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| MEDIA FRAMES OF FRACKING IN ILLINOIS. |
| PLS 5163: SUBNATIONAL GOVERNMENT |

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**INTRODUCTION**

 This paper focuses on media coverage of fracking in the state of Illinois, a technique of retrieving natural gas from underground shale formations (Davis, C., & Hoffer, K. 2012). America over the past few years has increased its production of natural gas and as President Obama rightly indicated, “Since2006, no country on Earth has reduced its total carbon pollution by as much as the United States of America”. This due to the reduction in coal mining which produces greater carbon emissions than fracking. However, is there enough justification to embark on this natural gas independence with regard to the environmental safety of it? Are the people of America educated adequately on this method of oil and gas production to make a decision on either supporting or blocking its rise in relevant states where such shale formations abound and therefore attracting oil companies? How well is the public informed about this matter will depend significantly on media representations of the issues of fracking. Using information obtained from media content analysis of prominent local newspapers in the state of Illinois, this paper seeks to find out whether the media focuses on the adverse impacts of fracking in its reportage or they are more interested in presenting the controversies of the topic. The political debate ranges from whether there should be increased state regulation of fracking, the opposing views on the dangers of it as well as current or proposed state legislation of fracking. Thus, the overall goal is to identify media frames of the issues of fracking.

 “According to the EPA, fracking is a process in which large quantities of fluids (water, sand, and chemicals) are injected into shale rock or shale “plays”- which are shale formations containing significant accumulations of natural gas and which share similar geologic and geographic properties to release natural gas ( geology.com. See also, EPA, 2011). The injection sites are either vertical or horizontal and may extend for thousands of feet. Once the injection process is completed, internal pressure caused by the fracking fluid causes gases to return to the surface, which can be collected. This returned fluid also contains the injected compounds and other chemicals” (Fisk, 2013. See also National Conference of State Legislatures). Fracking is generally reported to have begun in the 1940s, however recent increase in this activity has been spurred on by the discovery of large new reserves of coal or shale bound gas throughout the US and by technological improvements such as the inclusion of horizontal drilling techniques adopted from deepwater oil and gas wells operating in the Gulf of Mexico (C Davis, K Hoffer; see also US Energy Information Administration 2011).

 Apparently there are other advantages to the venture of fracking aside contributing to US oil independence. The Environmental Impact Assessment [reports](http://www.eia.gov/analysis/studies/usshalegas/pdf/usshaleplays.pdf) that over 750 trillion cubic feet of technically recoverable shale gas and 24 billion barrels of technically recoverable shale oil resources in discovered shale ‘plays’ (energyfromshale.org). Obviously, prudently developing these resources will increase jobs and energy for any state and for the nation as a whole. Some economic estimates indicate that the putting up of pipelines and other infrastructural facilities related to fracking could annually add $56 billion to the US economy and lead to the creation of an average of 132,000 new jobs annually by 2017 (Rosenbaum, 2013).

 On one hand, “environmental groups and some state officials are increasingly concerned about potential risks related to public health and water quality stemming from the migration of chemicals to nearby aquifers as well as the sizeable amount of water required to utilize this technology. They worry that state-level policies designed to protect water quality are too weak and that state regulatory agencies or commissions tend to be overly responsive to developmental interests. Consequently, they favor a larger federal role, that is, removing the regulatory exemption from the Safe Drinking Water Act”(Davis, C., & Hoffer, K. 2012).  At the federal level, hydraulic fracturing is exempt from the underground injection control program requirements set forth in the Safe Drinking Water Act. Congress is considering legislation known as the FRAC Act though, which would remove this exemption and require public disclosure of chemicals used in fracking (National Conference on State Legislatures).

On the other hand, the natural gas industry and other interested stakeholders certainly disagree with this demand for federal regulation. They believe that such efforts would be unnecessary and difficult (Advanced Resources International, 2009). Furthermore, the [Independent Petroleum Association of America](http://en.wikipedia.org/wiki/Independent_Petroleum_Association_of_America) argues that individual states already have enough legislative frameworks for regulating the sector. The findings of their study suggest that federal regulation could lead to a further spending of $100,000 on each well.

 Fracking which is technically known as hydraulic fracturing, started not so long ago in Illinois with state law only passed in May 2013 and signed by the Governor in June of the same year (Lustgarten, A. 2009). “However, proposed rules that would regulate fracking now sit with a little known 12-member state body called the Joint Committee on Administrative Rules. It has until Nov. 15 to approve the regulations or the rule-making process starts anew “(Chicago Tribune, Oct 26, 2014). While there have been general environmental concerns, some individuals (landowners) albeit small in Southern Illinois, are eagerly anticipating the approval of rules that will kick start fracking in the region. Indeed, the Chicago tribune reported in its October 26th edition reported that a dozen landowners vented their frustration with the state's inability to approve rules governing fracking by filing suit against Illinois Department of Natural Resources Director Marc Miller and Gov. Pat Quinn in Wayne County Circuit Court. Nevertheless, the dangers of hydraulic fracturing, no matter how hazy they are, need to be interrogated and known to the public.

