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(Re)Connecting With Listeners: How Radio Stations are Reaching Beyond the Dial (and Their Competitors) to Connect With Their Audience

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(Re)Connecting With Listeners: How Radio Stations are Reaching Beyond the Dial (and Their Competitors) to Connect With Their Audience

by

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Dedication

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Abstract

Radio has a history of adapting to new technologies to spread its signal farther and more efficiently to a larger audience. With the emergence of social media, the audience has begun to use non-traditional media channels to reach back and out to each other, thus by-passing traditional media outlets such as radio. Prior studies examined how the audience has shifted its daily routine to incorporate new technology. The present study sought to determine to what extent radio stations in New York State have adapted to use non-traditional media channels, how often they update those channels, and if revenue type had an effect on what channels were used to connect an ever-changing audience. Findings suggest that non-commercial public and college radio stations have the edge in the newest social media channels while commercial stations maintain their strength in local news and mobile apps. Findings suggest further routes for future study.

Keywords: radio, social media, local news, non-traditional media channels, uses and gratification, active audience

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Problem or Goal of the Study

In 2015, there are many more ways to spread a message and reach consumers that extend beyond the traditional channels. Communication professionals no longer need to solely rely on traditional media to reach the masses. Newspapers, television, and radio outlets still exist, but the landscape has shifted to digital: websites, podcasts, blogs, Facebook, and Twitter have entered the picture. Businesses can invest in e-mail blasts, website banner ads, search engine optimization (SEO), and their own daily newsletter to reach their target audience. The Internet has given people the ability to get news instantly from an endless variety of sources including social networks, news apps, online press releases, and online news websites. People are no longer restricted to traditional media to get their news and information.

In the past, radio stations had fewer tools to spread an organization's message. Businesses would buy commercial air time that would play over the airwaves in the form of commercial breaks. A communication professional would write a press release about an announcement, new product, or service and would send it to a media outlet such as radio in the hopes of gaining coverage. Traditional media such as radio, television, newspapers, and magazines were the only way to reach a mass audience. Local audiences would only see a radio disc jockey (DJ) at a station event or if they went to the physical location of a station.

Advertisers can now use non-traditional media channels such as podcasts, e-mail newsletters, and social media to directly reach out to the consumer, and the consumer can reach back! Brand manufacturers and retailers are beginning to create online communities that feature information, games, and social networks that work much like digital media companies (Mulhern,

2009). Organizations of all types can operate as their own media channel to connect to their customers and moderate the interactions through media events, entertainment, retail, and digital platforms.

The way the audience is consuming traditional media outlets such as radio has changed too. Originally, a print newspaper or magazine could only be read when physically in the hand of a reader. Television could only be watched when someone was physically positioned in front of a screen, and radio could only be listened to when an individual was sitting in front of their wireless unit. However, in a digital world, media content is free of the physical constraints of print and broadcast and can be copied and shared repeatedly, at little or no cost and with no loss of quality. Newspapers can now be read online or are delivered to an individual's e-mail as an attachment. Magazine articles promote bonus content and extended interviews on their websites. Television stations repost videos of their nightly broadcast, and radio stations stream music live over the Internet. Infinite reproduction destroys the business models of media companies that make money selling duplicates of content (Humprey & Messaris, 2005). Why turn to traditional media outlets when newer media channels can produce the same message in a more user-friendly package?

Why This Study is Important

Today's media landscape has become a mix of traditional media and new digital innovations. With the leaps in mobile technology and the change to ubiquity of Facebook, it is clear that social media is not going away and cannot be ignored. The question becomes how traditional media outlets such as radio stations choose which digital channels to incorporate into their own media mix to avoid being left behind in the race to reach their audience. In order to survive, a business must make productive use of its time, energy, and resources, as well as

continue to grow its audience and outperform competitors.

There are several obstacles when updating a traditional channel to reach an audience. Some digital channels such as Google+ never make it past the early innovation stage and are therefore never fully adopted by the target audience. Other innovations involve technology that is cost-prohibitive. Capital investment is required to purchase the domain name and to pay support staff to design, maintain, and update the site. Another issue is staffing to maintain a presence on a digital channel. Facebook and Twitter need constant tending to stay up-to-date with the latest news stories and viral videos. For some radio stations, it takes a village to constantly update this content while others have a dedicated social media specialist.

With the emerging world of Facebook, Twitter, Pinterest, and other social media platforms, how involved must media companies be to meet the needs and satisfy the gratifications of their listeners? How soon is too soon to "jump on the band wagon" of the newest digital trend to beat the competition? There is a constant race to be the first with breaking news, weather alerts, and the newest viral video. Does one member of the staff go on a week-long convention retreat and return the social media master? Should every member of the staff, from the receptionist to the General Manager, be an administrator to all of the company's social media pages? Or should management sack the old school morning show producer in favor of hiring a social media morning show producer in their 20s? Numerous articles have been published in media industry outlets such as the Radio Advertising Bureau, All Access, and *Radio Ink* on how radio stations can improve web and social media response. There are now entire online courses devoted to increasing website hits, Facebook likes, and Twitter followers—all in the name of improving listenership, increasing audience ratings, and ultimately revenue. Bonini and Sellas (2014) point out that very few existing literature reviews on the Twitter usage of radio

stations, or the content they send out, have been done.

The purpose of this study is to examine radio stations in New York State to determine how they are diversifying their media mix to meet the changing needs and gratifications of their listeners. Radio station groups were analyzed to determine what non-traditional channels they are using to represent their stations and when the most recent update was made. The study will compare radio stations in different markets that are owned by the same organization, radio stations within the same designated market area (DMA), and radio stations operating under different revenue models. This snapshot will show how traditional media is using non-traditional channels, and if competition is affecting the amount of participation within a given market.

Organization of This Study

This study will provide background information on how traditional radio has adapted to emerging technologies, the rise of the ratings system, the history of social media, and how radio is using new technology and social media to reach consumers.

The literature review explores (a) the history of commercial radio, (b) establishment of current ownership regulations, (c) evolution of satellite and syndicated radio, (d) beginnings of social media and the new media landscape, and (e) how radio stations are adapting to changing technology. It provides the rationale for this study and the subsequent research questions it will address.

The methods section describes the scope and method of the study, including how the study was shaped and conducted. Next, a discussion examines the results of the study and analyzes them within the chosen theoretical and philosophical frameworks. Finally, this study concludes with a summary and conclusion, explores limitations of the study, and provides recommendations for further study. A list of references and an appendix complete the thesis.

Literature Review

An examination of literature will initially provide the theoretical and philosophical foundations of how traditional media are using non-traditional media to reach today's audience. From a philosophical standpoint, people seek information, gratification, and an emotional outlet in their daily lives. People must trust the source of the information, be receptive to the message, and positioned to ingest the information. Theoretically, as media evolve so do the people who use it, and as people change how they receive their daily information, media must adapt to meet those new practices. Uses and gratifications theory (UGT) provides a framework for the consideration of the audience and individual media consumers in contemporary mass communication research and theory (West & Turner, 2010). Radio has continued to change and spread with new technology that has both strengthened its reach and threatened its existence.

Philosophical and Theoretical Basis

Summarizing uses and gratifications theory. The motivations for listening to radio have changed since the 1920s. UGT provides a framework for understanding when and how individual media consumers become more or less active and the consequences of that increased or decreased involvement. This framework will create a focal point to reflect how traditional media are adapting to meet the increased or decreased involvement of their audience to stay relevant in today's media landscape. Many of the assumptions of UGT were clearly articulated by the founders of the approach, Katz, Blumler, and Gurevitch (1973). They contended that there are five basic assumptions of UGT:

- The audience is active and its media use is goal oriented.
- The initiative in linking need gratification to a specific medium choice rests with the audience membership.

- The media compete with other sources for need satisfaction.
- People have enough self-awareness of their media use, interests, and motives to be able to provide researchers with an accurate picture of that use.
- Value judgments of media content can only be assessed by the audience.

These points will help guide the literature review in discovering how traditional media outlets (radio stations) have interacted with their audience in the past and how they are adapting to the new media landscape. The audience membership has changed to seek new sources of gratification. Radio stations are changing the methods they use to diversify the message and reach this audience. They are also evolving in the midst of competition. Neither the radio station nor the audience exists in a vacuum. "Both are part of the larger society, and the relationship between media and audiences is influenced by that society" (West & Turner, 2010, p. 399). This study will explore what channels radio stations are using to reach their audience and the impact of competitors within the same market DMA have on those pressures to adapt and change.

Philosophical basis. UGT is an extension of needs and motivation theory from Abraham Maslow (1943). Maslow believed that people actively seek to satisfy a hierarchy of needs starting with basic survival (see Figure 1). Once they have achieved the goals they seek on one level of the hierarchy, they are able to move up to the next level until they reach self-actualization. Humans are constantly seeking information and interacting with their environment to satisfy their needs and desires. This picture of humans as active seekers fits well with the ideas Katz, Blumler, and Gurevitch brought to their studies of how people consume mass communications (West & Turner, 2010). The need for safety for example, is what drives the audience to seek updated weather and news reports.

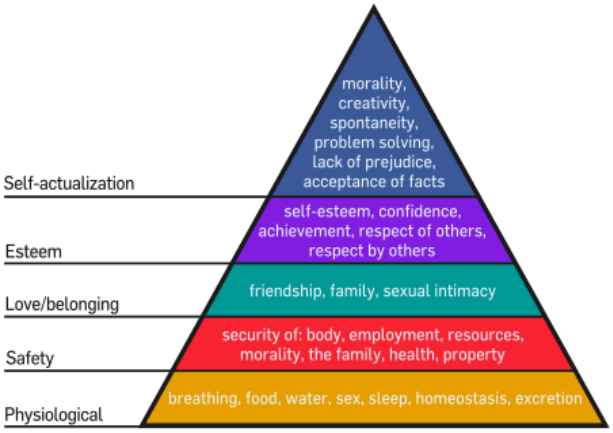

Figure 1. Adapted from R. West and L. H. Turner, 2010, *Introducing Communication Theory: Analysis and Application* (4th Ed.) Boston: McGraw-Hill Higher Education, p. 394. Image from: https://commons.wikimedia.org/wiki/File:Maslow%27s_Hierarchy_of_Needs.svg

Herta Herzog (1944) sought to understand the reasons people fulfilled their wants and needs in different forms of media behavior, such as newspaper reading and radio listening, starting with why radio soap operas were so appealing to women. After conducting in-depth interviews with dozens of fans, Herzog identified three major types of gratification: emotional, informational, and life-lessons. Some of the interviewees enjoyed the dramatic storylines because of the emotional release they found in listening to other's problems. Others found satisfaction from listening to the stories from other people's lives. A third group felt that they learned and applied the lessons conveyed in soap opera programming because "if you listen to these programs and something turns up in your life, you would know what to do about it" (Herzog, 1944, p. 25). Each group of women listened to radio soap operas through the same media channel but for their own reasons. Herzog's work was instrumental in the development of UGT because she was the first published researcher to provide an in-depth examination of media gratifications (West & Turner, 2010). The next sections of the literature review will go further into radio soap operas and how they were designed to meets the uses and gratifications of their

female audience.

