my organization.	2.1	2.22	2	2	0.6407	0.4278
33. My station's website only offers audio that is also available from over-the-air transmissions.	2.55	2.39	2	2	0.9445	0.6978

Item	Mean Round I	Mean Round II	Mode Round I	Mode Round II	STD Round I	STD Round II
34. My station's website offers streaming audio that is not available from over-the-air transmissions.	2.85	2.78	4	3	1.0894	1.003
35. Web only radio stations can successfully compete against traditional/web operations for audience share.	2.35	2.22	3	2	0.6708	0.6468
36. Web only radio stations can successfully compete against traditional/web operations for advertising revenues.	2.3	2.28	2	2	0.7327	0.5745

* For the mean and mode:
1 = strongly disagree
2 = disagree
3 = agree
4 = strongly agree

Table 4.2

Frequency Distribution Round I and Round II

Item – Round I (N=20) Round II (N=18)	Strongly Disagree R1 R2	Disagree R1 R2	Agree R1 R2	Strongly Agree R1 R2
1.Consumers are listening to Web Radio because they cannot find the programming they like to listen to on traditional radio stations.	0 0	3 3	10 11	7 4
2.Consumers are listening to Web Radio because there are little or no commercial interruptions in the programming.	5 3	7 10	7 4	1 1
3.Consumers are listening to Web Radio because it provides better quality sound than do many of the traditional radio stations.	1 2	11 16	5 0	3 0
4. Consumers are listening to Web Radio as a companion activity while making other uses of the Internet.	0 0	0 0	6 4	14 14
5. Consumers who listen to Web Radio are mostly listening to retransmissions of traditional radio stations.	0 0	2 1	11 12	7 5
6. In five years, Web Radio's total audience will have grown by more than 25%.	0 0	0 0	6 5	14 13
7. In five years, Web Radio's total audience will have grown by more than 50%.	0 0	2 0	6 7	12 11
8. In five years, Web Radio's total audience will have grown by more than 100%.	1 0	4 1	3 7	12 10

Item – Round I (N=20) Round II (N=18)	Strongly Disagree R1 R2	Disagree R1 R2	Agree R1 R2	Strongly Agree R1 R2
9. I can describe today's "typical" Web Radio listener.	0 0	2 4	17 14	1 0
10. I can describe what the "typical" Web Radio listener will be like in five years.	1 2	12 14	7 2	0 0
11. Web Radio has made it easier for consumers to listen to radio programming while at work.	0 0	0 0	2 4	18 14
12. Web Radio has made it easier for consumers to listen to radio programming while at home.	0 0	0 0	14 18	6 0
13. Web Radio has made it easier for consumers to listen to radio programming while in the car.	12 18	8 0	0 0	0 0
14. Web Radio has made it easier for the consumer to interact with the program provider.	0 0	0 0	14 14	6 4
15. Web Radio has made it possible for the consumer to access programming that was not previously available to them.	0 0	0 0	5 2	15 16
16. To date, Web Radio has not had an adverse effect on the number of consumers listening to traditional radio.	1 0	4 0	10 13	5 5
17. In five years, Web Radio will be a major competitor (for audience share) to traditional radio.	0 0	8 10	11 6	1 2

Item – Round I (N=20) Round II (N=18)	Strongly Disagree R1 R2	Disagree R1 R2	Agree R1 R2	Strongly Agree R1 R2
18. In five years, DAB (digital audio broadcasting) will have more of an impact on the radio listening experience than will Web Radio.	3 3	15 14	2 1	0 0
19. In five years, satellite radio will have more of an impact on the radio listening experience than will Web Radio.	0 1	13 12	6 5	1 0
20. In five years, wireless web radio will have more of an impact on the radio listening experience than will Web Radio.	2 0	12 15	5 3	1 0
21. Web Radio is currently an income-generating vehicle for your business organization.	5 3	9 11	6 4	0 0
22. Within five years, Web Radio will be an income-generating vehicle for your business organization.	0 0	1 1	10 12	9 5
23. Web Radio's main source of income will be derived from the sale of 30 and 60 second spot announcements aired within the programming.	3 1	11 15	6 2	0 0
24. Web Radio will be advertiser-supported but its main source of income will not be from spot ads but rather from on screen advertisements and direct response advertising.	0 0	4 2	11 15	5 1
25. Web Radio will have no impact on the advertiser-supported model of radio consumption.	10 9	9 7	1 2	0 0

Item – Round I (N=20) Round II (N=18)	Strongly Disagree R1 R2	Disagree R1 R2	Agree R1 R2	Strongly Agree R1 R2
26. In five years, the total income generated by Web Radio will have increased by more than 25%.	0 0	0 0	10 9	10 9
27. In five years, the total income generated by Web Radio will have increased by more than 50%.	0 0	1 0	10 11	9 7
28. In five years, the total income generated by Web Radio will have increased by more than 100%.	0 0	3 0	8 10	9 8
29. To be financially successful, Web Radio will have to generate income using the same business model that traditional radio stations use.	2 1	14 14	3 3	1 0
30. I can describe what the "typical" Web Radio station's business model will look like in five years.	4 5	13 12	3 1	0 0
31. Web Radio is a brand extension for my organization.	0 0	0 1	12 6	8 11
32. Web Radio is a whole new product offering for my organization.	3 0	12 14	5 4	0 0
33. My station's website only offers audio that is also available from over-the-air transmissions.	1 1	12 10	2 6	5 1
34. My station's website offers streaming audio that is not available from over-the-air transmissions.	3 2	4 5	6 6	7 5

