

Introduction

At a basic level, effective communication requires delivering the right message, to the right audience, through the right channel, at the right time (McQuail, 2010). Differing communication strategies, engagement methods, media channels, and individual or group preferences produce a wide array of approaches and options when developing targeted messages or disseminating information. Therefore, determining the most effective method, or combination of methods, toward meaningful engagement among a targeted audience can prove to be challenging (Fuchs, 2017; Papacharissi, 2015). To drill down to particular communication channel preferences or audience relevance evokes even more nuanced challenges (Holt, Rumble, Telg, & Lamm, 2015; McQuail, 2010).

Issues related to agriculture, food, and the environment are often layered in complexity. Empirical research results, policy and federal regulation, media and industry response, as well as public perception, all interact upon an industry fundamentally focused on feeding and clothing the world's population (Holt et al., 2015; Murdoch, 2006; Rumble, Holt, & Irani, 2014). Add to this complexity the rapidly-increasing news cycles, increased volume of media consumption, controversies around fake news, and decreased public trust—all, of which, present additional challenges (Shoemaker & Reese, 2013). Therefore, finding the right combination of timing, messages, media channels, and target audiences remains a persistent and dynamic goal. Despite the importance there are a limited number of empirical studies specifically analyzing agricultural communication channel preferences (Lamm, Rumble, Carter, & Lamm, 2016a), this study is intended to address this gap.

To juxtapose the complexities of message development and audience understanding expounds the challenges of effective engagement and information dissemination. This leads to a need for critically examining the processes associated with media convergence—specifically as media continue to integrate social-media dimensions of public engagement and discussion, and information consumers are carried across a variety of media platforms (Jenkins, 2006). While media convergence has predominantly been understood as a technological process that merges platforms and channels, Jenkins (2006) argues that “convergence represents a cultural shift as consumers are encouraged to seek out new information and make connections among dispersed media content” (p. 3). As media technology continues to evolve rapidly, such a cultural shift characterizes information sharing and audience engagement as dynamic rather than static, supporting the claim made by Boone, Meisenbach, and Tucker (2000); specifically, communication efforts need to recognize and stabilize the “deep-rooted human and social dimensions of a culture” (p. 49). Therefore, diverse audiences (in combination with dispersed media content) demand a combination of interactive and integrative strategies, channels, and media formats.

Effective message development and audience engagement are presented as grand challenges among communication practitioners charged with overseeing outcomes such as audience perception, organizational brand development, or issues management among others (Ashley & Tuten, 2015). To tackle such in its entirety would dilute the conversation around audience understanding. Previous researchers have shown narrowing in on the network of senders and receivers of information within the agricultural, food, and environmental discursive spaces itself proves to be incredibly challenging (Hughes, Johnson, Edgar, Miller, & Cox, 2016). Therefore, this research aimed to consider the role of the communication practitioner who is charged with disseminating information to key stakeholders within the industry—specifically opinion leaders and their network of influence.

For over 70 years the role of opinion leaders has been studied. Although the quantity and variety of communication channel options have expanded greatly since the concept of opinion leadership was introduced in 1940s (Lazarsfeld, Berelson, & Gaudet, 1948) the role of opinion leaders in the information dissemination process remains relevant. From a contemporary perspective, opinion leaders are the mavens (Gladwell, 2006) or thought leaders (e.g. Brosseau & Kawasaki, 2013) within their networks.

As aggregators, parsers, and distributors of information, these individuals become a trusted source of information within their networks. Empirically, opinion leaders are categorized as individuals who are engaged and knowledgeable on select issues, and are trusted sources of information within their social networks (e.g. Turcotte, York, Scholl, & Pingree, 2015). Consequently, reaching, engaging, and activating this group can propagate information through their networks of influence much more rapidly and effectively than might otherwise be possible (Huang & Lamm, 2017; Lamm, Lamm, & Carter, 2014; Putnam, Lamm, & Lundy, 2017)

In the agricultural and natural resource (ANR) industry the role of opinion leaders has been well established (Lamm, Lamm, & Carter, 2015; Ryan & Lamm, 2017; Taylor & Lamm, 2017). For example, opinion leaders and the dissemination of information through their networks is fundamental to Rogers' Theory of Diffusion (Rogers, 1995), which has been a central, as well as contested, framework to agriculture and the Cooperative Extension system since the 1960s (Rivera & Sulaiman, 2009). However, despite the centrality and criticality of opinion leaders in the communication process, particularly within the ANR industry (Lamm et al., 2016a), there is a notable gap in the literature specifically dedicated to identifying the communication channel preferences of such opinion leaders. Identifying channels to engage ANR opinion leaders effectively is critical, particularly in an environment where credibility among most news organizations continues to decline (Pew Research, 2012) and controversies regarding fake news continue to evolve (Lazer et al., 2018).

