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Visualizing a non-visual medium through social media:

The semiotics of radio station posts on Instagram

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Abstract

For decades, radio was a hidden or unseen medium to listeners. In recent years, digital technologies have transformed radio to a medium that can both be seen and heard. In particular, visuals on social media have given audiences a glimpse of broadcast operations and talent, while enhancing interaction with stations. This study examined how commercial stations across the US portrayed themselves through posts on Instagram. Using a qualitative methodology and social semiotic theory, results of the study revealed two dominant themes of station posts -- station promotion and community -- that signified the essence of radio stations.

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Radio broadcasting has long been perceived as somewhat mysterious to its audiences, largely because it represents the unseen. Its inception and development at the beginning of the 20th century constituted a break from accepted traditional visual culture associated with print to a means of communicating only audibly (Patnode, 2011). Additionally, the characteristics of audiences were as hidden from the broadcast talent as were station personnel from their listeners (Patnode, 2011).

In radio's early days, the medium was met with pessimistic and negative attitudes, including the perception of President William Howard Taft who likened the new form of communication to the supernatural (Covert, 1992). Viewed as a mystery (Hilmes, 1990), radio was initially accused of having the capability to disconnect listeners from involvement in community and society, family, and even morality (Covert, 1992).

The notion of the "theater of the mind" (Patnode, 2011, p. 165) carried with it the medium's self perception that broadcasts were able to generate pictures in the minds of audiences as well as the use of the individual receiver's imagination (Verma, 2012). In the 1920s, *New Yorker* magazine, through a series of cartoons, attempted to visualize the essence both of radio and its audiences (Patnode, 2011). Some illustrations in the series depicted studio talent as very different than the perceptions that stations wanted to create for their listeners, including supposed behind-the-scenes activities during live broadcasts (Patnode, 2011).

In more recent decades, radio broadcasters and associated organizations have attempted to capitalize on radio's audible characteristic. In 1985, the Radio Advertising Bureau launched a promotional campaign for the medium themed "I heard it on radio" (Dougherty, 1985, para. 3). Ads, featuring graphics such as a "pipe-smoking fish" and "a four-legged banana" were placed in media and advertising trade publications, as well as producing spots that were broadcast on local stations (Dougherty, 1985, para. 1).

For the most part, modern radio stations and their talent remain hidden from their listeners. What has changed is the use of digital technologies that enable stations to communicate visually, as well as audibly. Broadcasters have moved from providing only a web presence to using a variety of social media. For example, KISS FM is using Snapchat as a way to connect with younger listeners (Southern, 2016). Additionally, research has shown that radio stations have implemented Twitter as a way to disseminate news and self promotion (Ferguson & Greer, 2011). Stations are also adding Instagram to their communication toolbox. Although prior research has considered social media uses by traditional media, research has yet to consider how radio stations present themselves visually. Using a visual social semiotic approach, the present study analyzed posts on a sample of radio station Instagram pages to determine whether there exists a commonality of themes and how those themes convey the essence of local radio.

Instagram Profile

Instagram is a social media platform that enables users to upload photos and short videos, along with comments and hashtags, via smartphone. Although Instagram is primarily a mobile-centric medium, users are able to view content from a computer. The network was started in March 2010, but made available for use by the public in October of the same year (Markowitz, 2012). Facebook purchased Instagram in 2012 for \$300 million in cash, plus 23 million shares valued around \$30 a share (Savitz, 2012). The company continues to add new features to the network, including Boomerang, which enables users to take a sequence of photos to create a "mini video" (Instagram, 2015.).

Since its unveiling, Instagram has experienced a steady increase in the number of users. A report by eMarketer in 2014 noted that the number of people in the US who were using the social network via smartphone had reached more than 34 million (Bercovici, 2014). The same report estimated that the number of people using Instagram on mobile devices would eclipse those using

Twitter on mobile. Indeed, another report noted that the number of Instagram grew by 60-percent in 2014 compared to a 12-percent user growth of Twitter (Investor's Business Daily, 2015).

Mobile access, the key characteristic of Instagram, has also been a factor in the growth of the network. In early 2016, an industry marketing report stated that just over a third of "mobile phone users" in the US were using Instagram (eMarketer, 2016). According to that report, Instagram was predicted to increase in 2017 to more than 50-percent of people who use mobile devices. At the end of 2016, Instagram estimated that it had 500 million users around the world, including 300 million who accessed the network daily (Instagram, 2016). That compares with only 27 million users in the first quarter of 2012 (Markowitz, 2012).

