US Nationwide Coronavirus Newspaper Coverage of Federal/National Government Responses: Community Structure Theory and a “Violated Buffer”¹

John C. Pollock
Suchir Govindarajan
Alexis Marta
James N. Sparano
The College of New Jersey (USA)

Community structure analysis (Pollock, 2007, 2013a, 2015) compared city characteristics and newspaper coverage of federal/Trump administration coronavirus responses in 18 major US cities, sampling all 250+ word articles from 01/28/20 to 04/03/20. The resulting 123 articles were coded for “prominence” and “direction” (favorable/unfavorable/balanced-neutral coverage), then combined into each newspaper’s composite “Media Vector” (range= 0.3850 to -0.6433, or 1.033). Fifteen of 18 newspapers (83%) displayed negative coverage of federal COVID-19 responses. Pearson correlations and regression analysis confirmed a robust “violated buffer” pattern (higher proportions of economically/socially “buffered” privileged groups are associated with negative coverage of “biological threats or threats to a cherished way of life”: Pollock, 2007: 101), manifest in polit-

ical and religious polarization and links between health access or generational privilege and negative coverage of federal COVID-19 actions. Higher proportions voting Democratic or Catholic membership in cities were associated strongly with negative coverage of federal efforts, while voting Republican and Evangelical membership accompanied positive federal coverage, evoking nationwide partisan “tribalism”. Privileged healthcare access (physicians/100,000, municipal healthcare spending) and economically “privileged” age groups 45-64 and 65+ were all connected to negative coverage of federal COVID-19 responses, illuminating overall “violated” expectations that the national government is responsible for nationwide disaster protection.

Keywords: COVID-19, community structure theory, newspapers, government, media.

¹ The four authors wish to acknowledge the excellent contributions of co-authors Miranda Crowley, Abigail Lewis, and Radhika Purandare, all undergraduates at The College of New Jersey.

In just a few months, a novel coronavirus from Wuhan, China brought the world to a complete standstill. The respiratory disease COVID-19 has gone from a national crisis in China, to a global health emergency, and now a global pandemic, according to the World Health Organization (WHO) (World Health Organization, 2020). The United States' Centers for Disease Control and Prevention (CDC) have confirmed cases in every state of the country (2020), leading most governors to close many businesses and multiple states to issue "shelter in place" guidelines for residents.

Yet the federal government—the Trump administration in particular—has been heavily scrutinized for minimizing the coronavirus danger from its inception, despite warnings from the WHO in early January, 2020. The federal government/Trump administration has also received criticism for failing to demonstrate vigorous national leadership during such a compelling national emergency. Non-partisan national (4,917 adults) Pew Research Center polling from April 7-12, 2020, found that about two-thirds of the US (65%) thinks Trump responded to COVID-19 too slowly (Beggin, 2020). Because the US is such a varied country in political identity, ethnic diversity, and population density, it is assumed that coverage of the federal response to COVID-19 will vary widely across the nation.

This paper will examine newspaper coverage of federal or Trump administration COVID-19 responses in multicity coverage throughout the United States by exploring prevailing media "frames." Framing "signifies the structuring power of context... in which people produce and exchange messages" (D'Angelo, 2018: 23).² Two media frames will be investigated. Coverage will be considered "favorable" if federal government/Trump administration COVID-19 responses are described in a positive, respectful way or "unfavorable" if the federal/Trump measures are criticized/questioned.

To study coverage of COVID-19, this study will utilize the mass medium of newspapers. Newspapers are valuable sources of information because they are read by the well-educated and by political and economic elites (Singer, 2013), and they are notorious intermedia agenda setters for other news platforms such as television, radio, and the internet (Pollock, 2007: 5-6). Newspapers are also easily accessible to the public, providing community forums to discuss relevant topics (Tichenor, Donohue, and Olien, 1980).

This examination uses community structure theory to analyze COVID-19 coverage in major cities across the United States. The community structure approach is best defined as:

A form of quantitative content analysis that focuses on the ways in which key characteristics of communities, such as cities, are related to the content coverage of newspapers in those communities (Pollock, 2007: 23).

2 Foundational studies on framing include those by D'Angelo, 2018; Vreese, 2005; Entman, 1993; Matthes and Kohring, 2008; and Vliegenthart and Walgrave, 2012.

Two questions guide this study: How much disparity across cities occurs in news coverage surrounding the COVID-19 outbreak in the United States? To what extent are community demographic differences associated with any variation in coverage of COVID-19?

COMMUNITY STRUCTURE THEORY

Although media coverage of COVID-19 is abundantly relevant for communication studies/journalism research, the field displays little interest in this or related topics, such as Severe Acute Respiratory Syndrome (SARS) or Middle East Respiratory Syndrome (MERS). Community structure theory provides a bottom-up lens to understand how newspapers frame narratives. Funk and McCombs (2017) define community structure theory as the “conceptual inverse” of agenda-setting. The theory focuses on demographic characteristics of communities as “bottom-up” shapers of news instead of “top-down” national news leaders as “intermedia agenda-setters” (McCombs, 2004) and drivers of public perception. Consequently, community structure theory is a “central pillar of modern communication research” (Funk and McCombs, 2017: 845), providing a powerful framework for analyzing society’s influence on media coverage. First utilized in the early twentieth century by Robert Park at the University of Chicago, the approach advocated that scholars examine society’s influence on the media, and not only media’s influence on society (1922), later reinforced by sociologist Morris Janowitz, who viewed media as an “index” of community social structure (1952).

Three University of Minnesota scholars —Tichenor, Donohue, and Olien— further explored “structural pluralism” (1973, 1980), suggesting that newspapers in larger cities were more progressive due to more socially diverse populations. These initial systematic studies confined their focus to one or two cities or one state, Minnesota, emphasizing media’s role as an instrument of “social control,” reinforcing interests of political/economic elites. Next-generation structural scholars uncovered more media willingness to accommodate social change. Hindman (1999) found that media in a few cities could reflect interests of dominant ethnic groups instead of political elites. McLeod and Hertog (1992, 1999) found favorable media coverage in cities could reflect sizes of specific protest groups. Demers and Viswanath concluded that “mainstream mass media are agents both of social control for dominant institutions and value systems” and also of social change (1999: 34). Jeffres *et al.* (2011) concurred about the capacity of media to accommodate social change, accompanied by excellent empirical work from younger scholars Armstrong, Funk, Nah, Watson, and Yamamoto, together publishing articles in a special 2011 “community structure” issue of “Mass Communication and Society” (Pollock, 2013a).