Theoretical Framework

For the purposes of this research two theoretical frameworks were employed. Specifically, audience segmentation as defined by Slater (1996) along with opinion leadership as defined by Lazarsfeld, Berelson, and Gaudet (1948). These frameworks were identified based on need to acknowledge that even within the scope of a given target audience, such an audience should not be generalized with a one-size-fits-all approach to selected communication strategies. Therefore, a more nuanced understanding of within-group dynamics is necessary. For the purposes of better understanding agricultural opinion leaders as a target audience, the process of audience segmentation guided the analysis of the data.

Audience Segmentation

Within the practices and strategies of communication, the development of the message for targeted audiences is of paramount importance (Slater, 1996). Audience segmentation, which is often used in commercial marketing, is rooted in understanding and tailoring messages to specific audiences based upon their demographics, attitudes, and beliefs (Slater, 1996). Within each of these audience segments, the individuals share commonalities that are relevant to the delivery of information. The segments should be developed with respect to measurable patterns or homogeneity related to demographics, attitudes, and behaviors (Hine et al., 2014; Slater, 1996). The aim of grouping audiences with similarities is to allow data analysis to focus on the between-group differences, rather than the within-group differences (Hine et al., 2014).

Similarly, tailoring communication has been extensively studied and refers to identifying specific characteristics of an individual and then developing messages that address the needs and interests of the individual (Hawkins, Kreuter, Resnicow, Fishbein, & Dijkstra, 2008). Typically, communication efforts target different categories within the public: mass communication, targeted communication; and tailored communication. Mass communication efforts are created to appeal to a mass, general audience. Targeted communication utilizes audience segmentation to identify needs and interests of similar groups. While tailored communication strategies focus on the needs of individuals and highlight those issues within the message (Hawkins et al., 2008). Research suggests that tailoring messages for audiences exists on a continuum and, while categories of tailoring exist, communication strategies should evaluate the needs of the audience and the purpose of the message when selecting the most appropriate method for communication (Hawkins et al., 2008).

While audience segmentation and tailoring communication have shown to impact consumers' intention to adopt behaviors (Kim, Shen, & Morgan, 2011; Warner, Chaudhary, Rumble, Lamm, & Momol, 2017; Warner & Lamm, 2017), one concern with utilizing audience segmentation techniques is its potential to further polarize audiences on specific issues (Hine et al., 2014). Therefore, messaging and communication efforts should be tailored specifically to the needs, involvement level, and intention to engage within each audience group, with purposeful and intentional roles for each subgroup within the communication or marketing efforts (Warner et al., 2017; Lamm, Lundy, Warner, & Lamm, 2016). For example, in a study examining homeowners' adoption of water conservation practices for landscaping, Warner et al. (2017) found creating subgroups based on established water conservation behaviors could ultimately lead to assigning different roles through messaging to each group. Utilizing *water savvy conservationists* in a more directive role to educate and advocate for conservation behaviors to other groups may be more beneficial. Additionally, it was recommended that by grouping like individuals together in subgroups, more appropriate and meaningful goals and adoption rates could be established to measure the success of an initiative or campaign (Warner et al., 2017).

Opinion Leadership

Lazarsfeld, Berelson, and Gaudet (1948) established a two-step process, whereby, a group of opinion leaders would determine relevant information to be communicated and shared with their communities, subgroups, and followers. Opinion leaders have been identified as those capable of sparking change and innovation in a natural and, often, infectious manner (Burt, 1999). Using their power to inspire others, opinion leaders have been shown to influence change with the information they communicate to their followers and subgroups (Lazarsfeld et al., 1948); therefore, it is imperative to understand how opinion leaders prefer to communicate information in order to more effectively engage with them and their subgroups about topics of interest in the agricultural field.