Item – Round I (N=20) Round II (N=18)	Strongly Disagree R1 R2	Disagree R1 R2	Agree R1 R2	Strongly Agree R1 R2
35. Web only radio stations can successfully compete against traditional/web operations for audience share.	2 2	9 10	9 6	0 0
36. Web only radio stations can successfully compete against traditional/web operations for advertising revenues.	2 1	11 11	6 6	1 0

Table 4.3

Distribution of Respondents by Sub-Groups

Sub-Groups	Large Market Broadcaster	Small Market Broadcaster
New Broadcaster	R1 - 4 R2 - 4	R1 – 6 R2 – 5
Long Time Broadcaster	R1 – 6 R2 - 5	R1 – 4 R2 - 4

Round I (N=20)

Round II (N=18)

Table 4.4

Sub-Group Differences

Item	Large Market Broadcasters	Small Market Broadcasters	Long Time Broadcasters	New Broadcasters
2. Consumers are listening to Web Radio because there are little or no commercial interruptions in the programming.	Round I – All 10 either disagreed or strongly disagreed. Round II – all 9 either disagreed or strongly disagreed.	Round I – 8 of 10 either agreed or strongly agreed. Round II – 5 of 9 either agreed or strongly agreed.	Round I – All 10 either disagreed or strongly disagreed. Round II - All 9 either disagreed or strongly disagreed.	Round I – 8 of 10 either agreed or strongly agreed. Round II – 5 of 9 either agreed or strongly agreed.
17. In five years, Web Radio will be a major competitor for audience share to traditional radio.	Round I – 8 of 10 disagreed. Round II – 6 of 9 disagreed.	Round I – All 10 either agreed or strongly agreed. Round II – 5 of 9 either agreed or strongly agreed.	Round I – 8 of 10 disagreed. Round II – 8 of 9 disagreed.	Round I – All 10 either agreed or strongly agreed. Round II – 7 of 9 either agreed or strongly agreed.
19. In five years, satellite radio will have more of an impact on the radio listening experience than will Web Radio.	Round I – 6 of 10 agreed. Round II – 4 of 9 agreed.	Round I – 9 of 10 disagreed. Round II – 8 of 9 disagreed.	Round I – 6 of 10 agreed. Round II – 4 of 9 agreed.	Round I – 9 of 10 disagreed. Round II – 8 of 9 disagreed.
21. Web Radio is currently an income-generating vehicle for your business organization.	Round I – 6 of 10 agreed. Round II – 4 of 9 agreed.	Round I – All 10 disagreed. Round II – All 9 disagreed.	N/A	N/A
32. Web Radio is a whole new product offering for my organization.	N/A	N/A	Round I – All 10 disagreed. Round II – All 9 disagreed.	Round I – 5 of 10 agreed. Round II – 4 of 9 agreed.

Item	Large Market Broadcasters	Small Market Broadcasters	Long Time Broadcasters	New Broadcasters
35. Web only radio stations can successfully compete against traditional/web operations for audience share.	Round I – 9 of 10 either disagreed or strongly disagreed. Round II – 8 of 9 either disagreed or strongly disagreed.	Round I – 8 of 10 agreed. Round II – 5 of 9 agreed.	Round I – 9 of 10 either disagreed or strongly disagreed. Round II – 8 of 9 either disagreed or strongly disagreed.	Round I – 8 of 10 agreed. Round II – 5 of 9 agreed.
36. Web only radio stations can successfully compete against traditional/web operations for advertising revenues.	Round I – 9 of 10 either disagreed or strongly disagreed. Round II – 8 of 9 either disagreed or strongly disagreed.	Round I – 6 of 10 agreed. Round II – 5 of 9 agreed.	Round I – 9 of 10 either disagreed or strongly disagreed. Round II – 8 of 9 either disagreed or strongly disagreed.	Round I – 6 of 10 agreed. Round II – 5 of 9 agreed.

Table 4.5

Research Questions of the Study

1) Why are consumers choosing to listen to Web Radio?
2) How is Web Radio influencing the radio listening experience?
3) Is Web Radio having an impact on the advertiser-supported model of radio consumption? If so, why and if not, why not?

Table 4.6

Open Coding Categories and Relevant Research Questions

Category	Research Question
Extending the Market	1, 2
Niche Programming	1, 2
Convenience	1
Novelty	1
Interactivity	2
Listener Control	2
Subscription Model	3
Video Added	3
Not Yet	3, 2

Table 4.7

Sample Demographics

Variable	Round I (N=20)	Round II (N=18)
7 or more years in Broadcasting	10	9
Less than 7 years in broadcasting	10	9
Average number of years involved with webcasting	2.5	2.5
Modal Age Range	40-49	40-49
Gender - Male	18	16
Gender - Female	2	2

Table 4.8

Delphi Self-Rating

Variable	Round I (N=20)		Round II (N=18)	
	Mean	(s.d.)	Mean	(s.d.)
Radio Programming	4.05	(0.96)	4.17	(0.92)
Radio Sales	4.04	(0.87)	4.11	(0.83)
Digital Audio Broadcasting	3.20	(0.92)	3.06	(0.87)
Satellite Radio	3.35	(0.96)	3.28	(0.96)
Web Radio	4.20	(0.64)	4.17	(0.62)
Wireless Web Radio	3.05	(1.16)	3.00	(1.14)

1 = not knowledgeable; 5 = very knowledgeable

CHAPTER 5

DISCUSSION

Introduction

Chapter Five interprets the results given in Chapter Four. This is accomplished in part through selective coding, the third level of analysis in the grounded theory approach. The goal of selective coding is to combine categories from open and axial coding into a core category that focuses on the main theme to emerge in the study. The implications of the results of the Delphi survey are also discussed. Additionally, limitations of the study and areas for future research are discussed.

