

Reaching a moving target: How local TV stations are using digital tools
to connect with Generation C

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Abstract

Television is experiencing generational shifts in viewing, but in large part to digital technologies. This study examined the extent to which a sample of local television stations in the US are meeting the demands and needs of Generation C through the use of social media, mobile technology and other online communication tools. The major finding of this study was that television stations have a growing repertoire of social media and other connectivity tools with which to engage their viewers, but that stations in larger markets are making fuller use of interactive technologies.

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The fact that the television industry is undergoing a massive sea change is not surprising news. National broadcast networks and local television stations are both experiencing seismic shifts in audiences, as well as in the way programming is distributed. In an October 2014 *Newsweek* article, Maney (2014) asserted, “broadcast television is about to go the way of AM radio.” Digital technologies are rapidly altering all facets of the industry. The Internet, in particular, has served as a significant impetus in changing the nature of society from one that was traditional and organized into that which is now characterized by mobile and individualized (Maney, 2014). Even TV advertising is undergoing a transition in sales and placement methods by experimenting with programmatic buying nationally (Shields & Marshall, 2014) and automated spot sales locally (Stilson, 2015).

Recent trends in television viewership offer tentative news for broadcast's future. Several market research studies have found that the preponderance of viewers still watch traditional television (Friedman, 2014), with more than eight in ten viewers watching live TV via a traditional set (McAdams, 2014). However, the other aspect of viewership is an aging TV population. In the 2013-2014 television season, the average age of viewers was just over 44, while network program viewers averaged nearly 54 years of age (Kang, 2014). Only the number of older viewers remains consistent, while younger audience numbers are decreasing.

Reports about local television viewership also are also not encouraging. Although the number of people watching local TV news increased from 2012 to 2013, viewership was still

down from 2007 to 2013 (Matsa, 2014a). Reasons for the increase in 2013 might have been attributed to interest in several major news topics.

With generational shifts in television viewing preferences and the proliferation of diverse digital communications, how well is the TV industry staying ahead of the curve? The question is especially crucial for the future of local television and the emergence of the connected generation -- Generation C. Given the extent of online news access and sharing through social media, as well as citizen contributions to the process, Mitchell and Page (2014) noted that news operations must become involved in multiple forms of content distribution. With that in mind, the purpose of this study is to examine the extent to which television stations have incorporated social networks, mobile technologies and other digital distribution channels into their information repertoires.

Defining Generation C

Audience segmentation has typically been based on delineated age ranges. Although there is some variation in establishing birth years according to differing sources, there is general agreement on the identification and characteristics of individuals falling within those parameters. For example, these include designations such as Silent, Baby Boomers and Generation X (see e.g., Fry, 2015). Compared with generational divisions based on standard demographics such as birth years, members of Generation C are defined according to the use of communication technology (Hardey, 2011) and "based on interests and behavior" (Solis, 2013, p. 32).

Although Generation C describes lifestyle over age categories, millennials ages 18 to 34 are the highest percentage of connected individuals and "spend the most time using media" (Irwin, 2014, para. 4). In addition, millennials view YouTube more than any other online source (Guimarães, 2014). Furthermore, one report predicted that Generation C will comprise four in

ten people living in the U.S. by 2020 and will provide the impetus for economic growth, changes in business communication and extended social connections (Friedrich, Peterson, & Koster, 2011).

An early discussion of Generation C by Trendwatcher ("Generation C," 2004) defined these individuals as consisting of four attributes: content produced by the general public, particularly online, as compared with content generated by professionals; creativity; control by the individual over purchases and product development; and celebrity status of the individual through wide distribution of online content. Friedrich, Peterson and Koster (2011) defined Generation C as "connected, communicating, control-centric, computerized, community-oriented" (para. 6).

Also referred to as digital natives, these individuals have "grown up with ubiquitous digital technology" (Manafy & Gautschi, 2011, p. xi). Research by Morreale and colleagues (2014) found that Generation C college students perceived themselves to be competent in the use of communication technologies, and were most active in texting and cell or smartphone use, and the use of social media. Additionally, research has found that college students are so connected to their iPhones that they experienced less anxiety, lower blood pressure and heart rate, and higher feelings of pleasantness when they were in possession of the phone when it was ringing (Clayton, Leshner, & Almond, 2015).