Regarding user demographics, Instagram is largely a medium used by younger ages and females. More than half of the social medium's users are ages 18 to 29, with more women than men utilizing the network (Duggan & Page, 2015). Nearly a third of females who go online were using Instagram, as compared with just under a quarter of online males. It is the choice of millennials, with nearly 50 million individuals in that category on Instagram (eMarketer, 2016).

Semiotic Theory

Central to the study of semiotics is the attribution of meaning to signs, which range from words to visuals, and objects to actions (Chandler, 2007). Additionally, there are various kinds of signs, including words, film (and scenes in them), performances, paintings, food, clothing and sounds (Berger, 1999), as well as non-verbal interpersonal communication, emoticons and the proximity between individuals engaged in conversation (Jappy, 2013). Signs are things "standing for something" (Chandler, 2007) and include anything that "carries meaning" (Bignell, 2002, p. 6). Simply stated, "signs 'mean' something" (Berger, 1999, p. 1). Conceptually, the study of semiotics considers the differences between denotative, which is what an object or concept appears to be, and connotative, which is what the object means to an individual (Moriarty, 2004). Eco (1976)

differentiated between the two concepts as how a sign is defined (denotation) versus how, by extension, the sign should be interpreted (connotation).

Largely, a person's understanding of the world is based on a "system of signs" (Bignell, 2002, p. 7). It is a system through which information (in the form of codes) is transmitted and elicits some form of behavioral response on the part of the receiver due to a set of rules that operate within the system (Eco, 1976). As such, meaning can be different at the encoding and decoding steps in the process based on an individual's perspective (Moriarty, 2004). However, it is also important to note the "social context" in which a particular sign is used in order to have an agreed upon meaning in society (Bignell, 2002). Berger (1999) argued that signs and their meanings need to be learned according to some form of "convention." Thus, there are symbols in society that convey a certain meaning and that then precipitate an action or feeling (Berger, 1999). Eco (1976) distinguished between the notions of interpretant and interpreter, the former of which indicates the "validity of the sign" even when there is no one to observe it (p. 68).

Two schools of thought informed the development of semiotic theory. Ferdinand de Saussure argued that there were two elements: signs, which comprised the item under consideration, and the signified, which was the meaning of the item when interpreted by the individual (Chandler, 2007). On the other hand, Charles S. Peirce posited that there are three elements that work in concert: the sign, what the sign "represents" or "the object", and "the effect the sign produces" for the individual who is exposed to it (Jappy, 2013, p. 2). The key here is the "effect" rather than the person interpreting the sign. Peirce further proposed that there are three types of signs: iconic, indexical and symbolic. Iconic signs possess a "character" or "quality" of the item for which the icon stands. An indexical sign is something that directs attention or points to something else (Bignell, 2002; Jappy, 2013). Signs that are symbols are those that come to have agreed upon meaning by interpretants and are learned signs in order to understand their meaning (Jappy, 2013). Noth (2011) posited that photos can be both iconic and indexical. They are iconic because the contents of the

photo are similar to the real object, but indexical because the photograph is the result of an action (light), and because they "identify the object which they depict" (p. 303).

Although both Saussure and Peirce approached the notion of signs as representative of concepts and objects, Saussure primarily focused on linguistics and the form of communication between individuals (Eco, 1976). In contrast, Peirce viewed the semiotic process in three parts. The differences between the two theorists is that Saussure included intentionality in communicating signs based on "conventional systems of artificial signs", while the approach of Peirce does not rely on human communication (Eco, 1976, p. 15). Moriarty (2002) argued that Peirce offers a better theoretical approach than Saussure because Saussure is primarily linguistic, while Peirce approached semiotics from a variety of perspectives (I.e., verbal and visual). However, Eco (1976) disagreed with Peirce's contention that all inferences are "semiotic act[s]", arguing that inferences do not become semiotic signs until they are conventional item and recognized as "social codes" (p. 20).

Mentioned earlier is the concept of codes and their operation within the semiotic system. "Codes provide the framework within which signs make sense" and the convention to interpret signs (Chandler, 2007, p. 147); a means by which signs come to have a commonality of meaning (Chandler, 2007). Cultural codes serve as rules of conduct in a social system or setting and accepted conventions in society (Oswald, 2012) and that underlie the culture in which the sign is being interpreted (Moriarty, 2004). Codes are the rules by which society understands the system of signs and their application as people communicate to others in various settings (Bignell, 2002), as well as codes that govern the production of signs such as visuals (Moriarty, 2004). For example, codes are used in marketing efforts to make connections between individual audience members and the "message" (Oswald, 2012, p. 27).