 Public perceptions of the issue will be enhanced or cultivated if the media plays their rightful role. This paper will seek to establish how the media contributes to the knowledge of the issues of fracking. With the state’s bill on fracking, Senate Bill 664 that will require chemicals to be listed on the internet, the paper will particularly focus on how the selected newspapers present the facts of the bill alongside their discussions on fracking. Specific questions that the paper seeks to find answers to include; do the newspapers make significant report on state regulations (or proposed regulations)? Do they present them as good measures or they raise concerns about them? Furthermore, do they focus more on the adverse effects of fracking or there is a favorable inclination toward the topic; or there is a balance of opposing views on the advantages and disadvantages of fracking?

 Considering that different states have different regulations on fracking, the next section makes an analysis of the various discussions on fracking policies in the states. The subsequent section will summarize the literatures that address media coverage of fracking and environmental issues at large and the various standpoints from different authors on fracking. It needs to be noted however that not much literature exists on media coverage of fracking and a virtually no scholarly material at all on media coverage of fracking in Illinois. Those very few scholarly works that focus on media coverage of fracking only do so as a means to an end rather than making a proper study of the subject. The paper will therefore serve to fill this gap by setting the trend for scholarly study of the state of Illinois’s fracking. That is much of the research on fracking has to do with administrative and rulemaking framework in the context of federalism with very little on media coverage and its impact on public knowledge of the issues. This paper therefore intends to contribute to the infinitesimal literature on the research topic. As of the time of the study, there was no research inquiry on media framing of fracking in Illinois

**STATE FRACKING POLICIES**

 According to Rabe & Borick (2013), in a more recent analysis, instead of the “conventional thinking” that a state government will favor economic benefits and malign environmental concerns, the discovery of large shale gas deposits would rather result in much emphasis on  on “assuring systematic environmental protection prior to any extended resource extraction”. Davis, C., & Hoffer, K. (2012) will tend to disagree. for them, state-level regulation of oil and gas in general They go on to further state that such effort will include  “series of innovative environmental policy tools applied to the emerging case at hand, building on recent state experience in related areas”. This however wasn’t the case in the past. One important consequence of increasingly rich oil and gas ventures was the development of state-level coalition comprising industry players and state legislators as well as regulatory agencies that more often than not had greater preference for the promotional aspect of the energy business than on environmental concerns (Davis, 2012. See also Eisner & Ringquist, 2006). Davis, C., & Hoffer, K. (2012) will tend to argue that this trend still exists today, contrary to the argument by Rabe and Borick. For them, state-level regulation tends to tilt in favor of the development of gas-related activities as a good source of income paying jobs in a tough economy and to regulate fracking as part of the general framework for oil and gas drilling (see also IHS Global Insight 2009 and Wiseman 2009). Smith, 2014 refrains from the above argument and posits that State government should tailor regulations to their specific needs due to the wide differences in geology, hydrology, and economics.

 Whichever path a state chooses, one implication is writ large-the most important question whenever an individual state government mulls over policy engagement in environmental or energy policy that is potentially controversial like fracking is the possible effect of unilateral state action (Rabe & Borick, 2011).

**LITERATURE REVIEW**

 ***Media and Framing***

 Framing is the process by which a source of communication constructs and defines a social or political issue for consumption by its audience (Nelson & Clawson, 1997). This definition implies that there is only one type of framing, however some authors differentiate between individual and media frames. Individual frames refer to “information-processing schemata” of individuals while media frames are “attributes of the news itself” (Scheufele, 1999. See also Tuchman 1978). Tuchman 1978 further explains this definition by stating that “news frames organize everyday reality and the news frame is part and parcel of everyday reality... it is an essential feature of the news”. However Tuchman definition implies that media frames are representations of individual constructs. In other words, media frame can be a dependent variable. As a dependent variable, media frames may be influenced by “social-structural or organizational variables” or by ideological factors (Scheufele, 1999). This affirms the popular saying that the media is a reflection of the society. On the other hand, media frame as an independent variable refers to its effects either on political actors or the public in general.

