

Framing fracking: private property, common resources, and regimes of governance

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Abstract

In this policy ethnography we examine the discourse related to unconventional natural gas development in western Pennsylvania in order to illuminate expressions of political power in attempts to manufacture consent. We focus on the overlapping spheres of influence between the state and capital to dissect techniques of governance as they operate at the level of civil society. Data collection from fieldwork and discourse analysis, particularly focused on discourse about recent legislation to regulate the booming natural gas industry in Pennsylvania, reveals the ways in which industry proponents attempt to corral public opinion to the goal of extracting and amassing capital. We analyze how industry actors try to gain and draw from the authority and approval of the state in those efforts. In turn, the state uses its socially sanctioned authority to reframe water, land, air, community, health, and self around a paradigm that interprets those as sources of profit. This case study examines how, under neoliberalism, the state organizes knowledge on the topic of fracking such that the balance of power shifts further out of democratic reach.

Key Words: capital, discourse analysis, ethnography, fracking, Marcellus Shale, Pennsylvania Act 13, governance

Résumé

Dans cette étude ethnographique nous examinons le discours relatif au développement de gaz naturel non classique dans l'ouest de la Pennsylvanie, pour éclairer les expressions du pouvoir politique ne sont utilisées pour fabriquer un consensus. Nous nous concentrons sur les sphères d'influence entre l'État et le capital fait chevauchement, interroger les techniques de gouvernance car elles opèrent au niveau de la société civile. La collecte des données de travail sur le terrain et l'analyse du discours, en particulier l'accent sur le discours sur la récente législation pour réglementer l'industrie du gaz naturel en plein essor en Pennsylvanie, révèle la façon dont les promoteurs de l'industrie tentent d'encercler l'opinion publique à extraire et accumuler du capital. Nous analysons comment les acteurs de l'industrie essaient de gagner et de tirer de l'autorité et de l'approbation de l'État dans ces efforts. En contrepartie, l'État utilise son autorité, socialement sanctionnée, pour recadrer l'eau, la terre, l'air, la communauté, la santé, et la personne autour d'un paradigme fait interprète les choses comme des sources de profit. Cette étude de cas examine comment, sous le néolibéralisme, l'État organise les connaissances sur le sujet de la fracturation hydraulique comme l'a fait la balance du pouvoir va plus loin hors de contrôle démocratique.

Mots clés: Capital, analyse du discours, ethnographie, fracturation, Marcellus Shale, Pennsylvanie Loi 13, la gouvernance

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Resumen

En esta etnografía política examinamos el discurso relacionado con el desarrollo no convencional de gas natural en Pensilvania occidental con el fin de clarificar las expresiones de poder político en sus intentos por generar aprobación. Nos centramos en las esferas de influencia sobrepuestas entre el estado y capital para así diseccionar técnicas de gobernanza debido a que estas operan al nivel de la sociedad civil. Datos recogidos en trabajo de campo y análisis sobre el discurso, particularmente enfocado en el discurso sobre legislación reciente para regular el auge de la industria de gas en Pensilvania, revela las maneras en las cuales los defensores de la industria intentan contener a la opinión pública con el objetivo de extraer y acumular capital. Analizamos como los actores de la industria tratan de ganar, y sacar de autoridad y aprobación al estado en estos esfuerzos. A su vez, el Estado usa su autoridad socialmente sancionada para replantearse a sí mismo al igual que la tierra, el agua, el aire, comunidad y la salud en torno a un paradigma que los interpreta como fuentes de lucro. Este caso estudio examina como bajo el neoliberalismo el Estado organiza la información en relación a fractura hidráulica para que el balance del poder se mueva aun mas afuera del alcance democrático.

Palabras claves: Capital, análisis de discurso, etnografía, fractura hidráulica, Marcellus Shale, Acto 13 de Pensilvania, gobernanza.

1. Introduction

In the hotly contested terrain of hydraulic fracturing for unconventional natural gas in Pennsylvania, we are told to trust the state, and not to trust the state. We are told by a board member of the Pennsylvania Independent Oil and Gas Association that the Pennsylvania DEP's (Department of Environmental Protection) 2011 mandate, that flow-back water produced during the fracking process be cleaned to drinking water standards before being released into area streams is an "ideological and philosophical decision, not a decision based in science." This policy shift occurred after it was discovered that waste water, laced with radioactivity, arsenic, mercury, cadmium, barium and other dissolved solids that occur naturally at the depths that horizontal drilling happens, plus the chemical admixture used to open up the fractures in the shale, were being discharged at traditional water treatment facilities that were not equipped to detect the presence of, nor filter out, these contaminants. He said: "The argument from the natural gas industry is that increasing those requirements and those costs, there's no significant benefit from it...I tried to make that argument with the discharge...to no avail, because politics now drives decisions and not science."² While this operator's water treatment plant in Indiana County stopped processing wastewater from unconventional gas wells in 2011, a Duke University study recently discovered radium levels downstream from the plant were 200 times greater than upstream (Kusic 2013).

In a separate case, Pennsylvania DEP officials argued that a town's concern about water contamination was baseless, and dismissed public meetings about water contamination as "political theater." These concerns were raised after a DEP lab employee revealed that when individuals, concerned about potential contamination of their well water due to hydraulic fracturing, brought in samples for testing, technicians were instructed to label these samples "Marcellus Water." Subsequent reports on these samples intentionally excluded information on the presence of volatile organic compounds and heavy metals—the very substances that pose a health hazard to people and animals drinking or bathing in the water (Hopey 2012, 2013).

What we are witnessing is the re-categorization of land, water, and people under a new regime of energy (Willow and Wylie 2014). We see how the state is put to use in an economic and regulatory fashion to ensure the governance of citizens and commons in such a way that resistance is minimized and profit is maximized, thus subordinating the democratic premise of state governance. Pennsylvania's Act 13 exemplifies this. The 2012 law codifies unconventional drilling: it sets fees for drilling companies, eliminates local control over zoning, and opens all zones to drilling, even residential zones so long as certain conditions are met. David Harvey points out that elites in a neoliberal state eschew and are "suspicious" of democracy and its potential to disrupt their individual economic goals. "Democracy is viewed as a luxury, only possible under conditions of relative affluence coupled with a strong middle-class presence to guarantee political

² Presentation made to IUP Ethnographic Field School, 2012. Names of field school speakers are withheld in this article, which offers a structural critique of industry-state relations in the policy sphere, rather than a critique of individuals.

stability. Neoliberals therefore tend to favour governance by experts and elites" (Harvey 2005: 66). This neoliberal vision of governance was revealed in the crafting of Act 13, where a narrow range of experts was included on the governmental advisory commission that established the parameters of the Law. Among the 31 experts appointed to the committee by Gov. Tom Corbett, only one academic was included (a geoscientist whose scholarship is funded by and supportive of drilling), ten people from government, four from environmental groups, 11 from industry, and five from civil society groups; public health and applied social sciences were excluded (Goldstein 2012).