The notion of connectivity is particularly noteworthy. According to various market research reports, individuals ages 18-34 comprise the highest percentage of social media users (Nielsen, 2012), particularly Facebook, Instagram, Twitter, Tumblr, Pinterest and Snapchat (Guimarães, 2014). Only LinkedIn was dominated by users age 35 and older (Guimarães, 2014). Generation C also views experiences with companies as important and sees the importance of

sharing their experiences with others (Solis, 2013). They also tend to trust what people who they perceive to be friends post online. One study found that members of Generation C were confident in the truthfulness of comments posted to "consumer review websites" (Hardey, 2011, p. 761). The ability to connect has also redefined the concept of work for these individuals. For them, work is not relegated to a specific time and space, or even to the amount of time spent on individual tasks (Evans, 2011), largely because technology allows them to work and interact from anywhere at any time.

Attitudes about an organization based on its use of technology is also a pertinent issue for the present study. For example, prior research found that millennials had a higher perception of brands that used social media (Agozzino, 2012). In a study of Generation C, Hardey (2011) concluded that, in order to reach them, companies need to facilitate user generated content to "build brand loyalty" and to better understand how that group thinks and what they think about (p. 763).

It is not simply that Generation C is connected on social media, but that they use a variety of technologies, such as mobile, to maintain constant connections (Solis, 2013). According to Nielsen (2012), members of that group, ages 18-34, comprise the highest percentage of people who own mobile devices. In addition, a Pew Research study noted that 83-percent of smartphone owners were ages 18-29 ("Mobile technology," 2014). Using a combination of technology is also a factor, with one report revealing that 60-percent of social media use by a younger demographic is through mobile devices (Adler, 2014).

Diffusion Theory and Organizational Adoption of Innovations

The implementation of emerging technologies by local television stations is rooted theoretically in diffusion of innovations. Examining the adoption of communication platforms,

such as social media, offer an understanding both of the sender and audience members who choose to follow the station's social network postings. Television stations might adopt a particular medium, but the perceived effectiveness of innovation adoption decisions are limited unless their audiences become a part of the communication process by following or subscribing to the medium. Diffusion is defined as an innovation being communicated over time through various media among members of a social system (Rogers, 1995). In the present study, the social system being examined is local television stations and the extent to which those entities have adopted the use of social networks, information feeds through RSS and mobile devices (such as apps) to connect with Generation C.

Innovation adoption occurs at two levels. At the individual level, whether or not a person adopts a given innovation is related to five perceived characteristics of the innovation (Rogers, 1995). First is relative advantage, which includes weighing the benefits of adopting the innovation compared with costs. Individuals may also decide about implementing an innovation based on the compatibility of the innovation with the person's values, knowledge and experience with similar innovations. Third, is assessing the level of complexity associated with the innovation. For this characteristic, higher levels of perceived complexity mean less chance of adoption. The last two innovation characteristics, observability and trialability, involve potential adopter seeing the innovation in use by others and try the innovation themselves.

Adoption of innovations may also occur at the organizational level. As it relates to the catalyst for adoption, there are differing motivations for organizational diffusion (Rogers, 1995). One is optional and determined by the individual. Second, the motivation to implement an innovation may be collective, with the adoption decision made by a group. Third, adoption may

be authority-driven, in which "few individuals" make the determination to adopt a practice or object.

Various factors influence the implementation of ideas or objects in organizational settings. These include "organizational structure," the amount of resources available, management, as well as individuals who serve as either a positive or negative influence of adoption (Rogers, 1995). Organizations may also encounter issues such as "performance gap," which is the difference between anticipated and actual results of implementing an innovation (Rogers, 1995, p. 393). Additionally, the size of an organization has been found to correlate with the degree of innovativeness, so that "*Larger organizations are more innovative*" (Rogers, 1995, p. 379, emphasis in original). Given that factor, the following hypothesis is proposed:

H1: Television stations in larger markets will evidence a higher level of innovativeness as seen in the implementation of tools for connectivity.

Local TV Stations Technology Adoption

Three trends are particularly noteworthy regarding the current and future status of television. One is time-shifted viewing. Although viewers prefer watching TV on a traditional set, one study found that just over 40-percent prefer viewing live television, while 43-percent preferred viewing at a different time (Friedman, 2014). Digital is playing an important role in viewer dynamics. Live TV viewing is declining among younger ages, due to "time shifting" and "online options" (Pallota, 2014, para. 2). Nielsen (2014a) reported that total time viewing TV had increased in 2014; however, the growth was attributed to online viewing, with increases in digital consumption.