In the 21st century, Pollock and colleagues introduced three advances to the structural approach. First, by pioneering highly varied, nationwide, and cross-national samples, maximizing sample variation. In addition, they created a “Media Vector”, a sensitive composite score combining measurements of both article

“content” and article “prominence.” Finally, despite Donohue, Tichenor, and Olien’s “guard dog” hypothesis (1995), emphasizing media’s protection of political/economic elite interests (Pollock, 2007: 24), Pollock and colleague studies, including three books (2007, 2013a, 2015) and an annotated bibliography (Pollock, 2013b), often conclude that media can reflect the interests of society’s most “vulnerable” citizens.

HYPOTHESES

To analyze media coverage of the COVID-19 federal pandemic response in the United States, three umbrella hypotheses were utilized: buffer/violated buffer, vulnerability, and stakeholder (Pollock, 2007, 2013a, 2015). Pearson correlations and regression analysis were used to compare community demographics with variations in coverage of federal responses.

BUFFER AND VIOLATED BUFFER HYPOTHESES

The “buffer” hypothesis expects that the higher the percentage of privileged groups in a city, the more likely that city’s newspaper will cover human rights issues favorably (Pollock, 2007: 52). Pollock’s book, *Tilted Mirrors*, argues:

The more individuals in a city who are “buffered” from scarcity or uncertainty, the more likely they are to accord legitimacy to those who articulate their concerns in human rights frames (2007: 62).

A related hypothesis also employs measures of privilege to outline alignments with human rights coverage but with reversed outcomes. This “violated buffer” hypothesis expects that the higher the proportion of privileged groups in a city, the “less favorable the coverage of biological threats or threats to a cherished way of life” (Pollock, 2007: 101). Coverage of the coronavirus epidemic fits both circumstances anticipated by the “violated buffer” hypothesis, representing both a “biological threat” and a “threat to a cherished way of life” involving access to economic opportunity, freedom of movement, and healthcare.

Previous research has confirmed the utility of the “violated buffer” hypothesis, associating proportions of those with college educations and professional/technical occupational status with negative coverage of both basketball player “Magic” Johnson (announcing he was HIV-positive in 1991), signaling infection risks faced by even the most “privileged”, and all others living with HIV/AIDS (Pollock, 2007: 211-229). Similarly, higher levels of education and family income in cities were linked to negative coverage of the US Supreme Court stopping the Florida 2000 presidential vote-counting, handing the presidency to George W. Bush, violating a cherished way of life in which voters, not judges, decided presidential elections (Pollock, 2007: 126-135). To test the “violated buffer” hypothesis, measures of “traditional privilege” (percent college-educated, family income \$200,000+, or professional/technical occupational status) were compared with

variations in federal COVID-19 response coverage, none significant (Pearson correlations and significance levels in Table 5, below.).

Healthcare Access

The violated buffer hypothesis was also used to trace connections between healthcare access, another measure of privilege, and variations in coverage of federal/Trump administration COVID-19 responses. Pollock operationalizes healthcare access as “the proportion of the municipal budget that a city spends on health care, in addition to the availability of hospital beds and physicians” (2007: 99). Since COVID-19 is predicted to strain healthcare capacity in many cities throughout the US, it is expected that high levels of healthcare access will be associated with negative coverage of federal responses to the pandemic: a “violated buffer” pattern.

Previous studies have generally encountered a “buffer” pattern, associating privileged healthcare access with progressive reporting on health or human rights claims. Cities with more physicians/100,000 residents manifested more favorable newspaper coverage of stem cell research (Pollock, 2007: 97), physician-assisted suicide (Pollock and Yulis, 2004) and pediatric immunization (Trotochaud *et al.*, 2015); and media gave more emphasis to “authoritative responsibility” for rape culture and rape on campuses (Pollock *et al.*, 2018). Other studies confirmed connections between more hospital beds/100,000 and: more media support for military rape adjudication beyond the chain of command (Peraria *et al.*, 2015); less media support for solitary confinement (Pollock *et al.*, 2017b); and media emphasis on government responsibility for gun safety (Patel *et al.*, 2017).

Yet the COVID-19 pandemic has seriously encumbered healthcare capacity across the United States. The Centers for Disease Control and Prevention (CDC) project that between 2.4 and 21 million people in the US who contract COVID-19 will need hospitalization (Human Rights Watch, 2020: para. 3). An annual survey estimated only about 924,107 total staffed US hospital beds are available (American Hospital Association, 2020). This disparity in US healthcare system capacity, yielding increased numbers of untreated cases and excess deaths, will likely generate less favorable media coverage of the response of the federal government (and the Trump administration) to the COVID-19 outbreak.

- H1: *The greater the healthcare access (measured by number of physicians per 100,000, hospital beds/100,00 or municipal spending on healthcare) the less favorable the coverage of federal government responses to the COVID-19 outbreak (County and City Extra, 2019).*

VULNERABILITY HYPOTHESIS

The “vulnerability hypothesis” predicts connections between economically disadvantaged groups of people who are vulnerable, unemployed, live in high-crime areas, etc. and favorable media coverage of their interests (Pollock, 2007: 137). This hypothesis posits that media coverage in cities with marginal or impoverished residents will be more closely aligned with the interests of those with

economic disadvantages (Pollock, 2007: 137). By contrast, a longstanding “guard dog” counter hypothesis advocates that media coverage will primarily reflect concerns of political and economic elites (Donohue, Tichenor, and Olien, 1995). Studies conducted by Pollock and other scholars, however, have found that media coverage often reflects interests of the economically disadvantaged (Pollock, 2007: 137).

The 1973 *Roe v. Wade* Supreme Court decision legalizing abortion discovered more favorable coverage in cities with higher percentages below the poverty level or African American (Pollock, Robinson, and Murray, 1978). Other studies revealed associations between higher poverty levels and more favorable coverage of legislation, including a Patient’s Bill of Rights and immigration reform (Pollock, 2007: 151; Pollock *et al.*, 2014, 2015); and less favorable coverage of capital punishment (Pollock, 2007: 138-146). Further, higher levels of uninsured are linked to more media emphasis on government responsibility for gun regulation (Sparano *et al.*, 2020). In addition, the “higher the poverty or unemployment levels in a city, the more media support for genetically-modified food” (Pollock *et al.*, 2010: 51-75), and higher proportions of Hispanics were associated with more media support for universal health care (Kiernicki, Pollock, and Lavery, 2013).