In considering the makeup of the commission, the potential profits to be made, and risks to be borne by residents in a part of the country long marked by internal colonization (Chiang 2004; Cope 2013), the apparent power disparity between these players requires that we attend to a political economy of vulnerability: "how public policy, productive relations, and social factors converge to concentrate risks among some sections of the population" (Johnson 2011: xxxiv). While power is infused in all actors, as Foucault's work reveals, that power may be a representation of the aims of capital such that power moves from and through individuals, benefitting capital's goals. This article's analysis of language and policy takes as its starting point that citizens' common resources are used by and for corporations, and aims to reveal that the surplus value extracted from these commons is an effect of capital's relation to the state (Mitchell 2006). The persuasive speech embedded in the discourse examined here is to act as a form of governance. In other words, it is meant to bolster the state's and capital's ability to govern, by sedating any urge to interrogate the unequal distribution of benefits from hydraulic fracturing.

That sedation manifests where the natural gas industry attempts to manufacture consent among publics by describing massive increases in employment for U.S. citizens, and casting an embrace of the new industry as an expression of patriotism, a means of increasing national security, and an act of environmental friendliness. With an audience of peers at a 2011 unconventional natural gas drilling conference for public relations professionals in Houston, two speakers described the benefits of employing U.S. military 'psy-ops' methods used in the most recent wars in the Middle East to persuade people to support unconventional gas drilling in their communities. These speakers advised audience members to read the U.S. Army and Marine Corps Counter-Insurgency Manual because, referring to public anxieties over the potential environmental, social, and health impacts of hydraulic fracturing, "we are dealing with an insurgency" (Carmichael 2011; Pittzarella 2011).

This article analyzes the way industry proponents attempt to corral public opinion to the goal of extracting and amassing capital, and garner the imprimatur of the state in those efforts. Consequently, this article is not a policy brief that assesses the pros and cons of Act 13, imagining a binary relationship between the bias of lobbyists from industry and those from environmental organizations as they influence politicians from either party. Instead, this is an ethnography of policy, that explores the discourse related to unconventional natural gas development in ways that can help to illuminate the play of political power in attempts to manufacture consent in western Pennsylvania. An examination of the discourse deployed in documents and presentations by industry and state personnel reveals the parallels in idiom between industry and state, and allows us to unpack the aims of actors enmeshed in this industrial process, thereby problematizing the dichotomous relationship of capital and state. Under neoliberal governance where the state is the handmaiden to the market (Johnson 2011), water, land, air, community, quality of life, health, wildlife, family relationships, food, and more are reframed such that their utility or fulfillment is defined around the market logic required to extract maximum profit. This article reflects on how language is put to use by industry in order to attempt to govern individuals so that they comport themselves in ways instrumental to capital's goals, and reframe their human needs and desires to parallel those of capital. We show the techniques of governance that industry employs to maintain a hegemonic control over the discourse, and how the state acquiesces by effectively shutting out expertise that doesn't conform to the goals of industry as it formulates law (see also Mercer *et al.* 2014). Rather than seeing the state and capital operating in separate spheres, we take for granted that they operate in overlapping domains in a neoliberal economy and political environment, in order to examine how citizens are governed through the many and contradictory maneuvers and machinations of state and capital. A robust literature on the state has examined the nature of the relationship between state and capital and civil society, and this article adds to that literature by providing

a case study of the political processes that convert manufactured consent into actionable legislation on unconventional drilling in Pennsylvania.

2. Methods

Data for this article include presentations made to a small audience of students and faculty at the Indiana University of Pennsylvania 2012 Ethnographic Field School. A variety of speakers prepared talks on the subject of their expertise, including waste water treatment, environmental law, public health, local zoning and politics, state-level politics, community well-being, corporate assessment of drilling's risks and rewards, environmental and community activists, and history. During the Field School students absorbed this range of perspectives, learned ethnographic research methods, and developed their own individual research projects in and around Indiana County that they presented at a public forum at the conclusion of the Field School. Students transcribed their interviews and the speakers' lectures were recorded and transcribed for research use. The identities of the speakers and interviewees are disguised here, yet their structural role is intact.

We also rely on journalistic accounts of particular events, public documents such as corporations' annual reports, legislative and news reports on Pennsylvania Act 13, and industry presentations made public via the internet. Finally, we review the blog and Twitter feeds of the Marcellus Shale Coalition, the top industry trade group in Pennsylvania that is "the public face of the natural gas drilling industry" (Stateimpact.npr.org 2013). Composed of 40 energy companies and other businesses associated with the gas industry, the stated goal of the Marcellus Shale Coalition is to "provide in-depth information to policymakers, regulators, media, and other public stakeholders on the positive impacts responsible natural gas production is having on families, businesses, and communities across the region" (Marcelluscoalition.org 2013). These sources are included in order to provide examples of language used to manage perceptions of industry and state actions related to drilling, not as a comprehensive assessment of events that occurred.

An inclusion of the presentations made to Field School participants collates information about hydraulic shale drilling on local, regional, state-level, and national levels, while industry-related self-presentations in news and social media are included as artifacts of industry's attempt to manufacture consent. This set of data allows for an examination of the image, issues and narratives each participant wished to advance. By inviting speakers to instruct the audience on their particular expertise, speakers were able to frame their subject as they wished. This delivery of information relies on the self-consciousness of the speaker to intentionally amplify his or her message for the audience; indeed the Field School invited this sort of presentation. While the immediate goal was to inform the students of the many stakeholder views, the Field School also served as an opportunity to "study up" (Nader 1972). Each speaker's talk was couched in a set of tacit givens about fracking, citizenship, democracy, what constitutes evidence, and the role of the state. Conti and O'Neil (2007) highlight feminist methods that attend to the micro power relations between interviewer and interviewee, and that are useful in settings where the researcher has a lower status than his or her interlocutor. In retrospect the Field School setting allowed this power dynamic to be of benefit: normally it might be difficult to obtain an audience with many of the speakers who graciously and generously gave of their time, and to be allowed to pose critical questions. But the classroom setting acknowledged speakers' relatively elevated statuses by asking them to share insights into their field of expertise (Poole and Hudgins 2014).