A second trend is the use of alternate technologies, including acquiring video content via mobile devices, and by opting for streamed programming and opting out of cable services (i.e.,

cord cutting). Online providers such as Netflix and Hulu Plus have been in existence for several years; however, traditional program providers are beginning to tap into changes of audience preferences by instituting their own form of a-la-carte television. For example, CBS is attempting to attract cord-cutters by starting its own streaming service (Steel, 2014).

The third TV industry trend is the impact of social media on news consumption. A study by the Pew Research Center found that social media users are also using the networks to share stories or even to contribute content (Matsa, 2014a). About half of Facebook users get news from the social network, although more than three-quarters of those people get news incidentally (Matsa, 2014b). The report also noted that the demographics of people who access news on social media varies, with ages 30-49 predominant on Facebook and Google+, while the top age group for news is 18-29 on Twitter and YouTube.

Over the past three decades, media scholars have studied the evolving use of various technologies by local television stations in the U.S. For example, a pair of studies in the 1980s examined the use of satellite news gathering (SNG) equipment. One study found that less than a fifth of stations used SNG gear, with large market stations having more "access" to the technology (Lacy, Atwater & Powers, 1988). The second study noted that cost was an issue in adoption (Lacy, Atwater, Qin & Powers, 1988). Additionally, competition was a part of the adoption rationale, in that a higher degree of competition meant it was more likely a station would use SNG equipment. Based on market dynamics, the following hypothesis is proposed:

H2: Stations in more competitive markets will evidence more use of connectivity tools than less competitive markets.

Research about emerging technology and TV stations has also included a series of studies about the adoption of the Web. Compared with the SNG findings noted above, one study found

that there was no relationship between competition and the type of content on TV stations' websites (Kiernan & Levy, 1999). However, the research revealed that there were some significant differences in site content based on network affiliation and income. The researchers concluded that stations at the time did not appear to be using the Web's full potential. Based on that finding, this study seeks to answer the following research question:

RQ1: What is the relationship between network affiliation and use of connectivity tools by local TV stations?

Type of content offered online has also been considered. Chan-Olmsted and Park (2000) found that few TV stations offered webcasts of news, with most stations simply using text. They also noted that there was little presence of interactive elements or a means for site visitors to offer feedback. Instead, the focus was on delivering news and programming information. In recent years, YouTube has become a popular medium for younger audiences to both view and contribute content. A 2014 study by Pew Research found that, for adult Web users overall, YouTube was the second most accessed social network after Facebook, with more than eight in ten 18-29-year olds having used that online resource (Anderson, 2015).

Research has also examined how broadcast and cable networks use the Web as a tool for enhanced television (Ha, 2002). The study found there were some differences in what broadcast TV and cable offered on their websites. Broadcast networks had more video clips and programming information to connect with show followers. In contrast, cable network websites were more user friendly, and had more interactive features through games and quizzes. The analysis also revealed that neither broadcast or cable sites provided many participation opportunities.

Local television stations attempt to differentiate themselves from their competition through programming, technology and promotion. Some stations have experimented with converged operations with newspapers that included sharing news and resources (Singer, 2004; Smith, Tanner & Duhé, 2007). Other research found that stations also use weather technology, such as radar and "satellite maps," as a promotion strategy (Daniels & Loggins, 2010). In particular, the study noted that the top stations in a market were more likely to brand their weather casts.

More recently, a number of studies have focused on television and social media. Research comparing TV networks and major newspapers found that the networks relied on Twitter as a news source more than did the newspapers examined in the study (Moon & Hadley, 2014). A study of local TV station Twitter postings found that the use of the social network differed according to market size (Greer & Ferguson, 2011). Large market stations had more invitations for interaction, while stations in medium size markets were more likely to use Twitter to promote the station's website. Overall, Twitter postings comprised mostly news content and little promotion. Similarly, research about TV station use of Pinterest found that only about 20-percent of pins promoted the stations, with lifestyle the predominant type of content (Ferguson & Greer, 2015). Market size was related to postings in that large market stations had the most pin boards and more followers, but stations in small markets provided more pins. Given findings of these studies, the following research question is posed:

RQ2: What is the extent to which stations are creating community, based on market and station characteristics?