Overall, newspaper coverage frequently mirrors the interests of vulnerable populations. They face greater disparities in healthcare access and accurate COVID-19 prevention information. Indeed, “the cost of inpatient admissions for COVID-19 treatment could top \$20,000” per person (Rae *et al.*, 2020: para. 4). Vulnerable populations also face workforce barriers, either suspension from jobs without pay or compulsion to work in close quarters or while sick. Accordingly:

- H2: *The greater the proportion of “vulnerable” city residents (percent below the poverty level, unemployed, uninsured, single-parent families, African American, or Hispanic), the more favorable the coverage of federal government response to the COVID-19 outbreak (County and City Extra, 2019).*

STAKEHOLDER HYPOTHESIS

The third umbrella hypothesis in this study is the stakeholder hypothesis, which expects a connection between proportions of stakeholders and favorable coverage of stakeholders’ concerns (Pollock, 2007: 172). This study on COVID-19 pandemic coverage targets several stakeholder categories: political identity, belief system, and generation.

Political Identity/Partisanship

Previous studies found higher percentages of Democratic voters associated with less favorable coverage of juveniles being tried as adults (Pollock, 2007: 204) or of drilling for oil in an Alaskan wildlife refuge – ANWR (Pollock, 2007: 184-194), and more favorable coverage of same-sex marriage (Vales *et al.*, 2014, 2015). Opposite results emerged for high percentages voting Republican. Similarly, higher Democratic voter percentages were associated with more favorable coverage of

pediatric immunization and transgender rights (Trotochaud *et al.*, 2015; Pollock *et al.*, 2017a). In a poll of 835 US adults conducted March 13-14, 2020, 76% of Democrats viewed COVID-19 as a real threat, compared to only 40% of Republicans (Marist Institute for Public Opinion, 2020). In this highly polarized political climate, Democratic and Republican voters will likely have differing perspectives on the COVID-19 crisis. Accordingly:

- H3a: *The higher the percentage voting Democratic in the last presidential election, the less favorable the coverage of federal government responses to the COVID-19 outbreak (Claritas, 2017).*
- H3b: *The higher the percentage voting Republican in the last presidential election, the more favorable the coverage of federal government responses to the COVID-19 outbreak (Claritas, 2017).*

Belief System

Distinct religious beliefs could contribute to differing newspaper coverage of crucial issues. Pollock, Robinson, and Murray (1978) found that cities with higher percentages of Catholics were associated with unfavorable coverage of the Supreme Court's 1973 *Roe v. Wade* legalization of abortion. Less favorable coverage of same-sex marriage (Vales *et al.*, 2014, 2015) and transgender rights (Pollock *et al.*, 2017a), and more favorable coverage of security surveillance (Moran *et al.*, 2017) were discovered in cities with greater percentages of Evangelicals, also linked curiously to greater government responsibility coverage for opioid abuse (Cruz *et al.*, 2018).

However, multiple studies demonstrate strong connections between favorable coverage of progressive public policies and other belief systems. Cities with higher Catholic populations witnessed more positive coverage for same-sex marriage and gay Boy Scouts members (Vales *et al.*, 2014: 201; Pollock, 2007), as well as for military rape adjudication claims "outside" the chain of command (Peraria *et al.*, 2015) and for government responsibility for campus rape culture and

rape culture itself (Soya *et al.*, 2015) (Several studies found greater percentages of Mainline Protestants also linked to related progressive coverage. Since Pearson correlations yielded insignificant results – Table 5, below, Mainline Protestant patterns are not elaborated.).

Often associated with conservative political positions, Evangelicals are expected connected to more favorable coverage of federal government/Trump administration responses to the COVID-19 outbreak. By contrast, Catholics, often associated with progressive positions and federal engagement addressing inequality, are likely linked with less favorable coverage. Therefore:

- H4a: *The greater the percentage of Evangelicals in a city, the more favorable the coverage of federal government responses to the COVID-19 outbreak (Association of Religion Data Archives, 2006).*
- H4b: *The greater the percentage of Catholics in a city, the less favorable the coverage of federal government responses to the COVID-19 outbreak (Association of Religion Data Archives, 2006).*

Generation

Proportions of different age groups in a community may be connected with media coverage of significant topics. Borowski *et al.* (2017) found that higher percentages 18-24 in a city corresponded with more favorable coverage of immigration reform. Vales *et al.* (2014, 2015) found higher percentages 25-44 and 45-64 associated with more favorable (and ages 65+ less favorable) coverage regarding same-sex marriage. Zinck *et al.* (2014, 2015) discovered less favorable coverage of detainee rights at Guantanamo Bay in cities with higher percentages 65+. Pollock and Yulis (2004) linked higher percentages of citizens 75+ to less favorable coverage of legalizing physician-assisted suicide.

Younger generations often take liberal approaches to controversial issues, while older generations are typically more conservative, often associated with relatively higher incomes or net worth, with more family responsibilities and more to “lose”. Compared to younger groups, the middle-aged (45-64) and seniors (65+) are expected associated with less favorable coverage of federal government responses to the COVID-19 outbreak. Therefore:

- H5a: *The greater the percentage of those 18-24 and 25-44 in a city, the more favorable the coverage of federal government responses to the COVID-19 outbreak (Claritas, 2017).*
- H5b: *The greater the percentage of those 45-64 and 65+ in a city, the less favorable the coverage of federal government responses to the COVID-19 outbreak (Claritas, 2017).*

METHODOLOGY

To systematically study coverage of federal responses to coronavirus, a nationwide sample of 18 prominent metropolitan newspapers was selected from the NewsBank database. The sample contained all articles relevant to the topic of COVID-19 and federal/Trump’s coronavirus responses from the sample period with a length of 250 words or more, resulting in 123 total articles. A larger sample of newspapers was drawn initially, but other newspapers in that sample were ultimately excluded because so few articles (fewer than six) were encountered. Using search terms “coronavirus” OR “COVID-19” AND “gov*”, articles on local/state government activity were excluded from data collection, to be analyzed elsewhere. Articles were collected from the following major publications: *Albuquerque Journal*, *Atlanta Journal-Constitution*, *Charlotte Observer*, *Denver Post*, *Houston Chronicle*, *Las Vegas Sun*, *Sacramento Bee*, *San Diego Union-Tribune*, *San Francisco Chronicle*, *St. Louis Post-Dispatch*, *The Buffalo News*, *The Detroit News*, *The Oregonian*, *The Orlando Sentinel*, *The Philadelphia Inquirer*, *The Pittsburgh Post-Gazette*, *The Plain Dealer (OH)*, and *The State (SC)*. The sample of articles in this study covered all four major regions. Newspapers with nationwide readerships including *The New York Times*, *USA Today*, *The Wall Street Journal*, *The Los Angeles Times*, and *The Washington Post* were excluded because they target nationwide rather than local audiences.

The data collection inception date was January 23, 2020, when Illinois reported the state’s (and the US’s) first laboratory-confirmed case of COVID-19. The data collection end date was April 3, 2020, when the Food and Drug Administration (FDA) announced several coronavirus actions, including a protocol for convalescent plasma to patients, streamlined respirator approval standards, and safety guidance supporting new animal drug development to galvanize the US response to the pandemic.