Jappy (2013) argued against the notion of codes, proposing that there is not a commonality of interpretation between individuals. He agreed that there are similarly understood communications, but not systematically across all signs. Jappy noted that some, but not all, signs are conventional and

subject to codes that elicit a specific interpretation. Instead, he argued that people interpret signs differently based on their prior experience with the sign. Thus, the caveat in understanding codes is that some signs are due to codes or rules, while other signs are individually interpreted. Some individuals may have a general versus specific understanding of a sign based on the person's level of experience (Jappy, 2013).

Additionally, codes provide an ability to understand and interpret the meanings of signs as they contrast with other signs (Bignell, 2002). For example, metaphors are commonly used and necessary forms of communication (Lakoff & Johnson, 1980), serving as forms of linguistic comparisons to describe or depict similarities between objects or concepts (Berger, 1999). A further issue is literal versus metaphorical or how a term resemble the concept to which it is applied (Chandler, 2007). Language may also include metaphors in order to depict something in a particular manner to convey a certain meaning via association (Oswald, 2012). Metonymy is used to associate or relate one thing with another (Berger, 1999). Furthermore, myths surrounding a sign give meaning of context that leads to a given interpretation of a sign (Berger, 1999). Examples include a person who is depicted as being larger than life or an event that stands above others in history as comprising more significance or importance.

It is also important to note that signs and codes are not fixed, but dynamic and fluid based on a number of factors that exist at several levels. Words may have varied meanings depending on an individual's language, and different words may be used to indicate "the same thing" (Chandler, 2007, p. 62). Signs may also differ according to abstractness, ranging from simplistic and general to complex and specific (Chandler, 2007). Furthermore, it is essential to understand the existence of culturally applied meanings to draw distinctions between concepts and how to define them (Bignell, 2002) within a given culture (Eco, 1976). Additionally, signs must be considered as what they are not, as well as what they are (Begnell, 2002). This involves the use of concepts that are opposites (Berger, 1999). Location is also an issue in meaning, since context can result in different

understandings (Oswald, 2012). Codes can also change over time within a culture as exemplified by Moriarty (2004) in a discussion of the interior designs of American homes between one decade and another.

In addition to a community understanding of signs, characteristics of individuals observing a particular sign also are a factor in interpretation. This includes a person's mental association between what is signified and the sign (Bignell, 2002). Crucial is the frame of reference that individuals and their experiences bring to their understanding of a sign and how they "react to them" (Jappy, 2013, p. 4). There also are differences in the meanings of signs based on the individual's experience, education and background related to a sign (Berger, 1999).

Furthermore, signs do not operate without the influence of other signs, both within a social system and within groupings of signs. Signs must be mediated in some fashion ("sign-vehicle" as termed by Eco, 1976); thus, signs are associated with the medium through which they are conveyed (Jappy, 2013). There are differing type of signs with inherent limitations and forms of content in various forms of media (Chandler, 2007). Meaning of signs also must be considered within the context of the sign or syntagm, which is the composition of items that make a whole (Chandler, 2007). This includes a series of signs that connect to the next, such as sentences in a story (Jappy, 2013), a sequence of visuals that comprise a message (Berger, 1999) or the meaning of a video due to its order of elements (Bignell, 2002).

The emergence of digital communication has created different dynamics for semiotic analyses, particularly due to the nature of interactivity (Bubaris, 2014). As noted by Bubaris (2014), multimedia provides a different form of signs since users interact rather than simply observe them. Furthermore, interactive designs give users the capability to select content, each of which has meaning.

Visual Semiotics

Underlying the contribution of "visual social semiotics" to semiotic theory is the manner in which composition emphasizes particular elements (Harrison, 2003). Since signs can be either visual or verbal, theoretical application may be made to anything that has meaning (Bignell, 2002).

As discussed earlier, codes (both verbal and visual) provide the framework both for the production and interpretation of signs (Chandler, 2007). For example, in film production, the process of shooting, framing, camera position and editing is based on cinematic codes, the meaning of which audiences or viewers have come to understand through conventions (Chandler, 2007).

Organizations use visuals to convey meaning about themselves in advertising, such as the presence of stereotypes (Oswald, 2012). In pictures, photographers "create the reality of the photograph" by selecting light, setting and composition (Berger, 1999, p. 156). There is also the notion that visuals are more truthful and more accurately depict reality because they can be seen by an individual (Kress & van Leeuwen, 2006).