We analyze this data using ethnographic approaches toward understanding the state (Sharma and Gupta 2009) and public policy (Wedel *et al.* 2005). Ethnography seeks to take the material world and analyze a socially meaningful aspect of it. It examines a particular process in a particular place (understanding that spheres of influence radiate from and toward any particular place) to address how and what forms of power and history come together to create the subjective but patterned reality that persons partake in. Here, we use ethnography to explore an arrangement of power, to sift through lines of argument in order to get at what consequential forms of power are at play or are in competition with each other.

Perry (2013) describes the value and limitations of ethnography in understanding and monitoring community health impacts of natural gas development, particularly in places lacking baseline information on the environmental, social, and psychological determinants of health. Despite the obvious strengths of ethnography in these contexts, Perry notes that there remains a significant lack of understanding about the

nature of this form of qualitative research, which some audiences interpret as being a collection of anecdotal stories, or uninformed public opinions at odds with select expert analysis. Yet, as Perry argues: "the results of this research methodology are not anecdotal stories and information, but are defensible descriptions and analyses of the cultural worldviews and context within which specific people or places exist..." (Perry 2013: 45-46). It would be mistaken to assume that because ethnography deals with qualitative data – narratives, stories, and emic, or local, categories – that it should follow journalistic patterns of reporting, where accounts are often balanced in a polarized manner, and voices are accorded equal weight. Such a binary model of competing truth claims is a limiting metaphor for understanding complex sociality. The value of ethnography, particularly in relation to policy analysis, involves a close attention to and illumination of unequal terrains of power through which claims to truth are made, and the hegemonic nature of particular discursive regimes. This article seeks to contribute to the growing body of ethnographic research on unconventional energy extraction by following one of many possible strands of analysis – the ways in which state and industry actors in Pennsylvania attempt to construct a hegemonic discourse designed to curtail critique and manufacture consent. In sum, ethnography allows us to examine an instance of the *political economy of vulnerability* that exists in southwest Pennsylvania. This production of vulnerability is rendered as surplus value through the effects of the state (Mitchell 2006) and 'consumed' by capital. We question why and how the state allows this, and we find explanations in the narratives and speech acts of relevant actors.

3. History and background

The history of labor and resource extraction in Western Pennsylvania is of a piece with Appalachian history (Whitson *et al.* 2006). The coal mining and the timber industries' reliance on the region's bountiful natural resources fueled the growth of the nation, with the few decades after the Civil War (1861-1865) marking the division between the turn from timber to the explosive growth of coal mining and the steel industry it fostered (Beik 1996; Jensen 1945). Folklorist and labor scholar Jim Dougherty aptly describes this region as a "zone of national sacrifice" where the sanctity of the land and the health and well-being of its people were withered by the commodification that fueled growth in the metropolis (Dougherty 2012). Chiang (2006) describes the "internal colonization" of Indiana County where capitalists from the economic centers of the country gain rights over the land and extract the resources, benefiting themselves and local elites complicit in converting local resources and labor into wealth. The timber industry first exhibited this model, then coal mining and shallow gas extraction, and now hydraulic fracturing.

"Pennsylvania" conjures the verdant nature of the countryside when King Charles II granted William Penn the land for the Quakers in 1681, but by 1900 the hills of Pennsylvania were mostly denuded to such a degree that Central Pennsylvania was referred to as the Allegheny Brush Patch (Forrey 1984) with timber serving as fuel, and raw materials for infrastructure, housing, furniture and ship-building. Uncontrolled wild fires, erosion and flooding resulted, and after the 1899 Johnstown Flood the state began to buy lands from tax delinquent timber companies, accumulating 110,000 acres (44,515 ha) by 1900. In 1911 Congress passed the Weeks Act that allowed the federal government to buy land in the eastern United States, and the Allegheny National Forest was established in 1923. Despite this emphasis on conservation, the state only purchased the surface rights to forests and parks, failing to secure the mineral rights beneath.³

While the literature reveals the many ways common property resources are equitably and sustainably managed by communities across the globe (Nonini 2007; Ostrom 1990), there are serious restrictions on the ability of communities to regulate the commons in western Pennsylvania. Private ownership of subsurface mineral rights has historically taken precedence over other claims - including private and public rights to surface property, and to common property resources like state game lands, state parks, and all waterways. Enshrined in state law is a division between surface and subsurface ownership, allowing entities to extract the minerals from beneath the surface of the earth with no real compensation to those who own the surface rights, or to local communities. This property dynamic emerged as the coal industry in Pennsylvania began to expand, and established a firm precedent for future energy extraction.

³ The authors laud the valuable contribution Jim Dougherty made to their understanding of the labor and extraction history in Pennsylvania. This review of history is informed by a presentation he gave at the Ethnographic Field School, but any and all faults are the authors'.

The coal industry, which began in the mid-1700s in Pennsylvania, experienced explosive growth after the Civil War, and production mirrored the legacy of timber by extracting resources without substantively returning wealth to the area. In the case of coal however, new socio-political arrangements were created as companies took a heavier hand in forming and controlling social, political, and economic life in "company towns." In 1900 ninety percent of the nation's energy came from coal and Pennsylvania was a significant provider, as coal towns began to spring up along paths of profitable coal seams (Beik 1996).

Following the model of internal colonization (Chiang 2004), local elites were linked economically to outside capitalists who accumulated wealth that they shared with the local elites. Windber, like many coal towns, relied on local elites to accomplish the goals of the absentee owner, Edward J. Berwind, who had investments in larger economic concerns (Beik 1996).⁴ In the 1860s-1870s the Berwind-White Coal Mining Company "leased mines, bought up mineral and surface rights, invested in related enterprises, and entered into contracts that guaranteed markets for their coal" (Beik 1996:9).⁵ Today the Berwind Corporation is headquartered in Philadelphia and still maintains control over vast tracts of land and mineral rights (Beik 1996). The historical sedimentation of political economic power can also be found in the history of Consol Energy – originally a local coal company, Consol has transformed itself into a significant presence in the Marcellus shale play.