Selective Coding

Selective coding, the third step in the grounded theory procedure involves "making it all come together." It is a procedure much like that undertaken during axial coding, that is, integrating categories that have evolved in previous steps of the analysis in an attempt to see what relationships exist between categories. Selective coding differs from the previous steps in that only one category emerges. This is known as the core category. The core category is the central phenomenon around which all other categories are integrated and forms the heart of the integration process (Strauss and Corbin, 1990). The core category also is the basis of the theory to emerge from the analysis.

In looking at the open coding categories and subsequent axial categories, it became apparent that the way the audio was being delivered to the consumer was central to all discussions about Web Radio. This emerging new technology is providing a whole new distribution system for audio programming.

The way that the Internet allows audio programming to be delivered is influencing both the radio listening experience and the advertiser-supported model of radio consumption. The panel of experts disagrees as to the extent of the influence or impact that Web Radio has had to date. The Large Market Broadcasters and Long Time Broadcasters think that Web Radio is just another way for consumers to access the traditional radio stations' broadcast signals while the Small Market Broadcasters and the New Broadcasters are much more likely to recognize other reasons why consumers are choosing to listen to Web Radio. Such reasons included unique program offerings, local or regional information and non-commercial programming.

The experts also disagree as to the extent Web Radio will influence the radio listening experience and its advertiser-supported model of radio consumption over the next five years. In general the Large Market Broadcasters and Long Time Broadcasters minimize the potential impact that Web Radio will have on the advertiser-supported model of radio consumption. The Small Market and New Broadcasters think Web Radio will have a much larger impact over the next five years. However, all the experts agree that five to ten years from now Web Radio will have a substantial impact on both the radio listening experience and the advertiser-supported model of radio consumption.

As a new delivery system, Web Radio allows programming to reach potential listeners in locations where such listeners, heretofore, could not listen to that station. Web Radio overcomes the geographical limitations of the old, over-the-air delivery system. This same freedom from the old geographical limitations is allowing for the emergence of many more narrowly targeted or niche formatted stations. Because Web Radio provides a way to distribute such programming to locations all around the world, a

narrowly targeted Web Radio station can aggregate the small number of potential listeners in each local market into a much larger total market that may be attractive for potential advertisers.

The cost of accessing this new delivery system is relatively small. This is allowing many "new to broadcasting" entries into the radio industry as well as allowing current broadcasters a way to extend and expand their product offerings. This expansion and extension is also having an influence on the radio listening experience by offering the consumer more choices and more control over what types of programming they can choose to listen to.

The new delivery system is also making it possible for the program provider to alter the business model. Radio, which has always been "free" in the United States, can now develop a different business model using the Internet as its means of delivery. Web Radio is already seeing the development of subscription models similar to cable TV. The vast majority of the panel feels that Web Radio will bring changes to the advertiser-supported model of radio consumption. However, in their opinion, it is too early to tell what the changes will look like.

Findings from the current study support the Emerging New Technologies Model (Table 2.1) detailed in Chapter Two. It is the distribution system employed in Web Radio that makes it a discontinuous innovation. It is this new technology that is making more choices available to the consumer of radio programming and more opportunities for financial gain for the program providers. McLuhan (1965) noted, "The effects of technology do not occur at the level of opinions or concepts, but alter sense ratios or patterns of perception steadily and without resistance" (p. 18). Severin and Tankard

(1992) interpreted this statement to mean, "the most important effect of communication media is that they affect our habits of perception and thinking" (p. 251). Evidence from the in-depth interviews of the expert panel indicates that Web Radio is having an effect on such perceptions and thinking.

If, as McLuhan stated, "the medium is the message," then an on-line distribution system such as Web Radio suggests a convergence not only of technologies but also of senses. Newhagen and Rafaeli (1996) note, "Text, voice, pictures, animation, video, virtual-reality motion codes, even smell, are all being conveyed on the Net. The Net's capacity for addressing senses far surpasses that of any other medium. In a sense, this indicates that the medium serves less than ever before in a constraining, guiding role" (p. 5). This is true of Web Radio. It frees the consumers from being tied to time and location as determining what stations they can choose to listen to and it frees the entrepreneur from the limits of federal licensing and the associated costs of securing a broadcast facility.

The Delphi Study

The point of the Delphi study was to develop an expert group estimate that could provide answers to the three main research questions: 1) Why are consumers choosing to listen to Web Radio? 2) How is Web Radio influencing the radio listening experience? 3) Is Web Radio having an impact on the advertiser-supported model of radio consumption? The panel provided data that indicates that they know why consumers are listening to Web Radio but that the panel is not sure how Web Radio is influencing the radio listening experience or how it might be impacting the advertiser-supported model of radio consumption.

The panel felt confident in saying that consumers are listening to Web Radio in part because it is convenient to access at work or at home (assuming access to the Internet is available). Also the fact that geographically displaced consumers could now listen on-line to their old "hometown" station was another important reason given as to why consumers are listening to Web Radio.

The majority of New Broadcasters and Small Market Broadcasters on the panel also felt that consumers are listening to Web Radio because they cannot find what they want to listen to on traditional radio. This marked a split with several of the Large Market Broadcasters and Long Time Broadcasters who disagreed with the statement, "Consumers are listening to Web Radio because they cannot find the programming they like to listen to on traditional radio." The Large Market Broadcasters backed their opinions up by referring to recent Web Radio survey data that suggests that the vast majority of Web Radio listeners are tuning in to traditional radio stations that are also streaming their programming on the Internet. One possible explanation for this difference of opinion may be that New Broadcasters, because they are relatively new to the industry, are more receptive to new ways of doing things and Small Market Broadcasters are hoping to find new ways to grow their markets.