Branding and Semiotics

Understanding advertising messages, both verbally and visually, is also based on semiotics. This involves more than solely the individual signs in an ad, but what those signs mean in a given culture or society (Bignell, 2002). This extends from how the advertiser wants the reader to interpret the signs to what the signs represent or signify (Bignell, 2002). Companies, through ads, communicate a particular message about a brand to a target audience, using cultural codes to connect with receivers, and by selecting terminology from among potential terms to best communicate within a given context (Oswald, 2012). Organizations also rely on logos for identity to portray what a company stands for in the market (Berger, 1999) and to convey meaning through other branding devices, such as slogans and packaging, that are recognized by consumers (Oswald, 2012). By categorizing brand characteristics in a specific manner, companies are able to "differentiate" themselves from others (Oswald, 2012).

A number of studies have examined organizational use of visuals from a semiotic standpoint. Feng and O'Halloran (2013) analyzed visual metaphors in car advertisements. They found that various camera angles and positions were used to convey meaning, including the amount of distance between the camera and the subject, differentiating sizes of items to show relationships, and positioning elements in either the foreground and background to connote degrees of importance. The researchers noted that contents were intended to produce some form of reaction or attitude on the part of the viewer, with cultural influence in meaning and interpretation.

Another study focused on "airline tailfin designs" to assess visual semiotics and methods of company branding (Thurlow & Aiello, 2007). From a descriptive standpoint, more than half of the designs used blue, a quarter featured a bird, but only 12 percent completely showed the company name. Qualitatively, the designs largely represented some form of motion, with a range of abstractness from clear meanings to highly abstract with the potential for varied interpretations. The designs included cultural associations, as well as an assumed "universal" understanding of the meanings of geometric patterns (p. 327).

Radio and Digital Technology

Gioia and colleagues (2014) posted that "image is everything", both for organizations and public personalities (p. 129). The current challenge, however, is dealing with image and perception in a society dominated by multiple communication vehicles, including social media (Gioia, Hamilton, & Patvardhan, 2014). In response to these changes, legacy media have incorporated online technologies as a means of managing their brand, while attempting to both retain and involve audiences (Chan-Olmsted, 2011). Radio stations as organizations and radio talent, individually, have implemented diverse digital tactics in order to enhance connections with listeners and differentiate their brand from among other stations in their markets.

Given the historical nature of radio as a personality-based medium, it is essential for stations to secure a loyal following of listeners, which may then translate (on a commercial level) into

audiences for advertisers. Two studies have focused on factors that contribute to parasocial interaction with radio personalities and the effects of perceived connectivity. One study examined the relationship between audience members' parasocial interaction, listenership and product recall (Johnson & Patnoe-Woodley, 2016). Results of the study showed that listeners develop connections and parasocial interactions with radio talent, resulting in increased listening, as well as heightened recall and purchase of products they heard about on the stations. Another study used an experiment to assess perceptions of college students about radio hosts (Savage & Spence, 2014). The study found that "self-disclosure" was associated with increased levels of parasocial interaction, but that the use of social media by the host was negatively related to both parasocial interaction and perceived credibility about the personality.

Ersoz (1998) termed radio "the blind medium", since stations convey meaning about themselves through different forms than those that are visual (p. 212). For example, although not showing its on-air personalities, Ersoz noted in a semiotic analysis of a Christian radio station in Colorado that the station's visibility was associated with its assigned frequency and listenership, as well as by the content of its programming. Additionally, the station's "signature" (in this case "The Rock") served as a means of semiotic identification via biblical reference and associated symbolism (p. 216).

Research has also considered how radio stations are using social media. Ferguson and Greer (2011) analyzed the content of radio station Twitter posts and found that the number of followers and quantity of tweets were related to station format. Music stations had more content related to promotion as compared to other station formats, while news/talk stations featured more informational content. Also, AM stations had more daily tweets than did FM stations.

More recently, Herrera-Damas and Hermida (2014) studied the use of Twitter by several "talk show radio stations in Canada." They found that Twitter was primarily an information medium that provided news. A very small percentage of posts featured station promotion. In fact, the number

of promotion posts declined between the two years studied. Additionally, the researchers noted there was little interaction between the stations and their listeners via the social medium. Hyperlinks were essentially internal rather than to external sources, and hashtags were seldom used.