The negative externalities of the coal industry were borne by the miners and their families, and the environment. Black lung and chronic illness, and deaths in accidents and explosions underground are but a few of the human costs. And although the numbers of miners have decreased since the 1970s due to mechanization and OSHA regulations, the environmental degradation continues: 2,500 miles (4,023 km) of Pennsylvania streams don't support life because of mine drainage including sulfuric acid, and iron oxide, and mine subsidence, sink holes, abandoned and unmapped mines, and flammable slag heaps continue to pose hazards (PA DEP 1999). Also, the economic legacy of internal colonization continues: one local community that experienced the timber and coal boom-bust cycles and is now home to an unconventional drill site (discussed in Hudgins 2013), has 14% unemployment, a per capita income of only US\$16,222, and 18.3% of families recorded income below the poverty level in the year preceding the 2010 census (American FactFinder 2010).⁶

Fast forward to 2012. Pennsylvania's Act 13 was signed into law by Governor Tom Corbett in February of that year. This new law took effect statewide, with the exception of two counties in Pennsylvania, Bucks and Philadelphia (which happen to be among the wealthiest counties) because, according to one co-sponsor of Act 13 during his talk to the Field School students, "there is no natural gas beneath those counties." The law as it was originally written, changes zoning regulations to allow hydraulic fracturing in any zone, even residential, so long as a well isn't within 500 feet (152m) of a building or well, unless the owner agrees to its presence. Drilling must also be beyond 100 feet (30m) of the edge of a stream or spring, or a body of water or wetland that is larger than one acre (though a waiver may be granted). Bonds required should the drilling company abandon responsibility for the well are US\$4,000 to \$10,000 per well depending on the depth of the bore hole, with a maximum cap of US\$600,000 for companies that own more than 150 wells. National and state forests may be drilled, and amendments are underway that would allow drilling on state-owned university campuses where the state would lease their surface rights to the drilling companies who have leased the mineral rights.

In terms of the chemicals that are used in production, the law allows companies to guard the secrecy of proprietary chemicals and the quantity of chemicals used in the drilling process (Detrow 2012). Companies are required to disclose the names of chemicals they use on the state-industry website

⁴ In Beik's (1996) examination of unionization among new immigrants in the coal industry, she examines the social history of the small town of Windber, named for Edward J. Berwind—like many towns in this region named after prominent investors.

⁵ The Penn Mary Coal Company followed a similar economic arrangement. Coal from Heilwood was bound for New York City markets because the town's Board of Directors had investments in New York industries that required a steady supply of coal (Kuzemchak 2006).

⁶ Compared this number to 10.1% of families living in poverty averaged across Indiana county, where IUP, a robust medical center, and small-scale industries centered in the town of Indiana contribute substantially to the economy. Other former coal mining towns have higher rates of poverty, including Heilwood, where 25.8% of all families report earning income below the poverty level, and per capita income is US\$16,724 (American FactFinder 2010).

fracfocus.org, but only within 60 days of the conclusion of the hydraulic fracturing.⁷ Should a physician require this information to treat a potentially exposed patient, the request for the chemicals must be made in writing and the physician may not broadcast to other at-risk community members what they may be or have been exposed to. Chemicals and radiation in the flow-back water and produced water that occur naturally in the fractured strata of shale, including barium, mercury and arsenic and others, are not subject to disclosure under Act 13 (Goldstein *et al.* 2012).

Act 13 requires drilling companies to pay an impact fee (this verbiage allowed Governor Tom Corbett to avoid defending himself from allegations that he raised any kind of tax) based on the market price of natural gas, and on the age of the well. Monies collected are allocated according to a specific formula: a fixed amount for specific programs comes off the top: those programs include the Department of Environmental Protection, the Fish and Boat Commission, Pennsylvania Utilities Commission, Pennsylvania Emergency Management Agency, the Office of the Fire Commissioner, and the Natural Gas Energy Development Program. Of the remainder, 60% is proportionately allocated to counties affected by drilling, and the remaining 40% funds the Pennsylvania Department of Transportation, Department of Community and Economic Development, Commonwealth Financing Agency, Pennsylvania Conservation Districts, the Pennsylvania Infrastructure Investment Authority, hazardous sites waste cleanup, watershed projects, and other programs.

Governor Tom Corbett defended Act 13 in July 2012, after the state Commonwealth Court ruled that Act 13 violated the state constitution by removing the power of local municipalities to enact zoning to control gas drilling activities (for a contrast with New York State where zoning is still possible, see Simonelli 2014). Focusing on the primary categories of jobs and private property rights, Corbett argued "The provisions struck down by the Commonwealth Court are critically important for job creators who are employing more than 240,000 Pennsylvanians, for landowners seeking to exercise their property rights, and for local governments looking for guidance on how they may reasonably regulate oil and gas operations" (StateImpact.npr.org 2012). As discussed below, this discourse closely mirrors the discursive strategy of the gas industry, which has donated nearly eight million dollars to Pennsylvania political committees and state candidates since 2000. Notably, Tom Corbett tops the list of Pennsylvania politicians receiving money from the gas industry, with donated funds totaling over US\$1.8 million between 2000 and April 2012 (Marcellusmoney.org 2012).

A great deal is at stake in this burgeoning industry of unconventional natural gas extraction. This "game changing" form of energy extraction has been described as eliminating the U.S.' dependence on foreign oil, and profits have been estimated to be in the billions of dollars, though this has been described as overly optimistic by more critical observers (Hughes 2013). The capital outlay is enormous as is the number of acres under lease according to 2011 annual reports. In 2011 Range Resources owned a "working interest" in 1,219,049 acres (493,300 ha) in Pennsylvania (Range Resources 2012); Chesapeake Energy had 15.3 million net acres under lease in the U.S. (6.2m ha, about the size of West Virginia); Consol Energy had 347,000 acres (140,000 ha) under contract in Pennsylvania, West Virginia and New York, and entered into a contract to share 624,000 acres (253,000 ha) with Noble Energy in those same states (Consol Energy 2012); and Anadarko had 260,000 acres (105,000 ha) under lease in Pennsylvania (Anadarko 2012).