Given the widespread use of smartphones by 18-29 year olds ("Mobile technology," 2014) and dependence on this technology by college students (Clayton, Leshner & Almond,

2015), it is also pertinent to examine this aspect of local TV connectivity. To date, only a handful of studies have considered mobile devices in relation to traditional television. One study examined the use of iPads to watch television and found that viewing TV on tablet computers was supplementing rather than replacing watching television on a traditional set (Greer & Ferguson, 2014). A study of television stations in Tampa, Florida, found that news on the stations' websites was the same as that found on the stations' mobile apps (Padley, 2012). Drawing on findings of prior research about mobile technology and television, this study seeks to answer the following questions:

RQ3: What is the relationship between station characteristics and the extent to which television stations are communicating via mobile apps, RSS feeds and alerts?

RQ4: What is the relationship between station characteristics and the extent to which stations provide opportunities to contribute content?

Method

Stations were selected through a stratified, systematic selection according to methods adapted from prior research (Chan-Olmsted & Park, 2000; Kiernan & Levy, 1999). Strata were defined as large (1-50), medium (51-100) and small (101-210) markets. Within each stratum, 20% of markets were selected systematically with a random start. This resulted in selecting 10 markets each for medium and large, and 22 small markets. 180 stations were coded. Two of those were missing even basic information.

Within each market, the authors accessed the websites of all full-power, English-language stations that were affiliated with ABC, CBS, NBC, Fox and CW networks. Websites were primarily located using StationIndex.com, which lists markets in order of largest to smallest based on the estimated number of TV homes, as well as stations within those markets and links

to the station's website. Some web links were outdated and links to some other stations were not provided. In those instances, a search was conducted for the station site through a web search engine. For situations in which multiple stations shared a single website and social media links, the authors recorded data for the stations as if they were individual entities.

Coding involved searching the station's website for links to six social media: Facebook, Twitter, Instagram, Pinterest, Google+ and YouTube. Those social networks were selected for inclusion in this study because they represented six of the eight most visited social media sites in late October 2014 (Experian, 2014). Also, a preliminary site review revealed that TV stations were likely to offer a link to one or more of those six social media. Websites typically displayed social media icons at the top or bottom of the home page. Social media sites were primarily accessed through those links. If a link for a social media site was not present on the home page, a Web search was conducted to determine if the station had a given social media account.

The researchers first recorded the network affiliation of the station, the Nielsen Designated Market Area (DMA) rank and the estimated number of TV homes (Nielsen, 2014b). Given that the focus of this research is the way local TV connects with Generation C, coding of social media and other technological features was based on three characteristics of that generation noted previously (e.g., Trendwatcher, 2004; Friedrich, Peterson & Koster, 2011): Connected, Content/Control and Community.

Connected: To assess level of station connectivity, the researchers indicated whether or not the station provided RSS feeds, offered a mobile app or linked to a site for the user to download an app, or provided a way to sign up for email or text alerts.

Content/Control: One characteristic of Generation C is their desire to contribute content. For this study, content was operationalized as the station encouraging and providing a location

for visitors to contribute content via the website. This included posting photos, videos or news tips. For this category, researchers indicated whether or not the station offered this feature (0=no; 1=yes).

Community: Coding here included two elements that comprise the notion of community: the station's posting of content and the level of belonging to the station community as indicated by the number of followers (Twitter, Pinterest, Instagram, Google+), subscribers and views (YouTube) and likes (Facebook).

Table 1 is a summary of the continuous measures: likes, tweets, pins, posts, views, subscribers, followers, TV households. No interpretation was necessary, so intercoder reliability was not an issue. Content offered among the six social media tools was recoded as dichotomous (0 = none, 1 = one or more piece of content (e.g., tweets) but then summed into an "implementation of social tools" score ranging from 0 to 6 ($M = 3.70$, $SD = 1.71$, $N = 178$).

Among the 178 stations in the final sample, Facebook was the most common social medium (169 stations). Twitter was used by 161 stations, YouTube (associated with Google+ by ownership) had 100 stations. Pinterest and Instagram were used by 72 and 68 stations, respectively.