Method

This study was conducted using a qualitative method to examine radio station Instagram posts. The goal was to collect and analyze artifacts that consisted of individual Instagram posts on English-language, commercial radio stations in the U.S. Non-commercial educational stations, including those affiliated with NPR, were not included. For AM stations, there is no range of frequencies set aside for non-commercial stations, so station type was determined during the search process discussed below. For the FM band, noncommercial, educational stations primarily are found between reserved frequencies of 88.1 and 91.9 (Federal Communications Commission, 2015). Some noncommercial stations are located at higher frequencies, but are easily recognized by home page content.

Acquiring the Instagram visuals took place in two steps. First, because there is not a source that lists stations using Instagram, it was necessary to individually assess whether stations were using the social network. This was accomplished by accessing the websites of stations through Radio Station World (radiostationworld.com). The site lists stations in the US alphabetically by state, then alphabetically by city. Within each city, stations are listed by AM and then by FM according to frequency. The site also provides links to websites of most of the stations, although some links were out of date or not otherwise available.

The second step was to access the websites of the stations through the Radio Station World links. After accessing the site, one of the researchers examined the home page for the appearance of an Instagram logo or wording that indicated the station had an Instagram account. The link was clicked to verify that the station's Instagram page was operational. A few stations had an account, but had not posted content to the social network. Another handful of stations posted the Instagram logo

on the homepage of their website, but the link appeared to be inoperative. A majority of stations with an Instagram account posted at least 12 visuals, which is the number of items that appears on the first screen when accessing the site on a desktop computer.

Using a spreadsheet, one of the researchers listed the station call letters, state, type of station (AM or FM), the station's website and, when available, the Instagram address. Some group owned stations used the same Instagram page. In those instances, only one station was listed on the sampling frame. The search resulted in locating 561 commercial stations with an Instagram site. The list was divided, with the researchers each focusing on about half of the sampling frame.

Prior to analysis, the researchers archived the first page of all Instagram sites in their portion of the list in October 2016 using the free Firefox plugin Grab Them All. The plugin enables users to take screenshots of one or more web pages by inputting a list of URLs into the program. Examining all sites was not considered essential, due to anticipated saturation of themes (Ferguson, 2012). Therefore, analysis was initially based on the first 30 sites within each researcher's half of the sampling frame.

The method for analysis was the constant comparative method (Strauss & Corbin, 1990), also known as analytic induction. To execute this method, researchers individually printed the pages, cut the posts from the pages, and then sorted them into stacks based on related theme until main categories and subcategories were exhausted. Individual posts were printed in black and white rather than in color to provide for a neutral visual. Videos also were included whenever a frame of the video appeared as a visual along with the still photos. It should be noted that a visual representing a given video might have been any frame within the product. Only the single frame was used to analyze the video content rather than viewing the entire video. Individual posts were compared with one another until sub-themes were identified. The last step was to sort smaller themes into two or more larger themes.

Although the posts of hundreds of radio stations were collected for this study, the number of distinct themes reached a point of “saturation” after viewing 30 stations (Baxter & Babbie, 2004, p. 79). One of the researchers looked at an additional 30 stations, but could not uncover additional themes. Still, the missing photos for expected themes gave rise to greater appreciation for the method.

Two broad categories of photos were simply unclassifiable: (1) videos, for which a freeze-frame was (much more often than not) ambiguous, and (2) mundane objects unrelated to radio or anything associated with the promotion of radio or the surrounding community. A potential third category was humor, a typical subset of posts that lent itself to a “happy times” motif but still disconnected from the community and station.

Results

Two dominant themes emerged from the analysis. One theme focused on elements associated with station promotion. A second dominant theme featured visuals of the station’s community and its listeners.

Promotion. A dominant theme that arose from the Instagram posts was *station promotion*. Radio and television stations devote a great deal of attention to gathering an audience and promoting a brand, format, or other set of unique attributes (Eastman, Ferguson & Klein, 2006). Radio stations promote their on-air staff, known in the broadcast trade as *talent* or *personalities*. Commercial radio stations often sell live “remote” broadcasts in conjunction with advertisers or community events (Warner, 2005, p. 145; Richter, 2006). Examples of Instagram posts related to remote events include photos of station vehicles, portable tents, microphone covers, and signage -- all emblazoned with station identification (logos, channel numbers, and call letters). Another example would be photos of the event itself: an outdoor fair, rally, festival, or charity event that stations use to cross-promote the sponsor and the station.

Much of the promotion signifies the intent to promote station personnel, e.g., talent within the radio station's main studio. The underlying meaning is that listeners are allowed to see the unseen (although some stations stream a live video feed from their studios). Ordinary listening in one's car denies a visual element to the live radio program. Photos both promote listening and afford a viewing.

