Just Because Fracking Doesn't Bleed, Doesn't Mean It Can't Lead:

How Coverage of Shale Gas Fracking and Other Environmental Stories Rank on Local Television News

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Abstract

This study analyzed the frequency with which local newscasters cover shale gas fracking and other environmental issues during a typical daily televised news broadcast. In doing so, the duration as well as frequency of other news stories were also compared to that of environmental stories. This study questioned why such environmental issues are not commonly discussed on local news stations, especially stations located in geographic areas that are particularly affected by such issues. The study was conducted through the use of qualitative analysis as well as quantitative analysis. The qualitative analysis was performed by reviewing the sample for any patterns, observations or themes, such as tone connotation and broadcasting style. The quantitative analysis was performed using data from a random sample of recorded news broadcasts, in which the topics discussed during the broadcast are analyzed using a coding instrument. Upon compiling data and results, the number of environmental/shale gas stories was compared to that of other news stories. The results will be shared and discussed with various local broadcast news stations; emphasizing the importance of public awareness on such crucial issues.

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In a society more likely to receive news about the naming of the latest Kardashian infant than that of issues involving shale gas fracking, air pollution, or ocean acidification, it is important to discuss how and why local news broadcasts should provide equal coverage of environmental concerns. Despite the lack of *actual* personal impact that 'fluff' stories have on viewers, entertainment headlines on average get over three times more coverage than environmental stories for national prominent news organizations (Miller & Pollack, 2012). However this is not due to lack of environmental viewer interest. A 2012 poll commissioned by Project for Improved Environmental Coverage and conducted by the Opinion Research Corporation, found that 79 percent of Americans from almost every demographic say they want improved environmental coverage (Adel, 2013). As environmental stories inevitably develop, trustworthy news outlets informing people of such transformations can be highly beneficial in the way people learn to live with such changes.

The literature review of this study focuses a significant amount of attention on recent technological developments and how they should/could be used to enhance environmental journalism coverage. In media communication, there are many ways of speaking simultaneously about issues amongst a plethora of platforms. Mobile news may be on the horizon in terms of popularity, but televised news broadcasts still remain in the number one slot, as most stations have yet to find a perfect formula for blending the two forms, i.e., media convergence. (Huang, 2004). Though different from the style

of traditional communication outlets, social media and online news websites have made a major and permanent dent in the way people discover the news. A study from the Earth Journalism Network contends that journalists can and should use these new technologies to their maximum benefit serving as story sources, finding interviewees, and presenting an opportunity for scientists and other experts to communicate directly with large audiences (Daley, 2010). The study also states that social media and television work in tangent with one another in today's media world and per the investigation of this research, similar comparisons and contrasts will be made regarding environment issue discussion on television. Research from a study performed for the Chinese Journal of Communication found that when new media (social, web) appear in the traditional news media, it is mainly as a *source* of information rather than the originator (of the new agenda) or platform for expressing public opinion. In this instance, the new and old methods exist for different purposes and perform different roles (Chao-Chen, 2013).

According to the 2017 Online News Association conference, the gap between television and online news consumption is narrowing and the use of mobile devices for news continues to grow (Bialik & Matsa, 2017). The flaw tied to overabundant mobile feeds however, is that there is a great simplicity in publicizing a story on the internet or via social media in this day and age, and this often leads to overcrowding of content and loss of value. As a result of this overwhelming complicated surplus of options, it is not uncommon for viewers to revert back to a familiar platform; tv news, specifically local television news. Local news broadcasts are known for consistently capturing an audience's attention for several reasons. The all-in-one style in which the local news is

presented is generally quick, to the point, relevant, and easily found. Stress-free access to local news also makes it an appealing option for some viewers. If a person misses the broadcast at 9 A.M, there will surely be a second broadcast shortly after at noon and on a handful of channels. These ideas are mentioned to place emphasis on the still-impactful reach of local news broadcasts; confirming that environmental news coverage can benefit from this platform.