Table 2 shows the frequency counts for the discrete measures: mobile apps, RSS feeds, alerts, and invited contributions (all of which were coded either 1 when the station web site indicated the use of these a connection or community tools. Mobile apps found use in the largest portion of stations (63.48 percent), followed by RSS feeds (59.89 percent), invited contributions (58.99 percent) and email/text alerts (56.74 percent). All of these seemed influenced by whether that station offered local news, which was unlikely for CW affiliates and some Fox stations. The

apps, feeds, and alerts were summed into a “mobile tools” variable ranging from 0 to 3 ($M = 1.81$, $SD = 1.13$, $N = 177$).

Competitiveness was measured by sorting the markets into two groups, low and high, by virtue of stations collaborating with ownership, website cooperation, or fewer than 4 network-affiliated stations (coded 1 for low, $n = 84$). High competition stations (coded 2, $n = 95$) had four or more network-affiliated stations and showed no collaboration for social tools, ownership or shared local news). Low competition stations were not synonymous with stations in small markets. For example, Jacksonville (DMA number 48) was coded low competition and Pocatello (DMA number 163) was coded high.

Results

The first hypothesis proposed that stations in larger markets would evidence a higher level of innovativeness in the use of various digital tools. This hypothesis was tested by comparing the implementation of social tools across the three market size groups (83 stations below the top 100 DMA, 46 in the second 50 DMA, and 50 in the top 50 DMA). An ANOVA test, $F(2, 176) = 8.78$, $p = .000$, $\eta^2 = .03$, showed small, significant group differences between the implementation score (3.17) for bottom-ranked stations and the top 50 (4.34) and second 50 stations (3.97), using Tukey-b post-hoc comparison ($p < .05$). H1 was supported (see Table 3).

Hypothesis two sought to determine if stations in more competitive markets would evidence more use of digital connectivity tools than stations in less competitive markets. The hypothesis was tested using the same implementation score. An independent variables t-test, $t(177) = -1.06$, $p = .29$, revealed no difference between low competition stations ($M = 3.56$, $SD = 1.71$, $n = 84$) and high competition stations ($M = 3.83$, $SD = 1.72$, $n = 95$). H2 was not supported.

The first research question considered whether network affiliation made a difference in the implementation of social tools. An ANOVA test, $F(4, 174) = 5.98$, $p = .000$, $\eta^2 = .09$, revealed differences between the implementation score for CW affiliates (2.39, $n = 23$) and the scores for the other four network stations: Fox (3.32, $n = 37$), ABC (3.90, $n = 41$), NBC (4.16, $n = 38$), and CBS (4.18, $n = 40$), using Tukey-b post-hoc comparison ($p < .05$). RQ1 thus revealed some difference with regard to network affiliation, possibly related to whether a station carried local news (see Table 4).

Research question two considered differences in the number of tweets, posts and pins. An ANOVA test ($F(2, 175) = 26.36$, $p = .000$, $\eta^2 = .23$) showed large differences in summed content activity among the three market groups: Top 50 stations ($N = 49$) averaged 48,442 tweets, posts and pins, while second 50 DMA stations ($N = 47$) had 37,622 posts and stations below the top 100 had 17,213 (all three groups differed $p < .05$ by Tukey-b post-hoc comparison). See Table 5. Although nothing prevents small-market stations from posting as much content as large affiliates (and some stations did), top-market stations on average seem to give such community building a higher priority.

The second research question also examined differences by network affiliation. Another one-way ANOVA ($F(4, 173) = 6.85$, $p = .00$, $\eta^2 = .14$) showed that posting content differed by network affiliation divided into one group comprised of the posts of CW affiliates (6,822.48, $n = 21$) and a second group comprised of the posts of the other four network stations: Fox (25,827.95, $n = 37$), ABC (33,195.36, $n = 42$), CBS (37,062.05, $n = 40$), and NBC (41,804.08, $n = 38$), using Tukey-b post-hoc comparison ($p < .05$). RQ2 thus revealed some difference with regard to network affiliation (see Table 6).