The uses and gratifications approach as we know it today was first described in an article by Katz (1959) in which he was reacting to a claim by Bernard Berelson that the field of communication research appeared to have reached a dead end. Katz pointed out that most communication research up to that time had been aimed at investigating the effects of persuasive campaigns on audiences (Severin & Tankard, 1992). The focus has since shifted from asking what media do to people. In a paper summarizing work in the field to that time, Katz, Blumler, and Gurevitch (1973) pointed out that the uses and gratification studies are concerned with: (1) the social and psychological origins of (2) needs, which generate (3) expectations of (4) the mass media or other sources, which lead to (5) differential pattern of media exposure (or engagement in other activities), resulting in (6) need gratifications, and (7) other consequences, perhaps mostly unwanted ones (Severin & Tankard, 1992). UGT has adapted to new technologies and the reasons people use media.

When it came to television use, Rubin (1981) found that uses and gratifications were clustered into the following categories: to pass time, for companionship, excitement, escape, enjoyment, social interaction, relaxation, information, and to learn about a specific content. Different people will use the same mass communication channel for very different purposes (Severin & Tankard, 1992). Other researchers (McQuail, Blumler, & Brown, 1972) asserted that media use could be categorized with only four basic divisions: diversion, personal relationships, personal identity, and surveillance. Most recently, uses and gratifications theorists have been interested in researching specific reasons for media use with variables such as needs, goals, benefits, the consequences of media use, and individual factors (West & Turner, 2010). This theory builds a case for how traditional media outlets are involved in a feedback loop between

their outreach practices and how audiences are reaching back.

Theoretical basis. The exchange of information between media outlets and their audience is interconnected. The connection exists as a feedback loop. Advances in technology have given the audience a louder voice and more ways to reach back not only to media channels but each other. When mass media channels such as newspapers, radio, and television began to rise in popularity, theorists were concerned about the amount of perceived power that these media outlets held over their audiences. Mass society theory was developed with the belief that this connection was one-sided and that the average person was a helpless victim. This belief was eventually abandoned since social science and simple observations could not confirm the operation of an all-powerful media (West & Turner, 2010). The audience has an active role in what media channels they listen to and what they listen for.

Media messages have the power to influence, but not universally and not uniformly. McQuail (1987) poses that media are more than simple mechanisms for disseminating information. "They are complex organizations and an important social institution of society (McQuail, 1987, p. 142). The uses and gratifications approach is a limited effects theory. In other words, it grants individuals control over how they employ media in their lives. Although media scholars are divided on just how powerful media outlets are, some scholars have argued that the limited effects and powerful effects models are not necessarily incompatible. There are two approaches to limited effects theory. Individual difference perspective sees the influence of the media is only as powerful as the self-confidence and intelligence of the audience member. It is believed that smart people and more secure people are better able to defend themselves against unwanted media impact. Dependency theory takes a step toward showing how both may explain media effects. Dependency theory was originally proposed by Ball-Rokeach and DeFleur

(1976). Like UGT, this approach also rejected the casual assumptions of early reinforcement hypothesis. To overcome this weakness, Ball-Rokeach and DeFluer took a broad system approach. They proposed an integral relationship among audiences, media, and the larger social system. Consistent with UGT, this theory predicts that you depend on media information to meet certain needs and achieve certain goals, but you do not depend on all media equally. Two factors determine how dependent an individual becomes on a member outlet: (1) how important the information from a media channel is to that individual and (2) how socially acceptable it is to use that media channel (Littlejohn, 1999). The social categories model views media's influence as being limited by audience members' association and group affiliations (West & Turner, 2010). Audience members will follow a group mentality and reach a general consensus about a topic or idea through a combination of what they learn from the media and the opinions of their social group. This can be seen when one audience member joins a social network such as Facebook, and encourages their friends and family to join in order to see their status updates and photo galleries.

This consensus can also influence what communication channel is “hip” or how people want others to communicate with them. The question for uses and gratification researchers is whether the motivations people brought with their use of traditional media outlets will apply to new media. How will their habits and lifestyle choices change with emerging technologies, and how will those traditional media outlets change to meet the needs and lifestyle choices? In a sense, this heightened selectivity due to the new technology could create a kind of balance that has been lacking in mass communication, with the audience and the message producers being more equal in power (Severin & Tankard, 1992). Access to new technologies has changed and extended our abilities for entertainment and information gathering, and media researchers require

greater understanding of the personal and social reasons people have for using new media (West & Turner, 2010). It is now effortless to access a social network or news website through a smartphone or tablet computer.

The future of these traditional communication channels will depend on whether they can adapt to new technology and alter the message to meet the everyday needs and uses of their audience. The increase in user control that is coming with the new technology may have a beneficial effect of giving users more control over the information explosion. Each individual audience member has the power to become their own media content producer. By being more selective on their choice of communication channels, audience members are able to pick and choose their potential influencers (Severin & Tankard, 1992). Technology has enabled radio to come a long way from being a one-way communication channel to a two-way conversation.

Origins of Radio

> Radio lends itself to nostalgia, to a pining for the innocence of a summer's night listening to baseball from a far-off city, the signal fading in and out, the crack of the bat sometimes lost in the sizzle of static from a distant lightning bolt. (Fisher, 2007, p. xxi)

The origins of radio reach back into the early 20th century. Radio does not have one inventor, but many. Kern (2007) cites the history of the wireless to an 1864 paper by James Clerk Maxwell which argued that electromagnetic waves must exist and should be able to be propagated through space. In 1887, Heinrich Hertz produced those waves in a laboratory, and in 1894 Guglielmo Marconi devised an apparatus to transmit and receive them. Italian inventor and entrepreneur Marconi is most commonly acknowledged as the father of the wireless. Wireless, the early term for radio, provides an insight into the way this communication channel was first perceived. "It was seen as an extension of the electric telegraph and the telephone, and to begin

with its purposes were circumscribed by that view of it" (Lewis & Booth, 1990, p. 12). Even the term "broadcasting" was repurposed. The original lexicon was from farming and referred to the act of scattering seeds over a general area without a specific pattern, just like sending out a radio transmission in all directions. Anyone with a receiver tuned to the right frequency and within broadcast range could pick up the signal.

Radio signals are divided into two spectrums: amplitude modulation (AM) and frequency modulation (FM). AM stations send out signals that are ground wave and sky wave. AM radio towers emit a wave that follows the curvature of the earth, the ground wave, which is subject to interference from the ionosphere, the sky wave (Richter, 2006). The signal has the potential to go an unfathomable distance with the right atmospheric conditions but does not carry the same sound fidelity as an FM transmission. FM stations are line-of-sight. The signal from an FM station is a straight link that runs from the top of the tower to the horizon. This means that, at best, a 100,000-watt station can expect to reach only 65 miles (Richter, 2006). For many broadcasters, the superior sounds of an FM station trump the distance of an AM signal. The final product is the result of the frequency, power, and tower of the station.

The equipment needed to broadcast during the early days of radio was minimal, and included a microphone, transmitter, audio board, and antenna. Actors or announcers would stand in front of a microphone, and the signal was sent to a transmitter. At the transmitter site, the signal was encoded into electronic waves, amplified, and broadcast using the antenna (Richter, 2006). This gave the wireless great usefulness during an emergency situation but lacked the targeted messaging for military applications (Lewis & Booth, 1990). Up until the outbreak of World War I, the technology of the wireless was funded by private entrepreneurs who were fighting their own battles over patents and the issues associated with ownership monopoly. The

development of the communication channel stuttered and stopped as transmission and receiver inventions were developed by a variety of individuals and companies.

> The Marconi Company established the first wireless news service in 1904 with nightly transmissions from Cornwall and Cape Cod. The first distress signal from a ship at sea was sent in 1899, and in 1909, following a collision between two ships, a wireless call saved 1,700 lives. (Kern, 2007, pp. 208-209)

Richter (2006) considers radio to be our first national medium. "While just a few thousand people braved the weather to attend Abraham Lincoln's swearing-in ceremony, some 15 million people heard Calvin Coolidge's 1925 reelection inauguration on the radio while sitting in the comfort of their living room" (Richter, 2006, p. 2).

There was also the matter that anyone could broadcast their own wireless station at anytime from anywhere. The discovery of the crystal detector opened up the wireless to legions of boys and men who were, basically, hobbyists. They built their own stations in their bedrooms, attic, or garages. "They became known for their ingenuity in assembling a motley array of electrical and metal castoffs—from curtain rods and bedposts to Model T ignition coils—into highly effective homemade sets" (Douglas, 2007, p. 213). This group became radio's first audience members and paved the way in a cultural revolution: the turn to listening a blend of talk, music, and static as their heads became filled with the voices and sounds of nearby and far-off places. When World War I broke out, there were over 8000 wireless radio stations on the air in the United States (Richter, 2006). The increasing number of stations meant that broadcasters had to offer the audience an ever-growing menu from which to choose.

On July 2, 1921, the Radio Corporation of America (RCA) broadcast the Jack Dempsey-Georges Carpenter heavyweight boxing match using an experimental station with the call letters

WJY. This was the first documented time that a live program was broadcast for entertainment purposes. In 1922, under the claim wireless units were an extension of the telephone, AT&T began to "toll broadcast," or to manufacture and sell radio transmitters, and link multiple stations together by telephone wires to chain broadcasts. The first commercial advertisement ever aired was on WEAF in New York. A 15-minute ad for a housing development cost $100 and was aired for five consecutive evenings. Although KDKA is referred to as the first commercial station because it operated with the intent to make money by selling radio receivers, WEAF was the first station to air a commercial (Richter, 2006). By the late 1920s, listeners could tune into two different stations and hear the same radio programming if the two stations were part of the same chain broadcasting network. Listeners also had the option of listening to independent stations that featured locally produced shows with local talent. "Listeners could tune in to either or both, and tie in, imaginatively, with shows that sought to capture and represent a 'national' culture and those that sought to defend regional and local cultural authority" (Douglas, 2007, p. 212). Within media studies in higher education, radio finds a small place in media history, while radio practice almost everywhere concentrates on reproducing the techniques of radio journalism (Lewis & Booth, 1990). Radio journalism needs to be effective, timeless, and cost efficient. The revenue model of commercial radio stations depends on finding a niche with their audience in order to leverage their listener reach for sponsorship dollars.