ARTICLE PROMINENCE

Each article was assigned two assessments. The first score evaluated “prominence” Prominence measures the significance of the article to an editor. Each article was evaluated with a number between 0 and 4 based on each of four elements; placement, headline size, article length, and photos/graphics, if any. Articles with higher numbers of points received a greater prominence score. Table 1 demonstrates the scoring in detail.

Table 1. Prominence Score*
For coding databases

Dimension	4	3	2	1
Placement	Front page, front section	Front page, inside section	Inside page, first section	Other
Headline Size (# of words)	10+	9-8	7-6	5 or less
Article Length (# of words)	1,000+	750-999	500-749	250-499
Graphics/Photos	2 or more	1		

Source: © John C. Pollock, 1994-2020.

ARTICLE DIRECTION

In addition to prominence, articles were evaluated for direction, representing how articles were framed. Articles were assigned categories based on whether media emphasized “favorable” or “unfavorable” coverage of coronavirus. A “balanced/neutral” score was given to articles that presented coverage emphasizing neither favorable nor unfavorable coverage, or articles that simply stated facts or statistics unrelated to perspective on the subject were also considered balanced/neutral.

Favorable

Articles emphasizing favorable coverage regarding the federal/Trump administration coronavirus response were coded “Favorable”. For example, the Plain Dealer stated, “Democrats have criticized President Donald Trump for his administration’s response to the new coronavirus, making claims about cuts to public

health programs and the silencing of government experts. But they haven't always gotten their facts right..."(Robertson, McDonald, and Farley, 2020: 5).

Unfavorable

Articles that emphasized unfavorable coverage regarding coronavirus were coded as "unfavorable". *The Detroit News* stated:

On Tuesday, [governor] Whitmer again criticized the federal response, noting the state needed respirators, personal protection equipment, ventilators and more test kits but was told it would have to work around the federal government. She called the response "mind-boggling" (LeBlanc, 2020: 1).

Balanced/Neutral

Articles that emphasized neither favorable nor unfavorable coverage, or simply offered facts and statistics regarding coronavirus, were coded as "balanced/neutral". The *San Diego Union-Tribune* described a large national business request:

(T)he nation's largest business organization asked the Trump administration and Congress on Monday to act rapidly to help companies have access to cash and avert a "potentially devastating" hit to the economy as the coronavirus pandemic forced closures and quarantines that threatened to choke off commerce worldwide (Fram, 2020: 3).

Of the 123 articles collected, 59 (48%) were double coded, resulting in a Scott's Pi coefficient of inter-coder reliability of .7723.

CALCULATING A MEDIA VECTOR

Examining 18 newspapers from cities across the country, a "Media Vector" was calculated using the Janis-Fadner Coefficient of Imbalance. Each newspaper's article prominence was combined with its directional scores into a single composite measure called a "Media Vector" of article "projection" onto audiences (Pollock, 2007: 49). Scores lie on a spectrum from -1.00 to +1.00. A Media Vector score between 0 and +1.00 reflected favorable coverage of federal government responses to the coronavirus. A score between 0 and -1.00 represented coverage that emphasized unfavorable coverage. Table 2 depicts the Media Vector formula.

Table 2. Media Vector Formula

f = sum of prominence scores coded "favorable"		
u = sum of prominence scores coded "unfavorable"		
n = sum of prominence scores coded "balanced/neutral"		
r = f + u + n		
If f > u (the sum of the favorable prominence scores is greater than the sum of the unfavorable prominence scores), the following formula is used:		
FMV =	$(f^2 - fu) / r^2$	(Answer lies between 0 and +1.00)
If f < u (the sum of unfavorable prominence scores is greater than the sum of the favorable prominence scores), the following formula is used:		
UMV =	$(fu - u^2) / r^2$	(Answer lies between 0 and -1.00)

Source: © John C. Pollock, 2000-2020.

RESULTS

This study examined coverage of federal coronavirus responses comparing Media Vectors from 18 cities within a sample period of January 28, 2020, to April 3, 2020, using Pearson correlations and regression analysis. The highest Media Vector composite score was Columbia, South Carolina, with + 0.3850, while the lowest score was Philadelphia, Pennsylvania, with -0.6483 for a range of 1.033, with 15 of 18 newspapers (83%) displaying negative coverage of federal COVID-19 responses. A complete list of Media Vector scores is found, from most positive to most negative, in Table 3.

Media Vector scores for newspapers in each of four regions were averaged and ranked-ordered from highest to lowest. Shown in Table 4, the results reveal the South as the only region with somewhat favorable coverage of federal coronavirus efforts (0.0638), while the Northeast displayed by far the most negative coverage of any region (-0.4831). SPSS was used to calculate Pearson correlations to measure connections between city characteristics and variations in newspaper coverage. Results are presented in Table 5.

Table 3. Media Vectors

City	Newspaper	Media Vector
Columbia, SC	<i>The State</i>	-.3850
Sacramento, CA	<i>The Sacramento Bee</i>	.1792
Charlotte, NC	<i>The Charlotte Observer</i>	.0079
Atlanta, GA	<i>The Atlanta-Journal Constitution</i>	-.0068
San Diego, CA	<i>The San Diego Tribute</i>	-.0142

City	Newspaper	Media Vector
Cleveland, OH	<i>The Plain Dealer</i>	-.0145
Orlando, FL	<i>The Orlando Sentinel</i>	-.0249
Houston, TX	<i>The Houston Chronicle</i>	-.0422
St. Louis, MO	<i>The St. Louis Post-Dispatch</i>	-.0490
Denver, CO	<i>The Denver Post</i>	-.1111
Las Vegas, NV	<i>The Las Vegas Sun</i>	-.1564
Albuquerque, NM	<i>The Albuquerque Journal</i>	-.1660
Pittsburgh, PA	<i>The Pittsburgh Post-Gazette</i>	-.2849
Portland, OR	<i>The Oregonian</i>	-.3492
Buffalo, NY	<i>The Buffalo News</i>	-.5162
San Francisco, CA	<i>The San Francisco Chronicle</i>	-.5878
Detroit, MI	<i>The Detroit News</i>	-.6246
Philadelphia, PA	<i>The Philadelphia Inquirer</i>	-.6483

Source: © John C. Pollock, Suchir Govindarajan, Alexis Marta, James N. Sparano, 2020.

Table 4. Regional Average Media Vectors

Region	Average Vectors
South	0.0638
West	-0.1722
Midwest	-0.2294
Northeast	-0.4831

Source: © John C. Pollock, Suchir Govindarajan, Alexis Marta, James N. Sparano, 2020.