This being said, how does national news play into the environmental news coverage discussion? Does the national news provide better coverage of environmental stories than local channels? In 2012, The Union of Concern Scientists composed an analysis looking into the coverage of environmental issues discussed on several major news channels. The analysis found Fox news's environmental coverage to be overwhelmingly misleading; including broad dismissals of human-caused climate change, rejections of climate science as a body of knowledge, and disparaging comments about individual scientists (Huertas & Alder, 2012). Additionally, the claimed 'balanced' CNN also proved to be equally vague. A fraction of the PIEC study discussed earlier in this essay discovered that between April 18 and May 18, 2012, sports/entertainment and news dominated with 217 stories, 86 stories were crime related, 71 were trivial stories and 17 were stories related to the environment. These statistics further confirm a minimal amount of environmental news coverage on all levels. Most would argue that exposure to a story is the first link to awareness, and awareness is the first link to change.

This study will further advance environmental journalism research by primarily highlighting the gaps in coverage when it comes to environmental discussion (with a

specific emphasis on fracking). Creating a dynamic and more effective dialogue is of value for this study, as the study's focus is not centered on the stance on the environmental story subjects, but instead *why* and *how* the stances should be presented in a more regularly viewed televised platform. Experts on fracking exist, as do studies, stories and first-hand experiences. The advanced efforts and results stemming from such experiences are ultimately *designed* to be widely shared with those whom are directly affected on platforms as accessible as television broadcasts.

Review of Literature

A Lack of Awareness and Education

Today, fracking and other environmental problems have become a very common part of many people's daily lives, but very few are sufficiently educated on the "why" or "how" such issues came to be in the first place. Various studies in the literature review support the idea that people do have an interest in remaining educated, but just lack awareness of the proper outlet, and have the opportunity to find one within their local news.

A team of individuals from Oregon State, George Mason and Yale Universities in 2012 performed a research study asking participants a variety of questions regarding a variety of environment issues. This research demonstrates a lack of awareness people have of environmental issues and why education through the media could be valuable. In this study, researchers found that most Americans knew little or nothing of the oil and gas production process called hydraulic fracking, and did not know whether to support or oppose it. Fifty-eight percent of the 1061 participants surveyed reported that they

knew nothing at all about fracking. Seven percent said they were aware of some environmental impacts of fracking, and three percent said they were aware of positive economic and energy supply impacts of fracking. This research supported the development of a more formal and objective educational approach to discussing the benefits and drawbacks of this emerging technology (Magill, 2017).

Partner to the project, Samantha Malone, manager of the FracTracker oil and gas research team said, "The potential economic and job benefits and the risks (such as environmental, health and social impacts as well as broader climate change implications) should all be part of the larger energy dialogue." Public awareness of the status of these potentially life-changing impacts is very important. As scientific understanding improves, it often unearths new questions to be answered (Sarewitz, 2004). Environmental issues, like weather issues, directly affect the lives of many on a regular basis, and thus are in need of public exposition. The media play an inherent role in representing certain interpretations of the biosphere (Luedecke & Boykoff, 2014). It is up to the media to share complex developments to average people not necessarily connected to such industries.

A 2013 study conducted by Yale University's Project on Climate Change Communication found that 57 percent of Americans know that the greenhouse effect refers to gases in the atmosphere that trap heat; 50 percent understand that global warming is caused mostly by human activities; 45 percent understand that carbon dioxide traps heat from the earth's surface; and only 25 percent have ever heard of coral bleaching or ocean acidification (Adel, 2013). This, without even mentioning the

effects of shale gas fracking, just scratches the surface as to what information is not being communicated to the general public.

Why The Need For Environmental Journalism

The majority of Americans say protection of the environment should be a priority, even at the risk of curbing economic growth, and they also believe the U.S. government is not doing enough to protect the environment (Newport, 2018). In 2018, Gallup.com polled 1041 adults and sixty-two percent said the government is doing too little to protect the environment; the highest in 12 years, and well above the low point of forty-six percent the last time Gallup measured in 2010. These results demonstrate that people have a genuine interest in the environment, and thus need an adequate information source to keep them informed on the subject.