No matter the reasons why consumers are listening to Web Radio, the experts all agreed that the number of consumers choosing to listen to Web Radio will grow substantially over the next five years. The most frequently mentioned reason for the future growth is the fact that the number of hours spent listening to Web Radio today is such a small fraction of the overall time spent listening to radio that Web Radio listening is bound to grow over the next five years. Just as important is the fact that access to high-

speed Internet connection is growing rapidly making it easier to connect to streaming audio. Once the consumer is connected the broadband access will provide a better quality sound than what most consumers hear today on the Internet.

At the conclusion of the Delphi study it seemed apparent to the researcher that the panel is confident in their opinions as to why consumers are listening to Web Radio. What the panel is much less certain of is how Web Radio is influencing the radio listening experience and what impact it is having on advertiser-supported model of radio consumption. It is too early in the life-cycle of Web Radio to determine how much influence Web Radio will have on the radio listening experience or what impact it will have on the advertiser-supported model of radio consumption. The panel is saying that Web Radio had not yet had any major influence on the radio listening experience but that they are sure that it will at some point in the future.

The panel feels that the impact Web Radio is having on the advertiser-supported model of radio consumption is rather minimal. Right now the panel sees Web Radio as a value-added proposition but they understand that this approach to Web Radio is about to change. The problem for the panel is that it does not know what the business model for Web Radio is going to evolve into over the next five years. Some of the experts speculate that a form of subscription radio will develop. From their description of this model it would be more like a hybrid, combining elements of the advertiser-supported model along with some type of fee charged to the consumer to access the programming.

Limitations of the Study

No research is perfect. This study is no exception. Wimmer and Dominick (1991) point out that costs and time are significant barriers to designing the ideal study.

Schatzman and Strauss (1973) note that the compromise is an integral part of conducting research. Social scientists must work within the parameters of what is feasible versus what is not. Time and cost figured greatly in the current study. The panel selection was limited to broadcasters located in state of Georgia. Future work could expand the process to other geographic areas. However, history and maturation would provide threats to the validity of the study.

The current study was exploratory in nature so one is cautioned not to put too much emphasis on any of the numerical data. The panel was not selected using random sampling techniques and therefore attempts at generalizing from the findings of this study should not be made.

Future Directions

This study is a step toward understanding the role of Web Radio for both the consumer and the provider. Building on the findings of this study there are several areas where future research into Web Radio is warranted. This study provides an insight into the reasons why consumers are choosing to listen to Web Radio from the viewpoint of the program providers. Future research should address this question to Web Radio consumers. A comparison of the consumers' responses to this question with those views expressed by the program providers might identify "gaps" in audience needs that are not being met currently by the program providers. This type of triangulation could produce data beneficial to both the academic world as well as the business world.

This study dealt only with broadcasters who are also webcasting. A future study could involve web only radio station operators to see how they would respond to the same three basic research questions. It is the researcher's assumption that the web only

operators would respond differently than did the broadcast panel used in the current research.

The current research did not address the legal issues of performance fees and copyright protection. A substantial number of broadcasters have discontinued their webcasts in recent days because of the uncertainty surrounding these two issues. Future research into the implication of legal issues as they relate to the diffusion of emerging new technologies such as Web Radio is an area that needs further research.

Implications for the Industry

In part, this study generated more questions than answers. During the course of this research several areas have been identified as needing further research. Three particular areas of interest are worthy of further study because they have the potential to influence either the listening experience or the advertiser-supported model of radio consumption. These three areas of study are 1) the means by which the listener accesses the audio programming (computer vs. radio receiver), 2) governmental action (policy implications) and radio managerial implications (branding).

How does the radio listening experience differ when accessing the audio through the computer versus a traditional receiver? Does it make the experience different? If so, how is it different? Is the consumer more or less involved with the radio listening experience when using the computer to receive the audio versus the traditional receiver? Are Web Radio listeners different from traditional radio listeners? Answers to these questions would help Web Radio programmers to better serve their audiences and would help advertisers to better target their advertising messages.

Current broadcast managers are faced with uncertainty when it comes to the regulation of webcasting. Unlike traditional broadcasting, a webcaster does not need a license from the federal government in order to stream audio on the Internet. This has allowed for easy entry into the marketplace. The uncertainty comes in the areas of copyright protection, royalty fees, performance rights and retransmission consent. All of these issues are still in litigation, but broadcasters and webcasters do know that they will have to pay substantial fees for most of the content that they are streaming. What they do not know is how much they will have to pay and when they will have to start paying the fees. Additionally, the fees will most likely be retroactive. Such uncertainty means that the webcaster will have to pay fees for content that they have already streamed. Therefore, making it hard to devise a business plan when the webcaster is uncertain of the total cost of streaming the audio. Because of this uncertainty a number of broadcasters have ceased to webcast. A number of questions arise from this uncertainty. Will this lack of knowing the true cost of webcasting have an impact on the decision making process? Are broadcasters now hesitating to webcast because of this uncertainty about programming fees? Would broadcasters move more quickly into the area of webcasting if they knew in advance all of the policy implications? Are large market broadcasters more likely to move forward with webcasting while small market broadcasters wait to see what the outcome of the litigation is before deciding to enter into webcasting?