The third research question concerned the influence of market size and network affiliation (i.e., station characteristics) on station connectivity as measured by mobile apps, RSS feeds, and alerts. Two ANOVA tests revealed significant differences. For market size, Tukey-b post hoc comparisons ($p < .05$) showed that top 50 stations scored 2.28 (out of the 3 tools) while smaller stations scored lower: second 50 DMA scored 1.83 and markets below the top 100 scored 1.51 ($F(2, 174) = 7.79, p = .001, \eta^2 = .08$). See Table 7. Using TV households instead of groups, Pearson's r confirmed the finding, correlating exact size of market with use of connectivity tools ($r = .22, p = .003$). Network affiliation by ANOVA ($F(4, 172) = 6.63, p = .0001, \eta^2 = .13$) clearly identified CW affiliates (0.91) standing alone in the low group and NBC affiliates (2.29) in the high group in the post-hoc tests, but the middle group showed some Tukey-b overlap (Fox 1.57) compared with ABC (1.86) and CBS (2.00), with ABC and CBS both appearing in the high and middle groupings. Nevertheless, network affiliation mattered. See Table 8.

Research question fourth addressed differences related to the same station characteristics but with regard to invited contributions. All the variables were nominal so two chi-square cross-tabulations were used. In the first crosstab, market size ($\chi^2(2, N = 178) = 6.82, p = .03$) showed differences with 74.0 percent of top 50 markets soliciting contributions from viewers, followed by 56.5 percent of second 50 markets and 51.2 percent of DMA below 100. In the second crosstab, network affiliation ($\chi^2(4, N = 178) = 14.24, p = .01$) showed differences with 76.0 percent of NBC stations soliciting contributions from viewers, followed by 65.0 percent of CBS stations, 61.9 percent for ABC affiliates, 47.2 percent of Fox stations, and 31.8 percent of CW affiliates. For all stations combined, 59 percent invited viewer contributions.

Discussion

National television networks as well as local television stations are experiencing changes that range from programming distribution methods to shifts in audiences. As the average age of television viewers increases (Kang, 2014), an important issue is how well both the industry and local stations are dealing with changes, including cultivating relationships with younger audience members who rely heavily on social networks (Nielsen, 2014) and mobile devices (“Mobile technology,” 2014). This study focused on the extent to which local TV stations are using top social media platforms, mobile technology and other digital tools to connect with Generation C.

The major finding of this study is that television stations have a growing repertoire of social media and other connectivity tools with which to engage their viewers, but that stations in larger markets are making fuller use of interactive technologies. The finding of significant differences according to market size in the implementation of these tools also supports Rogers’ (1995) notion that larger organizations evidence more innovativeness. Although Rogers focused on organizational size, there is a connection between market and station sizes, particularly regarding resources.

Smaller-market stations sometimes feel at an economic disadvantage compared to larger affiliates, especially with regard to state-of-the-art equipment and high-priced talent. But opting to offer content on social media is essential free. In some of the very small markets we observed, those with small staffs and minimal budgets, the use of Facebook and Twitter was substantial, even spreading to Instagram (younger audiences) and Pinterest (female viewers). Encouraging viewers to send photos or video to the local news producers is an activity that transcends economic resources, yet it was mostly large-market stations that engaged in such outreach to the mass audience.

Network affiliation was also a differentiating characteristic of stations with regard to social media use, confirming previous research (Kiernan & Levy, 1999). CW affiliates were far less likely to court viewers with social media and other interactive features. It might be argued that CW stations are “weak sister” operations, especially with regard to local news programming.

Competition among stations in a market was not found to be an influence on social media use, confirming Kiernan & Levy (1999), but disconfirming Lacy, Atwater, Qin & Powers (1988). The key difference in those two studies perhaps centered upon where there was a difficult economic choice: As noted above, using websites (and social media) is not as price-driven as purchasing satellite news gathering equipment. It might also be an issue of whether the station dedicates personnel to social media. Further study is warranted to determine the influence of intra-market competition.

Opportunities for audience participation was also a concern in this study. As with other comparisons, the top markets had the most incidents of opportunities to participate through such means as contributing news story ideas or posting photos and videos. This finding is commensurate with prior research about Twitter, which found that large market stations were more likely to invite interaction of followers (Greer & Ferguson, 2011). Regarding network affiliation, the highest number of stations that offered opportunities to contribute were associated with NBC.

Members of Generation C are defined by characteristics such as a desire to contribute content, creativity, connectivity and computer use (see e.g., “Generation C,” 2004; Friedrich, Peterson, & Koster, 2011). The analysis in this study examined TV station’s digital offerings associated with connected, content/control and community. Nearly two-thirds of the stations offered mobile apps. Sixty stations provided RSS feeds and around 56% offered alerts of various

types. This findings is crucial for stations, given the importance Generation C/millennials place on their smartphones for communication (“Mobile technology,” 2014; Solis, 2013), including the use of mobile devices to check news (Edmonds, 2015). Regarding content/control, nearly 59% of stations provided opportunities to contribute content.