A great example demonstrating the public's interest specifically in the fracking debate comes from a study performed by the U.S. Department of Agriculture in 2013. With over half of the rural land in the continental United States owned or operated by farmers, and cropland, pasture and range accounting for 45 percent of total land use, many people are closer to the shale debate than they even know. The presence of shale in agriculturally-productive regions of the U.S. highlights potential areas of tension between benefits and risks for farmers living near such areas, including competition for resources such as water, labor, and land; environmental degradation; payment of per-acre fees and royalties to farmers; and changes to the livability of the surrounding community (Hitaj, Boslett, Weber, 2014). It is possible that ineffective communication and education from the media, particularly the broadcast television media, is to blame for a stagnation in the improvement of such concerns. Consistent updates performed

through the use of quick television soundbites tied with social media could keep people informed in a very easy manner. Similarly, in 2013, the non-profit organization Project for Improved Environmental Coverage released a report that compared and ranked news organizations according to how they had prioritized environmental headlines. The results were less-than-optimistic for members off the green team. “There’s a virtual black hole when it comes to green news, as major media organizations favor crime and entertainment stories above environmental ones” (Adel, 2013).

Utilizing the Broadcast Medium to the Fullest Degree

Though ratings have declined in recent years, television still outranks digital as the top source for news in the U.S, and 50 percent of all U.S. adults say they ‘”often” get local news from television (Rundlet & Gill, 2018). Local TV news operations have a significant advantage in a world hungry for video storytelling---they are recognized as experts in the medium, and still control a broadcast distribution system that tens of millions of Americans use every day to get their news (Knight Foundation, 2018). This “expertise” allows the local news to captivate viewers in a way that other communication platforms (like the internet) often fall short; creating the ability of re-rendering and deepening an audience’s education on a story, or to its detriment, depending on its level of effectiveness and accuracy. Fears about credibility within the digital media environment stem from the fact that there are few standards for quality control and evaluation online. There are no universal standards for posting information on the Internet, and digital information may be easily altered, misrepresented, or created anonymously under false pretenses (Metzger & Flannagan, 2013). It is possible that traditional media consumers (newspaper readers, tv news viewers) remain loyal for this

exact reason; online news often lacks the ability to prove credibility amongst its writers and social media news is oversaturated and sometimes complicated to discover.

In 2016, GfK, a trusted leader in market research, teamed up with TVB, a website dedicated to media solutions, to conduct a study comparing a variety of media platforms in terms of reach, influence, trust, and time spent. The 2016 Media Comparisons Study found that consumers spend more time with television than all other ad-supported media platforms studied and television that is the top advertising medium that influences purchasing decisions. The study also revealed that consumers overwhelmingly trust local broadcast TV news over any other source (Gerber, 2016). Needless to say, a vast number of citizens rely solely on local television media to keep them updated on what the news deems is the 'most vital information'.

Method

As mentioned in the introduction section, this study questioned how the coverage of fracking and other environmental news stories compared to other news stories on the local news. In order to best discover and answer the aforementioned questions, the methods used in this study consisted of quantitative and qualitative comparisons. The sample consisted of a variety of televised news broadcasts being aired on three local Pittsburgh news stations, KDKA, WPXI and WTAE throughout the months of May, June, July, August and September 2018. The televised broadcasts varied in their dates and air-times and were selected randomly in order to produce unbiased and objective results.

The necessary digital media requirements to perform the study were: a television, DVR device, and basic cable subscription. There were 8 broadcasts recorded via DVR per station each month, with 2-5 broadcasts (per station) randomly selected and coded each month for use of the study. Every month, the total number of recorded broadcasts actually coded for the use of the study were between 9-12. The number of broadcasts conclusively used in the study was 31.