Events related to a commercial product or service, including logos of those products/services, remind the listener of the relationship between the sponsor and the station. Listeners hear radio programming without cost of subscription, but the photos signify a latent connection between the regular format and the support system. Blatant advertising in the Instagram posts was extremely rare. Events were far more likely to involve charity organizations than sponsors.

Contests constitute a promotion tool that is enhanced by Instagram, but we found very few instances of contest photos. A listener seems far more likely to receive live radio reminders (or view billboards and television advertising campaigns that promote a contest) than posts on Instagram. This lower utilization suggests that Instagram use by radio stations privileges people, music and community events over the desire to promote time spent listening.

A substantial subset of photos relate directly to music, either as a live performance or graphic presentations (e.g., cover art, posters) that promote a music genre, individual artists or groups, or commercial releases. Photos of performance are instantly recognizable by the presence of people with microphones and musical instruments (guitars, drums) surrounded by stage venues, elaborate settings, and spotlights. The spotlight itself is a motif that signifies a backlit object worthy of one's attention.

Posts of station talent often include close-range photos taken inside the station studios, sometimes with celebrity guests or public visitors. Smiling faces dominate the various solo and group headshots, communicating a happy gathering. "Having fun" is the sub-theme, which makes it an

ideal tie-in for an entertainment medium like radio. The omnipresent smiling is congruent with the “happy times” motif mentioned above with regard to humor.

In the case of solo headshot photos, the singularity of focus signified importance of the person. Even if the context is missing, the framing draws the human viewer to the face or upper torso of a special person (if only by virtue of their isolation from others). Solo shots fell into two roughly equal groups: celebrities and ordinary celebrants. Oddly, solo photos of fans were rare, which might signify how station promotional activities often supersede the actual people and messages involved.

Community. A second dominant theme focused on visualizing various aspects of the community, or at least how stations desired to signify the people and confines of their immediate environment. It is not uncommon for radio stations to make connections with their town or city in a number of ways, including remote broadcasts, news reporting and events. For Instagram posts, community visuals were primarily associated with three sub-themes: events, listeners by themselves, and station staff with listeners.

Visuals highlighting local events varied, likely based on the format of the station. Several posts featured music artists at concerts, including stylized images of performers silhouetted in front of bright lights or wide shots of the stage with spotlights. In those instances, indistinct faces signified an aura of mystery coupled with power and radiance of the central figure. It was also not uncommon to find sports-related posts, primarily high school football, due to the time of year when the sites were analyzed. Other posts randomly illustrated local events, including fairs, parades, Halloween, and what appeared to be a 5k race. Generally, these posts seemed to portray the personality of the community as being alive, active, and unified. Many of the pictures showed groups of people rather than just individual residents, which suggests the radio stations desired to show that the residents of their towns enjoyed participation in sometimes large numbers rather than simply as individuals. These posts signified communities filled with happy residents who enjoyed each other’s companionship.

Other photos commensurate with the community theme included pictures of listeners by themselves, as well as radio station talent with listeners. The fact that stations often featured posts of their listeners signaled to their Instagram followers that residents of the community were as important as the station talent. Some pictures appeared to show listeners who won tickets to an event or other prizes. In essence, the station was giving back to the community, enabling its residents to feel as though they were a part of the station. Overall, the photos depicted listeners as happy people. As with the promotion pictures noted above, the community- and listener-centered posts focused on the notion of having fun.

Pictures also attempted to represent the diversity of the community and of the station's listeners. Some photos were political in nature, which was not unusual given the time during which the artifacts were gathered. Several other photos showed listeners dressed in Halloween costumes that were similar to political candidates. People in the photos were smiling, as compared to the contentious political environment of the 2016 political races. Stations also depicted diversity by showing people of various ethnicities and ages -- from children to senior citizens, which signified that everyone is both welcomed and welcoming in the community.

Rather than photos focusing entirely on station staff ("it's all about us"), picturing listeners on posts signified that the station is really about them. Another set of visuals featured listeners with station personnel, which further signified the connection between residents and the station. In a sense, those photos attempted to show that radio is a partnership between the station and its listeners.

At the same time, many posts about listeners with or without station personnel included a backdrop of the station's call letters, slogan or frequency. Thus, even though the focus of the visual was people, the picture still provided an opportunity for the station to incorporate an element of promotion to remind Instagram followers, "we're here."