Rise of Commercial Radio

"Commercialization is the production, manufacturing, package, marketing, and distribution of a product that embodies an innovation. Commercialization is the conversion of an idea from research into a product or service for sale in the marketplace" (Rogers, 2003, p. 152).

As the size of potential listenership grew, wireless operators scrabbled to fill the void in

the airwaves with their voices. Schools, churches, department stores, newspapers, and even hotels owned many of the earliest radio stations. Programming ranged from religious services to live symphonies to children's bedtime stories (Richter, 2006). The goal of commercial stations shifted from selling radio receivers to selling airtime to potential advertisers. Most of the programs on radio at the time were family friendly. Most families who could afford a radio had only one, which was situated in the living room or den. Sitting around the radio and listening to a program was a family event (Richter, 2006). Early on, broadcasters saw potential in broadcasts aimed at children. Children are impressionable and can act as a deciding factor for the real decision-maker of the house—the parents. This targeting reinforced radio as an acceptable group media channel.

Although the radio industry was making inroads with younger viewers, it could not subsist solely on the whims of petulant children and their accommodating parents. Radio needed to grow its listenership by targeting a segment of the adult audience, finding their desires, and linking their need for gratification to its programming, in order to engage them. One of those targets, as mentioned earlier in this literature review, was housewives listening to soap operas during the late 1920s and early 1930s. Ready-made soap and electric washing machines were becoming part of the everyday technological norm, and companies needed a way to reach their target audience. The name *soap opera* was a reference to the detergent companies that sponsored many of the series. These dramas became so popular that by 1940, 90% of commercial radio programs were soap operas (Allen, 2004).

Radio stations' revenue models can be broken down into two types: commercial and non-commercial. Non-commercial stations are divided into two smaller categories: the larger market public radio stations that carry National Public Radio (NPR) and other program services, and a

thousand or more local community or college outlets that rely almost exclusively on donations from listeners (Sterling, 2006). The revenue model of a public service station is based on state funding and a tax on household broadcasting devices, known as the license fee (Bonini & Sellas, 2014). Commercial radio is financed by advertising and sponsorship. Networks may be operated by profit-seeking conglomerates at a loss, whether out of temporary expediency, or as part of a strategic plan which uses the outlet as a stepping stone to the acquisition of other media interests, or plays off tax incentives in different sectors or counties (Lewis & Booth, 1990). The programming is fairly inexpensive to produce in comparison to a television show or motion picture. "While it would be costly to shoot a movie serial of *The Lone Ranger* or any other adventure story, radio can do it cheaper. A great show needed only a script, actors, and a good sound effects person" (Richter, 2006, p. 39). The specific format of the station partially depended on the market for it. The most economical model is based on music, supplemented with studio chat by DJs and guests, and often responding to listeners phoning in for requests for promotions (Lewis & Booth, 1990). Music is pre-produced and easy to replicate in the form of Top 40 formats or format niche genres. Today's DJs can play a song with the assistance of a computer database and the click of a button. Playing music maintains the attention of the listener, decreases the technical skill of the board operator, and keeps costs low.

President Franklin D. Roosevelt used radio as a communication channel directly into the homes of the American voter in the form of fireside chats. He spoke directly to the people during some of America's hardest times including the banking crisis, the Great Depression, and World War II. "His thirty-minute broadcasts gave the people a sense that even in hard times, the president could get them through it" (Richter, 2006, p. 45). The audience tuned to radio as a source of information and need for safety, their sense of love and belonging that they were not

alone in their struggles, and their esteem that things would soon turn for the better.

Radio stations have continued to satisfy the audience's need for information through local and national news coverage. Commercial radio stations began to carry out the clause in their Federal Communications Commission (FCC) agreement to serve the public, as a reason to carry news coverage. Breaking news could be transmitted almost instantaneously over radio while yesterday's news was printed in today's newspaper. News, entertainment, and listener engagement began to change the way the audience interacted with radio as a communication channel. As the technology changed and wireless units became more commonplace in the household, listeners began to reach back and audience numbers boomed.

Audience Measurement

As of July 2015, there were 15,455 radio stations in the United States, including 4698 commercial AM stations, 6666 commercial FM stations, and 4091 FM educational stations (http://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db0708/DOC-334266A1.pdf). When selling airtime to potential advertisers, commercial radio stations live and die by their projected audience members. Stations can measure their audiences in several ways. They can base a show's popularity by the membership of their active audience who calls and write letters to the station to provide feedback. For example, if the morning show receives 50 requests per hour and the afternoon show receives 100, the station management might decide that the afternoon show is more popular. This could lead to higher unit rates for commercials during *afternoon drive* or an increase in the promotional budget to maintain those numbers.

The more difficult number to measure is the inactive audience. Think about it, the morning audience usually is preparing for the day ahead or commuting. Unless the radio station gives them a reason to reach out to the station (e.g., to participate in a call-in promotion or to

complain about the content), they cannot or will not call in. This could skew the results and make it harder to demonstrate that the morning show actually has three times the audience listenership as the afternoon show (Richter, 2006). The radio station with the most listeners in a given market will attract the most advertisers who are reaching out to the consumer opinions and pocket books. Advertisers need assurance that they are spending their money in the most efficient way possible. Logically, they want to know which station is drawing the most listeners within the market and who is likely to buy the product they are selling. To show potential advertisers the listener market share that a station attained, there needs to be a way to demonstrate audience management.

There are many ways one can define a market, but using geography is the most common method. The FCC defines a radio market as "the area encompassed by the principal community contours (i.e., predicted or measured 5 mV/m for AM stations and predicted 3.16 mV/m for FM stations) of the mutually overlapping stations proposing to have common ownership" (47 C.F.R. _73.3555(a)(2)(i)). According to Richter (2006), the federal Office of Management and Budget (OMB) has placed every city, town, and county into a greater metropolitan statistical area (MSA), primary metropolitan statistical area (PMSA), and consolidated metropolitan statistical area (CMSA).

The American Research Bureau was the first major attempt to measure audience management. Jim Seiler founded the company in 1949 and collected audience data in medium and large-sized market using listener diaries. Randomly selected households kept a diary for each member of the household, outlining when and what station they were listening to (Richter, 2006). Most present day radio stations subscribe to the Nielsen ratings. The data are collected and stations are ranked based on the reported listeners by station and demographic. "Salespeople

as well as advertisers will pour over the ratings books look at day parts and demographics-advertisers looking for the people they want to sell to, and salespeople trying to determine how to package their station to potential advertisers" (Richter, 2006, p. 90). Since radio stations cannot increase their transmitter power to increase their reach, they need to dig into the listener data to find the right demographics that will show their advantage over the competition.

Establishment of FCC

The Federal Communications Commission oversees the licensing process and enforcement for all radio stations located in the United States. The origins of the FCC stretch back to The Wireless Ship Act of 1910 when the wireless was seen as a safety tool of commercial shipping. All ships carrying 50 or more passengers and traveling more than 200 miles were required to have at least two Marconi wireless operators and wireless equipment that could reach at least 100 miles on board (Richter, 2006). The FCC was then charged with the task of clearing up the airwaves so that neighboring stations would not create interference for each other (Lewis & Booth, 1990). The Wireless Act of 1912 was the first set of legislation to

> set aside certain frequencies for government use, set up administrative rules regarding the use of distress signals, mandated that all transmitting equipment that was being used to commercial purposes had to be licensed by the secretary of commerce, and said that operators had to be licensed. (Richter, 2006, p. 168)

The Radio Act of 1927 established the Federal Radio Commission (FRC). The act gave the FRC authority to regulate the radio industry by enforcing rules, making regulations, and modifying existing ones. Stations were policed so that they ran on a specific frequency, at a specific power, and during set times. For example, AM stations were required to "power down" after sunset due to the atmospheric boost the transmitter received from the night sky. It seems to be a given

nowadays that your favorite radio station is always located on the same dial frequency, and you can always hear it during the drive to school or work.

> The FCC is responsible for managing and licensing the electromagnetic spectrum for commercial users and for non-commercial users including: state, county and local governments. This includes public safety, commercial and non-commercial fixed and mobile wireless services, broadcast television and radio, satellite and other services. In licensing the spectrum, the Commission promotes efficient and reliable access to the spectrum for a variety of innovative uses as well as promotes public safety and emergency response. (https://www.fcc.gov/topic/licensing, para. 1)

The FCC only gives broadcasters a license to use the airwaves on behalf of the public. They also dictate ownership rules so that no one owner has a controlling share over the market.

Communications Act of 1996

With the Telecommunications Act of 1996, the FCC redrew the limitations on the number of radio stations any one person or group may own from its former cap of 20 AM and 20 FM stations. The act attempted to ensure that no one owner had more than half of the advertising revenue.

> In Section 202(b)(1) of the Telecommunications Act of 1996 ("1996 Act"), Congress directed the Commission to increase the number of stations in a market in which a party could have a cognizable ownership interest, providing that in the largest markets a single entity could own up to eight stations. (47 C.F.R. _73.3555(a)(2)(i))

The number of stations that one single owner could control depended on the number of commercial radio stations in the market. For example, in a market DMA of 45 or more stations, up to eight stations could be owned or operated by the same owner, with only a maximum of five

AM or FM stations.

Sterling (2006) argues that the Telecommunications Act of 1996 is correctly accused of having greatly accelerated the ownership consolidation that underlies these trends including the rapid growth of media companies including Clear Channel. Under one ownership, the stations will potentially have the same format, similar programming, a unified news source, and a standardized way of targeting potential audience members. Lack of ingenuity at the risk of losing advertiser revenue has led to a consistent but static formula for maintaining current audience share.

Launch of Satellite Radio and Syndication

Sterling (2006) believes that satellite radio developed out of an assumption that the technology could provide a far broader menu of choices for listeners with different interests who were scattered across the country. "Although the total audience for satellite radio is but a fraction of that tuned to legacy broadcast radio, the 130 channels programmed by both XM and Sirius offer a variety unavailable otherwise even in the largest cities" (Sterling, 2006, p. 325). Both mainstream and niche audiences can be satisfied with satellite radio service and the variety of program offerings.