Table 5. Pearson’s Correlations

City Characteristics	Pearson Correlation	Significance	Hypothesis Category
Percent Voting Democratic in the last Presidential election	-0.716	0.000**	PI
Percent Voting Republican in the last Presidential election	0.714	0.000**	PI
Percent Evangelical	0.692	0.001**	BS
Percent Catholic	-0.585	0.005**	BS
Percent Municipal Spending on Health Welfare	-0.582	0.006**	HP
Ages 65+	-0.534	0.011*	A

City Characteristics	Pearson Correlation	Significance	Hypothesis Category
Physicians/100,000	-0.613	0.013*	HP
Crime Rate/100,000	-0.485	0.024*	V
Percent Uninsured	0.480	0.022*	V
Ages 18-24	0.475	0.023*	A
Ages 45-64	-0.413	0.044*	A
Percent Single-Parent Households	0.411	0.045*	V
Percent Family Income of \$200,000+	-0.329	0.091	TP
Percent Protestant (Mainline)	0.282	0.128	BS
Occupational Status (Management/Business/Science/Arts)	-0.175	0.243	TP
Percent Hispanic	0.145	0.283	V
Percent African American	0.127	0.307	V
Hospital Beds/100,000	-0.060	0.406	HP
Percent Unemployed	-0.060	0.406	V
Percent College Educated	-0.044	0.431	TP
Percent Below Poverty Level	-0.024	0.463	V

**significant at .01 level

*significant at .05 level

KEY: PI = Political Identity, BS = Belief System, HP = Health Privilege, A = Age, V = Vulnerability, TP = Traditional Privilege

Source: © John C. Pollock, Suchir Govindarajan, Alexis Marta, James N. Sparano, 2020.

DISCUSSION OF SIGNIFICANT FINDINGS

Polarization in Political Partisanship and Belief Systems Confirmed as Major Drivers of Coverage

As predicted, the higher the percentage voting Democratic in the previous presidential election, the less favorable the coverage of federal responses to COVID-19 ($r = .716$, $p = 0.000$); and conversely, higher proportions voting Republican are linked to more favorable coverage ($r = 0.714$, $p = 0.000$). Perhaps somewhat more surprising in its strength, the same sharp polarization manifested in political identity is apparent in belief systems as well, with higher percentages of Evangelicals associated with markedly more favorable reporting on federal government COVID-19 performance ($r = 0.692$, $p = 0.001$), while higher proportions of Catholics are linked to dramatically less favorable reporting ($r = -0.585$, $p = 0.006$).

“Violated Buffer” Pattern Describes Negative Coverage of Federal COVID-19 Responses for those Privileged with Healthcare Access and Economic (Age) Advantage

It was hypothesized that the higher the proportion of those privileged with healthcare access in a community (in terms of municipal spending on healthcare, hospital beds/100,000, or physicians/100,000), the less favorable the coverage of federal COVID-19 responses. Previous research confirming this expectation helped construct a “violated buffer” hypothesis (Pollock, 2007: 101-135), defined as connections between measures of community privilege and negative reporting on “biological threats or threats to a privileged way of life” (2007: 101). Specifically, two indicators of healthcare access privilege, higher proportion municipal spending on healthcare ($r = -0.582$, $p = 0.006$) and physicians/100,000 ($r = -0.613$, $p = 0.13$), are strongly associated with unfavorable coverage of federal responses to a biological threat, COVID-19. Only hospital beds/100,000 has no significant connection to virus coverage.

Similarly, the “violated buffer” pattern may apply to different age groups as well. The relatively older, more economically “privileged” city residents are linked robustly to negative coverage of federal COVID-19 efforts (age 65+: $r = -0.534$, $p = 0.031$; ages 45-64: $r = -0.413$, $p = 0.044$), compared to positive coverage associated with the youngest adults age 18-24 ($r = 0.475$, $p = 0.023$). In addition to typically manifesting higher net worth than younger adults, the middle-aged (45-64) and seniors (65+) often shoulder more responsibilities for other family members than do the youngest age group, who typically may be among the least risk-averse age categories. Viewing federal government responses to the COVID-19 virus negatively, the two older age categories may experience a “violated buffer”, both a biological threat and a threat to a cherished, stable, predictable way of life. The age category 25-44 was not significantly associated with COVID-19 government response coverage.

Vulnerability Matters in Unexpected Ways, Supporting Federal Responses

It is striking to encounter the “most” socially, economically, and medically vulnerable, the uninsured ($r = 0.480$, $p = 0.022$) and those in single-parent households ($r = 0.411$, $p = 0.045$) significantly linked to “favorable” coverage of federal COVID-19 efforts. Perhaps extreme vulnerability may be associated with appreciation of any government efforts at all, however meager, to help the least fortunate. Other measures of vulnerability were not significantly connected to COVID-19 government response coverage.

Regression Analysis: Two-Thirds of Variance Associated with Negative Reporting

Regression analysis of variables significantly associated with newspaper coverage of federal government COVID-19 responses, shown in Table 6, reveals a consistent pattern: Political partisanship, generational economic privilege, and a major belief system are all strongly associated with negative coverage of federal COVID-19 activities. Percent voting Democratic in the last presidential election (2016) accounts for 49.6% of the variance; while the most privileged income age group (middle age, or 45-64) accounts for 11.8%, and proportions of a major

belief system, percent Catholic, account for another 14,5%, collectively totaling 75.9% of the variance associated with negative reporting on federal coronavirus activities. Percent single-parent families (8.8% of the variance) is uniquely linked to positive reporting on federal government virus responses, but the general pattern is clear. Vast numbers of US metropolitan residents, in particular those voting Democratic, generationally privileged, and Catholic, are associated with profound disappointment in national government virus activities, a massive “violated buffer” pattern: a negative media reaction to a “biological threat or a threat to a cherished way of life” in which previous governments/administrations could be relied on to make good faith efforts to protect the people of the US from the worst effects of life-threatening disasters.

Table 6. Regression Analysis

Model (Variables)	R	R2 Cumulative	R2 Change	F Change	Sig. F Change
Voting Democratic	0.704	0.496	0.496	9.832	0.011
Voting Democratic, Ages 45-64	0.784	0.614	0.118	2.763	0.131
Voting Democratic, Ages 45-64, Catholic	0.871	0.759	0.145	4.797	0.060
Voting Democratic, Ages 45-64, Catholic, Single-Parent Household	0.920	0.847	0.088	4.000	0.086

Source: © John C. Pollock, Suchir Govindarajan, Alexis Marta, James N. Sparano, 2020.