The coding process involved a coding sheet listing the three different news stations (KDKA, WPXI, WTAE) on the Y axis, and the stories listed on the X axis to compare the number of instances in which the story listed on the X axis was shown on one of the three news stations on the Y axis. This would display the frequency of some news stories versus others.

Sample Selection

For this study, a random sample was selected. The sample consisted of news broadcasts varying in date, hour and news station. The dates of the analyzed broadcasts took place between May, June, July, August and September of 2018. The time of day in which broadcasts were analyzed included: morning broadcasts (5:00 AM - 11 AM), afternoon broadcasts (12:00 PM - 5:00 PM), and evening broadcasts (6:00 PM - 11:30 PM). The three different local news stations providing broadcast television news analyzed were: KDKA, WPXI and WTAE. The reason there were five months included in the sample was to ensure objectivity in the sampling due to the various and differing seasonal stories that sometimes coincide with certain months of the year. Similarly, a range of time options were also selected in the sample to

ensure that all newscasts despite their time of airing or popularity would be factored into the study.

Random broadcasts aired during each month were recorded and coded, with each station having three to five broadcast episodes coded per month, 9-11 coded episodes per station, and a total of 31 coded broadcast episodes amongst all three stations. The recorded broadcasts were grouped into three sections: Summer 1 (May), Summer 2 (June/July) and Summer 3 (August/September).

Procedure

For this study, it was imperative to use local, real-life broadcasts to learn how much coverage environmental stories receive on local television news stations, and how this coverage compares to that of non-environmental stories. The best way to capture such instances included recording a random sample of broadcast television newscasts from multiple local news stations, and analyzing the different news stories that were discussed in each episode. The analysis was performed utilizing a coding instrument that charts different news subjects that exist during a typical broadcast. The subject options included: crime, weather, politics (both national and local), health, sports, business/economics, human interest, other, and environmental. Every instance in which a story of a certain subject was mentioned, a tally would get marked in that subject's box. If an environmental/fracking story was mentioned, a second step was required in the coding process. This second step entailed referring to a second coding chart that focused in on a variety of eleven different specific types of environmental news issues.

The specific type of environmental issue would receive a tally on the second chart; making note as to what types of environmental news receive attention the most.

Results

Station	Time	Date of Br	Crime	Traffic	Human Interest	Weather	Sports	Env/Fracking	Politics	Business, Economics	health	Other
KDKA	Morning	5/31/18	6	7	5	8	4	2	1	3	1	1
KDKA	Evening	5/27/18	2		4	5	5	1	1			2
kdka	morning	5/30/18	7	6	3	7					3	3
wtae	morning	5/20/18	5	2	6	5	5	1	1	3	1	
wtae	morning	5/26/18	8		6	4	2	1	2	2		3
wtae	morning	5/30/18	2	2	6	3		2	1	3		2
WPXI	evening	31-May	9	3	2			1	1	1		1
wpXI	Evening	26-May	4	2	5	3	2	1	3	1		1
wPXI	Morning	27-May	5	3	9	7	2	2	3	3	1	1
kdka	evening	28-Jul	3	1	3	2	3	1	1	1		1
kdka	evening	30-Jul	8	3	2	3	4	1	3	4	3	3
kdka	evening	31-Jul	6	2	2	8	2	1	4	6	3	4
wtae	Evening	july 31 5pn	7	4	5	5	4	1	2	2	1	2
wtae	Evening	7/30/18.	6	3	7	8	3	1	1	8	2	3
WTAE	Morning	6/1/18	5	7	8	8	2	1			4	1
wtae	Morning	6/4/18	5	5	6	7	2	3	2	3	5	3
wtae	Afternoon	6/5/18	6		3	4		1	1	3	1	2
wtae	Evening	6/2/18	7	1	5	3	5		1		2	
wpxi	Morning	3-Jun	13	2	7	6	2	2	2	2	1	1
WPXI	Afternoon	7/31/18	8	1	3	6	1		2	4	4	4
wpxi	afternoon	30-Jul	6	2	4	5	3	1	1	3		4
KDKA	Morning	6-Sep	7	7	4	7	5			6	1	2
kDKA	evening	27-Aug	10	2	7	3	3	1		1		2
kDKA	Evening	22-Aug	10	4	5	6	5		1	3	1	5
wTAE	Morning	3-Sep	10	8	7	7	3	1	2	4		2
WTAE	morning	22-Aug	16	5	6	6	4	2	5	1	2	1
WTAE	Evening	31-Aug	7	6	4	5	6		1	4	2	4
wtAE	Evening	10-Sep	5		8	14	1	3	3	3	2	2
wpXI	afternoon	31-Aug	8	5	8	5	5		1	3	5	3
wpXI	afternoon	16-Aug	11	2	5	4	1	1	1	2	1	2
wpXI	morning	21-Aug	18	6	7	8		4				5
			230	101	162	172	84	36	47	79	46	70