In 1997, the FCC put two frequencies in the S-band (digital audio radio service) up for auction. The two frequencies for satellite were sold to two different firms: CD Radio which became Sirius Satellite Radio, and American Mobile Radio Corporation, now known as XM Radio. Now merged, Sirius XM Satellite Radio offers more than 175 channels, including 72 programmed stations of commercial-free music (Sirius XM Satellite Radio. What Is SiriusXM?) Satellite radio companies are very similar to satellite or cable television in that they are subscriber-based. They also offer a variety of stations carried simultaneously across the county

and are not limited by the same market constraints as terrestrial commercial radio stations (Richter, 2006). An audience member could potentially listen to the same stations constantly while driving from the west coast of the United States to the east coast. This is a large leap from terrestrial stations that may only stay in range for an hour or so of driving depending on signal strength and terrain.

Sterling (2006) believes that the greatest potential threat to terrestrial radio stations comes from the Internet. "Audio streaming (whether by broadcasters or Internet-only services) is one rapidly expanding way of creating a national or global market for widespread specialized interests" (Sterling, 2006, p. 325). With the click of a button, the ability to broadcast yourself is back in the hands of the amateur hobbyist. Podcasting is also a relatively new advancement in the new media landscape that radio is beginning to use. The blending of the words *iPod* and *broadcasting* gives a hint as to what this new medium is. Instead of streaming audio or having to download massive files to a computer, podcasting allows a person or media outlet to publish audio files (Richter, 2006). These files can range from new music artist exclusives to personal blogs and in-depth interviews that may have not been appropriate for on-air broadcast.

In traditional media outlets, the news, entertainment, and advertising messages are bundled by editors and producers, and delivered to the audience prepackaged. A digital outlet enables bite-sized, individual pieces, to be unbundled and freely distributed separately from packaged content. No one needs to buy an entire newspaper to get one story, nor do they need to listen to an entire radio newscast to get today's top story. As a result, the expectations and standards for what a news story must look like have changed. As more listeners shift from passive listeners to active news engagers, large media firms have the potential to lose control of the content and distribution of information (Mulhern, 2009).

The relationship between the DJ and the listeners is about the exchange of ideas, events, and culture. It goes beyond the electronic world of networks, algorithms, and automated systems designed to target the end-user (Mulhern, 2009). Radio is in the process of adapting to ever-changing technology and the new media landscape to go where the listeners are. Sterling (2006) predicts the danger facing radio comes with ownership concentration and the growing sameness in the medium's programming, especially on a local level. "Individual market 'clustering' of multiple stations under a single owner has had far more effect on what radio listeners hear—or do not hear" (Sterling, 2006, p. 322). As more stations become part of larger conglomerate networks, such as Citadel and iHeartMedia, staffing is sacrificed for cost saving automation.

One of the departments within radio that has seen the most reduction is local news. For decades, radio was the medium to which most people first turned for breaking news. This was an audience habit learned from the 1930s and reinforced with World War II. Well into the 1980s, most stations offered at least occasional newscasts, often five minutes on the hour, especially in the morning and evening drive time. Stations offered news as good business—advertisers and listeners alike were interested. That the FCC considered news to be a part of the public interest responsibility of broadcast licensees was a minor reason for providing it. News was an expected—and often profitable—part of radio's menu (Sterling, 2006, p. 323). At bare minimum, all it took was one staff member with a newspaper and a microphone.

Automation and budget cuts have seen local news departments reduced to shadows of themselves; in some cases stations have only a single reporter in the mornings and network news the other 20 hours of the day. The demise of local news is part of a larger trend the industry generally ignores—the demise of localism, once a cornerstone of American radio (Hillard & Keith, 2005). "Though localism is still touted by industry spokespeople when competition looms

(as with cries to "save free local radio"), American radio today consists of locally-based outlets providing national content" (Sterling, 2006, p. 323). The implications of the current revolution for media and marketing communications are systemic, profound, and unlike anything the field has experienced (Mulhern, 2009). Traditionally, a person must hold a newspaper to read a message, have access to a radio to hear a message, and be in front of a television to view the message.

How Traditional Media is Adapting to New Technology

Organizations have always used multiple media to share their message with consumers. Pilotta (2004) comments that this recipe for communication is easy to follow. "These media forms were commonly limited to local and national markets. Thus, identifying which media vehicles to use, their price and the scheduling details was a relatively simple task" (Pilotta, 2004, p. 287). Emerging technology gives advertisers more channels to choose from, including their own mediated channels. Although traditional media outlets became available at different points in time, they all evolved using the same business model—the selling of broadcast time slots based on demographically defined audiences.

> The torrent of digital information now produced by digital media will reorient marketing communications much the way it has done for business logistics and operations research. Ongoing tracing of media use and buying behavior will parallel, and to some degree replace, the static methods of market research and qualitative research. (Mulhern, 2009, p. 88)

Perez (2002) outlines technological revolutions in four stages: interruption, frenzy, synergy, and maturity. The greater the audience, the more stable that technological innovation becomes and the better chance it has to mature. The trick to staying with current media trends is

to pick the channel that has the most potential to reach audience saturation. In the new media landscape, where consumers have multiple channels to choose from, media understanding must occur early in the process along with consumer insight and market research.

Table 1

From Media Planning to Digital Services

	Integrated Marketing Communications	
Concept	Traditional	Digital
Planning process	Linear/batch	Dynamic/ongoing
Targeting	Demographics	Consumer and/or context
Consumers	Audience of individual	Users in social unit
Partner	News and entertainment	All media, digital services and places
Pricing	CPM	Contingency

Note. Adapted from "Integrated Marketing Communications: From Media Channels to Digital Connectivity," by F. Mulhern, 2009, *Journal of Marketing Communications, 15*(2-3), p. 92.

The digital landscape is dynamic and responds to instant feedback. According to Mulhern (2009), advertising, with its traditional business models and processes for targeting consumers with brand messages, is being adapted for a world where demographically-targeted print and broadcast messages are being replaced with data-driven, contextually relevant brand communications that no longer have to be paired with news or entertainment (see Table 1).

Old and current habits always run the risk of being outdated or outshined by new technology and trends. In the case of radio, the first threat came from television. The high level of technological development that helped launch radio established listener habits in the general public. The audience was already used to turning on its wireless unit for the latest news and entertainment, and the television added pictures. For advertisers, television operated with the same business model as radio—the selling of broadcast time slots based on demographically

defined target audiences (Mulhern, 2009). As more and more television stations went on the air and more households could afford television sets, radio saw its first major drop in listenership.

Local news and events is one way that radio stations stay current with their audience. DJs create a relationship with their audience. New music appeals to a younger audience, thus more stations play it. This trend became increasingly important for the survival of radio when American teenagers became a society centered on cars, especially cars with radio (Richter, 2006). In 1985, Sony developed the ICR-101, an AM radio about the size of a credit card that allowed users to listen to their favorite radio station on the way to the office or school (Sony Global – Product & Technology Milestones – Radio). In 2016, AT&T will include smartphone device specifications that will enable users to activate the FM chip built into their phones (McLane, 2015). This seems ironic given that AT&T used to consider the wireless as an extension of the telephone.

The way that music is played behind the scenes has evolved and changed with the new media landscape. As the younger generation enters the workforce, they bring new ideas and habits with them. Turntables and cart machines collect dust or are sent to scrap metal collectors as radio stations have transitioned to computers. Entire music libraries, playlists, and even hourly show run-downs are now completely digitized and in some cases, remotely automated. This makes it incredibly easy for the Program Director or DJ to preprogram a single show or an entire weekend playlist of songs, commercials, and PSAs into one automated system (Richter, 2006), and for an afternoon host to update his show voice track to a dozen different radio stations over 1,000 miles away in a matter of seconds. Stations battle for dominance over their slice of the market. Management wants the best programming mix with the best return on investment (ROI) as possible. As audience members began to expect and seek gratification from their

engagement, radio stations needed to learn how to relate and reach back to their core audience. Radio was no longer the solitary passive listening medium of the past with the lone news reporter reading the day's news from the local newspaper, but a more upbeat, entertaining format designed to get the audience members laughing and telling their friends.

The Internet has added yet another media channel touchpoint into the radio broadcasting mix. It has come a long way from being a medium for military data exchange to the home of countless websites about every topic imaginable. The majority of commercial radio stations have complemented their programming with companion websites. These websites are most often used as promotion and marketing tools, offering audience members additional information about the on-air personalities, bands, songs, and contests. A good percentage also offers the ability to stream their on-air broadcast to distant listeners around the world from the comfort of their computers, laptops, MP3 players, and smart phones (Richter, 2006). As more people adopt smartphone technology, it becomes more socially acceptable to get weather, news, and social media updates from work, the grocery store, and traditional media outlets such radio and television.

In a 2010 report by the Pew Research Center for the People and the Press on how Americans consume news, it was found that 34% of the American populations used a computer to get news online the previous day. When combined with the use of cell phones, email, social networks, and podcasts, that figure jumped to 44%. By comparison, those who get their news from traditional media such as newspapers, TV, and radio held steady or trended down slightly (Pew Research Center for the People and the Press, 2010). In fact, 75% of respondents said they had consumed news from one of these traditional media the previous day (Pew Research Center for the People and the Press, 2010).

Van Damme, Courtois, Verbrugge, and De Marez (2015) found that the majority of news consumers relied primarily on traditional media outlets to stay informed and only occasionally supplemented their information from trusted brand mobile sources. Van Damme et al. also found that mobile news producers are gaining a foothold in the news feeds and daily lives of mobile-dominated audiences who were previously disengaged from the news. This means that mobile is both supporting traditional media outlets and directly growing a new audience that is using new technology and non-traditional channels to normalize their news usage. It predicts a time where breaking news alerts could almost force a spot in the media routine of users. At the moment, the choice between traditional and new media sources for news is not a simple one. Nel and Westlund (2012) argue that while the advent of mobile devices has emerged as a direct channel to the news consumer, there is also a concern that it will eventually threaten to displace traditional media outlets.

The growth of mobile technology has created a media channel that is delivered directly to the end-user. In line with other audience-centered research on media consumptions, Courtois (2012) found that the notion of context is divided into three strongly coinciding levels: time, location, and social context. Each context parameter has a potential influence on the choice of news channel or news type. Time, space, and social context are, however, often interrelated. Daily routines follow a fixed pattern: different time frames (e.g., morning versus afternoon) imply different locations (e.g., at home or on the road versus work) and the company (e.g., children versus colleagues). The artifact in their personal space must be accessible, affordable, and socially accepted. For example, if consumers are unfamiliar with how to listen to a podcast on a smart phone, they will not seek it out without guidance or incentive.