CONCLUSION: MEDIA COVERAGE REVEALS A “VIOLATED BUFFER”

Community structure theory was used to analyze associations between community-level demographics and variations in newspaper coverage of federal government responses to COVID- 19 in major metropolitan areas in the US. At least one prediction was vibrantly confirmed: Partisan political activity, voting Democratic or Republican, was robustly associated with variations in reporting, with the former (voting Democratic) strongly linked to negative reporting on federal government virus responses, while voting Republican was connected to the opposite.

Other findings were somewhat less expected. It was not easily foreseen, for example, that belief system membership would be associated almost as strongly as political identity with variations in reporting on federal virus activity. Yet, Evangelical membership was linked to positive reporting, and Catholic membership to its negative counterpart, almost as powerfully as political identity, suggesting a level of religious polarization rarely encountered in content analysis comparing belief system demographics and reporting on critical issues. Under conditions of extreme crisis, perhaps many resort to relatively familiar “tribal”

identities of political party and religion, a portent of growing nationwide rigidity as the pandemic unfolds.

Groups “buffered” from economic and other uncertainties are traditionally expected to hold their own against a variety of social, political, and medical challenges. Yet those arguably “buffered” from medical challenges, communities with higher proportions of municipal spending on healthcare or physicians/100,000, manifested markedly negative reporting on federal virus responses, suggesting those previously “buffered” had suffered a “violation” of that buffer. In parallel fashion, age categories presumed most economically comfortable, middle-aged (45-64) and seniors (65+), were precisely the age groups associated with strong negative coverage of federal COVID-19 activities, more evidence of a “violated buffer”. Communities with higher proportions of “vulnerable” inhabitants (uninsured and single-parent families) were connected to positive coverage of federal virus efforts, but overall coverage patterns point in the opposite direction.

Collectively, percent voting Democratic, percent ages 45-64, and percent Catholic, accounting for over 75% of the variance, were all linked to negative coverage. The power and direction of those findings, some unexpected, all underscore what community structure scholars call a “violated buffer” pattern: robust connections between measures of privilege or stable community and negative coverage of biological threats (such as a pandemic) or threats to a cherished way of life. In addition to the obvious biological threat of the virus, the threat to a predictable way of life is immediately visible in a national leader who, with a background in business rather than public service, sometimes appears more concerned with “selling” policies than with “protecting” the people it is supposed to defend at all costs.

Empirically, media coverage of federal COVID-19 responses confirmed it as a national issue associated with a “violated buffer”. Methodologically, combining measures of both “prominence” and “direction,” highly sensitive Media Vectors highlighted the capacity of media to reflect community measures of “political identity” “belief system,” and “healthcare access”, “age” and “vulnerability”. Theoretically, emphasizing the influence of local demographics, community structure theory complements agenda-setting theory at the national level, re-confirming the empirical findings of a founder of agenda-setting (Funk and McCombs, 2017), that both nationally prominent newspapers (agenda setting) and local community characteristics/concerns (community structure) can affect coverage of critical local issues.

John C. Pollock (pollock@tcnj.edu) (PhD, Stanford) is professor, depts. of Communication Studies and Public Health, The College of New Jersey. Authored/edited books include *Tilted Mirrors: Media Alignment with Political and Social Change – A Community Structure Ap-*

proach (2007); *Media and Social Inequality: Innovations in Community Structure Research* (2013); *Journalism and Human Rights: How Demographics Drive Media Coverage* (2015); and with Mort Winston, *Making Human Rights News: Balancing Participation and Professionalism* (2017).

Serving on editorial boards, including *Journal of Health Communication*, *Communication Theory*, and *Mass Communication and Society*, Pollock's articles for scholarly/non-scholarly outlets, mostly advancing community struc-

ture theory, include: *Journalism & Mass Communication Quarterly*, *Journal of Health Communication*, *Mass Communication and Society*, *Journal of Human Rights*, *Human Rights Review, Society*, *The Nation*, and *The New York Times*.

Suchir Govindarajan (govinds1@tcnj.edu) is a junior English major with minors in Public Health and Russian Studies at The College of New Jersey. He currently serves as the Executive President for the Student Government, representing the student perspective to the College President, Cabinet, and Governance system. Suchir interned at the New Jersey Office of the Secretary of Higher Education; where he assis-

ted in efforts to support the state plan for Higher Education and provided student resources in response to the COVID-19 pandemic; and now serves as a student representative to the NJ Higher Education Restart Advisory Group. He is a TCNJ College Ambassador and Orientation Leader and previously served as the Hunger Prevention and Workforce Development Program Assistant at the Trenton non-profit Arm In Arm.

Alexis Marta (martaa1@tcnj.edu) is a Communication Studies major with a public and mass communication specialization at The College of New Jersey, anticipated graduation spring 2021. In 2018, she presented a paper at the New Jersey Communication Association annual conference (NJCA) on socio-political consequences of

media convergence in the news industry. Most recently, her co-authored paper entitled, *Nationwide Newspaper Coverage of Southern Border Immigrant Rights in the United States: Community Structure Theory and a "Violated Buffer" Reporting Pattern* was accepted for presentation at the 2020 NJCA annual conference.

James N. Sparano (sparanj4@tcnj.edu) is a Communication Studies student at The College of New Jersey. Co-authored a presented poster on gun safety at the Kentucky Conference on Health Communication (*Nationwide Media Coverage of Gun Safety: Community Structure Theory and Community Vulnerability*), and has had various papers accepted to the New

Jersey Communication Association, including *Cross-National Media Coverage of Food Insecurity: Community Structure Theory and National Vulnerability* and *Nationwide Newspaper Coverage of Immigrant Rights in the United States: Advancing Community Structure Theory*. He will graduate in spring, 2021, with a mass communication specialization.

References

American Hospital Association. (2020). "Fast Facts on US Hospitals, 2020". AHA. Available at: <<https://www.aha.org/statistics/fast-facts-us-hospitals>>. Accessed 9 March 2020.

Association of Religion Data Archives. (2006). "Belief Systems". ARDA. Available at: <<http://www.thearda.com/>>. Accessed 9 March 2020.