A study in 2015 found that Facebook, YouTube and Instagram were the top three social media sources where millennials get news (“How millennials get news,” 2015). TV stations in the present study also evidenced a sense of community building through social media, primarily Facebook. A large percentage of stations also had a Twitter account. However, there was little use of Instagram and a relatively small number of station posts on that social medium. In fact, only 68 of the stations had an Instagram account. Given its popularity among 18-34-year olds (Guimarães, 2014), it seems that stations would be more active in the use of Instagram. In addition, for stations with YouTube accounts, there was a large number of views, but a small subscriber base. This might indicate that, while people are accessing a station’s video content through YouTube, they are not connecting as subscribers. Because this study examined only numbers of views and subscribers, results cannot be associated with a particular age group. Future research should seek to provide details about viewership of TV station YouTube sites.

This study did not interview station personnel to ascertain the motives to engage with their viewers. Future research should survey promotion managers regarding their use of free media to promote station programming and news talent. Another future approach would be to measure viewers’ self-reported preferences for social media content and mobile apps downloaded from local stations. It would be interesting to compare the habits of Generation C to more traditional viewers.

A number of other observations surfaced that are pertinent for the TV industry in general and local television stations in particular. First, some stations utilized a wide array of tools to connect with their audiences, including social media and mobile technologies. However, findings are mixed when it comes to providing features that match the characteristics of Generation C. As TV news audience age, it is imperative that stations find ways to incorporate digital technologies into their communication repertoire in effort to court younger segments of their markets. Just having content, however, will not accomplish that objective. Rather, stations also need to encourage interaction through user generated content and sharing to add value to local news and information.

Second, some stations are taking advantage of technology, while others are slow to adopt some features discussed in this study. It is crucial that stations change their operational model to one that incorporates diverse tools, ranging from social to mobile to participatory, especially to encourage the development of community versus passive viewers. This could include tailoring content to Generation C. It also means providing news and information via YouTube to capitalize on the desire for viewing flexibility and time shifting (Pallota, 2014). In addition, stations need to be flexible and creative in finding ways to implement the emergence of new social media platforms.

We found it odd that stations would make an effort to reach specialized audiences on Instagram, Pinterest and YouTube, but often neglect to display an icon for those venues alongside the ubiquitous logos for Facebook and Twitter. Very young viewers might be more inclined to follow stations on Instagram than Facebook, because they see the latter as too much in the mainstream. In 2015, some stations started to consider lesser-known social media tools

like Snapchat because of youth appeal (Marszalek, 2015). Future research should examine that alleged trend.

Some limitations should be noted regarding this study. Due to its focus on content research, this study only examined observable numbers of postings, followers, views, and subscribers. It did not analyze types of content. Future research should compare the types of news this age group accesses with the content that stations provide via social media. Second, given the nature of this study, findings cannot be associated with the extent to which younger audiences are engaged in TV station use of technologies. That is also is a topic for future research. Finally, as noted earlier, this study focused on station uses of digital tools and, therefore, does not include an analysis of station operations.

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Table 1

Descriptive summary of continuous measures

Variable	N	Minimum	Maximum	Mean	Std Dev
Facebook likes	169	264	3,754,024	117,772.88	307,202.17
Station tweets	161	27	119,000	34,049.07	27,466.83
Twitter followers	161	42	724,000	28,169.88	62,201.86
Instagram posts	68	0	1,451	399.01	379.48
Instagram followers	68	6	43,114	2,100.51	5,488.53
Pinterest pins	72	0	12,995	791.53	1,774.48
Pinterest followers	72	1	2,527	466.13	507.71
YouTube views	100	77	76,803,609	3,617,718.18	11,936,875.42
YouTube subscribers	100	0	26,291	1,265.67	3,555.57
Google+ views	102	0	12,479,021	462,007.25	1,520,652.81
Google+ followers	100	0	441,412	12,569.41	64,130.01
Station posts ^a	178	0	119,000	31,259.26	28,293.90
Station views ^b	178	0	81,623,240	2,297,171.67	9,426,522.36
Implementation ^c	179	0	6	3.70	1.71
Mobile tools ^d	177	0	3	1.81	1.13
Total TV HH	180	16,580	3,477,250	597,440.56	718,039.74