Discussion

For nearly a century, radio was essentially an unseen medium, primarily because listeners could only hear on-air talent. Audiences were required to use their imaginations when listening to dramatic broadcasts (Verma, 2012), which gave birth to the notion of "the theater of the mind" (Patnode, 2011, p. 165). Over the past two decades, the emergence of digital technologies have transformed the medium to one that can both be seen and heard. Social media, in particular, have given listeners a glimpse of radio operations and talent, while enabling interaction with stations. The question this study sought to answer is how commercial stations across the US portrayed themselves through posts on Instagram. Using a qualitative methodology, based on visual semiotics, this study found two dominant themes of station posts: station promotion and community.

One of the predominant elements in station promotion involved visuals of station personalities. Talent was often seen in close-up photos, which implies the notion of intimacy through the distance between the camera and the subjects (Feng & O'Halloran, 2013). Revealing on-air personalities who had previously been hidden from their audiences removes the mythology (e.g., Berger, 1999) typically surrounding station talent, particularly now that they can be seen by listeners. Displaying pictures of talent in the studio and at remote broadcasts enables listeners to see announcers doing what they regularly hear on the radio. It is how Instagram visitors come to understand the station's world through visual signs. Therefore, seeing the previously unseen highlights the importance of mental associations (Bignell, 2002) that listeners might have developed about station operations and personnel.

Stations not only posted visuals about themselves, but also featured pictures of sponsors and advertisements that illustrated the connection between the station and its support system. That stations included these elements adds to the truthfulness and credibility of advertisers, because visuals have the capability of enhancing reality (Kress & van Leeuwen, 2006). Furthermore, inclusion of sponsors also might provide a more positive perspective of the advertiser, because the

visuals are included with photos of station staff and talent for whom the listener already has an affinity. These connections, also known as parasocial relationships, between stations and their audiences not only might improve listening, but can also enhance the purchase of products advertised on the station (Johnson & Patnoe-Woodley, 2016).

Another subtheme of station promotion featured photos of talent, performers and celebrities. This was not unexpected, since personalities are the bread and butter of music format stations. At the same time, there were few pictures of celebrities with listeners. This signified that, while station personnel were seen associating with listeners, celebrities are in a special category and are separate from the listener. Such visuals seem to place celebrities on a higher level than the audience. However, station talent were pictured with celebrities, which suggests that the station is the bridge between celebrities and the station's audience. Additionally, picturing celebrities performing by themselves frames them as part of the station's entertainment programming, even when the person is on a stage versus on a broadcast.

Stations also posted a preponderance of pictures of various aspects of their community, primarily through activities and groups of people. In essence, this signified a partnership with their listeners and utilized visual signs to make connections between themselves and their audiences (Oswald, 2012). Bignell (2002) noted that there is a social context in which a sign appears. In these photos, the central message in context was a community that focused on unity and fun. Event photos depicted the personality of the community as active and involving groups of people rather than individuals.

Pictures that were part of the community theme also showed the station sharing in these activities. This further provides a frame of reference for the audience and enhances a particular interpretation of the visual (Jappy, 2013). Events pictured in the posts were likely part of the listeners' experience. They were present, so the pictures could potentially evoke positive memories, since the photos featured smiling people. Chandler (2007) argued that codes imbedded in signs

provide for common meanings. Although individuals might not all interpret a sign (in this case a photo) the same way (Jappy, 2013), the dominant theme helps to depict social settings a certain manner.

Instagram posts offered listeners a window to the station's world -- at least its immediate world. Few of the pictures were of settings outside the local area, which was somewhat like being in a bubble. The community and its residents were in a close and self-contained environment with the radio station serving as the connection and the source of entertainment and belonging. Everything the community needed was in its own locale and the station was there to make it happen.

Radio is no longer "the theatre of the mind" (Patnode, 2011; Verma, 2012), because digital communications through social media have given site visitors the visual stage upon which stations depict themselves, their listeners and their communities. Online technologies reveal the station and their talent; however, the pictures posted on Instagram only tell the story the station wants to tell. The use of logos, call letters and slogans provide meaning to site followers as they view the sequence of visuals on stations' Instagram pages (see e.g., Oswald, 2012).

Radio station Instagram posts served as signs that lead viewers to an interpretation of what is seen. Pictures clearly show literal objects, but also carry with them a meaning to visitors. For example, an Instagram post might feature six people at a local event, but what it signifies is a town that is comprised of diverse, yet unified individuals. As noted earlier, the context of a sign is important when understanding the semiotics of posts. For this study, the analysis revealed the repeated theme of community with happy and energetic residents. These pictures offer context for the whole of a station's site that encourages a particular understanding by viewers. The visuals might even indicate that the radio station is the reason for this togetherness and happiness. While interpreting a sign is based on what an individual brings to it, stations create a visual culture that promotes a dominant interpretation of the radio broadcast industry. This was evidenced in similarly-themed photos being posted across different programming genres and market sizes.