- Beggin, R. (2020). "Two-Thirds of Americans Think Trump Acted Too Slowly to Fight Coronavirus". Vox. Available at: <<https://www.vox.com/policy-and-politics/2020/4/18/21226500/coronavirus-two-thirds-americans-think-trump-acted-too-slowly>>. Accessed 19 April 2020.
- Borowski, G.; Olesnycky, N.; O'Malley, A.; Panettiere, M.; Pollock, J. C., and Kim, J. (2017). "Nationwide Multi-City Newspaper Coverage of Immigration Reform: A Community Structure Approach". Invited paper presented at the Annual New Jersey Communication Association Conference. Lakewood, 25th March.
- Centers for Disease Control. (2020). "Situation Summary". CDC. Available at: <<https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/summary.html>>. Accessed 22 March 2020.
- Claritas. (2017). "Claritas Segmentation & Market Solution". Claritas. Available at: <www.segmentationsolutions.nielson.com>. Accessed 9 March 2020.
- Cruz, B.; García, S.; Moncada, C.; Tarrant, M.; Pollock, J. C.; DeVoe, N., and Moore, P. (2018). "Nationwide Newspaper Coverage of Opioid Abuse: Testing Community Structure Theory". Invited paper presented at the Biannual Kentucky Conference on Health Communication. Lexington, 12th April.
- D'Angelo, P. (ed.) (2018). *Doing News Framing Analysis II: Empirical and Theoretical Perspectives*. New York: Routledge.
- Demers, D. and Viswanath, K. (eds.) (1999). *Mass Media, Social Control, and Social Change: A Macrosocial Perspective*. New York: Iowa State University Press.
- Donohue, G. A.; Tichenor, P. J., and Olien, C. (1995). "A Guard Dog Perspective on the Role of Media". *Journal of Communication*, 45, pp. 115-132.
- Entman, R. (1993). "Framing: Toward Clarification of a Fractured Paradigm". *Journal of Communication*, 43(4), pp. 51-58.
- Fram, A. (17, March 2020). "Chamber Asks Government to Avert Economic Hit - Business Organization Pushes White House, Congress on Legislation". *The San Diego Union-Tribune*. Available at: <https://infoweb.newsbank.com/apps/news/openurl?ctx_ver=z39.882004&rft_id=info%3Aid/infoweb.newsbank.com&svc_dat=AWNB&reqdat=107C51BF0D1D18A&rft_val_format=info%3Aofi/ft%3Akev%3Amtx%3Actx&rft_dat=document_id%3Anews%252F179C252D9FD05D08>. Accessed 7 April 2020.
- Funk, M. J. and McCombs, M. (2017). "Strangers on a Theoretical Train: Inter-media Agenda Setting, Community Structure, and Local News Coverage". *Journalism Studies*, 18(7), pp. 845-865.
- Gaquin, D. A. and Ryan, M. M. (eds.) (2019). *County and City Extra 2019: Annual Metro, City, and County Data Book*. Bernan Press. Available at: <<https://ezproxy.tcnj.edu:2225/lib/tcnj/detail.action?docID=5968840#>>. Accessed 9 March 2020.
- Hindman, D. B. (1999). "Social Control, Social Change and Local Mass Media". In: Demers, D. and Viswanath, K. (eds.). *Mass Media, Social Control, and Social Change: A Macrosocial Perspective*. Ames: Iowa State University Press, pp. 99-116.
- Human Rights Watch. (2020). "US: Ensure Affordable COVID-19 Treatment Cost of Coronavirus Care Could Lead to Crushing Medical Debt". Human Rights Watch. Available at: <<https://www.hrw.org/news/2020/03/20/us-ensure-affordable-covid-19-treatment>>. Accessed 9 March 2020.
- Janowitz, M. (1952). *The Community Press in an Urban Setting*. New York: Free Press.
- Jeffres, L.; Horowitz, E.; Bracken, C. C.; Jian, G.; Neuendorf, K. A., and Yoon, S. (2011). "Structural Pluralism and the Community Context: How and When Does the Environment Matter"? *Mass Communication and Society*, 14(6), pp. 787-815.
- Kiernicki, K.; Pollock, J. C., and Lavery, P. (2013). "Nationwide Newspaper Coverage of Universal Health Care: A Community Structure Approach". In: Pollock, J. C. (ed.). *Media and So-*

cial Inequality: Innovations in Community Structure Research. New York: Routledge, pp. 116-134.

LeBlanc, B. (18, March 2020). "Trump Targets Whitmer on Twitter - Attack Comes after Gov Calls Federal Virus Response 'Mind-Boggling'". *The Detroit News*. Available at: <https://infoweb.newsbank.com/apps/news/openurl?ctx_ver=z39.88-2004&rft_id=info%3Aid/infoweb.newsbank.com&svc_dat=AWNB&req_dat=107C51BF0D1D188A&rft_val_format=info%3Aofi/ftm%3Akev%3Amtx%3Actx&rft_dat=document_id%3Anews%252F179C7F816417B730>. Accessed 7 April 2020.

Marist Institute for Public Opinion. (2020). "NPR/PBS NewsHour/Marist Poll National Adults". The Marist Institute. Available at: <http://maristpoll.marist.edu/wp-content/uploads/2020/03/NPR-PBS-NewsHour_Marist-Poll_USA-NOS-and-Tables_2003151338.pdf#page=3>. Accessed 9 March 2020.

Matthes, J. and Kohring, M. (2008). "The Content Analysis of Media Frames: Toward Improving Reliability and Validity". *Journal of Communication*, 58, pp. 258-279.

McCombs, M. (2004). *Setting the Agenda: The Mass Media and Public Opinion*. Malden: Blackwell Publishing.

McLeod, D. M. and Hertog, J. K. (1992). "The Manufacture of Public Opinion by Reporters: Informal Cues for Public Perceptions of Protest Groups". *Discourse and Society*, 3, pp. 259-275.

—. (1999). "Social Control, Social Change and the Mass Media's Role in the Regulation of Protest Groups". In: Demers, D. and Viswanath, K. (eds.). *Mass Media, Social Control, and Social Change: A Macrosocial Perspective*. Ames: Iowa State University Press, pp. 305-331.

Moran, K.; Byrdak, N.; Hogerty, K.; Streckenbein, E.; Kim, J., and Pollock, J. C. (2017). "Nationwide Newspaper Coverage of Security Surveillance: A Community Structure Approach". Invited paper presented at the Annual New Jersey Communication Association Conference. Lakewood, 25th March.

Park, R. (1922). *The Immigrant Press and Its Control*. New York: Harcourt.

Patel, A.; Ruggiero, M.; Ver Haeghe, K.; DiBlasi, M.; Pollock, J. C., and Morgan, M. (2017). "Nationwide Newspaper Coverage of Gun Safety: A Community Structure Approach". Invited paper presented at the DC Health Communication Conference. Washington, DC, 27th April.

Peraria, H.; Brown, D.; Fishbone, A.; Longo, L.; Agresti, S., and Pollock, J. C. (2015). "Nationwide Coverage of Rape Culture in the US Military: A Community Structure Approach". Invited paper presented at the DC Health Communication Conference. Washington, DC, 16th April.

Pollock, J. C. (2007). *Tilted Mirrors: Media Alignment with Political and Social Change —A Community Structure Approach*. Cresskill: Hampton Press.