Also at stake are the commons—the air and water needed for life, and the ability for citizens to be assured of their protection—as well as people's relationships to places. The history of extraction in Pennsylvania leaves room for doubt that regulatory agencies and elected officials can or will protect these resources for the shared benefit of all, and a body of citizens is skeptical that unconventional drilling will be any different. Documented leaks, contaminated aquifers, carcasses of wild and domestic animals floating in waste water pits, reports of noxious fumes and burn-off, and trucks surreptitiously dumping waste water all indicate the gap between the promise of environmental protections and the residents who witness abuse and misuse.

⁷ This website's capacity to adequately inform and regulate chemical additives is called into question by a recent analysis (Konschnik *et al.* 2013), and that analysis was promptly challenged by Fracfocus.

4. The case, and discussion

This section focuses on the crafting of Act 13 and the exclusions that gave the law its parameters. We argue that the construction of the law illustrates the anti-democratic nature of the relationship between capital and the state on the one hand and society on the other, and further amplifies the utilitarian nature of the category of the individual in service to capital. Experts' knowledge that informed the law is over-determined by the power relations that exist between capital and the state (Goldstein *et al.* 2012), and the law itself cuts off democratic debate. Yet, as discussed below, politicians obfuscate that relationship by referring to the "messy" process of democracy, and to themselves as common-sense arbitrators between citizens' needs for protection and corporations' need for profit. We argue that this arrangement of power is essentially hegemonic and that individuals' relationship to the state is used to buttress capital's legitimacy.

To understand the attempts to make that relationship durable, we examine the mediascape (Appadurai 1990) through which discourse about shale drilling is diffused. An information onslaught has deluged media consumers—from advertisements, op/ed pieces, mailers, and films like *Truthland* (which was the industry response to *Gasland*). Does the jingoistic media blitz work? Which publics are receptive to it, and which aren't? While those questions are for future research, this article examines the efforts on behalf of industry to manufacture consent to the current arrangement of power that has been codified into law. Hegemony is always an incomplete process, and the continual maintenance of consent seems intended to quell any concerns on behalf of dubious publics, and to remove the possibility of a counter-hegemonic ideology that would pose a threat to the privileged ideology promoted by capital. Future research might examine the role that activists play and the tools they use in devising a counter-hegemonic strategy.

Experts and democracy

For a majority of people opposed to hydraulic fracturing, health risks are chief among their concerns (Goldstein *et al.* 2012). And despite the fact that governors in Pennsylvania and Maryland, and President Obama all say that health is a top concern when it comes to hydraulic fracturing, no public health experts sit on any of the shale drilling commissions at the state or federal level. In the distribution of funds under the rules of Act 13, none of the monies are allocated for public health, and funding for a database to follow shale drilling illnesses and accidents was stripped from the final version of the bill (Goldstein *et al.* 2012). Why, despite the articulated concern, are there no structures in place to ensure that health concerns are fully aired and addressed?

In their article on this topic, Goldstein *et al.* come to the conclusion that it must be the fault of public health, that it isn't emphatic enough about its inclusion. But by analyzing this exclusion through the lens of the relationship of capital to the state, we come to a different conclusion. In trying to understand precisely where governance takes place we see that the problem is a political-economic one, and inclusion of a set of experts that may put the brakes on unconventional drilling will not be part of the law-making process that grants corporations barely-fettered access to natural gas. Lest this seem to be a clear-cut set of actors and entities (state/capital), we recognize such differentiation is an "elusive boundary" (Mitchell 2006). In a neoliberal setting, the state acts on behalf of capital by transforming its role from a regulatory one to one that uses its power to discipline populations. It shifts power from workers to owners (especially property owners in the case of Act 13), and organizes knowledge in such a way that it benefits capital (Carrico 2013), as in the composition of experts on the Marcellus Shale Commission which established the framework for Act 13. In so doing, it diminishes opportunities for a counter-hegemonic discourse to be officially recognized, as a public health perspective would be apt to do.

In this section we draw attention to the politics and the ruses that disguise the baldly political-economic nature of Act 13. One of the state politicians from the Pennsylvania House of Representatives who co-sponsored Act 13 came to speak to the Ethnographic Field School. When a student asked why no funding was allocated for the Department of Health, the representative said:

The Department of Health was discussed, but ultimately it was more from a research vantage point which is perfectly legitimate, but probably should be funded by government as a whole. Part of the DoH's job is to really evaluate not just one industry but any industry that might be

having an impact on the health of individuals, so we kind of shied away from that because it wasn't directly, you know, they weren't sending folks out to clean up streams or to rebuild roads or they weren't, you know, social workers who were dealing with an influx of a new population into an area with drilling. So we kind of tried to look at more direct, actual expenditures...It's kind of one of those things where they should be doing that anyway, so should we give them extra money to do the job that they're supposed to do anyway in the DoH?

Rose and Miller write that "Governing a sphere requires that it can be represented, depicted in a way which both grasps at its truth and re-presents it in a form in which it can enter the sphere of conscious political calculation" (1992: 182). Describing the goal of public health as simply to conduct research on overall health issues, and that health is not affected by work-place factors, by industry-related factors, or by regulations that permit pollution to be dispersed in water, land and air, is a gross misrepresentation of public health. But the Representative blithely cast aside the student's concern as if were just a misunderstanding on her part. This calls to mind Shore and Wright's critique of policy: "it is a feature of policies that their political nature is disguised by the objective neutral, legal-rational idioms in which they are portrayed...This masking of the political under the cloak of neutrality is a key feature of modern power" (Shore and Wright 1997: 8). Allowing a public health official to be part of the commission would have opened an opportunity for a counter-hegemonic voice to be represented in the policy, but given that policies are political, this omission is not surprising.

The dismissal of public concerns as 'uneducated' and destined to change once people 'get the facts' may serve as a form of silencing, as the discursive terrain is claimed by those with an ability to speak a specialized language. In response to a student question about nondisclosure agreements signed by people who have had the industry provide water buffalos (a free stand container for storing water) in the wake of well-water contamination (despite claims that the process is safe), one industry representative during our Field School dismissed the question with: "You haven't spent much time with an attorney, have you?" He then gestured to the legal logic of nondisclosure agreements, which may not hinge at all upon cases of actual water contamination. Finally, he shared advice that he often gives to young people about to marry – the significance of assembling a group of experts more broadly, like a doctor, mechanic, and attorney, as "You just have to recognize that you don't have competency in those areas."