 Thus media frames can initially be a dependent variable but later translate into an independent variable, they are therefore dynamic. For example while pressure or protests by environmental groups on a state environmental agency can attract and influence media reportage and framing, report of these incidents as news articles can in turn influence the audience of the particular news source. However, many authors in the debate of framing and its effects argue that such reliance by the public on the media for information is indicative of their incompetence; that is, “evidence that citizens base their preferences on arbitrary information and/or are subject to extensive elite manipulation” (Druckman 2001). Contrary to this assertion, Duckman’s study concluded that while the evidence to date seems to suggest some individual cases of incompetence, the more general message is that citizens use frames in a competent and well-reasoned manner. He distinguishes between emphasis and equivalency frames. Equivalency framing effect occurs when the use of different, but logically equivalent meaning, words or phrases causes individuals to alter their preferences; On the other hand, emphasis framing effect comes about if by emphasizing a subset of potentially relevant considerations, a speaker leads individuals to focus on these considerations when constructing their opinions (Druckman, 2001). Hence, they have different implications. His argument is that even though equivalency framing effects indicate cases of citizen incompetence, there is insufficient political conditions under which these occur and may even occur less than typically perceived (Druckman, 2001). Frames can be used to shape and influence readers’ policy preferences and opinions by highlighting certain aspects of a controversial topic (Tewksbury, Jones, Peske, Raymond, & Vig, 2000). Benford and Snow (2000) argue frames can be used to describe solutions and plans for solving problems. However, Chong & Druckman, 2007 (see also Druckman, 2001) argue that before the audience’s preferences and opinions can be shaped, there has to be motivation. Druckman further explains:

The news frame goes through a process beginning with its creation and ending with an impact or result. Framing begins with the identification of a complex issue by the news media and ends when media consumers experience an impact, take action or get involved with the complex issue first identified by the media. The news media, after identifying the complex issue, constructs the framing device, and then amplifies the frame. The media consumer, who must be motivated to receive the framing device, next evaluates the message presented in the frame, and the media consumer’s beliefs or understanding of the issue may be affected (Druckman, 2001).

 Based on his analysis, we can expect the public to be influenced by what the media reports on fracking as regards making meaningful interpretations of news stories and forming opinion of fracking, either in favor or against it or possibly being neutral to it.

***Media Coverage of fracking and environmental issues***

 The amount of media coverage of an issue has been shown to have a significant impact on public opinion (McCombs & Shaw, 1972; Funkhouser, 1973). This influence does not only pertain to one specific issue but applicable to most issues including the environment (Hargreaves, Lewis, & Speers, 2003; Guber, 2003). One of the earlier general notions pointed out as influencing the relationship between the media and the public is the obtrusiveness of an issue. Social issues can be classified into two different types; obtrusive and unobtrusive (Zucker, 1987). Obtrusive issues are those in which the public has had direct contact or experience. Conversely, unobtrusive issues are those in which the public has not gained any direct contact or experience. In his study, Zucker found that the less experience the public has with an issue the more likely they will depend on the media for information. Fracking is one environmental sub-issue that most people could argue that it is unobtrusive. Those few who have experienced its adverse impact, mainly polluted water, are those who live nearby these gas wells. Residents of certain states such as Pennsylvania, New York, Michigan, North Dakota, New Mexico, Texas, Colorado, Virginia and Arkansas have reported various instances of drinking water contamination after hydraulic fracturing (Natural Resources Defense Council Blog, 2011). By and large, however, most people do not live near these wells, hence have little or no direct experience of it. Thus people are therefore inclined to look to other sources for information, most notably the media

 In the UK, shale gas, and in particular its method of extraction (fracking) has received significant media coverage with a growing number of stories in dominant UK newspapers including several reports on news and current affairs programs (O’Hara, Humphrey, Jaspal, Nerlich, & Poberezhskaya, 2013). Similarly, in assessing public perceptions of fracking and using a nationally representative U.S. sample survey, Boudet, Clarke, Bugden, Maibach, Roser-Renouf, & Leiserowitz (2014) found that those who read newspapers more than once a week are more likely to oppose fracking. Nicholson and Blanson (2011) have also observed the increasing media coverage trend in the US; they state that hydraulic fracturing and its effect on water quality have gained increased “attention” and “scrutiny” from the media. However, Quantity of Consumer Theory (QCT) asserts that people don’t necessarily pay particular attention to the details of news coverage; rather they absorb simple images of hazards captured in the stories (Mazur, 2014). Using explanation of QCT again, his article emphasizes the significance of the fame or notability of related news issues in determining the extent to which the dangers of an environmental activity is reported by major news media. In other words, “trigger events” such as Exxon Valdez Oil Spill and the like can play a major role influencing the amount of media coverage concerning an environmental issue. While agreeing that media coverage of fracking is increasing, (Lawson, 2014) argues that media frames of fracking can lead to public acceptance and policy development, therefore, frames developed around fracking issues should be examined. He also identified variety of frames used in different regions of United States. Similarly, however basing the study’s argument on the theory of framing (Mercado, Alvarez, & Herranz (2014), found that the Spanish media also focus on the debate of risks and benefits of fracking. However the researchers contend that negative environmental representation about fracking in the media is greater due to the large number of actors, appearing as sources in the news items that are against the technique of fracking.

 Furthermore, anti-fracking proponents seem to dominate in the public debate of fracking in the country and this has led to the formation of negative opinion of this technique in Spain. Beresford 2014 also found differences in media framing of fracking between US and European newspapers. The finding also indicated that the examined US newspapers presented much more negative connotations of fracking than its European counterparts and such differences could explain policy differences between the two regions.