—. (ed.) (2013a). *Media and Social Inequality: Innovations in Community Structure Research*. New York: Routledge.

—. (2013b). *Community Structure Research*. In: Moy, P. (ed.). *Oxford Bibliographies Online*. New York: Oxford University Press.

—. (ed.) (2015). *Journalism and Human Rights: How Demographics Drive Media Coverage*. New York: Routledge.

Pollock, J. C.; Buonauro, B.; Hosonitz, A.; Kordomenos, C.; Phelan, C., and Salmon, M. (2017a). "Nationwide Newspaper Coverage of Transgender Rights: A Community Structure Approach". Invited paper presented at the International Communication Association Conference. San Diego, 25th May.

Pollock, J. C.; Gratale, S.; Teta, K.; Bauer, K., and Hoekstra, E. (2014). "Nationwide Newspaper Coverage of Immigration Reform: A Community Structure Approach". *Atlantic Journal of Communication*, 22(3-4), pp. 259-274.

—. (2015). "Nationwide Newspaper Coverage of Immigration Reform: A Community Structure Approach". In: Pollock, J. C. (ed.). *Journalism and Human Rights: How Demographic Differences Drive Media Coverage*. London and New York: Routledge.

- Pollock, J. C.; Maltese-Nehrbass, M.; Corbin, P., and Fascanella, P. B. (2010). "Nationwide Newspaper Coverage of Genetically-Modified Food in the United States: A Community Structure Approach". *Ecos de la Comunicación*, 3(3), pp. 51-75.
- Pollock, J. C.; Richardella, B.; Jahr, A.; Morgan, M., and Cook, J. P. (2018). "Nationwide Newspaper Coverage of Rape and Rape Culture on College Campuses: Testing Community Structure Theory". *Human Rights Review*, 19(2), pp. 229-248.
- Pollock, J. C.; Robinson, J. L., and Murray, M. C. (1978). "Media Agendas and Human Rights: The Supreme Court Decision on Abortion". *Journalism Quarterly*, 53(3), pp. 545-548, 561.
- Pollock, J. C.; Street, A.; Moran, M.; Riper, A. van; Minick, C.; Soya, T.; Morgan, M. K., and Streckenbein, E. (2017b). "Nationwide Newspaper Coverage of Solitary Confinement: A Community Structure Approach". Invited paper presented at the DC Health Communication Conference. Washington, DC, 27th April.
- Pollock, J. C. and Yulis, S. G. (2004). "Nationwide Newspaper Coverage of Physician-Assisted Suicide: A Community Structure Approach". *Journal of Health Communication*, 9(4), pp. 281-307.
- Rae, M.; Claxton, G.; Kurani, N.; McDermott, D., and Cox, C. (2020). Potential Costs of COVID-19 treatment for People with Employer Coverage. Available at: <<https://www.healthsystemtracker.org/brief/potential-costs-of-coronavirus-treatment-for-people-with-employer-coverage/>>. Accessed 9 March 2020.
- Robertson, L.; McDonald, J., and Farley, R. (8 March 2020). An Outbreak of Exaggeration: Democrats Misconstrue Facts about CDC Funding, 'Muzzling' of Scientists. *The Plain Dealer*. Available at: <https://infoweb.newsbank.com/apps/news/openurl?ctx_ver=z39.882004&rft_id=info%3Aid/infoweb.newsbank.com&svc_dat=AWNB&req_dat=107C51F0D1D188A&rft_val_format=info%3Aofi/fmt%3Akev%3Amtx%3Actx&rft_dat=document_id%3Anews%252F1799424B1BB815A>. Accessed 12 April 2020.
- Singer, J. B. (2013). "The Ethical Implications of an Elite Press". *Journal of Mass Media Ethics*, 28(3), pp. 203-216.
- Soya, T.; Fleck, J.; Makhdomi, H.; Wallman, L.; Agresti, S.; Longo, L., and Pollock, J. C. (2015). "Nationwide Coverage of Rape and Rape Culture on College Campuses: A Community Structure Approach". Invited paper presented at the DC Health Communication Conference. Washington, DC, 16th April.
- Sparano, J.; DeGirolamo, O.; Martin, H.; Corvil, D., and Pollock, J. C. (2020). "Nationwide Newspaper Coverage of Government Gun Safety Regulation: Community Structure Theory and Community 'Vulnerability'". Invited paper presented at the Kentucky Conference on Health Communication. Lexington, 3rd April.
- Tichenor, P. J.; Donohue, G., and Olien, C. (1973). "Mass Communication Research: Evolution of a Structural Model". *Journalism Quarterly*, 50(3), pp. 419-425.
- . (1980). *Community Conflict and the Press*. Beverly Hills: Sage.
- Trotochaud, M.; Huang, L.; Dietel, C.; Longo, L.; Agresti, S., and Pollock, J. C. (2015). "Nationwide Coverage of Pediatric Immunization in the US: A Community Structure Approach". Invited paper presented at the DC Health Communication Conference. Washington, DC, 16th April.
- Vales, V.; Pollock, J. C.; Scarfone, V.; Koziol, C.; Wilson, A., and Flanagan, P. (2014). "Nationwide US Newspaper Coverage of Same-sex Marriage: A Community Structure Approach". *Atlantic Journal of Communication*, 22(3/4), pp. 229- 244.
- . (2015). "Nationwide US Newspaper Coverage of Same-Sex Marriage: A Community Structure Approach". In: Pollock, J. C. (ed.). *Journalism and Human Rights: How Demographics Drive Media Coverage*. London and New York: Routledge.

Vliegenthart, R. and Walgrave, S. (2012). "The Interdependency of Mass Media and Social Movements". In: Semetko, H. A. and Scammell, M. (eds.). *The Sage Handbook of Political Communication*. Thousand Oaks: Sage.

Vreese, C. de (2005). "News Framing: Theory and Typology". *Information Design Journal*, 13(1), pp. 51-62.

World Health Organization. (2020). "Coronavirus Disease (COVID-2019) R&D". WHO. Available at: <<https://www.who.int/blueprint/priority-diseases/key-action/novel-coronavirus/en/>>. Accessed 26 March 2020.

Zinck, K.; Rogers, M.; Pollock, J. C., and Salvatore, M. (2014). "Nationwide US Multicity Newspaper Coverage of Detainee Rights at Guantanamo Bay: A Community Structure Approach". *Atlantic Journal of Communication*, 22(3/4), pp. 245-258.

—. (2015). "Nationwide US Multicity Newspaper Coverage of Detainee Rights at Guantanamo Bay: A Community Structure Approach". In: Pollock, J. C. (ed.). *Journalism and Human Rights: How Demographics Drive Media Coverage*. London and New York: Routledge.