Signs are mediated and associated with the medium through which they are delivered (Eco, 1976). For the present study, the vehicle is the social network Instagram. Users likely have a positive image of the medium, so there exists by extension a positive perception of the station and the content it posts. This is a particularly important factor in station communication, since the predominant ages of Instagram users are 18 to 29 (Duggan & Page, 2015). Stations, therefore, have the ability to make meaningful connections with listeners in this age group and to differentiate themselves from other stations in their market with specific visuals that serve as signs the station wants to convey. Effective use of Instagram from a semiotic standpoint requires the intentional use of visuals to provide certain codes to site visitors. Furthermore, Instagram is an interactive medium that offers dynamic connections to visitors (Bubaris, 2014).

As Gioia and colleagues (2014, p. 129) noted “image is everything” and Instagram is one social medium that can either enhance or detract from the image of a station. It is particularly crucial for radio, since station activities are largely unseen. With social media, stations can define themselves visually. Listeners might already have developed parasocial relationships (Johnson & Patnoe-Woodley, 2016), so Instagram can be a means of enhancing those connections. The use of Instagram also enhances the reach and frequency of station promotion.

A qualitative analysis of meanings and themes is not complete without considering what is missing from the Instagram sites we studied. Negative case analysis is a form of analytic induction that forces the researcher to consider what was expected but not apparent in the data (Lindlof & Taylor, 2002). The following are examples of posts we expected to find on radio station Instagram sites, but did not encounter in any appreciable amount: news, politics, weather, and scenic visuals. It was expected that posts would vary according to station genre, but that was not generally the case. Although there were variations in exact visuals, stations evidenced similarities in themes that crossed format, market size and region of the country.

Very few posts showed specific occupations. One exception was a photo showing emergency responders standing in front of a fire engine. Another picture appeared to show a woman working with a customer in a beauty salon. Stations primarily defined their communities based on people and activities, but rarely recognized their listeners' contributions to the community from the standpoint of businesses or organizations. It contrasts with pictures of station personnel who were shown in the studio or on remote broadcasts. This seemed to signify that the station was working, while the community was engaged in various forms of entertainment and activities. Two themes arose among the neglected categories: serious information and visually aesthetic content.

The relative dearth of serious information stands in stark contrast to content analysis of Instagram content posted by television stations (Greer & Ferguson, 2016). We interpreted the difference in terms of "happy times" for radio stations and "local news" for television stations. The difference between the two type of media is likely due to the programming provided by each of them. While both forms of media offer local content, the primary material for television is news and information at a specific time of day. Radio, in contrast, offers constant local contact through personalities.

Likewise, the intense visual nature of television lends itself to celebrating what the eye can appreciate: glamorous fashions, tantalizing food, stunning scenic vistas. Radio appeals to the ear and personality-driven contact with the human voice. Comparing photos on Instagram sites for television and radio stations, fewer faces comprise the typical post on a radio station's Instagram site.

Nevertheless, some similarities have been found with both broadcast media. Radio and television stations are comparably likely to share groups of people smiling directly into the camera. The meaning of all these joyous faces signifies a happy audience. The subtext to the viewer is "tune to our station and you will be happy, too."

Limitations. The interpretivism in the method and results of this study were not intended to challenge positivism, but enhance our understanding of the types of content on the social media sites

of broadcast stations, radio in this case. Previous work that carefully counted the messages as they were sorted into traditional categories is not discredited. Qualitative research such as semiotics has a long history and published work has gone mainstream in the past twenty years in communication research. Media consultants commonly employ qualitative methods (Hollifield & Coffey, 2006).

The standards of trustworthiness for much qualitative research have been identified previously as credibility, dependability, confirmability and transferability (Lincoln & Guba, 1985). Although the credibility is difficult to assess for photo interpretation, the process we employed was trackable and stable (dependable). Our identification of themes is sufficiently traceable to the sources for the Instagram posts, and thus confirmable. Transferability to other samples of stations, on the other hand, is far less certain, especially given the confines of a conference paper for supplying sufficient details about each image we examined.

Future research might further explore the themes located with this analysis. Also, interviewing the people who compose and select the photos would supply more convincing evidence of the interpretations in this study. We suspect that station motivations comprise a presentation language that guides the day-to-day maintenance of a radio station's Instagram site. More qualitative study is warranted.

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