Purpose & Research Objectives

The purpose of this study was to examine the nature of the relationship between demographic characteristics and communication channel preference amongst agricultural opinion leaders. The study was driven by the following research objectives:

1. Describe agricultural opinion leader communication channel preferences based on demographic, or audience segmentation, characteristics.
2. Determine whether demographic, or audience segmentation, characteristics were statistically significantly associated with communication channel preferences.

Methods

To address the research objectives, a quantitative research design was undertaken. The design consisted of an online survey of agricultural opinion leaders. Respondents self-reported communication channel preference and demographic data. The data analyzed in the study capitalize on data collected in the Lamm et al. (2016a) sample, the current study extended the work in two important ways. First, the communication channel data are analyzed discretely at the audience category level. Second, extensive descriptive statistics are presented to provide greater insights for communication practitioners. These disclosures are presented based on recommendations within the literature for clarity (Kirkman & Chen, 2011).

Sample and Procedures

Based on previous research, agricultural opinion leaders were identified based on their participation in agricultural and natural resource leadership development programs (Lamm, Lamm, & Carter, 2014). The International Association of Programs for Agricultural Leaders (IAPAL) organization serves as a consortium of independent agricultural leadership programs that provide leadership development programming for adult agricultural opinion leaders (Kellogg, 2000). Therefore, programs associated with the IAPAL organization, and subsequent alumni from those programs, were identified as an appropriate sample frame (Lamm et al., 2016a).

To ensure a comprehensive representation of opinion leaders, a census of IAPAL program alumni was conducted. A census frequently provides the most complete data and ensures all respondents within a sample are provided an opportunity to participate (Ary, Jacobs, & Sorensen, 2010; Rossi, Lipsey, & Freeman, 2004). Within the IAPAL organization a total of 41 programs were active at the time of the research, 28 programs opted to participate.

Contact information was provided for 7,152 alumni from the 28 participating programs. Alumni were contacted according to the tailored design method (Dillman, Smyth, & Christian, 2008), which included a pre-notice from the program director, an invitation to complete the survey in Qualtrics by the researcher, and three additional follow up reminders. There were a total of 3,234 completed questionnaires for a response rate of 45%. Based on established social science response rates, this was considered acceptable for analysis (Baruch & Holtom, 2008). Nevertheless, non-response analysis comparing early and late respondents found no statistically significant differences between the two groups. The finding indicated non-response bias was not a material consideration for further analysis (Lindner, Murphy, & Briers, 2001).

Data

Within the survey, respondents were asked to indicate whether they were interested in interacting with alumni of leadership development programs through a list of eight potential communication channels, *Yes* was coded as 1, *No* was coded as 0. Communication channel options included: informal meetings coordinated by alumni (informal meetings), dedicated web page or blog, formal annual meetings, Facebook group, LinkedIn group, conference calls, and Twitter. Interactions were operationalized as receiving communications for the purposes of the study.

Demographically, respondents provided information regarding their sex, age, level of employment, and level of education. Geographic region of the program was assigned based on the Extension regions (Lamm, Carter, & Lamm, 2016; USDA, 2014).

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics were calculated to describe agricultural opinion leaders preferred channels for communication. Additionally, Chi-Square analysis were completed to test for associations between demographic characteristics and communication channel (Rossi et al., 2004). Cramer's V (reported as Φ) was calculated to determine effect sizes of associations with effect size interpretations according to Cohen (1988) summarized in Table 1. A level of significance of .05 was established *a priori*.

Table 1
Cramer's V Effect Size Interpretation (Cohen, 1988)

<i>df</i> *	<i>small</i>	<i>medium</i>	<i>large</i>
1	.10	.30	.50
2	.07	.21	.35
3	.06	.17	.29
4	.05	.15	.25
5	.04	.13	.22

Results

Related to informal meetings (Table 2) there were observed associations between gender, age, organizational level, educational attainment, region and informal meetings. Accounting for the degrees of freedom, or number of categories within a demographic set, effect sizes ranged from small to medium (Cohen, 1988). The largest effect was observed between age groups, with younger individuals expressing the strongest interest in informal meetings and interest diminishing inversely with age.