Van Damme et al. (2015) found that smartphones are used the most between 6:00 and

9:00 in the morning to check service-based news such as weather and traffic reports along with various news items. Audience members who grew up with traditional media outlets value the added rich multimedia experience, extra news updates, and personalized news offers. They see mobile news as a supplement to their current uses and gratifications. Van Damme et al. (2015) concluded that "The portability and mobility of mobile media, and perhaps even the form—specific content delivered via these media also pave the way for increasingly fragmented consumption needs" (Van Damme, Courtois, Verbrugge, & De Marez, 2015, p. 4).

For the moment, there seems to be a symbiosis between traditional and mobile news platforms. The Reuters Institute of the Study of Journalism found that the increased presence of mobile devices in a news consumer's house acted an extension of traditional media rather than a replacement (Newman & Levy, 2013). In television, this is referred to as the *4 Screen Approach*. A family can be in the same room watching television, browsing the Internet on a computer or laptop, listening to a podcast on a mobile phone, and playing a game on the tablet. Whether the family is all consuming the same material depends on the source of the channel. Originally, a news report could only be seen on television. Then with the advent of websites, news stories could be posted online. Further down the line, videos from the actual broadcast could be cut and repackaged for later replay or reposting on other media channels.

With the expansion of digital and social media, it is now essential that a business have a website. They may also have a YouTube Account, a Google+ page, Facebook account, Twitter feed, blog, and Pinterest page. Every point is an opportunity to lead back to the business and bring consumers with it. Backlinks are also a primary way of increasing the boosting of search engine optimization results, aside from monetizing (McDonald, 2013).

Social network sites have become a combined network of audience member and

traditional media outlets sharing time, space, and content. This real time exchange of information gives the audience instantaneous news updates, and news outlets immediate feedback from their listeners. This ambient journalism allows citizens to determine their choice of news outlets (Hermida, 2010). Social media puts the control back in the hands of the audience members. More than any other communication channel, social media has the potential to extend the traditional radio industry to interact with their audience in a new and engaging way that enriches their experience (Shaw, 2010). Radio can maintain its direct ties with listeners while adapting to the changing media landscape.

How Traditional Media is Using Social Media

Millions of people have integrated social media platforms, including Facebook and Twitter, into their daily lives. Boyd and Ellison (2008) define social networks as follows:

> …web-based services that allow users to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. (p. 211)

Although social networks sites were originally developed to connect with friends, they have evolved into powerful tools for communication and for accessing news. At the same time, mainstream media are exploring new ways of communicating with their audiences (Bonini & Sellas, 2014).

Founded in 2004, Facebook was established as a communication channel that gave people the power to share and make the world more open and connected. Users can sign on with Facebook to stay connected with friends and family, to discover what's going on in the world, and to share and express what matters to them. Facebook boasted 874 million monthly active

users who used their mobile products and 1.19 billion monthly active users as of September 30, 2013 (Facebook Key Facts). This rule has changed with the inclusion of social media and the digital landscape.

One of these emerging communication channels is Twitter. Twitter confines messages to 140 characters. Users must boil down the content of the message to its bare essentials. For Twitter to be acknowledged as a public service medium, it needs to function as both a communication channel for the broadcaster and a platform where audiences can engage both the media outlet and each other (Bonini & Selias, 2014). In the case of radio, Ferguson and Greer (2011) studied the Twitter profiles of 100 American stations and concluded that messages from music stations were mostly promotional, while talk radio stations focused their tweets on news content.

Traditional media outlets need to understand the unique challenge brought forth by the new media landscape. Although social media began with blogs and has been in existence for more than a decade, it now also includes social networking sites such as Facebook, Twitter, Pinterest, Instagram, Internet forums, wikis, podcasts, and streaming (Wright & Hinson, 2009). Social media really began to take hold with the launch of social networking sites MySpace in 2003 and Facebook in 2004 (Kaplan & Haenlein, 2010). Originally, Facebook could only be used by college students with an ".edu" e-mail address. In 2006, membership was opened to the general population. At that time, social media was a relatively new venture for many Americans but blogs were popular. In 2008, blog search engine Technorati noted that there were 23 million bloggers and 94 million blog readers in the United States (Wright & Hinson, 2009).

According to Rainie (2010), 61% of American get at least some of their news online each day. More than 83% of American adults between the ages of 18 and 22 are members of online

social networking sites such as Facebook and Twitter. Adults over the age of 30 are the fastest-growing segment of Facebook users (Wright & Hinson, 2009). Van Damme et al. (2015) found that smartphones are used the most between 6:00 and 9:00 in the morning to check service-based news such as weather and traffic reports along with various news items. "By providing a continuous flow of information about consumers, digital media provide the opportunity for more detailed and continuously monitored consumer insight" (Mulhern, 2009, p. 93).

To drive the customer engagement with a specific brand, businesses and radio stations used to incentivize page "likes" or "followers." This process has become more complicated with Facebook's 2010 policy change wherein a page cannot require "likes" as part of a promotion to win a prize. Since Facebook began including ad space on the sidebar of the news feed, companies have been competing for the attention of their current and potential customers. At a time when Americans are investing themselves in the digital landscape, traditional media outlets must continue to innovate to reach their audience through new and ever-changing channels. Once users are in control, they will create whatever consumption experience they desire. The media content, ads and all, will be customized—not by the media outlet or marketer, but by the user. Traditional media outlets have to deal with the challenge of being part of the trusted network of their publics (Bonini & Seflas, 2014). As a result, traditional media outlets are forced to change their tactics and their messages to respond to the consumer's wants and needs in order to stay relevant. Media planning has become much less about picking from the traditional outlets to place a commercial buy and more about establishing a pattern of interaction with the target consumer (Mulhern, 2009). This management of the interaction between the audience member and the brand no longer needs traditional media outlets to serve as the moderator. Instead, it becomes one of the many menu items available in the advertising media mix.

Theory

Radio has undergone many transformations since it was first seen as an extension of the telephone. It has adopted technological innovations to expand its reach and audience to take it from the hobbyists' garage to your pocket. People seek information, gratification, and an emotional outlet in their daily lives. In a world with information overload, the audience must trust the source of the information, be receptive to the message, and position themselves to ingest the information. As media evolves, so do the people who use it. Their listening habits change as technology adapts and social habits change. Media must adapt to meet these new needs. UGT provides a framework for the consideration of the audience and individual media consumers in contemporary mass communication research and theory. UGT outlines the framework for this study because it assumes that (1) the audience is active and seeks out media to achieve an end goal, whether it is today's news headlines or music to listen to in the car; (2) audience members will listen to radio if they are already familiar and accept it as a media channel to get their end goal, (3) radio stations compete with each other to gain majority audience share, (4) audience members are aware of what radio stations they are listening to and what needs they are satisfying, and (5) audience members can evaluate whether their needs and gratifications are being met by the content provided by a specific radio station. These assumptions will help form the foundation for the study and form an understanding of why radio stations are changing tactics to adjust their media mix to reach their active audience.

Rationale for This Study

There are a number of services from companies that will routinely send out marketing e-mails to media companies and local businesses. Each will offer a bullet point exposition on how poorly designed the business website is, how keywords and backlinks will improve the search

engine ranking results, and for only $99.99 they will redesign everything and maximize website traffic results. Optimization of Internet presence is not always due to lack of knowledge or tools, but lack of time and the staffing to maintain it.

Some experts might argue that the worst Internet cardinal sin an organization can commit is to start a website, blog, Facebook or Twitter account, and then allow it to languish with old content and no responses. No content is better than old content. This is especially true in times of tight budgets and staffing, where every staff member already wears multiple hats and reproduces their product onto multiple platforms. There is also training involved to educate existing staff on what it is, how to use it, and most importantly—how to monetize it. For some sales executive, it comes down to an important question—so what? How will increasing the number of Facebook likes get a new client on the air? How will 20 new e-mail subscribers help sell a sponsorship and put food on the table? The ultimate answer is that as more and more radio stations participate in non-traditional media channels, the more the audience is looking for it and expecting it.

UGT in today's media landscape looks at how traditional media outlets are using new technology to meet the new demands of their audience. This study will gather current data to determine how today's radio groups are using non-traditional channels to reach their audiences, and whether stations groups within the same organization are using the same channels with the same frequency. The study will also plot the start dates of each station's Twitter page as a timeline of when that channel was added to the marketing mix. It will also look at the difference (if any) that an organization's structure of non-commercial or commercial has on the diversity of channels used to reach the public, and if the presence of competition with a given market DMA creates a competition to reach the same listeners in the same channels.

Questions to Be Answered By This Study

This study addresses three research questions:

RQ1: What non-traditional channels are radio stations using to reach their audience?

RQ2: What connection can be drawn, if any, between the amount of communication channels and level of engagement within the same ownership group?

RQ3: Are radio stations within the same market DMA competing within the same channels and have similar levels of engagement as their competitors?

Scope and Methodology

Scope

The purpose of this study is to analyze radio station groups and determine what non-traditional channels they are using to represent their stations, and when the most recent update was made. The scope of this study will include radio station groups that are members of the New York State Broadcasters Association (NYSBA). Group members have current FCC licenses and are geo-located within New York State. The NYSBA currently lists 151 radio stations groups as members. This group was chosen based on the location and ability to fairly group stations for this study without the need for randomization. Each station was checked by call sign to its FCC license to confirm its current station group ownership. Some listings were consolidated into one station group if they were owned back the same station group in the same market, or had been sold. The final list of station groups was condensed to 137.

One reason to evaluate a radio group as a whole is that some radio stations will have one host website that serves as a hub for all of their stations. This study will test the differences between three radio groups: (1) Non-commercial public stations, (2) Non-commercial educational (college) stations, and (3) commercial stations. Non-commercial educational

stations are hypothesized to benefit from an influx of student generated content and familiarity with newer media channels. Non-commercial public stations are hypothesized to benefit from direct feedback in the form of public donations to gain a better grasp of how to reach their target audience. Commercial versus non-commercial stations have a different revenue model. Commercial radio stations are selling advertiser messages to their audience, whereas non-commercial stations are soliciting public support in the form of underwriting and donations. Commercial radio stations are hypothesized to be more traditional in their media channels and not to have as strong a presence in their social media channels as non-commercial stations.

Method

Radio stations will first be identified by their ownership group name and market DMA. Any stations listed more than once with be consolidated within their station group and market. For example, if Group A owns radio stations in two different market DMAs, then each market DMA will be listed separately. If Station A in Market A is found to be owned by the same group in Market A, the stations will be consolidated into one station group. This will be determined by using the station website, EOE file, and FCC license.