This study questioned how fracking and other environmental news stories compared in terms of coverage, and the results proved that of the 31 broadcasts and 1027 stories that were coded and analyzed, 36 environmental stories were discussed on local television news broadcasts. This study also placed emphasis on how/if news

stations specifically acknowledged the subject of fracking, and of the 36 environmental news stories covered, **no stories were in any way related to fracking or ethane cracker**. During the period of Summer 2 (June/July), news stations discussed the most environmental stories with there being 13 in total, and the period with the least environmental coverage was Summer 1 (May) with 11 stories. Based on these results, environmental stories were 3.5% of the content shown on local broadcast news. The findings also presented consistent discoveries for the most popularly covered topics; crime, weather, and human interest. The crime stories proved to be on average 22% of all stories in a single broadcast, and weather and human interest stories both were around the 16% mark for all stories in a single broadcast.

Discussion

This study's research question asked how fracking and other environmental news stories compare to other stories on local news. The results of this study supported the hypothesis that fracking and environmental news stories do not receive as much attention on local news broadcasts. These results are an important reflection on the local media landscape because this study discovered that the local media's coverage of environmental news stories does not differ much from that of national media; with both channels designating less attention and airtime on environmental stories than other major categories of stories on the news. Based off of the many different studies that were analyzed during the literature review, these results were not surprising or far from to be expected. It was jarring, however, to see *exactly in numbers* how little attention local broadcast news is spending on environmental issues. As previous studies have stated that entertainment news receive three times the amount of coverage that

environmental stories do, it was shocking to learn in this study that both sports and human interest stories also towered over the minutes spent on environmental news stories.

As fracking and climate change developments continue to evolve, the results of this study (and others cited in the literature review) become more relevant and noteworthy to the individuals that manage story content at media stations. These subjects can be intimidating and confusing for many people, so the more regularly local, familiar news stations speak on these stories, the less daunting their concepts will be to average audiences. Providing a more diverse and dynamic range of subjects on the news (such an environmental stories) can also be beneficial to widening audiences' overall knowledge base, and helping viewers to become more educated and understanding people.

A logical next step would be to perform a similar study using the same coding instrument, but instead of coding *just* local television, it would also include coverage on a wider array of other media platforms. This process could be done in several ways. There could be a study that analyzes local news stations *and* their social media channels (including broadcaster accounts to ensure complete coverage), which would essentially be an expansion of what was performed in this study. There could also be a study in which national news stations and their social media channels are analyzed, or one in which solely social media platforms themselves are analyzed for the amount of environmental news coverage that is mentioned throughout a regular day. Although traditional news media continue to play an important role in the news coverage of the environment, a "tsunami-like impact' from social media and other digital technologies