Table 2
Communication Channel Preference Based on Demographic, or Audience Segmentation, Characteristics – Informal meetings

<i>Characteristic</i>	<i>Yes</i>		<i>No</i>		<i>N</i>	χ^2	Φ
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>			
Gender						8.20**	.05
Male	1090	50.7%	1061	49.3%	2151		
Female	549	56.2%	428	43.8%	977		
Age						61.36***	.14
Under 30	46	67.6%	22	32.4%	68		
30 to 39	346	63.1%	202	36.9%	548		
40 to 49	378	53.7%	326	46.3%	704		
50 to 59	546	52.1%	502	47.9%	1048		
60 to 69	264	45.2%	320	54.8%	584		
70 and Over	25	29.8%	59	70.2%	84		
Level						27.18***	.09
Nonsupervisory employee	262	55.9%	207	44.1%	469		
Manager	596	52.3%	543	47.7%	1139		
Owner, CEO, President	628	54.9%	515	45.1%	1143		
Not applicable	160	40.6%	234	59.4%	394		
Education						15.80*	.07
High school diploma/GED	54	62.1%	33	37.9%	87		
Trade/technical training	33	66.0%	17	34.0%	50		

Some college - no degree	119	49.4%	122	50.6%	241		
Associate/Community college degree	111	58.7%	78	41.3%	189		
Bachelor's degree	841	52.4%	763	47.6%	1604		
Master's degree	393	51.3%	373	48.7%	766		
Professional degree (e.g., JD, MD)	44	49.4%	45	50.6%	89		
Doctorate (e.g., PhD, EdD)	54	43.2%	71	56.8%	125		
Region						30.28***	.10
Western	388	44.6%	481	55.4%	869		
North Central	646	54.8%	532	45.2%	1178		
Southern	412	57.1%	310	42.9%	722		
Northeast	136	50.6%	133	49.4%	269		
Non-US	91	51.4%	86	48.6%	177		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Regarding formal annual meetings (Table 3), associations between gender, age, and organizational level were observed. Additionally, a large effect size (Cohen, 1988) between gender categories was observed with females indicating a stronger preference than males.

Table 3
Communication Channel Preference Based on Demographic, or Audience Segmentation, Characteristics – Formal annual meetings

Characteristic	Yes		No		N	χ^2	Φ
	f	%	f	%			
Gender						60.57***	.14
Male	1179	55.2%	958	44.8%	2137		
Female	683	69.9%	294	30.1%	977		
Age						15.99**	.07
Under 30	48	70.6%	20	29.4%	68		
30 to 39	334	61.5%	209	38.5%	543		
40 to 49	420	60.4%	275	39.6%	695		
50 to 59	652	61.9%	401	38.1%	1053		
60 to 69	321	55.0%	263	45.0%	584		
70 and Over	42	48.8%	44	51.2%	86		
Level						8.55*	.05
Nonsupervisory employee	301	64.9%	163	35.1%	464		
Manager	687	60.6%	446	39.4%	1133		
Owner, CEO, President	667	58.4%	475	41.6%	1142		
Not applicable	219	56.0%	172	44.0%	391		
Education						11.29	.06
High school diploma/GED	48	56.5%	37	43.5%	85		
Trade/technical training	31	59.6%	21	40.4%	52		
Some college - no degree	168	68.9%	76	31.1%	244		
Associate/Community college degree	109	57.4%	81	42.6%	190		
Bachelor's degree	964	60.3%	636	39.8%	1600		
Master's degree	436	57.8%	318	42.2%	754		
Professional degree (e.g., JD, MD)	51	58.0%	37	42.0%	88		
Doctorate (e.g., PhD, EdD)	71	56.3%	55	43.7%	126		
Region						8.19	.05
Western	494	56.3%	383	43.7%	877		

North Central	710	60.8%	458	39.2%	1168
Southern	437	61.9%	269	38.1%	706
Northeast	171	62.0%	105	38.0%	276
Non-US	96	55.2%	78	44.8%	174

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Analyzing the dedicated web page or blog communication channel (Table 4), an association between the audience categories of age, organizational level, educational attainment, and region was observed. Accounting for the number of categories as degrees of freedom, all effect sizes were in the small range (Cohen, 1988). With identified preferences ranging from 60.6% for individuals with professional degrees, to 88.9% for individuals with trade or technical training across all audience categories.