Station groups will then be classified into three groups: (1) non-commercial public, (2) non-commercial educational, and (3) commercial. Each station will undergo a content analysis to determine if they use the following digital channels: desktop website, mobile website, mobile app, mobile text club, live stream, podcast and an e-mail newsletter; and the following non-traditional social media channels: Facebook, Twitter, Instagram, Pinterest, Google+, and YouTube.

An additional row has been added to the bottom for any additional channels that are noted among radio stations. If a radio station is determined to use that channel, then the flow

chart is completed to see when updates have been made to that specific channel. A (Yes) = 1 and (No/Not Present) = 0. The number of channels and frequency of updates was analyzed according the three search criteria: (1) how radio stations compare within the same station ownership, (2) within the same market DMA, and (3) within different revenue types. The analysis will provide a snapshot of how radio stations are innovating using non-traditional channels, and how competition is affecting the amount of participation within given market. A Chi-square goodness-of-fit test will be used to determine whether there are any significant differences between groups.

Coding

Radio stations groups were initially generated by group members listed on the New York State Broadcasters Association website as of July 2015. Individual stations were grouped together by common ownership in a specific market DMA. Since the majority of stations were not labeled by station name, each group was researched by station call letters to identify their ownership. This was then checked and verified against the FCC License listed on https://www.fcc.gov/encyclopedia/fm-query-broadcast-station-search and https://www.fcc.gov/encyclopedia/am-query-broadcast-station-search. The Market DMA was originally listed for each station group based on its classification on the NYSBA website. This initial categorization left any stations west of Albany listed as “Western New York.” A secondary list was found on an impartial listing by Radio Station World. Individual market DMA was determined by cross referencing a list of New York State Market/Region list on http://radiostationworld.com website by market. All but 13 stations were identified this way. The remaining 13 were previously labeled by NYSBA as “Upstate” so they remained labeled as an “Upstate” market.

During this secondary check, several non-commercial public and educational stations were flagged as not included in the original NYSBA radio station list. Each station was cross-referenced against the NYSBA database again. Three non-commercial public stations were found to have been excluded from the original list due to the fact that they were listed by the TV call sign and their radio call sign. A check of all TV stations listed as members of the NYSBA yielded a total of three radio station groups that were then added to the study. This list was then alphabetized by station group name. Stations with the same station name and market DMA were consolidated into one group. After consolidation, the total number of radio station group identified totaled 142.

Two additional coders were recruited and trained, and 14 stations groups (10%) were randomly selected by a random integer set generator in Random.org, then tested for reliability among all three coders. There was a 90% agreement. The main source of deviation occurred when coders did not finish testing each station within a station group against a given category. This led to a further deviation if that category asked for update frequency. The Flickr category was deleted since there were no found entries among the test station groups. Coders were asked to note it in the "Other" category if found in one of their designated station groups. After the coding was finished, coders were retested with 10% (14 stations) to establish intercoder reliability, and then 10% of that list to test intracoder reliability to see if they were evaluating each of the stations consistently. The post-questionnaire test came back 95% for intercoder and 97% for intracoder reliability.

During the study, three single station groups (Vineyard Public Radio, Inc. — WPUT, M.J. Phillips Communications, Inc. — WJJL, and Wade Communications, Inc. — WYBG) were found to have gone off the air since their FCC renewal in 2014, and three had been purchased by

another station group. Coders flagged these five stations for a secondary check to confirm that the information was correct. The "dead" stations were removed and the purchased stations were consolidated into their new station groups.

To compare station groups, an average of scores (1 for Yes and 0 for No) was taken across the number of individual station groups for each platform. That data were recorded and charted on a bar graph. The average number of channels used by each ownership group category was placed on a separate bar chart to help find differences (if any) between channels. Stations were then separated into individual categories: non-commercial public, non-commercial college, and commercial.

The Study, Results, and Analysis

How the Study was Designed

Coders were asked to look at radio stations groups across New York State and find the following web elements for at least one station within that group: desktop website, mobile-friendly website, mobile app, mobile text club, live stream, e-mail newsletter, local news, and podcast. In order to assist with the search, each station group name came with a reference list of its market DMA, city of license, and list of affiliated stations. This was to ensure that the correct station group in a specific market was being coded, and to assure the coder that they were looking at the correct stations.

A desktop website is essential for hosting any digital presence of the radio station. This is the first point of contact for listeners who use a search engine to look for more information. It is also a platform for digital revenue in the form of sponsor or underwriting banner ads. The second category looks at if the website is mobile optimized. Mobile optimized websites are easier to read and to reach the various menu headers. The third category had coders search for a

mobile app in the iPhone or Android store. A mobile app will set a bookmark for the station website on the listener's phone or tablet.

The next set of categories looked at how radio stations were reaching out to current listeners who may or may not have their radio on. A mobile text club creates a database of listeners including name, cellular phone number, and in some clubs gender, date of birth, and zip code. This gives radio station groups an immediate point of contact with their potential audience. Some programs will allow radio stations to communicate with their listeners via a computer website. Contests can also be operated directly through this platform with a pre-determined keyword.

The live stream uses the Internet to directly play what is currently going through the on-air transmitter to a listener's digital audio device. With this platform, the potential audience for a radio station is no longer restricted to geographical location. Listeners can “tune in” from anywhere in the world.

Similar to a mobile text club, an e-mail newsletter collects a database of listener information, including name and e-mail address. Depending on the amount of content and staff dedication, there may be many different e-mail lists that listeners can subscribe to from daily news updates to weather alerts to promotional offers. Listeners may also have the additional option to opt-in to receive offers from sponsors.

Coders were asked if any of the stations within a given group displayed a local news feed. One of the reasons that all stations within a group were analyzed was that some station groups dedicate one station to be a news “flagship.” This could be a news talk format, or simply a centralized newsroom that generates news for all of the radio stations in that group.

Podcasting takes segments of on-air programming and directly delivers them to online

listeners. These podcasts can include exclusive interviews, special segments, or recordings that were not fit for broadcast due to time constraints. These on-demand recordings eliminate the need for listeners to be sitting at their radio the moment the segment airs.

The presence of these channels indicates how radio stations are developing their on-air presence and using new technology to translate it for newer digital platforms. If a station group was found to have local news content and a podcast page, coders were asked if there had been an update in the past seven days, and the past 8-30 days. This additional evaluation helped to determine if stations were currently using that platform or if it had been abandoned.

Coders were then given a list of social media platforms and asked if at least one of the radio stations within a station group had (a) an account, and if they had updated that account in (b) the past 7 days, or (c) in the past 30 days. The social media platforms examined were Facebook, Twitter, Instagram, Pinterest, Google+, and YouTube. Coders were also given an "Other" category if they noticed a channel that was not named. A total of 127 radio station groups were analyzed based on their revenue category and broken into three different categories: Commercial (n = 113), Non-Commercial Public (n = 12), and Non-Commercial Educational (n = 12).

How Radio Stations are Reaching Their Audience Beyond Radio Waves

Results showing statistically significant differences in comparisons between the three station group types (commercial, non-commercial public, and non-commercial educational) were obtained using Chi-square goodness of fit tests. An alpha level of 0.5 was used for all statistical analyses. Statistically significant differences were found within stations that had Local News content, an Instagram account, and a Pinterest account. Differences that approached significance were found when investigating stations present on mobile apps and station groups that had a

YouTube channel.

Response to research questions. Research Question 1: What non-traditional channels are radio stations using to reach their audience?

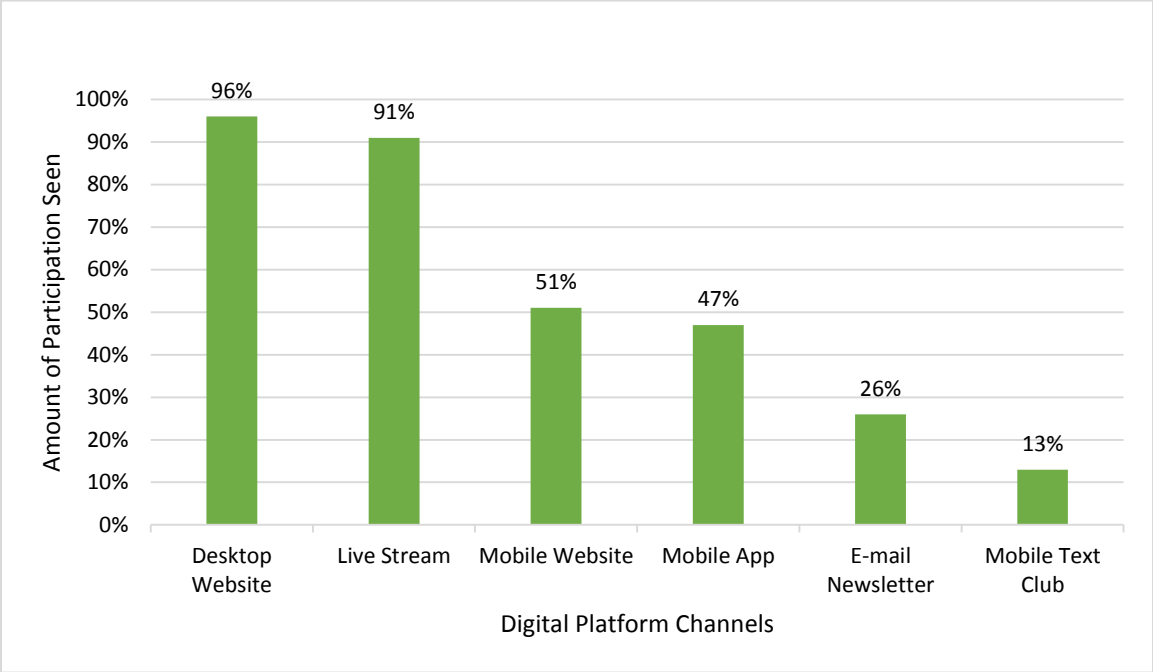

Figure 2. Digital platform participation by all radio stations

Among all radio station groups analyzed, 96% (N = 137, n = 132) were found to have a desktop website, and 51% (N = 137, n = 70) had a mobile-optimized website (see Figure 2). Percentages of each of the three groups are reported in Table 2. This suggests that there is no relationship between station type and the presence of a desktop and mobile website. The observations seen show that there is an equal likelihood of finding radio station digital presence among commercial, non-commercial public, and non-commercial educational stations.