An additional area of interest to broadcast managers is brand extension. Because they have an established brand, current over-the-air broadcasters have an advantage over web-only broadcasters. Each of the 12,000 over-the-air broadcast stations in America currently has the opportunity to extend their over-the-air brand to the Internet. These

traditional broadcasters can even use their current product offering (the over-the-air signal) to promote their new brand extension (Web Radio). In effect, they can "push" current listeners to their new brand extension by promoting their website and their streaming audio on their over-the-air station. In most cases, the webcast is branded with the same moniker as the over-the-air product offering (ex. WSB, WSB.com). When listeners do visit the website they bring with them a predisposition toward that brand. The listener already has an idea of what type programming they can expect to find at the website. Is this an advantage or "window of opportunity" for the over-the-air broadcaster? If so, how can they best make use of this brand extension? How long will this advantage last? Should the webcast offering be an extension of the current brand or would the organization be better served with a whole new product offering? Researching these types of questions would generate data that would be helpful to radio station managers as they face a continually changing marketplace.

Final Observations

This study examined the influence that Web Radio is having on the radio listening experience and what impact it is having on the advertiser-supported model of radio consumption. Analysis of the Delphi surveys and the in-depth interviews with a panel of broadcasts experts revealed that Web Radio is affecting both the listening experience and the ad-supported model. However, the biggest impacts are still to come. Over the next five to ten years, as more potential listeners of Web Radio gain access to broadband technologies that provide better quality sound along with easier connectivity, the number of consumers choosing to listen to Web Radio will increase substantially. Web Radio will begin to truly affect the advertiser-supported model of radio consumption when the

audience reaches a size large enough to attract the attention of national and international advertisers. All the experts agreed that both Web Radio's audience size and total revenues will grow substantially over the next five years.

Further analysis of the data revealed some differences of opinions among the members of the expert panel. On several key issues Large Market Broadcasters and Long Time Broadcasters held similar views while Small Market Broadcasters and New Broadcasters expressed opinions similar to one another yet different from the two sub-groups mentioned above. Why these differences of opinions exist warrant additional research.

Historically, small market broadcasters and large market broadcasters have viewed the radio industry in different ways. Small market broadcasters realize that their business needs differ from those of the Large Market Broadcasters. In response to these differences the small market broadcasters have established committees within the National Association of Broadcasters and the Radio Advertising Bureau to specifically address the needs of the small markets. Because small market broadcasters view the radio industry differently from large market broadcasters, it makes sense that small market broadcasters would have opinions different from those of large market broadcasters about an emerging new technology like Web Radio.

New broadcasters, particularly ones coming from an Internet or e-commerce background, should view Web Radio's potential differently than the long time broadcaster. Most long time broadcasters have done very well financially over the past decade with their traditional radio operations. Long time broadcasters do not see the need to invest in a new distribution system that has yet to show a profit. The new broadcasters,

because they are just entering the industry, more readily see the expansion of reach, the ability to identify and target the "right" consumers and the eventual profitability that Web Radio offers to traditional radio operations. The real savvy new broadcasters also understand the "window of opportunity" that traditional radio stations have at this moment in time to extend their brand to the Internet. Many long time broadcasters see the opportunity more as a big gamble and are willing to wait until someone else takes the risks and shows the way to make Web Radio profitable.

What might this mean for radio station managers? Balance your key staff members. Have both new and long time broadcasters on the staff. This allows for the development of new ideas under the watchful eyes of managers who will be mindful of the costs of such development. Future research into how effective such a mixed management team is for an organization is warranted.

Today, only a relatively few consumers are choosing to listen to Web Radio. Listeners are doing so because they cannot find what it is they want to hear on traditional radio in their local market. The experts agree that the number of listeners to Web Radio will increase substantially over the next five years. Web Radio is influencing the radio listening experience by making that experience interactive while giving the consumer more control over what they can listen to and when they can listen to it. So far, Web Radio's impact on the advertiser-supported model of radio consumption has been minimal. However, the panel of experts strongly feels that Web Radio will ultimately have a major impact on the advertiser-supported model of radio consumption. The problem the experts see is that they do not know how that impact will be achieved.

The radio industry is in the midst of a technological revolution. Web Radio brings with it the potential of the million-station universe. By 2005, Forrester Research (Sanford, 2001) estimates that 41% of U.S. consumers will listen to personalized, on-demand audio content at least once a week. Web Radio will radically transform the interrelationships between listener, broadcaster, advertiser and artist. Individuals, groups, associations and organizations that have never before had access to the airwaves will find a global voice in Web Radio. Listeners will have entrée to a vast range of programming choices and will access them from a variety of soon to be mobile devices. The revolution is just beginning. Much more research is needed to elaborate on the influence and impact that emerging new technologies, like Web Radio, are having on the radio listening experience.