When another student asked the Representative about the rationale for not allowing health professionals to discuss the chemicals used in the frack fluid with other people in a community who might also be exposed, as the doctor's patient was, the politician said:

It would be like telling Coke and Pepsi, we have your secret formula and now we're gonna disclose publicly for Pepsi to be able to use as well. They [doctors] can use it for medical purposes to treat patients if there's a public hazard, public emergency, those sorts of things, but they can't disclose the actual formulas in use at each site just the chemicals used at those sites.

Interestingly, the politician's dismissal of seemingly misguided concerns with disclosure of contaminants to medical patients, down to the Coke/Pepsi example, mirrors the case made for Act 13 on the Energy In Depth website, a gas industry front group (Massaro 2013).

Setting aside the fact that Coke and Pepsi are not toxic, it's important to recognize that proprietary chemicals are each unique and the nature of chemistry is such that when different chemicals are added together they might react with each other to create a new chemical that has different qualities and effects. Knowing the 'ingredients' in proprietary chemicals wouldn't help doctors treat patients if no documentation or research exists on the newly formed chemicals. Further, when those chemicals combine with flow-back water that brings up other substances from deep within the earth, additional chemical reactions may occur that could change the composition of the frack fluid. And when drillers use recycled frack- or mine-drainage water, those potentially unknown chemicals and combinations are doubly unknown. And the vectors for exposure to the chemicals are numerous. In other words, the health consequences for some of the chemicals are unknown. So when the politician says that it would be like telling Coke and Pepsi each other's "secret

formula," they each only have *one* formula, not innumerable known and unknown formulae, and contacting, breathing, or drinking them won't have an immediate negative effect.

Nevertheless the Representative sees himself as a "common sense" arbitrator for Act 13 and defender of democracy. In his talk to the class he presented himself as reasonable and independent—objecting to some portions of the bill but motivated by a need to compromise for democracy:

The first thing you have to remember is there are only three numbers that matter in government. In Pennsylvania it's 102, 26, and one. Without those three numbers you don't get to do anything. 102 is the majority of the House. You need 102 votes to do anything. You need 26 votes in the Senate and you need to governor to sign off. You could have the best idea in the world; you could have the worst idea in the world. If you can't get to 102, 26, and one, it doesn't matter; not gonna happen... In a democracy we don't get to run things how we want. Sometimes that's why a dictatorship may be cleaner than the legislative process.

He goes on to say:

What I found to meet the majority opinion was folks wanted to drill, they wanted it done safely, they wanted little environmental impact, they wanted the gas industry to pay something, they didn't want it to be exorbitant, but they wanted them to pay something, and they wanted the majority of money to stay locally in the community where they were drilling. When you get into the minute details of this number or that number, they weren't really bent on what the numbers were, they just wanted commonsense to prevail, they wanted something to happen, but they were somewhat flexible on what that something would be.

The Representative seems to be defining democracy quite narrowly: he emphasizes the messy exchange of passing a bill, and how it essentially is quite contained within the three numbers. What's missing is that the bill is not fundamentally democratic in its effects. In his words, the Representative disguises the potential hazards of shale drilling and minimizes the political-economic inequality by making it seem that everyone will benefit equally from hydraulic fracturing. Instead of a truly democratic process, focus and outcome we see an instance of what Cammack (1989) describes as the role of the state: aligning itself with the interests of the dominant social class, including the individuals or companies that own the subsurface mineral rights and the investment firms that have been securing the rights to shale gas (Schwartzel 2013). Others' needs fall far behind these interests.

The legal and economic infrastructures implemented by the state do bend to the will of capital. And in the case of Act 13, forms of knowledge and expertise that support hydraulic fracturing are included and those that don't are excluded. Rose and Miller write:

...the question is no longer one of accounting for government in terms of 'the power of the State', but of ascertaining how, and to what extent, the state is articulated into the activity of government: what relations are established between political and other authorities; what funds, forces, persons, knowledge or legitimacy are utilized; and by means of what devices and techniques are these different tactics made operable (1992: 177).

The discourse that flows from industry-enmeshed actors is justified, endorsed and empowered by policies and official bodies that exclude certain forms of knowledge that would complicate the neoliberal framing of the commons as utilitarian means for productive ends. The forms of knowledge that are accepted—scientific and technological—establish the legitimacy of the conversion of the commons to the private, while those that are rejected come from expertise couched in critical fields embedded in public welfare.

Manufacturing consent? Discursive tools of governance

In the previous section we discussed the regulatory power of neoliberal governance by the state and capital that isolates critical perspectives. Next we interpret the cultural and symbolic meanings in the discourse that frame the narrative of unconventional drilling, a discourse that attempts to manufacture consent for governance by evaluating the scope and role of the informational deluge that lauds shale drilling. We lay out the view of fracking that industry would like people to accept, and then turn to some of the methods they hope will create a positive reputation and impact local-level policies.

Glossy annual reports describe the contributions companies make to communities that host hydraulic fracturing, and they assure the beneficial impacts the industry will make to the body politic. With the former, industry takes on a paternal role by donating money to the local 4-H Club, Boy Scouts, and food pantries, and by having employees pitch in with community project like collecting litter, etc. In the case of the IUP Ethnographic Field School, a local drilling executive sent a company bus and driver to the university to take students to a rig tour, and other industry professionals gave tours of their facilities. Chesapeake Energy provides the "This School Rocks program in classrooms each year, which teaches elementary to high school students the basics about natural gas and oil" (Chesapeake 2012: 26). These outreach programs to public schools occur at a time of severe state cuts to public education, with nearly US\$1 billion in cuts since 2011, prompting school closings and consolidations as the cost of education is increasingly offset by local communities themselves (ELC 2013).

This outreach is meant to show local residents that drillers are involved in the community and will be its benefactor. These efforts are part of the promotional efforts public relations representatives advocate in order "to get out ahead of any problems" (Pitzarella 2011). Drilling corporations in Pennsylvania didn't have the welcome they might have liked, as evidenced in this quote from a public relations representative of Range Resources at a 2011 natural gas conference in Houston:

In Pennsylvania, everyone said 'we're going to talk about gas drilling and everyone's going to love us, right, because they've had coal, and steel, and rail, and timber. They're going to love us - new kinds of oil and gas drilling.' And the very first thing they said is 'we've had coal here, and we've had timber and we're done. And we don't want anymore because you're going to be just like them.' So what we need to do is...We employ tens of thousands of people. Every single one of our employees and service company folks should be engaged stake holders in this process" (Pitzarella 2011).