Table 2

Digital Platform Participation

Station type	Desktop Website %	Mobile-Friendly Website %	Mobile App %	Mobile Text Club %	Live Stream %	E-mail Newsletter %	Local News %	Podcasts %
Commercial	80	42	42	12	75	22	39	34
Non-Commercial Public	92	58	50	0	83	33	67	58
Non-Commercial Educational	100	42	17	8	100	17	8	33
All Stations	96	51	47	13	91	26	45	42

Mobile app. Among all radio station groups analyzed, 47% ($N = 137$, $n = 65$) had a mobile app (see Table 3). One of the two areas of interest that approached significance was the presence of a Mobile Application ($\chi = 4.997$, $df = 2$, $p = .082$). Coders reported if they found that at least one of the radio stations within a given group that had a mobile app for their station website. More commercial stations than expected were observed to have mobile apps. This could be due to the cost of development, the time and effort needed for testing and hosting a mobile app in the Android and iPhone store, or the drive from management to use this platform as a way to reach current and future listeners on their mobile devices. The same percentage of commercial stations analyzed (42%) were found to have a mobile website and mobile apps, though not necessarily both. Mobile apps also have the additional benefit of providing advertising banner space.

Table 3

Mobile App Participation

Participation	Commercial *n*	Non-Commercial Public *n*	Non-Commercial Educational *n*	Total
Mobile App - Yes	57	6	2	65
Mobile App - No	56	6	10	72
Total	113	12	12	137
Expected				
Yes	53.61313869	5.693430657	5.693430657	
No	59.38686131	6.306569343	6.306569343	
Chi square				4.997
p-value				0.082

Local news. Among all radio stations analyzed, 45% (N = 137, n = 62) have local news coverage (see Table 2). Differences between station types were statistically significant (χ = 8.947, df = 2, p = .011). This suggests that there is a relationship between the type of radio station and whether they produce local news coverage (see Table 4). Non-commercial public stations significantly were more likely to cover local news.

Table 4

Local News Participation

Participation	Commercial *n*	Non-Commercial Public *n*	Non-Commercial Educational *n*	Total
Local News - Yes	53	8	1	62
Local News - No	60	4	11	75
Total	113	12	12	137
Expected				
Yes	51.13868613	5.430656934	5.430656934	
No	61.86131387	6.56934066	6.56934066	
Chi square				8.947
p-value				.011

***Social media*.** The social media platforms examined were: Facebook, Twitter, Instagram, Pinterest, Google+, and YouTube (see Table 5). Among all radio station groups, 93% (N =137, n =127) participated in Facebook, 76% (N = 137, n = 104) have a Twitter account, 35% (N = 137, n = 48) post on Instagram, 13% (N = 137, n = 18) pin on Pinterest, 30% (N = 137, n = 41) have a Google+ page, 46% (N = 137, n = 46) have a YouTube channel, and 15% (N = 137, n = 20) were observed using another social media channel.

Table 5

Social Network Participation

Station type	Facebook %	Twitter %	Instagram %	Pinterest %	Google+ %	YouTube %	Other %
Commercial	75	60	25	9	23	24	11
Non-commercial public	100	92	58	42	50	58	25
Non-commercial educational	100	92	58	8	25	50	17
All stations	93	76	35	13	30	34	15

Among radio stations analyzed, a statistically significant difference was found between stations that participated in Instagram ($\chi = 6.938$, $df = 2$, $p = .031$). Non-commercial public and non-commercial educational stations were significantly more like to participate in Instagram (see Table 6). There could be multiple reasons for this. Non-commercial stations may have larger staffs that can manage an additional communication channel. They may also have a younger staff that is comfortable working with Twitter. Instagram is most often used as the photo extension of Twitter and incorporates hashtags as a way of spreading photos among followers. Of non-commercial public stations, 57% of them were observed updating their Instagram accounts on a regular basis—both within seven days and the past 8-30 days. It can be concluded that non-commercial radio stations are finding a receptive audience in this platform. Further study is needed on why stations choose to participate in Instagram and who manages the account.

Table 6

Instagram Participation

Participation	Commercial *n*	Non-Commercial Public *n*	Non-Commercial Educational *n*	Total
Instagram - Yes	34	7	7	48
Instagram - No	79	5	5	89
Total	113	12	12	137
Expected				
Yes	39.59124088	4.204379562	4.204379562	
No	73.40875912	7.795620438	7.795620438	
Chi square				6.938
Chi squared *p*-value				0.031

Pinterest. There were statistically significant differences between stations type and whether they participated in Pinterest (see Table 7). Non-commercial public stations were more likely to participate ($\chi = 9.429$, $df = 2$, $p = .009$). This also suggests that there could be a relationship between listeners who use Pinterest and the types of programming they listen to on non-commercial public stations. Of the non-commercial public station groups participating in Pinterest, 20% do so regularly—both within seven days and 8-30 days. The Pinterest platform is built to focus on images. It is mainly used for "pinning" specific topics such as photography, arts and crafts and do-it-yourself projects. Listeners may be drawn to the creator-oriented programming hosted on non-commercial public stations. Further content analysis is needed to determine if the Pinterest posts are connected to current programming, and if listeners are actively contributing in the conversation.

Table 7

Pinterest Participation

Participation	Commercial *n*	Non-Commercial Public *n*	Non-Commercial Educational *n*	Total
Pinterest - Yes	12	5	1	18
Pinterest - No	101	7	11	119
Total	113	12	12	137
Expected				
Yes	14.84671533	1.576642336	1.576642336	
No	98.15328467	10.42335766	10.42335766	
Chi square				9.429
p-value				.009

YouTube. One other finding that approached significance was the relationship between station type and the presence of a YouTube channel ($\chi = 6.572$, $df = 2$, $p = .0571$). Both non-commercial public and non-commercial educational station groups were observed to have higher than expected participation in YouTube (see Table 8). Since the *p*-value came close to significance, it can be suggested that there is a potential connection between the station type and presence of a YouTube channel. Further analysis is warranted to narrow the confidence level, especially with a larger sample.

Table 8

YouTube Participation

Participation	Commercial *n*	Non-Commercial Public *n*	Non-Commercial Educational *n*	Total
YouTube - Yes	33	7	6	46
YouTube - No	80	5	6	91
Total	113	12	12	137
Expected				
Yes	37.94160584	4.02919708	4.02919708	
No	75.05839416	7.97080292	7.97080292	
Chi square				65.72
p-value				.0571

How Often Are Radio Stations Reaching Out Through Non-Traditional Channels

Response to research questions. Research question 2: What connection can be drawn, if any, on the amount of communication channels and level of engagement within the same ownership group?

Eleven radio station groups had the same ownership over at least two markets. The number of markets ranged between two and seven. The only points of interest in the data were in the presence of a mobile app and live stream. Live stream feeds were observed in 91% (N =137, n =125) of all radio station groups, so the 100% participation data points was expected. The mobile app presence was significant considering that among all radio station groups, only 47% (N =137, n = 65) had one.

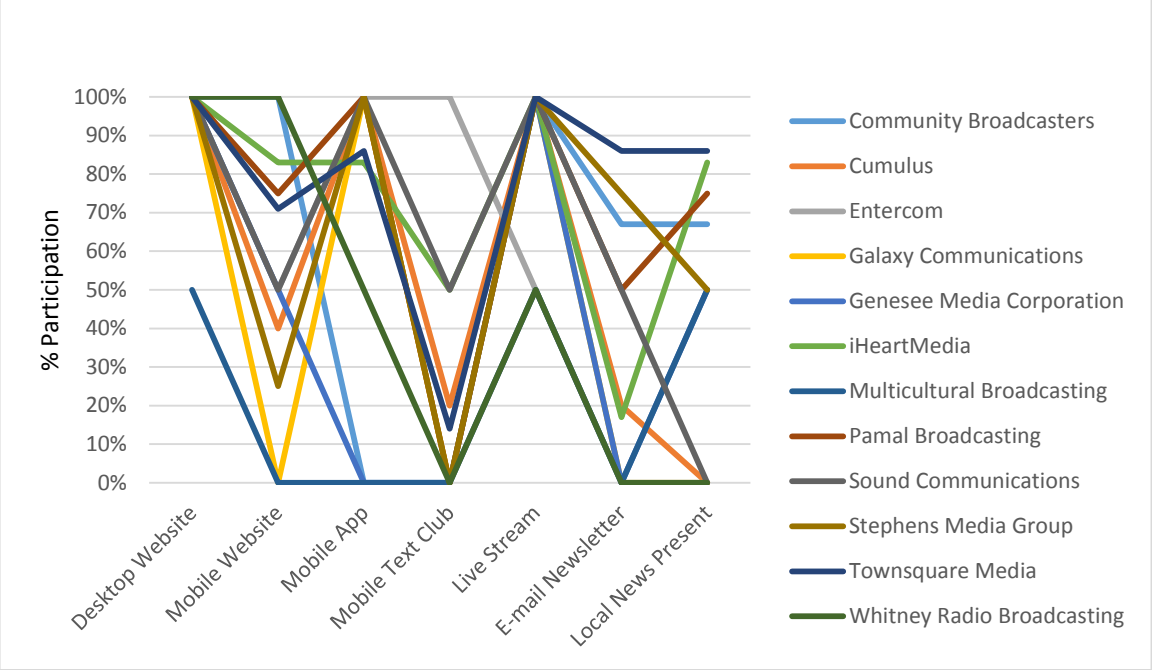

Figure 3. Digital platform participation among multiple DMA stations.

To understand the significance of the presence of a mobile app among station groups present in multiple DMAs, the 113 commercial stations were broken into two groups: radio station groups that present in at least two markets (N =113, n = 41), and single owner radio stations that are only present in one market (N = 113, n = 72). A statistically significant value of 5.39477E-05 was found (see Table 9).

Table 9

Mobile App Participation Among Commercial Stations

Participation	Multiple Market DMA	Single Ownership	Total
Mobile App - Yes	31	26	57
Mobile App - No	10	46	56
Total	41	72	113
Expected			
Yes	20.68141593	36.31858407	
No	20.31858407	35.68141593	
Chi squared *p*-value	5.39477E-05		

Competition Within Market DMAs

Response to research questions. Research Question 3: Are radio stations within the same market DMA competing within the same channels and have similar levels of engagement as their competitors?