***Fracking Controversy***

 The debate of fracking is largely related to the perils and benefits of the issue. The chief complaint against fracking has to do with water contamination. Findings of a study of 68 private drinking water wells in northeastern Pennsylvania and New York revealed that methane contamination rose sharply with proximity to natural gas drilling and hydraulic fracturing sites (Holzman, 2011). This accusation has for decades been denied by industry officials; they claim that the drilling technique occurs thousands of feet below drinking aquifers. Because of this great distance, the drilling chemicals couldn’t possibly pose any risks (The New York Times, 2011).

 Jenner, S., & Lamadrid, A. J. (2013) on the other hand, make a comparative analysis of the environmental impacts of shale gas, conventional gas and coal on air, water, and land in the United States and conclude that even though fracking can cause water contamination, “a shift from coal to shale gas would benefit public health, the safety of workers, local environmental protection, water consumption, and the land surface”. Peduzzi, & Harding Rohr Reis (2013) however, disagrees. They argue that he potential climate benefits of coal-to-gas substitution are both less apparent and more limited than initially asserted.

 There is also substantial scholarly work on the administrative and rule making arguments of fracking. Davis & Hoffer 2012 found that the natural gas policy coalition has predominantly emphasized political strategy based on maintaining fracking regulatory controls at the state level, while the environmental policy coalition has pushed for increased regulation of drilling practices in general, including a larger national policy and oversight role for federal agencies such as Environmental Protection Agency (EPA).

 While other scholars focus on potential policies and regulations and the merits and demerits of fracking, Nicholson and Blanson look at the litigation aspect of the issue. They look at lawsuits that implicate hydraulic fracturing and they find that there are similarities between the cases. Their findings also produce another interesting revelation; as of the year of the study, the authors had not found any legal judgment against a well operator, drilling contractor, or service company for contamination of groundwater resulting from fracking. It would be interesting to find out how news reportage on failed lawsuits against the industry will affect public judgment of fracturing. This will serve as a good research inquiry.

 In short, an observation of the literatures of media coverage and those on fracking and controversies surrounding fracking will help account for the media framing of fracking issues in the state of Illinois. It is important to note that the status quo seem to suggest strong calls for state legislation by the public. Therefore the media may be inclined to present more negative stories of the issue than to make objective or neutral representations of fracking in their reportage.

**PROBLEM STATEMENT AND RESEARCH OBJECTIVES**

Given the expansion and growth of hydraulic fracturing arising from new technologies and opportunities presented with shale basins, researchers are focusing more on the probable human health impact, groundwater impact, and air and soil quality Lawson , 2014; (see also Filipic, 2013). However at this time no research has been conducted to examine the coverage of hydraulic fracturing in the news media of Illinois exists, and its importance in understanding how the issue is communicated as news coverage may influence public participation and opinion.

 Furthermore, in Illinois, Senate Bill 2058 (pending) would amend the Drilling Operations Act to require permit applications to extract natural gas from shale using well stimulation fluids, which would have to be approved by the Department of Natural Resources prior to extraction. Well owners and operators would have to provide specific information about the formation depth, geological characteristics, stimulation fluid additives and compounds, and more (National Conference of State Legislatures 2011; see also www.ilga.gov). It is therefore important to know how the media communicate to the public, this bill and other relevant regulations and their attendant ramifications that will be manifested in the drilling industry alongside general fracking issues. However at this time no research has been conducted to examine the media in Illinois’s coverage of hydraulic fracturing and its importance in understanding how the issue is communicated. This is important as news coverage may influence public participation and opinion. The objectives of the study are:

1. Establish the dominant news frames in mainstream newspapers that cover hydraulic fracturing or fracking.
2. Regulatory-frame
3. Negative frame
4. Positive frame
5. Neutral frame
6. Compare and contrast hydraulic fracturing frames used in media discourse by different newspapers in Illinois.

**RESEARCH DESIGN**

 To analyze frames associated with the issue of hydraulic fracturing, qualititative content analysis of newspapers was used to evaluate dominant frames found in regions practicing fracking within the United States from January 1, 2010 to October 31, 2013. Content analysis is “a research technique for making replicable and valid inferences from data to their context,” (Lawson, 2014; see also Krippendorf, 1980, p. 21). Hsieh & Shannon, 2005 identify three distinct approaches of content analysis, conventional, directed and summative. This paper adopts the summative approach which entails counting and comparisons, usually of keywords or content, followed by the interpretation of the underlying context (Hsieh & Shannon, 2005). Content analysis was chosen as the research design because it is an important way of providing evidence for a phenomenon that is sensitive (Elo, S., & Kyngäs, H. 2008) and controversial like fracking.