^a sum of tweets, posts, pins^b sum of YouTube and Google+ views^c sum of dichotomous use of Facebook, Twitter, Instagram, Pinterest, YouTube, Google+^d sum of dichotomous variables mobile apps, RSS feeds, email/text alerts (see Table 2)

Table 2

Frequencies of dichotomous variables

	Label	Value	Frequency	Percent
Mobile apps	No	0	65	36.52
	Yes	1	113	63.48
		Total	178	100.00
		Missing	2	
RSS feeds	No	0	71	40.11
	Yes	1	106	59.89
		Total	177	100.00
		Missing	3	
Alerts	No	0	77	43.26
	Yes	1	101	56.74
		Total	178	100.00
		Missing	2	
Invited contributions	No	0	73	41.01
	Yes	1	105	58.99
		Total	178	100.00
		Missing	2	

Table 3

(H1) *One-way analysis of the implementation of social tools by market size*

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Between groups	2	47.47	9.07	8.78	.00	.03
Within groups	176	475.84	2.22			
Total	178	1523.31				

Tukey B post-hoc comparison

Market Size	<i>n</i>	Subset for alpha = 0.05	
		1	2
Below top 100	83	3.17	
2nd 50 markets	46		3.98
Top 50 markets	50		4.34

Note. Means for groups in homogeneous subsets are displayed.

Table 4

(RQ1) *One-way analysis of the implementation of social tools by network affiliation*

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Between groups	4	47.47	15.82	5.98	.00	.09
Within groups	174	460.02	2.64			
Total	178	523.31				

Tukey B post-hoc comparisons

Network	<i>n</i>	Subset for alpha = 0.05	
		1	2
CW	23	2.39	
Fox	37		3.32
ABC	41		3.90
NBC	38		4.16
CBS	40		4.18

Note. Means for groups in homogeneous subsets are displayed.

Table 5

(RQ2) *One-way analysis of posting^a by market size*

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Between groups	2	32,800,000,000	16,400,000,000	26.36	.00	.23
Within groups	175	108,900,000,000	622,200,000			
Total	177	141,700,000,000				

^a Posting was the sum of tweets, Instagram posts, and pins*Tukey B post-hoc comparison*

Market Size	<i>n</i>	Subset for alpha = 0.05		
		1	2	3
Below top 100	82	17,213		
2nd 50 markets	47		37,622	
Top 50 markets	49			48,442

Note. Means for groups in homogeneous subsets are displayed.

Table 6

(RQ2) *One-way analysis of posting^a by network affiliation*

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Between groups	4	19,360,000,000	4,840,000,000	6.85	.00	.14
Within groups	173	122,300,000,000	707,100,000			
Total	177	141,700,000,000				

Tukey B post-hoc comparisons

Network	<i>n</i>	Subset for alpha = 0.05	
		1	2
CW	21	6822.48	
Fox	37		25,827.95
ABC	42		33,195.36
NBC	40		37,062.05
NBC	38		41,804.08

Note. Means for groups in homogeneous subsets are displayed.

Table 7

(RQ3) *One-way analysis of station connectivity^a by market size*

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Between groups	2	18.53	9.27	7.79	.001	.08
Within groups	174	206.94	1.19			
Total	176	225.47				

^a Connectivity was the sum of mobile apps, RSS feeds and alerts*Tukey B post-hoc comparison*

Market Size	<i>n</i>	Subset for alpha = 0.05	
		1	2
Below top 100	81	1.51	
2nd 50 markets	46	1.83	
Top 50 markets	50		2.28

Note. Means for groups in homogeneous subsets are displayed.

Table 8

(RQ3) *One-way analysis of station connectivity^a by network affiliation*

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Between groups	4	30.12	7.53	6.63	.00	.13
Within groups	172	195.35	1.14			
Total	176	225.47				

^a Connectivity was the sum of mobile apps, RSS feeds and alerts*Tukey B post-hoc comparisons*

Network	<i>n</i>	Subset for alpha = 0.05		
		1	2	3
CW	22	0.91		
Fox	35		1.57	
ABC	42		1.86	1.86
CBS	40		2.00	2.00
NBC	38			2.29

Note. Means for groups in homogeneous subsets are displayed.