has emerged in the wake of the decline of traditional media (Friedman, 2015). While traditional news media assumes a kind of unidirectional, “broadcast” model for disseminating news, social networking users are also generating a cornucopia of news and information about the government (Cox & Pezullo, 2017). In the future it would also be of interest to explore the rise of citizen journalism in the media, specifically to analyze the number of citizen environmental stories that are published on social media in comparison to those mentioned in professional media settings. More and more individuals are using their smartphones and other mobile devices to contribute to environmental reporting by taking photos or videos and through other actions (Matsa & Mitchell, 2014). Due to the rapid-fire updating style that goes hand-in-hand with social media, it is possible that this format is the most timely when it comes to environmental news updates. In addition to performing studies that utilize the coding instrument created for this study, another valuable way to measure environmental news would be to follow a set of key words using the Hootsuite software or Google alerts; setting an alarm for every instance in which a key term or phrase is posted on social media channels of local news stations as well as local regular citizens. This method would allow for keen tracking of exactly what is of utmost interest in real time. A combination of keyword alerts and coding instrument findings perhaps would be the most effective measure as this would ensure that no findings go unseen, and larger samples could be studied.

Conclusion

The conclusion of this project proved that crime, weather and human interest stories vastly surpassed the likes of all/any environmental news stories including stories regarding fracking. **Fracking stories received 0% of the broadcast time recorded and coded. Despite it being a major project in the Pittsburgh region, the ethane cracker also received 0% of the broadcast time recorded and coded.** Other on-going environmental issues such as climate control, air quality, received little to no air-time, and the only environmental issues that were discussed were gas-leak and water-quality stories and national events that made breaking news across the country. There is much to be said about the results of this study, so conferring with local news stations about the reasons why they choose to limit environmental story coverage would be highly beneficial for the future of environmental news, and the environment in general.

Appendix

Coding Instrument:

Codes for Pittsburgh Broadcast Media Fracking Coverage Content Analysis

Coder: (Name)

Coding Sheet 1

Recording Info: | Content Genres:

Station	Time	Date of Broadcast	Crime	Traffic	Human Interest	Weather	Sports	Env/Fracking	Politics	Business/Econ	Health	Other	
KDKA	Morning												
WPXI	Afternoon												
WTAE	Evening												
TOTAL													

Coding Sheet 2

Enviornmental Story Focus

Recording Info: | Environmental Sub-Categories:

Station	Time	Date of Broadcast	Politics-Shale Gas Fracking	Economic Impact-Shale Gas Fracking	Health Impact-Shale Gas Fracking	Enviornmental Impact-Shale Gas Fracking	Ethane Cracker	Other Pipeline Storage Facilities/ Developments	Climate Change	Water	Air Quality	Volcano	Wildfire
KDKA	Morning												
WPXI	Afternoon												
WTAE	Evening												
TOTAL													

Operational Definitions

Coding Sheet:

A technical data chart comparing certain categories of content presented on local broadcast news, and the specific aspects/methods/characteristics of those news stories being presented.

Technical Data:

Data compilation using comparative charts in order to discover story patterns or methodologies performed by local news stations.

Station:

Pittsburgh news center(s) providing content and presenting local news stories to the general public. Stations used in study: WXPI, KDKA, WTAE.

Time:

The time-slot in which the news program is being aired. There are three options being analyzed in this study: Morning (5:00-11:30AM), Afternoon (12:00, 12:30 PM), Evening (6:00, 6:30, 7:00, 7:30 PM). The time noted indicates the time the newscast begins. (*All time selections used in coding are selected at complete random).*

Date of Broadcast:

The day of the week in which the broadcast is being aired to the general public (Monday, Tuesday, Wednesday etc.). *(All date selections used in coding are selected at complete random).*

Recording Info:

The three most significant broadcast specifications acknowledged in this study; particular news station, time the newscast begins, and day of week.

Content Genre:

A specific type of news story that is categorized based off of the content that exists within that story. Despite differentiation amongst categories, content genres overlap and are not mutually exclusive. For example, the story “New health clinic provides flu shots and creates jobs” would be coded as ‘health’ as well as a ‘business/economics’ story.

Crime (Story):

Any news report depicting illegal activities that are punishable by law (Merriam-Webster). This is including but not limited to: robbery, shooting, fire, killing, murder, harassment, theft, sexual harassment, domestic violence, endangerment, destruction of property, embezzlement, illegal immigration, protests resulting from crime acts/events, etc. Crime stories and/or updates that are referred to multiple times in a single broadcast are counted as one singular story.