Table 4
Communication Channel Preference Based on Demographic, or Audience Segmentation, Characteristics – Dedicated web page or blog

Characteristic	Yes		No		N	χ^2	Φ
	f	%	f	%			
Gender						1.72	.02
Male	1571	72.6%	594	27.4%	2165		
Female	733	74.8%	247	25.2%	980		
Age						10.94*	.06
Under 30	55	80.9%	13	19.1%	68		
30 to 39	403	74.2%	140	25.8%	543		
40 to 49	533	76.1%	167	23.9%	700		
50 to 59	778	73.5%	280	26.5%	1058		
60 to 69	415	69.7%	180	30.3%	595		
70 and Over	58	66.7%	29	33.3%	87		
Level						27.61***	.09
Nonsupervisory employee	372	78.6%	101	21.4%	473		
Manager	811	71.0%	331	29.0%	1142		
Owner, CEO, President	876	75.8%	279	24.2%	1155		
Not applicable	256	65.0%	138	35.0%	394		
Education						22.91**	.09
High school diploma/GED	67	78.8%	18	21.2%	85		
Trade/technical training	48	88.9%	6	11.1%	54		
Some college - no degree	166	68.9%	75	31.1%	241		
Associate/Community college degree	142	74.0%	50	26.0%	192		
Bachelor's degree	1200	74.4%	412	25.6%	1612		
Master's degree	554	72.0%	215	28.0%	769		
Professional degree (e.g., JD, MD)	63	70.0%	27	30.0%	90		
Doctorate (e.g., PhD, EdD)	77	60.6%	50	39.4%	127		
Region						18.42**	.08
Western	604	68.6%	277	31.4%	881		
North Central	861	73.0%	319	27.0%	1180		
Southern	545	75.5%	177	24.5%	722		
Northeast	222	80.1%	55	19.9%	277		
Non-US	124	71.3%	50	28.7%	174		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

There was an association between age, organizational level, region, and conference calls observed (Table 5). The observed effect size was small for organizational level and between medium and large for both age and region (Cohen, 1988). Further analysis within age indicated younger audiences had the strongest preference for conference calls with observed preference diminishing inversely with age, with individuals over 70 having the lowest preference.

Table 5
Communication Channel Preference Based on Demographic, or Audience Segmentation, Characteristics – Conference calls

<i>Characteristic</i>	<i>Yes</i>		<i>No</i>		<i>N</i>	χ^2	Φ
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>			
Gender						2.04	.03
Male	316	15.2%	1767	84.8%	2083		
Female	162	17.2%	779	82.8%	941		
Age						130.87***	.21
Under 30	23	33.8%	45	66.2%	68		
30 to 39	140	25.9%	400	74.1%	540		
40 to 49	143	21.4%	526	78.6%	669		
50 to 59	115	11.2%	911	88.8%	1026		
60 to 69	37	6.7%	516	93.3%	553		
70 and Over	5	6.0%	78	94.0%	83		
Level						8.96*	.05
Nonsupervisory employee	85	18.7%	369	81.3%	454		
Manager	185	16.8%	915	83.2%	1100		
Owner, CEO, President	164	14.8%	942	85.2%	1106		
Not applicable	45	11.9%	334	88.1%	379		
Education						3.08	.03
High school diploma/GED	12	15.0%	68	85.0%	80		
Trade/technical training	7	13.7%	44	86.3%	51		
Some college - no degree	38	16.2%	196	83.8%	234		
Associate/Community college degree	30	16.3%	154	83.7%	184		
Bachelor's degree	254	16.4%	1298	83.6%	1552		
Master's degree	112	15.2%	624	84.8%	736		
Professional degree (e.g., JD, MD)	9	10.1%	80	89.9%	89		
Doctorate (e.g., PhD, EdD)	18	14.9%	103	85.1%	121		
Region						98.40***	.18
Western	70	8.3%	775	91.7%	845		
North Central	184	16.2%	950	83.8%	1134		
Southern	139	20.1%	554	79.9%	693		
Northeast	33	12.5%	231	87.5%	264		
Non-US	60	35.7%	108	64.3%	168		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

An association was observed between Facebook group communication channel preference and all audience categories: gender, age, organizational level, educational attainment, and region (Table 6). Within age, where as other channels tended to have the highest level of preference with the youngest age category diminishing inversely as age increased, the Facebook group channel had a different observed preference pattern. Specifically, preference increased from the under 30 category at 32.8%, peaked in the 40 to 49 category at 40.8%, and then diminished inversely with

age with the lowest observed preference in the 70 and over category at 22.6%. A similar pattern was observed within educational attainment, with the lowest preference observed in the trade/technical training category at 20%, peaking with Master's degree at 39.2%, and diminishing to 36% at the Doctorate level. Within organizational level the highest observed category was non-supervisory employee at 43.6%, decreasing to 29.3% for owners, CEOs, or presidents. Across all statistically significant results the observed effect size was small (Cohen, 1988).