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APPENDIX A

DELPHI INSTRUMENT

1. Consumers are listening to Web Radio because they cannot find the programming they like to listen to on traditional radio stations. SD D A SA
2. Consumers are listening to Web Radio because there are little or no commercial interruptions in the programming. SD D A SA
3. Consumers are listening to Web Radio because it provides better quality sound than do many of the traditional radio stations. SD D A SA
4. Consumers are listening to Web Radio as a companion activity while making other uses of the Internet. SD D A SA
5. Consumers who listen to Web radio are mostly listening to retransmissions of traditional radio stations. SD D A SA
6. In five years Web Radio's total audience will have grown by more than 25%. SD D A SA
7. In five years Web Radio's total audience will have grown by more than 50%. SD D A SA
8. In five years Web Radio's total audience will have grown by more than 100%. SD D A SA
9. I can describe today's "typical" Web Radio listener. SD D A SA
10. I can describe what the "typical" Web Radio listener will be like in five years. SD D A SA
11. Web Radio has made it easier for consumers to listen to radio programming while at work. SD D A SA

12. Web Radio has made it easier for consumers to listen to radio programming while at home. SD D A SA
13. Web Radio has made it easier for consumers to listen to radio programming while in the car. SD D A SA
14. Web Radio has made it easier for the consumer to interact with the program provider. SD D A SA
15. Web Radio has made it possible for the consumer to access programming that was not previously available to them. SD D A SA
16. To date Web Radio has not had an adverse effect on the number of consumers listening to traditional radio. SD D A SA
17. In five years, Web Radio will be a major competitor(audience share) to traditional radio. SD D A SA
18. In five years, DAB (digital audio broadcasting) will have more of an impact on the radio listening experience than will Web Radio. SD D A SA
19. In five years, satellite radio will have more of an impact on the radio listening experience than will Web Radio. SD D A SA
20. In five years, wireless web radio will have more of an impact on the radio listening experience than will Web Radio. SD D A SA
21. Web Radio is currently an income-generating vehicle for your business organization. SD D A SA
22. Within five years Web Radio will be an income-generating vehicle for your business organization. SD D A SA
23. Web Radio's main source of income will be derived from the sale of 30 and 60 second spot announcements aired within the programming. SD D A SA

24. Web Radio will be advertiser supported but its main source of income will not be from spot ads but rather from on screen advertisements and direct response advertising. SD D A SA
25. Web Radio will have no impact on the advertiser-supported model of radio consumption. SD D A SA
26. In five years the total income generated by Web Radio will have increased by more than 25%. SD D A SA
27. In five years the total income generated by Web Radio will have increased by more than 50%. SD D A SA
28. In five years the total income generated by Web Radio will have increased by more than 100%. SD D A SA
29. To be financially successful Web Radio will have to generate income using the same business model that traditional radio stations use. SD D A SA
30. I can describe what the "typical" Web Radio station's business model will look like in five years. SD D A SA
31. Web Radio is a brand extension for my organization. SD D A SA
32. Web Radio is a whole new product offering for my organization. SD D A SA
33. My station's Website only offers audio that is also available from over-the-air transmissions. SD D A SA
34. My station's Website offers streaming audio that is not available from over-the-air transmissions. SD D A SA
35. Web only radio stations can successfully compete against traditional/web operations for audience share. SD D A SA
36. Web only radio stations can successfully compete against traditional/web operations for advertising revenues. SD D A SA

APPENDIX B

ROUND ONE LETTER AND INSTRUMENT

To:

From: Dale Van Cantfort

Re: Web Radio Research

Thank you for your assistance in conducting a research study on Web Radio. As a member of the Georgia Association of Broadcasters you have already indicated an interest and perhaps special knowledge in the area of Web Radio. This research is in connection with my Ph.D. dissertation and is not officially related to any GAB function. However, results of this study will be made available to all participants as well as to the Georgia Association of Broadcasters. This study will allow you to see how a group of your peers in the industry feel about Web Radio and its impact on our industry.

Essentially the purpose of the survey is to create a structure for a group communication process. The end result of this survey is a collection of best estimates regarding some set of phenomena. This result is achieved by asking an expert group to make an initial set of judgments or estimations. Therefore, your cooperation is essential for this study to be a successful one. After surveying the group of experts the data are tabulated and sent back to the group members. After examining the distribution of group responses, an opportunity is provided to re-estimate initial estimations. The procedure is repeated until some stability has been achieved. Typically, two or three rounds are sufficient.

The purpose of this study is three-fold; to develop estimates about why people chose to listen to Web Radio, how Web Radio is influencing the radio listening experience and how Web Radio is impacting the advertiser-supported model of radio consumption. Our initial interview should take no more than one hour to conduct. By our mutual agreement that interview will be conducted at ____ on ____2001.

Thank you for agreeing to participate. I look forward to talking with you about this exciting topic.

INTERVIEWER'S GUIDE

Directions: This questionnaire is divided into four sections. The first section asks for some basic demographic information and allows for you to provide a self-rating on your knowledge of broadcast operations. In the last three sections you will be asked a general, open-ended question about Web Radio. After responding to each open-ended question you will have a set of statements read to you. I will then ask you whether you strongly disagree, disagree, agree or strongly agree with each statement. Based on your response, I will ask you to provide further explanations as to why you agree or disagree.

Let me emphasize that there are no wrong or right answers to these questions. Our purpose is to gain a better understanding of Web Radio, its listenership and its business model, particularly as you see it developing over the next five years.

Our interview will be taped so that I can best reflect your views in my research. No remarks will be identified with any one particular participant. Only group averages and frequency of distribution will be made available. May we begin?

Demographic/Self-Rating:

Number of years in Broadcasting? ____

What is your current position? _____

How long has your station been Webcasting? ____

How long have you personally been involved with Webcasting? ____

Gender ___

Age bracket: under 30 30-39 40-49 50-59 60 or over

On a scale of 1-5, with 1 being not knowledgeable and 5 being very knowledgeable, how would you rate yourself on the following:

Radio Programming ___
Radio Sales ___
DAB (Digital Audio Broadcasting) ___
Satellite Radio ___
Web Radio ___
Wireless Web Radio ___
How to make money today Webcasting on the Internet ____

Now we will move on to the first of the three general, open-ended questions about Web Radio. After discussing each of the next three questions, I will ask you to respond to several statements. Remember there are no right or wrong answers. I am looking for your best estimates and opinions. Following your response to each statement I will ask you for a further explanation. May we proceed? (Before reading the statements remind the participant to choose from the following four options: strongly disagree, disagree, agree or strongly agree.)