Traffic (Story):

Any news report involving roads, routes, construction, vehicles, pedestrians, planes, or any other method of transportation that affects the routines of civilians. Traffic updates that are separated by commercial breaks or other news stories are considered individual stories and are counted as such, due to the frequent addition to initial traffic stories throughout a broadcast. *Should traffic stories involve crime events (hit and run, fleeing the scene by car, or cop chases) this would additionally be listed in the Crime category.*

Human Interest (Story)-

News stories that are solely based on emotion; revolve around people or animals (or events/programs focused on people or animals). Such stories are presented in a very humanistic, as well as appealing way that prompts interest, compassion or inspiration in the viewer. In this study, Human Interest stories include pop culture subjects (film screenings, television episodes, music, live concerts, theatre) as well as local events such as: memorials, parades, fundraisers, random acts of kindness, success stories, etc.

Weather (Story):

Also considered as ‘Weather Forecast(s)’; News stories presented by meteorologists that discuss upcoming/current atmosphere trends, natural disasters, severe weather/advisories (i.e., tornados, hurricanes, flooding, severe rainstorms, lightning, fog, wind, wildfires, forest fires) extreme temperatures, etc. Weather updates that are separated by commercial breaks or other news stories are considered individual stories and are counted as such (due to the frequent addition to initial weather stories throughout a broadcast).

Sports (Story):

Any news story focusing strict attention on local or national sporting events/players/teams including but not limited to: baseball, softball, basketball, football, hockey, tennis, soccer, golf, UFC, Olympic games, Nascar, etc. Game footage and/or recaps are the primary bulk of this news story category, but stories linked to player/team/events off-the-field also remain within this category. *(It is important to note that the stories mentioned in the previous sentence can also be listed in the Human Interest category when applicable.)* Same-game stories that are interrupted by commercial breaks and/or breaking news/other content stories are considered one single story and are counted as such.

Environmental/Fracking (Story):

Any news story that discusses environmental concerns/issues/reports. Environmental issues include but are not limited to: Shale Gas Fracking, Petrochemical and plastic hubs, climate change, air quality, water, deforestation, forest fires, pollution, natural gas leaks, etc.

Politics (Story):

Any news story including coverage of political, court cases including Supreme court cases, governmental, and/or electoral issues that are both local and national. Such issues include: any mention of POTUS, international affairs, elections, war, immigration, law developments, Supreme Court decisions/trials, local council legislation, etc.

Business, Economics (Story):

Any news story that discusses business/economic affairs or developments. Such examples include but are not limited to: new business developments, job creation, job loss, poverty, income, status, banking, work environments, personal finance, global markets, stock market data, economic policy, business policy, etc.

Health (Story):

Any news story that discusses health-related issues or reports. Such examples include but are not limited to: crisis outbreaks, food and diet, health care, healthy living, fitness, nutrition, new developments in medicine, medicinal laws, diseases, mental health, FDA developments, parenting, etc.

Other (Story):

Any news story that does not fit into any of the aforementioned categories.

Total # of Each Story:

The cumulative number of instances in which one type of news story is discussed during a single broadcast.

Environmental Story Focus:

News story(ies) only consisting of environmental issues/concerns/reports etc. Such concerns/issues/etc. include by are not limited to: Shale gas fracking (pollical, health economic and environmental impact), Ethane Cracker developments, other fracking pipeline developments, climate change, water (quality, consumption, impact from environmental factors that are not solely considered 'weather'), air quality (smog, pollution, etc.), and other.

Environmental Sub-Categories:

Varying environmental news story categories separated by the content that is discussed/analyzed in each news story.

Political Impact/Discussion Shale Gas Fracking (Story):

An environmental story that focuses on the political impact Shale Gas Fracking (and any relevant legislation) has on the general public with focus on those residing in the greater Pittsburgh, Pa region. Examples include: elections, debates, government decisions, specific party opinions, etc.