Table 6
Communication Channel Preference Based on Demographic, or Audience Segmentation, Characteristics – Facebook group

<i>Characteristic</i>	<i>Yes</i>		<i>No</i>		<i>N</i>	χ^2	Φ
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>			
Gender						25.72***	.09
Male	670	32.0%	1426	68.0%	2096		
Female	400	41.4%	567	58.6%	967		
Age						38.16***	.11
Under 30	22	32.8%	45	67.2%	67		
30 to 39	208	38.8%	328	61.2%	536		
40 to 49	283	40.8%	411	59.2%	694		
50 to 59	357	34.8%	668	65.2%	1025		
60 to 69	149	26.3%	417	73.7%	566		
70 and Over	19	22.6%	65	77.4%	84		
Level						43.28***	.12
Nonsupervisory employee	201	43.6%	260	56.4%	461		
Manager	436	39.0%	683	61.0%	1119		
Owner, CEO, President	327	29.3%	790	70.7%	1117		
Not applicable	113	29.8%	266	70.2%	379		
Education						18.46*	.08
High school diploma/GED	19	23.5%	62	76.5%	81		
Trade/technical training	10	20.0%	40	80.0%	50		
Some college - no degree	82	34.2%	158	65.8%	240		
Associate/Community college degree	55	29.6%	131	70.4%	186		
Bachelor's degree	541	34.4%	1032	65.6%	1573		
Master's degree	291	39.2%	451	60.8%	742		
Professional degree (e.g., JD, MD)	33	37.1%	56	62.9%	89		
Doctorate (e.g., PhD, EdD)	45	36.0%	80	64.0%	125		
Region						10.07*	.06
Western	271	31.6%	586	68.4%	857		
North Central	409	35.6%	739	64.4%	1148		
Southern	249	35.5%	452	64.5%	701		
Northeast	106	39.0%	166	61.0%	272		
Non-US	71	42.0%	98	58.0%	169		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

An association between all audience categories: gender, age, organizational level, educational attainment, and region and LinkedIn group was observed (Table 7). LinkedIn had the highest preference in the under 30 category at 57.9%, and diminishing inversely with age with the 70 and over category having the lowest preference at 22.9%. Related to educational attainment, a different pattern was observed. The high school diploma/GED category had a preference of 32.1% that

increased and peaked with the strongest preference observed within the some-college – no degree category at 48.6%, and diminishing to the Doctorate category at 23.8%. Nonsupervisory employees had the highest preference at 48.8%.

Table 7
Communication Channel Preference Based on Demographic, or Audience Segmentation, Characteristics – LinkedIn group

<i>Characteristic</i>	<i>Yes</i>		<i>No</i>		<i>N</i>	χ^2	Φ
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>			
Gender						201.66****	.26
Male	613	29.0%	1500	71.0%	2113		
Female	546	55.5%	437	44.5%	983		
Age						98.75****	.18
Under 30	39	57.4%	29	42.6%	68		
30 to 39	269	49.4%	276	50.6%	545		
40 to 49	299	43.4%	390	56.6%	689		
50 to 59	344	32.9%	702	67.1%	1046		
60 to 69	155	27.0%	420	73.0%	575		
70 and Over	19	22.9%	64	77.1%	83		
Level						30.96****	.10
Nonsupervisory employee	227	48.8%	238	51.2%	465		
Manager	405	35.9%	722	64.1%	1127		
Owner, CEO, President	399	35.2%	733	64.8%	1132		
Not applicable	132	34.1%	255	65.9%	387		
Education						29.42****	.10
High school diploma/GED	27	32.1%	57	67.9%	84		
Trade/technical training	24	47.1%	27	52.9%	51		
Some college - no degree	119	48.6%	126	51.4%	245		
Associate/Community college degree	75	40.1%	112	59.9%	187		
Bachelor's degree	596	37.5%	994	62.5%	1590		
Master's degree	272	36.1%	481	63.9%	753		
Professional degree (e.g., JD, MD)	26	29.2%	63	70.8%	89		
Doctorate (e.g., PhD, EdD)	29	23.8%	93	76.2%	122		
Region						33.35****	.10
Western	268	30.8%	601	69.2%	869		
North Central	459	39.5%	703	60.5%	1162		
Southern	292	41.4%	414	58.6%	706		
Northeast	121	44.5%	151	55.5%	272		
Non-US	51	29.5%	122	70.5%	173		

Note. * $p < .05$, ** $p < .01$, **** $p < .001$

An association between organizational level and Twitter was observed. The effect size of the association was small (Cohen, 1988). Additional details and results are presented in Table 8.