Question 1: Why are consumers listening to Web Radio? (Prompt and re-prompt … thank you, now let's go through a set of specific statements to which I will ask you whether or not you strongly disagree, disagree, agree or strongly agree with the statement … again please remember there are no right or wrong answers, I am looking for your best estimate or opinion.)

1. Consumers are listening to Web Radio because they cannot find the programming they like to listen to on traditional radio stations. SD D A SA
2. Consumers are listening to Web Radio because there are little or no commercial interruptions in the programming. SD D A SA
3. Consumers are listening to Web Radio because it provides better quality sound than do many of the traditional radio stations. SD D A SA
4. Consumers are listening to Web Radio as a companion activity while making other uses of the Internet. SD D A SA
5. Consumers who listen to Web radio are mostly listening to retransmissions of traditional radio stations. SD D A SA
6. In five years Web Radio's total audience will have grown by more than 25%. SD D A SA
7. In five years Web Radio's total audience will have grown by more than 50%. SD D A SA

8. In five years Web Radio's total audience will have grown by more than 100%. SD D A SA
9. I can describe today's "typical" Web Radio listener. SD D A SA
10. I can describe what the "typical" Web Radio listener will be like in five years. SD D A SA

Now we will move on to question two (be sure to repeat instructions from question one).

Question 2: How is Web Radio influencing the radio listening experience? (Prompt and re-prompt … repeat instructions from set #1).

1. Web Radio has made it easier for consumers to listen to radio programming while at work. SD D A SA
2. Web Radio has made it easier for consumers to listen to radio programming while at home. SD D A SA
3. Web Radio has made it easier for consumers to listen to radio programming while in the car. SD D A SA
4. Web Radio has made it easier for the consumer to interact with the program provider. SD D A SA
5. Web Radio has made it possible for the consumer to access programming that was not previously available to them. SD D A SA
6. To date Web Radio has not had an adverse effect on the number of consumers listening to traditional radio. SD D A SA
7. In five years, Web Radio will be a major competitor(audience share) to traditional radio. SD D A SA
8. In five years, DAB (digital audio broadcasting) will have more of an impact on the radio listening experience than will Web Radio. SD D A SA
9. In five years, satellite radio will have more of an impact on the radio listening experience than will Web Radio. SD D A SA

10. In five years, wireless web radio will have more of an impact on the radio listening experience than will Web Radio. SD D A SA

Now lets move on to question three (remember to repeat instructions from question one).

Question 3: Is Web Radio having an impact on the advertiser-supported model of radio consumption? Why or why not? What kind of impact is it having? (Prompt and re-prompt … repeat instructions from set #1 before reading the statements below)

1. Web Radio is currently an income-generating vehicle for your business organization. SD D A SA
2. Within five years Web Radio will be an income-generating vehicle for your business organization. SD D A SA
3. Web Radio's main source of income will be derived from the sale of 30 and 60 second spot announcements aired within the programming. SD D A SA
4. Web Radio will be advertiser supported but its main source of income will not be from spot ads but rather from on screen advertisements and direct response advertising. SD D A SA
5. Web Radio will have no impact on the advertiser-supported model of radio consumption. SD D A SA
6. In five years the total income generated by Web Radio will have increased by more than 25%. SD D A SA
7. In five years the total income generated by Web Radio will have increased by more than 50%. SD D A SA
8. In five years the total income generated by Web Radio will have increased by more than 100%. SD D A SA
9. To be financially successful Web Radio will have to generate income using the same business model that traditional radio stations use. SD D A SA

10. I can describe what the "typical" Web Radio station's business model will look like in five years. SD D A SA
11. Web Radio is a brand extension for my organization. SD D A SA
12. Web Radio is a whole new product offering for my organization. SD D A SA
13. My station's Website only offers audio that is also available from over-the-air transmissions. SD D A SA
14. My station's Website offers streaming audio that is not available from over-the-air transmissions. SD D A SA
15. Web only radio stations can successfully compete against traditional/web operations for audience share. SD D A SA
16. Web only radio stations can successfully compete against traditional/web operations for advertising revenues. SD D A SA

Wrap-up:

We are just about through. But before we conclude, is there anything else you would like to add in regards to Web Radio and its future impact on radio broadcasting?

Thank you again for your time and participation. In the near future you will receive a summary of the results and be given an opportunity to revise your positions after examining the distribution of group responses. Would you prefer that I e-mail you the results or send them by postal service?

Get address:

_____ Name _____ e-mail

_____ Street _____ city/zip

APPENDIX C

ROUND TWO E-MAIL AND INSTRUMENT

Dear _____,

I want to thank you for your participation in round one of the Web Radio study. Your initial comments and insights were extremely beneficial. As promised, listed below are the group averages (mean) and the most frequently occurring response (mode) to each of the 36 statements that you responded to in round one. It is now very important that you respond to the enclosed survey.

The goal of this study is to generate a consistent, or at least stable, set of group-based judgments regarding Web Radio to accomplish this, a second round of judgments is required. The objective of the first survey was to obtain the initial perceptions from the group. This second survey provides you the opportunity to make a second set of judgments based on the knowledge of how a group of your peers have reacted in the first survey below is an instrument that does two things: (1) summarizes data from the first survey; and (2) asks you to make a second set of judgments in light of these data.