 The initial target population for the study was news stories and feature stories pertaining to hydraulic fracturing or fracking appearing in the top newspapers in the state of Illinois. The newspapers that were initially identified were *Chicago Tribune, Chicago Sun Times, The State Journal Register, Southern Illinoisan and The Journal Star (Peoria).* This population represented a good balance between Downstate and Upstate Illinois*.* However, due to accessibility issues, Southern Illinoisan, The Journal Star, and Chicago Sun Times were removed. St. Louis Post-Dispatch, being one of the largest newspapers in Midwestern United States and with circulation in Springfield, Illinois (Wikipedia, 2011) was added to replace these newspapers. Most importantly, it was easily accessible through Lexis-Nexis. St Louis Post-Dispatch also provided another advantage in that it is a regional newspaper and therefore likely to contain stories pertaining to neighboring states that are equally dealing with fracking issues. Illinois citizenry is therefore presumably presented with a bigger information outlet to know more about fracking.

 Newspaper content analysis was adopted because newspapers still remain the go-to source for news. Print now accounts for 71.2% of daily news circulation according to an analysis by the Newspaper Association of America’s John Murray (Pew Research Journal, 2014). Newspapers are also increasing their accessibility by offering digital or online versions of their news. According to the Pew Research Journal, in 2013, 82% of Americans said they got news on a desktop or laptop and 54% said they got news on a mobile device. The newspapers used for the study post their news online some of which can sometimes be accessed via subscription.

 Newspapers also serve as a means for sharing information and details on local events and issues with community members (Lawson, 2014). It has been shown that other sources within the news media also have a proclivity to favor issues covered by newspapers that promote economic growth (Lawson, 2014; see also Andrews & Caren, 2010). As a result, newspapers may serve as a precursor and hold some influence in determining choice of news topics for other mass media platforms (Lawson, 2014).

 Articles for *Chicago Tribune, State Journal Register (Springfield)* and *St. Louis Post-Dispatch* were selected using Eastern Illinois University’s Booth Library through the databases of ProQuest and Lexis-Nexis respectively. Articles were identified in the databases by searching for the term “fracking” (for *State Journal Register*) within the time period of January 1, 2013 to December 31, 2013. For Chicago Tribune, the search terms were “fracking” and “2013” (this however did not prevent articles from other periods like 2012 to appear). This time frame was used typically because of the need to meet the research paper’s deadline. Furthermore, public concern about the issues of fracking in the state of Illinois seems to have heightened during this period although it can be traced as far back as 2009. Consequently, earlier periods were periods presumed to not contain substantial news reports in the newspapers.

 Repetitive and irrelevant articles were removed from the study. Furthermore, content analysis was conducted on news stories and feature stories only. Articles eliminated included opinion pieces, editorials, reviews, and other non-feature or non-news story types. Article on “Gasland”, a movie related to fracking was carried in both *State Journal Register* and *Chicago Tribune* was also omitted because it contained more of an analysis of the movie than the issue of fracking. Non-news and non-feature stories have the proclivity to be more bias and lack news information. It is important to note that some of the stories that pulled up made mentions of fracking in them but were not dealing with fracking per say. In other words, they were not related to fracking at all. These were also not counted as part of the study.

 A total of 189 articles pulled up when the above search terms were used. After removing non-feature, non-news and unrelated news from the main population, a new total of 56 was derived, including 27, 19 and 10 articles from *Chicago Tribune*, *State Journal Register,* and *St. Louis Post-Dispatch* respectively. All fifty-five articles were used in the study. In analyzing these articles, images were not used. However, headlines were taking into consideration. Furthermore, framing is determined on the basis of the overall tone of the story. And so, even though an article can contain both negative and positive connotations, the emphasis could actually be on one side more than the other.

 As indicated earlier, this is a qualitative research paper and therefore the identification of themes or tones of the articles were done by the author’s own interpretation; aided by contrast and comparisons of the articles for each newspaper. In other words classification or categorization of the texts were done manually with different concepts or implied meanings of the texts highlighted and marked with different alphabetical acronyms. It has to be noted however that the texts came in paragraphs with each article, having a minimum of one sentence line. Each paragraph was thoroughly read through and the overall tone of the text identified and marked by symbols. For example, RN denotes a text that mentions or discusses proposed/passed regulations (R) however with negative concerns about the legislation. Conversely, texts that carried positive connotation about the legislation were tagged as RP. Texts that contained adverse effects and good feelings about fracking were represented by ‘N’ and ‘P’ respectively and those that addressed regulations with a neutral tone were denoted as ‘R’. Some texts contained more than one combination, in this regard; comparisons are made with texts of other articles to identify common patterns and categorizations made accordingly. If a connotation had more counts per article, that article was labeled as such. Thus if an article had the highest frequency of RN, the article was labeled as RN, meaning, the overall tone or emphasis of the story was fracking regulation, however, negative concerns were expressed by individuals or environmentalists about the regulation.