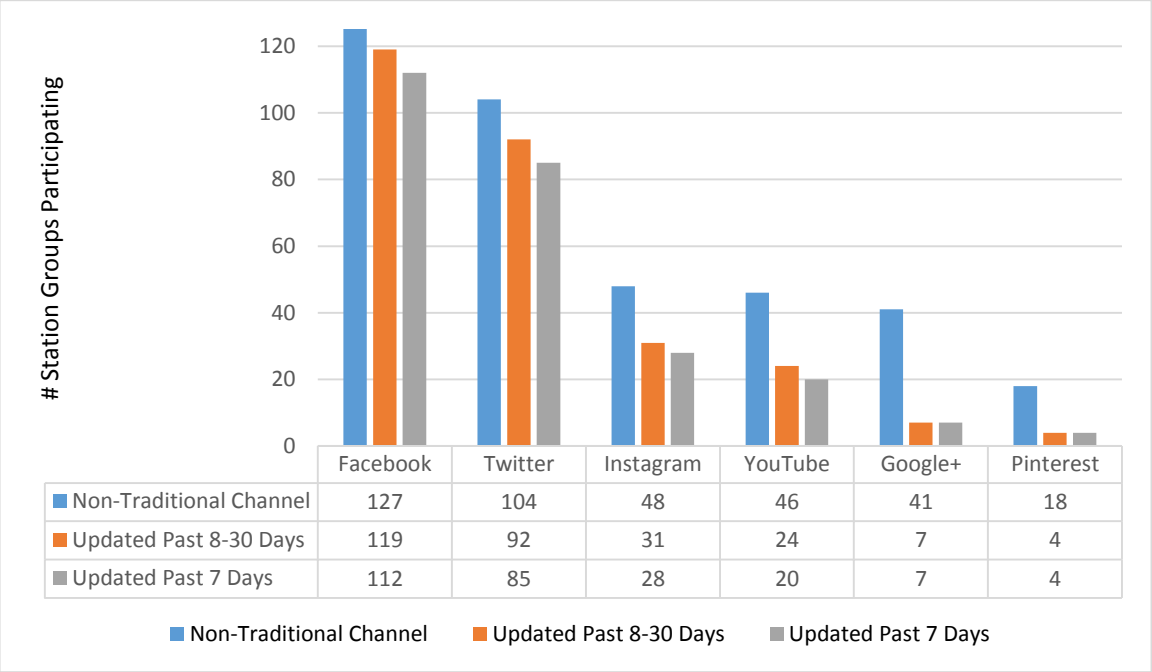

Figure 4. Social media update frequency.

The two highest used social media networks reported were Facebook and Twitter. Overall, 93% of all radio stations participate in Facebook and 76% participate in Twitter (see Table 4). The study observed how often stations that participated in those social networks then updated their accounts (see Figure 4). Participation in other social media channels did not exceed 50% of the station groups. Stations were grouped into their main market DMA and then analyzed for social media update frequency on Facebook and Twitter (see Table 10). Of the 20 market DMAs in New York State 14 were observed to have at least 70% of the stations.

Table 10

Facebook and Twitter Updates Past 7 Days

Market	# Stations in Group	Updated Facebook Past 7 Days %	Update Twitter Past 7 Days %
Albany-Schenectady-Troy		100	100
Buffalo	7	75	80
Elmira-Corning	3	100	100
Glens Falls-Saratoga	2	100	100
Ithaca	2	100	100
Jamestown-Olean	5	100	75
Long Island	9	100	86
New York City	12	100	90
Poughkeepsie-Kingston	5	100	100
Rochester	10	80	75
Syracuse	9	89	75
Upstate	13	100	78
Utica-Rome	7	83	100
Westchester	4	100	100

Summary and Conclusion

Limitations of Study

Online station information is only current to July and August 2015. This represents a snapshot due to the malleable nature of the Internet, and adjusting attitudes towards non-traditional media involvement is subject to change. A web page that may have been offline for maintenance could not be backed up. Social media pages take less than one day to set up and maintain if a station group, through an individual or management decision, creates a presence.

Another limitation of this study was in the data collection. Data were collected using

search engines, which may have had some station websites listed under alternative station or group names. The station may have a presence, but it might have been buried in the search engine results or known by an alternate name unfamiliar to non-listeners. This study employed a quantitative codebook, which avoided bias that may be introduced by lack of station participation in the study, or by claiming a social media presence where none exists for competitive purposes. This study was also limited by the type of radio stations analyzed. There are a number of religious, public, and education stations that were not included because they were not listed as members of the New York State Broadcasters Association (NYSBA). Tracking down station ownership was also very difficult. Although stations are grouped together on the NYSBA website, they are not listed by their ownership date. Some of these groupings were also out of date. Stations were found to have either been sold or had gone off the air since the list was last updated. Confirming new ownership was also difficult. Some of the FCC licenses are listed by where the license holder's main office is or had not been updated since the last renewal period in 2014.

UGT has been criticized because some of its central tenets may be questionable. The framework is vague and open to interpretation depending on how the researcher is looking at the media relationship. Swanson (1977) states that media usage can be seen as a constantly shifting system, "conceived variously as the personality system with past and present social situations and opportunities (functional), as patterned by the culture and social structure (structural/cultural), and as the production of reason and chance (action/motivation)" (p. 216). This relationship between media and the audience can also be seen as a balancing act between needs and expectations as technology "ebbs and flows" like waves on the sand. McQuail (1984) believes that the theory suffers from a lack of theoretical coherence. Some of the theory's

terminology needs to be further defined to avoid open interpretation. The theory relies too heavily on the functional use of media, because there are times when the media can be reckless. The concept of "needs," "problems," and "motives" changes depending on the context and origin of the use. How can a media organization be properly personified by human needs? (Swanson, 1977). UGT lends itself to bias. Some respondents are not able to specify the gratifications they get from media use when they are asked open-ended questions, but readily identify a need when it is presented in a list of alternatives (Becker, 1979). UGT looks at every aspect of the process except for investigating how the audience perceives and interprets the content of the message (Swanson, 1977). Another criticism of the uses and gratifications approach is that is focused too narrowly on the individual (Elliot, 1974). It relies on psychological concepts such as need, and it neglects the social structure and the place of the media in that structure (Severin & Tankard, 1992). West and Turner (2010) question the notion of an active audience. If the key concepts of the theory are shaky, then the theory is not useful—it is not really explaining anything. One extensive discussion of uses and gratifications theory (McLeod & Baker, 1981) concludes by specifying some additional needs of the uses of gratifications approach:

- More consistent use of the concepts of motivation and media use.
- A closer tie between differentiating patterns of gratifications sought and the meanings and interpretations given specific media messages.
- No longer equating effects research with the hypodermic all-powerful media model (and an attempt to investigate the consequences of various patterns of media use and motivation).
- More systematic attempts to develop broader and more complex models of the role of uses and gratifications.

- Go beyond its present largely individual focus to consider its relevance to social systems.

Further Study and Recommendations

Findings in the present study suggest a number of areas for future research related to how radio stations are adjusting their media channel mix to reconnect with their listeners on non-traditional media channels. These areas could include in-depth examinations of the relationships between:

1. Non-commercial public radio station programming and the type of posts made on Pinterest and Instagram,
2. Audience/Listener participation with posted material on non-traditional channels such as Facebook, Twitter, Instagram and Pinterest, and
3. A survey questionnaire asking radio stations to answer why they are reaching out through non-traditional channels, what channels they are using, and who is responsible for the content.

Other areas for future study include a content analysis of how radio stations are adjusting their lexicon for each channel message, and a survey of how listeners "listen" to their favorite radio stations.

Conclusion

Radio has a history of adapting to new technologies to spread the signal farther and more targeted to a larger audience. Search engine algorithms have the ability to target specific messages to the proper person at the proper time. With the emergence of social media, the audience has begun to use non-traditional media channels to reach back and out to each other—bypassing traditional media outlets such as radio. Prior studies examine how the audience has shifted their daily routine to incorporate new technology. The present study sought to determine

to what extent radio stations in New York State have adapted to use non-traditional media channels, how often they update those channels, and if revenue type had an effect on what channels were used to connect an ever-changing audience. Findings suggest that non-commercial public and college radio stations have the edge in the newest social media channels while commercial stations maintain their strength in local news and mobile apps. Findings suggest routes for future content analysis.

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Appendix

Definition of Terms

App: A self-contained program or piece of software designed to fulfill a particular purpose, especially as downloaded by a user to a mobile device.

Blog: Website containing a writer's or group of writers' own experiences, observations, opinions, etc., and often having images and links to other websites

Communication channel: the means by which messages get from one individual to another

Diffusion: the process by which (1) an innovations (2) is communicated through certain channels (3) over time (4) among the members of a social system.

DMA: a media market, broadcast market, media region, designated market area (DMA),television market area, or simply market is a region where the population can receive the same (or similar) television and radio station offerings, and may also include other types of media including newspapers and Internet content

Facebook: Social-networking service and website, launched in 2004

Fan-Gating: (also known as like-gating) is the practice of acquiring more fans for a Facebook page by requiring users to "like" the page in order to access specific content associated with the page

Flickr: an image hosting and video hosting website, where users can share and embed personal photographs, launched in 2004

Google +: Social network and social layer for Google Services, launched in 2011

Individual Differences Perspective: a specific approach to the idea of limited effects; concentrates on the limits posed by personal characteristics

Instagram: online mobile photo-sharing, video-sharing and social networking service that

enables its users to take pictures and videos, and share them on a variety of social networking platforms such as Facebook, Twitter, Tumblr and Flickr, launched in 2010

Innovation: an idea, practice, or object that is perceived as new by an individual or other unit of adoption

Mass Society Theory: the idea that average people are the victims of the powerful forces of mass media

Limited Effects: the perspective replacing Mass Society Theory; holds that media effects are limited by aspects of the audience's personal and social lives

Pinterest: web and mobile application company which operates a photo sharing website. Launched in 2010

Podcast: An online audio or video file that can be downloaded onto devices such as computers, cell phones, and iPods.

Social Categories Model – a specific approach to the idea of limited effects; concentrates on the limits posed by group membership

Social Media: Internet-based forms of communication such as websites and blogs.

Social Networks: Website such as Facebook, Twitter, Pinterest, Instagram and SnapChat that enable consumers to keep in constant contact with one another. These sites enable consumers to spread their opinions around the world.

Spam: Spreading unwanted, unsolicited messages through electronic means, such as email or blogs.

Streaming: A method of transmitting or receiving data (especially video or audio material) over a computer or phone network as a steady continuous flow.

Traditional Media: Communication outlets such as radio, newspapers, TV and magazines.

Tumblr: a microblogging platform and social network website that allows users to post multimedia and other content to a short-form blog, launched in 2007

Twitter: online social networking service that enables users to send and read short 140-character messages called “tweets”, launched in 2006

YouTube: a video-sharing website that allows users to upload, view and share videos, launched in 2005