Another speaker at the same conference advised submitting photogenic scientists to media training to create a trustworthy image:

We have a geologist, a guy, he looks like he's straight out of Hollywood. He's well-spoken...He is a very good spokesperson for our company. We put him through media training. He is our subject-matter expert. Rig tours, these editorial board meetings and things along these lines. We really rely on him. You guys, if you can, I really suggest you designate one of those individuals to play that role for you. It's extremely helpful for us. Because us tassel-shoed lobbyist and slick "PR-shields" as we're often called - I think we carry less credibility than a used-car salesman in the Marcellus region these days (Carmichael 2011).

To help lubricate relationships between municipal and county-level politicians, Pitzarella (2011) said:

We have several former psy-ops folks that work for us at Range because they're very comfortable dealing with local issues and local governments. They help folks develop local ordinances and things like that. Very much having that understanding of psy-ops in the Army, as in the Middle East, does apply. Very helpful for us in Pennsylvania.

Consequently, this strategy involves a focus on strategic spokespeople able to connect (or who are already connected) with local forms of social and cultural capital.

Another strategy that has been commonly deployed by industry front groups such as Energy In Depth involves discrediting scholars whose research challenges the hegemonic construction of the industry as safe and equitably beneficial to communities and individuals across the state. Simona Perry's work has been dismissed as "anecdotal" by a self-described landowner in Lycoming County who is now writing for the Energy In Depth website. This blog claims to "get to the heart of who the real experts are on this topic" (Jacobs 2012), and attempts to discredit Perry's expertise as a scholar, and consequently, her findings about the social trauma that has resulted in some communities that have experienced rampant natural gas development. Similarly, the discovery of high radioactivity levels mentioned in our introduction has been attacked on Energy In Depth for failing to get the 'facts' right, allegedly resulting from the contamination of the study itself by bias resulting from anti-industry funding sources (Brown 2013). Arguably, these attacks on the ethics, credentials, and methodology of scholars producing research counter to the interests of capital are designed to silence scholarship, rather than promote more rigorous study design.

The Marcellus Shale Coalition, a powerful lobby group that forms the public face of the gas industry in Pennsylvania, is also actively engaged in creating a particular dominant discourse focused on nationalism, jobs, and environmental and social responsibility.⁸ In regular emails posted to a listserv, Twitter feeds, and a blog, the Marcellus Shale Coalition claims and creates a discourse privileging quantifiable benefits shared by all, via legislation that privileges private property owners and large corporate entities that own mineral rights. Reviewing this social media, one predominant focus is on the enormous scale of economic development, and the ways in which this economic growth, coupled with the strong environmental regulations and impact fee of Act 13, contribute to environmental rehabilitation, "benefiting every Pennsylvanian" (Marcellus Shale Coalition 2013b). This last is a quote from a press release on the distribution of Act 13 impact fees from the Governor's office, linked to the PA Government Agency website. The other most common discursive strategy deployed by the Marcellus Shale Coalition involves a nationalistic sentiment, describing American economic growth, job creation in "America's heartland," the support by a "clear majority of Americans" for this industry, and quotes by scientists along with prominent industry and business leaders supporting "Safe American Shale Development" (Marcellus Shale Coalition 2013c).

Even the DEP engages in the linguistic subterfuge. One DEP lab technician recently testified that lab employees had been directed by the Office of Oil and Gas Management to not release information to homeowners who wanted their water tested out of concern for contamination associated with drilling. Although she found an alarming range of harmful chemicals and elements, she did not submit the information to the requestor (Hopey 2012). An elected official called the DEP to account for this practice, and the DEP submitted a response that stated: "DEP's attention is focused on our core mission of protecting the environment, not wasting time on political theater" (Hopey 2013). By using these words, the officials attempt to alter the knowledge about and consequences of the falsified test.

In terms of influencing a national audience, advertisements and editorials extol the benefits of unconventional drilling. Chesapeake Energy says: "Despite the burdens imposed by increasing federal regulation, the oil and natural gas industry can almost singlehandedly turn the U.S. economy around, and Chesapeake will be at the forefront of this movement..." (Chesapeake 2012:12). Chesapeake could have also, apparently, prevented the recent wars and acts of 'terrorism': "During the past 10 years we have suffered more than 236,000 casualties and spent more than US\$3 trillion dollars fighting conflicts in Iraq and Afghanistan. It is quite possible these conflicts could have been aided or minimized if we had not been reliant upon OPEC oil and had our oil imports not indirectly funded terrorism against the U.S. during the past decade" (Chesapeake 2012:13).

One strategy deployed on a local and national level is the attempt to redefine "hydraulic fracturing" in such a way as to fragment the process and thus expand the number of parties potentially responsible for

⁸ In the first three months of 2012, when the parameters of Act 13 was being debated by state legislators, the Marcellus Shale Coalition spent US\$978,766 of US\$1.3 million dollars coming from the gas industry to lobby state representatives. The four leading environmental groups combined spent US\$51,484 during that time period in an unsuccessful attempt to push for a severance tax and tighter environmental regulations (Micek 2012).

any contamination, a redefinition that results in no one entity effectively assigned blame. One Field School speaker active in the drilling community said:

...an issue that the industry continues to battle is that there is no known negative impact for hydraulic fracturing in the United States. The EPA came out with an announcement about ten years ago and they reiterated it this year...they will tell you that the hydraulic fracturing is not the problem. The problem is the operation of the wells. Now, the construction of the well does play into that, but when there is a contamination to soil, air or water, it is not so much due to hydraulic fracturing as it is to some type of a leak.

In the film *Truthland*, one commentator's quote was used as a rebuttal to the entire premise of the film *Gasland*:

Obviously *Gasland* has a lot of pretty dramatic events. I think where I would differ with Josh [the director of *Gasland*] is his conclusion that those problems were all related to fracking. Most of the problems we see in the natural gas area are due to poor well construction. Poor cement work. Spilling stuff on the ground. Fracking itself doesn't seem to cause a lot of problems so far. That's not to say we shouldn't be vigilant. Where I differ with Josh is him thinking it's the breaking of the rocks that's causing these problems.