**RESULTS AND ANALYSIS**

 As noted previously, two newspapers were eliminated from the study leaving and replaced by St Louis Post-Dispatch making a total of three newspapers. In addition, one unrelated story and another duplicate were removed from the stack of *Chicago Tribune* and that of *State Journal Register* during the content analysis. Also, one more ‘opinion’ article was identified in the *State Journal Register* newspaper and another review article was also spotted. These articles were consequently removed. The remaining 52 articles were used in the analysis.

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| **NEWSPAPER** | **INITIAL POPULATION** | **NO. OF USEABLE ARTICLES (N)** | **% N** |
| ***Chicago Tribune*** | 27 | 26 | .50 |
| ***St. Louis Post-Dispatch*** | 19 | 16 | .31 |
| ***State Journal Register*** | 10 | 10 | .19 |
| **TOTAL**  | 56 | 52 | 1 |

The main purpose of this research paper was to establish media framing of the state of Illinois newspapers. The specific objectives were to:

1. Establish the dominant news frames in mainstream newspapers that cover hydraulic

fracturing or fracking.

1. Regulatory-frame
2. Negative frame
3. Positive frame
4. Neutral frame
5. Compare and contrast hydraulic fracturing frames used in media discourse by

different newspapers in Illinois.

 With regard to the research objective of identifying the dominant frames inherent in major newspapers in the state of Illinois, of the 52 articles analyzed, regulatory frame was identified as the most dominant frame in 32 of the articles. That is, these articles were heavy with discussions about the state’s proposed legislation on fracking. This category was divided subsequently into RN and RP; these articles included apprehensive (negative) and positive views of individuals representing opposing sides of the argument including environmentalists on one side, and state and industry officials on the other side. Governor Pat Quinn was identified in most of the articles as favoring the proposed regulations and indicated that he would sign it into law*(Chicago Tribune, 22 May 2013).*Regulatory framed stories also included a balance of both negative and positive comments by individuals. Thus, these stories were neutral and denoted by ‘R’.

 Of the 32 regulatory-framed articles, 17 of them were neutral (R). That is, positive attitude and concerns were equally represented in these articles or were reports of the ‘current state’ of the proposed regulation. Only 1 article was heavy with good feelings (RP) about the proposed fracking regulation. Rep. John Bradley, D-Marion specifically stated that the fracking statute, drafted by Illinois Lawmakers was precise and thorough so much so that it would reduce the need for additional regulations to fill in gaps in the statute. It is however important to note that while most of the articles dealt with state regulations, none of these newspapers mentioned the name of the particular bill or legislation or rulemaking statutes that they were referring to. On November 6 2014, it was reported in the Chicago tribune that fracking regulations in Illinois have been approved. I followed up on the reporter, Julie Werner via email inquiring what particular bill had been approved. She however replied that it is actually a rulemaking that specifies the requirements that drilling companies are supposed to comply. The requirements would include, among other things, companies disclosing chemicals used in the drilling, waste containment, well safety. Thus the arguments about the regulations discussed in the analyzed articles were related to these specifications and others. Obviously there were opposing views as to what should constitute the regulation.

 The remaining 14 articles in the regulatory-framed category entailed negative concerns about the proposed regulations. Some of the concerns included low taxes to be paid by the industry and the fear that taxes would not be paid until after a year of fracking by these companies. Two major opponents of the regulations mentioned in the articles regardless of the type of frame were the Sierra Club and Southern Illinois Against Fracking Our Environment (SAFE). The Sierra Club, together with Illinois Environmental Council, however at a later point agreed to these regulations amidst protest by some other environmentalists. On the other hand, industry officials protested later changes in the proposed regulations that required that they test well water before and after drilling. Complaints were also expressed concerning the prolonged length of time that the Illinois Department of Natural Resources was taking to approve the regulations.

 Negative frames (N) of fracking entailed stories that were critical of fracking. 10 out of the total of 52 articles contained such stories. This should not be confused with resentment against fracking regulation. The major concern expressed in the majority of the articles across all newspapers had to do with possible water contamination. There was the fear that leftover water held in wells could seep into groundwater thereby rendering it unsafe to drink. *Chicago tribune* reported one research that studied water samples collected at fracking sites that contained chemicals that have been linked to infertility, birth defects and cancer (Chicago Tribune, 17 Dec. 2013). Other associated adverse effects of fracking that were mentioned included earthquakes and air pollution. One article also covered a study by a Duke University professor whose finding indicated that shale gas drilling within 1 kilometer of a home can decrease property values by an average of 16.7% if the house depends on wells and not municipal sources. Increased crime and loss of beautiful landscape were other fears reported in some of the article.