Table 8
Communication Channel Preference Based on Demographic, or Audience Segmentation, Characteristics – Twitter

<i>Characteristic</i>	<i>Yes</i>		<i>No</i>		<i>N</i>	χ^2	Φ
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>			

Gender						1.03	.02
Male	518	24.5%	1593	75.5%	2111		
Female	251	26.3%	705	73.7%	956		
Age						9.86	.06
Under 30	22	32.4%	46	67.6%	68		
30 to 39	131	24.5%	404	75.5%	535		
40 to 49	185	27.1%	497	72.9%	682		
50 to 59	270	25.8%	776	74.2%	1046		
60 to 69	116	20.6%	446	79.4%	562		
70 and Over	22	26.8%	60	73.2%	82		
Level						14.51**	.07
Nonsupervisory employee	133	28.7%	331	71.3%	464		
Manager	301	26.8%	822	73.2%	1123		
Owner, CEO, President	269	24.1%	848	75.9%	1117		
Not applicable	70	18.4%	310	81.6%	380		
Education						11.81	.06
High school diploma/GED	28	33.7%	55	66.3%	83		
Trade/technical training	13	25.5%	38	74.5%	51		
Some college - no degree	73	31.2%	161	68.8%	234		
Associate/Community college degree	53	28.5%	133	71.5%	186		
Bachelor's degree	372	23.5%	1209	76.5%	1581		
Master's degree	183	24.5%	563	75.5%	746		
Professional degree (e.g., JD, MD)	23	25.8%	66	74.2%	89		
Doctorate (e.g., PhD, EdD)	27	22.3%	94	77.7%	121		
Region						9.10	.05
Western	200	23.4%	656	76.6%	856		
North Central	311	26.8%	848	73.2%	1159		
Southern	178	25.5%	521	74.5%	699		
Northeast	79	29.4%	190	70.6%	269		
Non-US	32	18.9%	137	81.1%	169		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

A summary of the descriptive communication channel preference results based on demographic, or audience segmentation, category is presented in Table 9. Specifically, the table displays the communication channel receiving the highest percentage of *Yes* selections in the most preferred column. Additionally, the table displays the highest percentage of *No* selections in the least preferred column. All audience segments based on demographic category indicated dedicated web page or blog as their most preferred communication channel. Additionally, with the exception of individuals under 40 and not located in the United States, conference calls were identified as the least preferred communication channel.

Table 9
Most and Least Preferred Communication Channel by Audience Segment

<i>Characteristic</i>	<i>Most Preferred</i>	<i>Least Preferred</i>
Gender		
Male	web page	conference call
Female	web page	conference call
Age		

Under 30	web page	Twitter
30 to 39	web page	Twitter
40 to 49	web page	conference call
50 to 59	web page	conference call
60 to 69	web page	conference call
70 and Over	web page	conference call
Level		
Nonsupervisory employee	web page	conference call
Manager	web page	conference call
Owner, CEO, President	web page	conference call
Not applicable	web page	conference call
Education		
High school diploma/GED	web page	conference call
Trade/technical training	web page	conference call
Some college - no degree	web page	conference call
Associate/Community college degree	web page	conference call
Bachelor's degree	web page	conference call
Master's degree	web page	conference call
Professional degree (e.g., JD, MD)	web page	conference call
Doctorate (e.g., PhD, EdD)	web page	conference call
Region		
Western	web page	conference call
North Central	web page	conference call
Southern	web page	conference call
Northeast	web page	conference call
Non-US	web page	Twitter

Conclusions, Recommendation, and Implications

Despite the acknowledgement of the importance of delivering the right message to the right audience (McQuail, 2010), there remained a notable gap in the literature addressing the audience segmentation and communication channel considerations, particularly as it relates to ANR opinion leaders. The purpose of this research was to address this gap through rigorous empirical investigation and to provide a practical resource for communication practitioners.