Economic Impact/Discussion Shale Gas Fracking (Story):

An environmental story that focuses on the economic impact that Shale Gas Fracking (and any relevant legislation) has on the general public, with focus on those residing in the greater Pittsburgh, Pa region. Examples include but are not limited to: Job creation, job elimination, wealth, poverty, homelessness, income, education systems, law proposals, tax changes/breaks due to drilling, etc.

Health Impact/Discussion Shale Gas Fracking (Story):

An environmental story that focuses on the health impact that Shale Gas Fracking (and any relevant legislation) has on the general public, with focus on those residing in the greater Pittsburgh, Pa region. Examples include but are not limited to: water contamination, lung issues, respiratory issues, skin issues, eye issues, etc.

Environmental Impact/Discussion Shale Gas Fracking (Story):

An environmental story that focuses on the environmental impact that Shale Gas Fracking (and any relevant legislation) may/may not have on the general public, with focus on those residing in the greater Pittsburgh, Pa region. Examples include but are not limited to: disturbance of natural setting, deforestation, water

contamination, soil contamination, earthquakes, methane emissions, air pollution, etc.

Economic Impact/Discussion Ethane Cracker (Story):

An environmental story that focuses on the economic impact (and any relevant legislation) that the Ethane Cracker has on the general public, specifically those residing in the greater Pittsburgh, Pa region. Economic Impacts including but not limited to: job creation, financial growth, etc. (Detrow, 2012).

Health Impact/Discussion Ethane Cracker (Story):

An environmental story that focuses on the health impact that the Ethane Cracker (and any relevant legislation) has on the general public, specifically those residing in the greater Pittsburgh, Pa region. Health impacts include but are not limited to: lung damage due to toxic emission, respiratory damage due to toxic emission (toxic emissions consisting of nitrogen oxides, sulfur dioxides, carbon monoxide, volatile organic compounds, fine particulates and greenhouse gases [Detrow, 2012]).

Environmental Impact/Discussion Ethane Cracker (Story):

An environmental story that focuses on the environmental impact that the Ethane Cracker (and its legislation) has on the general public, specifically those residing in the greater Pittsburgh, Pa region. Environmental impacts include but are not limited to: toxic leaks, air quality, pollution, wet gas emission, toxic emissions consisting of nitrogen oxides, sulfur dioxides, carbon monoxide, volatile organic compounds, fine particulates and greenhouse gases (Detrow, 2012).

Other Pipeline Storage Facilities/ Developments:

An environmental news story that discusses pipeline storage facilities/developments (other than the ethane cracker), its legislation, and how such hubs affect the general public, specifically those residing in the greater Pittsburgh, Pa region.

Climate Change (Story):

An environmental news story that discusses climate change issues or reports (or its legislation). Such stories include but are not limited to: clean energy, wildfires, carbon pollution, agriculture, forestry, droughts, heat waves, sea level rising, artic lands, decreased water availability, etc. *Due to the broad nature of Climate Change discussions, cross-over category inclusions are to be expected.*

Water (Story):

An environmental news story that discusses water issues, reports or legislation. Such stories include but are not limited to: pollution, contamination, scarcity, flooding impact on citizens (*also can be listed in Weather category),* siltation of river systems, ocean acidification, etc.

Air Quality (Story):

An environmental news story that discusses air quality issues, reports or legislation. Such stories include but are not limited to: pollution, smog, respiratory problems amongst citizens (*also can be listed in Health category*), ozone developments, forest fire aftermath, etc.

Wildfire (Story)

Any environmental story that discusses fires (and its relevant legislation) that began in nature and without the impact of man. Stories include but are not limited to: forest fires, fire storms, forest fire recovery (*when applicable can be listed in the Air Quality* category), etc.

Other Environmental (Story):

Any other environmental story that is not discussed in the aforementioned list. This can include atypical happenstances or breaking alerts that are not affiliated with any of the aforementioned categories.

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