After completing this second and final round of the survey, please forward the results on to me at dvc@arches.uga.edu. Just like in the first round, I will provide you with the final set of group judgments at the end of my research project.

I am sincerely grateful for your help in this study. Thank you for contributing your time and expert knowledge. Please call or e-mail me if you have any further questions.

Best regards,

Dale Van Cantfort
Doctoral student, UGA
706-208-1529
dvc@arches.uga.edu

Round II:

Listed below are the 36 statements you responded to in round one. In parentheses at the end of each statement are two numbers. The first number represents the average response to that statement from the group of 20 panel members. The second number represents the most frequently occurring response to that statement from the 20 panel members. For example, the average response for question one was 3.2 and the most frequently occurring response was 3(agree). Strongly disagree(1), disagree(2), agree(3), and strongly agree(4) are the four choices from which you can select.

In order to respond to this second round you will need to "click" on "reply" then enter your response(either a 1, 2, 3, or 4) on the line at the end of each statement. After responding to all 36 statements and the open-ended questions at the end of this survey, just "click" on "send" and your responses will be sent back to me. Again, thank you for your time and expertise. Now, please proceed by clicking on "reply" and entering your responses to the following statements.

1. Consumers are listening to Web Radio because they cannot find the programming they like to listen to on traditional radio stations. (3.2, 3) ___

2. Consumers are listening to Web Radio because there are little or no commercial interruptions in the programming. (2.2, 3) ___

3. Consumers are listening to Web Radio because it provides better quality sound than do many of the traditional radio stations. (2.5, 2) ___

4. Consumers are listening to Web Radio as a companion activity while making other uses of the Internet. (3.7, 4) ___

5. Consumers who listen to Web Radio are mostly listening to retransmissions of traditional radio stations. (3.25, 3) ___

6. In five years, Web Radio's total audience will have grown by more than 25%. (3.7, 4) ___

7. In five years, Web Radio's total audience will have grown by more than 50%. (3.5, 4) ___

8. In five years, Web Radio's total audience will have grown by more than 100%. (3.3, 4) ___

9. I can describe today's "typical" Web Radio listener. (2.95, 3) ___

10. I can describe what the typical Web Radio listener will be like in five years. (2.3, 2) ___

11. Web Radio has made it easier for consumers to listen to radio programming while at work. (3.9, 4) ___

12. Web Radio has made it easier for consumers to listen to radio programming while at home. (3.3, 3) ___

13. Web Radio has made it easier for consumers to listen to radio programming while in the car. (1.4, 1) ___

14. Web Radio has made it easier for the consumer to interact with the program provider. (3.3, 3) ___

15. Web Radio has made it possible for the consumer to access programming that was not previously available to them. (3.75, 4) ___

16. To date, web Radio has not had an adverse effect on the number of consumers listening to traditional radio. (2.95, 3) ___

17. In five years, Web Radio will be a major competitor (for audience share) to traditional radio. (2.65, 3) ___

18. In five years, DAB (digital audio broadcasting) will have more of an impact on the radio listening experience than will Web Radio. (1.92, 2) ___

19. In five years, satellite radio will have more of an impact on the radio listening experience than will Web Radio. (2.4, 2) ___

20. In five years, wireless web radio will have more of an impact on the radio listening experience than will Web Radio. (2.25, 2) ___

21. Web Radio is currently an income-generating vehicle for your business organization. (3.4, 3) ___

22. Within five years, Web Radio will be an income-generating vehicle for your business organization. (3.4, 3) ___

23. Web Radio's main source of income will be derived from the sale of 30 and 60 second spot announcements aired within the programming. (2.15, 2) ___

24. Web Radio will be advertiser-supported but its main source of income will not be from spot ads but rather from on screen advertisements and direct response advertising. (3.05, 3) ___

25.Web Radio will have no impact on the advertiser-supported model of radio consumption. (1.55, 1) ___

26. In five years, the total income generated by Web Radio will have increased by more than 25%. (3.5, 3) ___

27. In five years, the total income generated by Web Radio will have increased by more than 50%. (3.4, 3) ___

28. In five years, the total income generated by Web Radio will have increased by more than 100%. (3.3, 4) ___

29. To be financially successful, Web Radio will have to generate income using the same business model that traditional radio stations use. (2.15, 2) ___

30. I can describe what the "typical" Web Radio station's business model will look like in five years. (1.95, 2) ___

31. Web Radio is a brand extension for my organization. (3.4, 4) ___

32. Web Radio is a whole new product offering for my organization. (2.1, 2) ___

33. My station's website only offers audio that is also available from over-the-air transmissions. (2.55, 2) ___

34. My station's website offers streaming audio that is not available from over-the-air transmissions. (2.85, 4) ___

35. Web only radio stations can successfully compete against traditional/web operations for audience share. (2.35, 3) ___

36. Web only radio stations can successfully compete against traditional/web operations for advertising revenues. (2.3, 2) ___

Having seen how your peers responded to the above statements and having now entered your second set of responses to those statements, please take a moment to respond to the three open-ended questions that you were presented with in the first survey. Those questions are listed below. Please enter your comments in the space provided.

1. Why are consumers choosing to listen to Web Radio?

2. How is Web Radio influencing the radio listening experience?

3. Is Web Radio having an impact on the advertiser-supported model of radio consumption? If so, how and if not, why not?

Thank you so very much for your time and efforts. If you have finished responding to all 36 statements and the open-ended questions, please save a copy of your completed survey in case I need to contact you about your responses, then "click" on "send" to return your responses to me