The results indicated that amongst ANR opinion leaders there are differences between audience segments, and these distinctions are related to communication channel preferences. A primary finding from the study was that each analyzed audience category identified a dedicated web page or blog as its most preferred communication channel. With the exception of individuals under 40 or those living outside the United States, the least preferred communication channel was conference calls.

The results indicated the most effective channel through which to reach ANR opinion leaders, regardless of audience segmentation, is through a dedicated web page or blog. This implies the ongoing importance for providing engaging and fundamentally sound content to appear, and be refreshed, on websites. Given this a recommendation is that, all things being equal, a dedicated web page or blog should be the primary focus for communicating with ANR opinion leaders with investment and resources allocated to this communication channel accordingly. A recommendation for future research would be to examine how ANR opinion leaders learn about, and become reliant upon, specific websites and blogs for communication (Al-Qeisi, Dennis, Alamanos, & Jayawardhena, 2014). A noteworthy limitation associated with the study findings is the grouping of web pages and blogs into one category. Future research is recommended to further

investigate whether there are any differences between web pages and blogs when considered independently.

The results also indicated the use of conference calls to reach ANR opinion leaders may not be effective. Given the ubiquity of conference calls across ANR, this was an unexpected result. This implies that unless there is strong empirical evidence within a very well-defined and understood audience, alternative communication channels may be preferable over conference calls when engaging with ANR opinion leaders.

Demographic, or audience segmentation, characteristics were found to be significantly associated with informal meeting preference. The results of the study imply females and younger individuals are more likely to prefer informal meetings than their counterparts. The findings indicated that between the two different types of meetings, formal and informal, there tends to be higher levels of audience segmentation associated with informal meetings relative to formal meetings. An implication from this result is that formal meetings may be more appropriate for more general communication across a wide variety of audiences, whereas informal meetings may be more appropriate if there is a targeted audience, which is aligned with the findings of Hawkins et al., 2008 and Hine et al., 2014.

Facebook groups were analyzed as a social media communication channel. The results indicated Facebook groups tend to be more audience-specific than other communication channels. An implication from these results is that communication professionals may want to consider a Facebook group when they wish to target very specific audiences. Similar to Warner et al. (2017), future research should examine whether utilizing separate Facebook groups for targeted audiences could be utilized to further assign roles to ANR opinion leaders to work toward a larger project. A second social media platform, LinkedIn, was also analyzed. Results were inconsistent with Facebook indicating LinkedIn may also be an effective communication channel when wanting to target a specific audience, particularly as it relates to age and educational attainment (Hine et al., 2014).

Finally, Twitter was analyzed as a potential communication channel. Unlike many of the other analyzed channels few statistically significant associations between categories were observed. The results implied Twitter is not a preferred communication channel among ANR opinion leaders. An implication from this result is that Twitter may not be the most effective channel to reach ANR opinion leaders if resources are limited.

A limitation of the findings presented here is the rate at which the results become dated given the continued emergence of new communication channels. Therefore, the results should be interpreted as a snapshot in time and should not be interpreted beyond the moment in which they were captured. A second limitation is the communication channels that were included in the study. It is difficult to predict what emergent channels will be relevant in the future and what channels will become irrelevant.

Overall, there are recommendations for practice associated with the present research. First, using audience segmentation can be an effective way to deliver tailored content to specific audiences, and different audiences have different communication channel preferences. Therefore, when communicating with ANR opinion leaders, a dedicated web-page or blog is likely to be the most universally preferred channel. To the contrary, conference calls were generally not preferred. Given limited resources, finding the right channel for the audience is critical.

Additionally, recommendations for future research are also associated with the study. Specifically, a recommendation for future research would be to replicate the study using emerging communication channels in addition to those that are well established. A further recommendation

would be to replicate the study among both ANR opinion leaders, as well as other non-ANR or non-opinion leader audiences and determine whether any differences exist. Future research is also encouraged to examine the interaction of communication channels as they relate to preference. For example, the use of Facebook to drive audiences to a dedicated web page or blog.

Lastly, a general recommendation from the study would be for communication practitioners to thoughtfully consider what message they are trying to deliver, and to what audience. By better understanding audience preferences, more effective and efficacious communications can be delivered to their intended audience (McQuail, 2010).

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