Rose and Miller write: "Language is not merely contemplative or justificatory, it is performative. An analysis of political discourse helps us elucidate not only *the systems of thought* through which authorities have posed and specified the problems for government, but also the *systems of action* through which they have sought to give effect to government" (1992: 177, italics in original). This way of narrowing hydraulic fracturing not only works to scramble blame in the event of a contamination, it also confuses the language and substitutes "expert language" to limit what in common parlance refers to a wide range of activities required to pursue shale drilling.

The language outlined above is a genre of expression "designed to persuade, not inform" (Apthorpe 1997: 43). Some policy language is more persuasive than others because the more "successful" policy draws on key words and preconceived notions that resonate with the audience. Language in policy does not truly seek to inform. It is not meant to be put to any test—but if it is put to the test, and it fails, that failure is overlooked (Apthorpe 1997).

These discursive strategies described above seem to attempt to create the world by describing it, by speaking it into being. Linguists point out that language is not just a symbolic representation of extant conditions and realities; instead speech can have consequences and can alter the social category of person – "I thee wed," for example is a so-called "speech act" (Austin 1962). Speech acts have the intent behind them to alter the category of a person or to provoke action. But do they work in this context? Do they resonate? Are they more than simple bloviation by crafty individuals and slick advertisements? Do these messages operate across the mediascape as a form of governance? Do they lay the groundwork for general public acceptance that dismisses the concerns voiced by those directly affected by fracking as irrational (Perry 2012) or do they exacerbate a pre-existing negative social relationship? Do industry boosters provide the sedation that paves the way for the state to pass laws that are remarkable for the benefits accrued to industry and protections denied to citizens?⁹ A 'reception study' would help answer these questions. We assume that these messages only 'preach to the choir,' but perhaps they have an insidious effect as well. Perhaps they dull the capacity for skeptical publics to envision and embrace a counter-hegemonic ideology, or perhaps the sheer quantity of them crowds out actual space for actionable critique to take root.

Act 13 was contentious for its omissions in the areas of public health funding and consideration, yet

⁹ Brian Cope (2013) offers one important move in this direction, with his analysis of the impacts and nature of industry rhetoric around Marcellus Shale development, as it obfuscates a holistic rhetoric of place in favor of a narrower focus on deprivation and need in a landscape long categorized by internal colonization.

some complained it wasn't permissive enough. In his talk before students at the Ethnographic Field School, a second Pennsylvania politician, a state senator, said that some of his constituency were unhappy with the law because it denied them the individual right to drill on their property due to the set-back limitations on water and buildings. One must wonder what gave way to those complaints. The language in Act 13 invites people to request waivers for the restrictions that limit the distances from drinking wells, buildings and water ways that drilling can take place. More likely a concern would be long-term renters next to a drill site where the landlord gives consent to drill in exchange for gas royalties (Hudgins 2013), or homeowners who can't refinance their property because a well is on a nearby neighbor's property. But his speech about the policy was meant to resonate with individuals who focus on individual liberties as an expression of democracy, and perhaps to signal to industry that he is an obedient mouthpiece.

5. Conclusion

Several months after the Field School, this second politician spoke at a public meeting about a local coal-fired power plant that is being sued by the EPA and the states of New York and New Jersey for emissions violations. He drew on the economic fears of the 600+ audience and goaded them into outrage that 'tree-huggers from California' wanted to close down the power plant and that 'they should go back to California and hug some redwoods.' The other speakers on the panel, none of whom was from California, had come to the meeting to discuss the links between the power plant pollution and rising rates of heart disease and asthma. The audience grew so irate the speakers had to be escorted by police to their cars at the end of the presentation. While the Senator seemed to be engaging the group in an opportunity to express free speech, he was, in essence, using theatrics to divert attention away from the hazards posed by an industry (coal, in that case) that benefits economically from people's refusal to demand that federal laws be upheld. His reliance on the crowd's anti-regulatory sentiment, stoked by expressions of personal liberty infringement and cultural difference resonated perhaps because he described an old economy where workers together are a powerful force, and the state's role is to constrain capital.

Such incitement sets up the state as the straw man with three industry-friendly consequences that are relevant to and visible in the discursive strategies that promote hydraulic fracturing:

- 1) the strategies give the appearance that regulations are onerous, and thus bolster the neoliberal argument that there should be decreased oversight through regulations;
- 2) they promote the fear that individual rights are jeopardized by collective rights to a healthy environment, and;
- 3) they create a broader space for capital to exert its force.

This is the inflection point where the performative nature of speech obfuscates the relationship between the state and capital. What goes misunderstood is that under neoliberal governance, the state does not shrink; rather, its role shifts such that its regulatory function ensures capital's success (Harvey 2005). Discursive strategies by the agents of state and capital that promote the ideology of free choice and limited government are able to capitalize on the conflation between the old economy (where Fordist labor dominated and unions mediated between worker and company), and the new economy (where flexible labor exists under neoliberal governance that promotes atomized labor forces and minimal government oversight or intervention). The subsequent production of surplus value is an effect of the state (Mitchell 2006).

Propaganda and speech acts designed to manufacture consent make up the "one" of the "one-two punch" of the neoliberal state's collusion with industry. In instances where these resonate with pre-existing worldviews, they are effective. Yet, as in Afghanistan where psy-ops was most recently used, these tactics do not always produce the desired results. In the case of the media campaign and public relations interventions into communities, these do not shift individuals' opinions about hydraulic fracturing, but they do give them a framework and a narrative to think through, blunting reception of incipient critiques that may draw on differing frameworks outside patriotism, job growth and energy independence as ways to understand, accept, or reject hydraulic fracturing as the future of energy reliance in the United States and beyond. This media

onslaught may also curb nascent arenas of discourse and action by merely crowding out other voices in popular media.

The second punch that ensures capital's ability to redefine humans' relationship to land, air, water, each other, and self is the shift in the state's responsibility from reining in capital, to effecting an increase in the production of surplus value (Mitchell 2006). In this case the state narrows the range of expertise included in important decision-making processes such that critical perspectives are excluded. The outcome is the omission of information that would ensure an informed public—an elemental part of any democratic society. The state chooses to organize the knowledge of experts in such a way that the balance of power shifts even further out of democratic reach.

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