 On the other hand, there were reports of general positive expectations of fracking (P). The number of such stories was 8 (15.4%). These were mostly expressed by industry players and some residents, especially those in Southern Illinois where these fracking activities are most likely to be seen. Increased jobs, source of income from leasing land to drilling companies are some of the economic benefits associated with fracking. Les carbon dioxide emission is also attributed to natural gas exploitation as compared to coal mining, even though the chief component of the gas is methane which is 72 times more potent than carbon dioxide (Chicago Tribune, 17 Sept. 2013). In fact, this article reported a study by researchers at the University of Texas whose findings stated that emissions from natural gas well sites across the US have reduced, mainly due to new equipment adopted in the drilling process. This was of course dismissed by environmental groups. Furthermore, contrary to fears expressed by environmental groups and some residents, one federal study showed no evidence that chemicals from the natural gas drilling process moved up to contaminate drinking water aquifers at a western Pennsylvania drilling site (St Louis Post-Dispatch, 20 July 2013). The argument was that drilling fluids remained more than 8000 feet below the surface, but were not detected in a monitoring zone 3000 feet higher. In view of that, the harmful substances “stayed about a mile away from drinking water supplies.

 Only two articles were identified as neutral (Ne), representing only 3% of the articles. The first article was just a description of fracking, while the other contained a good balance between the negatives and positives of fracking.

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| **TYPE OF MEDIA FRAME** | **NO. OF ARTICLES** | **% (N)** |
| **Positive frame (P)** | 8 | 15.4 |
| **Negative frame (N)** | 10 | 19.2 |
| **Neutral Regulatory Frame (R)** | 17 | 32.69 |
| **Negative regulatory frame (RN)** | 14 | 26.9 |
| **Positive Regulatory Frame (RP)** | 1 | 1.92 |
| **Neutral frame** | 2 | 3.85 |
| TOTAL | 52 | 100 |

 Positive articles (P) were most commonly framed by communicating economic benefits such as revenue to the state and counties and job creation. Examples of headlines written in a positive tone included, “scenic, struggling Southern Illinois braces for oil rush” and “fracking chemicals didn’t taint water, federal study finds”.

 Negative articles on the other hand saw the most common frames as water contamination, followed by potential environmental degradation. Headlines included, “study: chemical levels higher at fracking sites”, and “sinking feeling: drilling boom leaves homeowners in a big hole.”

 On the regulatory side of the issue, headlines written in a negative tone included, “state may not dig deep on fracking taxes: also, producers would pay lowest tax rates when oil flows at its peak”, and “fracking proposals under fire: environmentalists say rules weaken provisions that prompted them to support state laws”. Thus, the most commonly used frame was communicated by disapproval of the proposed regulations.

 As stated earlier, positive connotations about the regulation (RP) was reported by only one article and this article was among four articles that had no headlines as retrieved from Lexis-Nexis database via Booth Library. However in neutral regulatory framed articles which carried equal amounts of negative and positive expressions about the regulation, RP was mostly communicated by the ‘toughness’ of the regulation as was emphasized by Governor. Neutral regulatory framed articles included such headlines as, “both sides agree on tough new fracking standards”, and “state must adopt fracking rules, hire experts”.

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The second objective was to compare and contrast hydraulic fracturing frames used in media discourse by the identified newspapers and make general conclusions from the findings. Below are the findings summarized in a tabular form;

**Comparative Analysis of Newspapers by Frames**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Newspaper | P | N | Ne | RNe | RN | RP |
| *Chicago Tribune* | 3 | 9 | 1 | 6 | 7 | 0 |
| *St. Louis Post-Dispatch* | 5 | 1 | 0 | 3 | 1 | 0 |
| *State Journal Register* | 0 | 0 | 1 | 8 | 6 | 1 |
| TOTAL | 8 | 10 | 2 | 17 | 14 | 1 |

 *Chicago Tribune* hadthe most storieson fracking in the year for the study (2013) with 26 articles. Most of its stories had more negative connotations about fracking more than any other paper; a total of 16 articles (62% of its articles) when Negative Regulatory (RN) and Negative frame (N) categories are summed up. This is equal to the total number of negative stories on fracking reported by State Journal Register and St. Louis Post-Dispatch combined. This is an interesting observation considering that *Chicago Tribune* is an upstate newspaper and one would therefore presume that stories about fracking would be more favorable since residents have not really had a direct experience of fracking, hence cannot make informed judgments about it. On the other hand, *Chicago Tribune* had a relatively smaller amount of articles on regulations as compared to the *State Journal Register*. As a matter of fact, the State Journal Register had all but one of its stories related to regulation on fracking; 14 (87.5%) of 16 articles as compared to 13 (50%) of 26 articles by *Chicago Tribune.*

 Interestingly, for a relatively downstate newspaper, *St. Louis Post-Dispatch’s* articles contained more positive expressions of fracking than even *Chicago Tribune* as well as the *State Journal Register.* Approximately 50% (5 of 10) of its articles had an overall positive tone for fracking as compared with a meager 12% of such articles by *Chicago Tribune.* This could probably be explained by the expectation that fracking will create more jobs and provide a source of income not only for those individuals hired in a region that is suffering from high unemployment. Most surprisingly,the *State Journal Register* had no article containing an overall positive (P) affinity for fracking. However, 6 (37.5%) of its articles indicated an overall resentment toward fracking regulation. As indicated earlier, most of its stories concentrated on issues of fracking regulation. Moreover, *State Journal Register* was the only paper that emphasized positive regulatory frame, although only 1 article had that tone.

 Overall, a significant 62% (32) of the articles dealt with arguments about fracking regulation while 46% of the articles either emphasized concerns about fracking proper (19%) or about its regulation (27%). Again, of the 32 articles on regulation, 43.75% had negative concerns about the regulation. One important finding is that neutral regulatory frame category had more stories than any other framing category. Could this be an indication of an unbiased reportage of the fracking regulation by Illinois newspapers? This can be a good research inquiry, probably one deploying quantitative techniques to test this question.

 Contrary to expectation, *Chicago Tribune* reported more nationwide stories on fracking than St Louis Post-Dispatch. Such stories included studies by university professors and the EPA on fracking sites and other related research as well as regulatory wrangling pertaining to other states. It even had one article on the fracking debate in Britain. However, it is significant to note, that for *St Louis Post-Dispatch*, 6 (60%) of its articles were devoted to issues pertaining to other states or nationwide stories as compared to 10 (38%) articles by *Chicago Tribune*. the difference here too can be explained by the larger number of articles represented by the *Chicago Tribune* in the study. Hence, with regard to the total population of the study, *Chicago Tribune* had the highest percentage (19%) relative to 11.5% by St Louis Post-Dispatch. The *State Journal Register* had only one article that reported on fracking in other states.

**CONCLUSION**

 The total number of positive (P) media frame of fracking articles is 8 as compared to 10 articles for negatively framed stories (N). This probably suggests that fracking is not a well-received issue in the state of Illinois. However, the difference is marginal and so such conclusion could be prejudicial. Besides, when compared with regulatory framed stories, we see that the latter has more articles than any of the categories. This suggests that the contention has more to do with the regulation of the industry rather than protest against the activity itself. Proper regulation of the industry would therefore help to assuage some of the fears of the public and reduce the adverse effects of the industry.

 A total of 7 media frames were identified. However, one frame, fact-based frame was merged with regulatory frame and subdivided into the various sub categories identified above (making a total of six frames). Overall the various categories could be merged and divided into three main divisions, positive, negative and neutral frames. Such analysis will result in the identification of 24, 9 and 19 articles for negative, positive and neutral frames respectively. This indicates that fracking; particularly its regulation is not receiving enough public support. Such negative representation in the media could further provoke much more resentment against the industry. Majority (33%) of the articles fell under the neutral-regulatory frame (RNe). This finding is undeviating from other research that has concluded that the news media has a proclivity to report controversial and conflicting issues (Lawson, 2014. See also, Andsager, 2000, Lindsey, 2011, King, et al., 2006).

 While the state’s rules on fracking were passed recently, media coverage of fracking is most likely to increase in subsequent years. Considering that majority of the articles reported on fracking regulations, future media coverage is likely to follow the same trend as the effectiveness of rules would be tested now that business is expected to commence. In similar vein, negative reportage will likely increase as residents will get to experience the adverse effects of fracking at first hand.

 Additionally, the recognition of regulatory frame as the most commonly featured frame suggests that the controversy of fracking lies here. While there is the general negative expectation about fracking proper, people would need to be assured that the state has the regulatory framework that would keep the industry in check thereby mitigating the potential adverse problems that could arise from the activity. To this end, the Illinois Department of Natural Resources (IDNR) will need to hire additional staff and other resources that could help it have a better regulatory oversight of the industry. Regulations would not help if it cannot be enforced.

 However, more articles were framed negatively than positively when the various categories were merged into three broad categories as indicated earlier. This result can be explained by the assertion that emphasizing potential negative consequences was more likely to influence citizens’ perceptions (Lawson, 2014. See also, Davis, 1995). It is also likely that majority of the articles fell under the regulatory frames rather than the negative and positive aspects of fracking because much was not known about pros and cons of fracking because the business operations have not commenced on a large scale. Focus on regulation therefore avails some form of knowledge about the issue. Besides, not much can be reported if there are not enough real events to back up feature and news stories.

 *Chicago tribune’s* having the highest number of articles on fracking probably indicates its standing in the news media industry in the country.It probably has a wider news network as compared to the other two newspapers. The implied meaning here too is that issues of fracking matter to the citizenry irrespective of whether they live near drilling sites or not.Some Chicago inhabitants even joined in the protests of a group of southern Illinois inhabitants who had come to a public meeting concerning fracking at the University of Illinois.

 Further research opportunities exist by examining the media effects on public opinion of fracking in the state of Illinois. Furthermore an actual survey with quantitative analysis could be conducted to determine the effects of fracking frames on public opinion of the issue. The findings from these researches will provide better understanding of public perception of fracking in the state of Illinois.