

The People Know Best: Situating the Counterexpertise of Populist Pipeline Opposition Movements

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Critical scholarship suggests that environmental populism is either an expression of radical democracy beyond the paternalistic liberalism of mainstream environmentalism (Meyer 2008) or that it is paranoid, irrational, and merely reactive to elite technocratic governance (Swyngedouw 2010). Because both frameworks take populism to instrumentalize knowledge production, they miss how practices of counterexpertise might condition the emergence of left-populist oppositional identities. I argue that counterexpertise is a political activity not by producing an alternative epistemology but as a minor science that contests science from within and in the process shapes left-populist political coalitions. This is illustrated through research on populist responses to the Keystone XL and Dakota Access pipelines in the Great Plains region of North America, where environmentalists, landowners, and grassroots organizers sought to position themselves as experts. Through public participation in environmental review, pipeline mapping projects, and construction monitoring, environmental populists created an educational campaign concerning topics as diverse as hydrology, economics, and archaeology. Developing counterexpertise not only contested the evidence produced by oil infrastructure firms and the state but also consolidated the oppositional identity of “the people.” By examining populist knowledge production within the broader field of contentious politics, I argue that we can better understand it as neither an irrational reaction nor transparently democratic but as part of a processual production of identities of resentment and resistance. One implication is that climate change denial and disinformation spread by the oil industry might be challenged by resituating science for political ends rather than renewing neutral objectivity. *Key Words:* *environmentalism, expertise, oil pipelines, populism.*

批判研究主张，环保民粹主义不是超越温和专制的自由主义下的主流环境保护主义之基进民主的展现 (Meyer 2008)，便是仅只是针对精英官僚治理的偏执、非理性之反动 (Swyngedouw 2010)。上述两种架构皆运用民粹主义操作知识生产，因而忽略了反专家的实践如何可能成为左翼民粹主义的反抗性身份认同的浮现之条件。我主张，反专家作为一种政治活动，并非透过生产另类的认识论，而是在科学内部进行争夺的微科学，并在过程中塑造左翼民粹主义的政治联盟。此一论点通过研究北美大平原区域中的基斯顿输油管 (Keystone XL) 和达科他输油管 (Dakota Access pipelines) 之民粹反应进行阐述，其中环境专家、土地所有者和草根组织者寻求将自身置于专家的位置。通过环境审查、输油管制图计画、以及工程监督的公众参与，环保民粹主义者创造了考量水文、经济和考古等多样主题的教育倡议。发展反专家运动不仅对石油基础建设公司和国家所生产的证据进行争夺，同时巩固了“人民”作为反对者的身份认同。我通过检视更广泛的争议政治领域中的民粹知识生产，主张不将其视为不理性的反动或显而易见的民主，而是更佳地将其理解为生产愤怒与抵抗的身份认同的过程中的一部分。其中一个意涵便是，气候变迁否认主义和石油产业所传播的虚假信息，或可通过将科学至于政治端、而非重拾客观中立性来进行挑战。
关键词: 环境保护主义, 专家, 输油管, 民粹主义。

La erudición crítica sugiere que el populismo ambiental es, o una expresión de la democracia radical que trasciende el liberalismo paternalista de la principal corriente del ambientalismo (Meyer 2008), o paranoico, irracional y meramente reactivo a la gobernanza tecnocrática de la élite (Swyngedouw 2010). Debido a que ambos marcos toman al populismo para instrumentalizar la producción de conocimiento, ellos no captan cómo las prácticas de contraexperticia podrían condicionar la aparición de identidades opositoras izquierdo-populistas. Sostengo que la contraexperticia es una actividad política no productora de una epistemología alternativa, sino como una ciencia menor que cuestiona la ciencia desde dentro, proceso en el cual configura coaliciones políticas izquierdo-populistas. Esto se ilustra por medio de investigación sobre las respuestas

populistas a los oleoductos Keystone XL y Dakota Access en la región de los Grandes Llanos de América del Norte, donde los ambientalistas, propietarios de la tierra y organizadores de las bases buscan posicionarse como expertos. A través de la participación pública en la revisión ambiental, proyectos de mapeo de los oleoductos y monitoreo de las construcciones, los populistas ambientales crearon una campaña educativa relacionada con tópicos tan diversos como hidrología, economía y arqueología. El desarrollar contraexpertise no solo cuestionó la evidencia producida por las firmas de infraestructura de petróleo y el estado, sino que también consolidó la identidad opositora de “el pueblo”. Al examinar la producción populista de conocimiento dentro del campo más amplio de la política de confrontación, sostengo que es posible entenderla mejor si no la consideramos como reacción irracional ni transparentemente democrática, sino como parte de una producción de proceso de identidades de resentimiento y resistencia. Una implicación es que la denegación del cambio climático y la desinformación difundida por la industria petrolera podrían retarse resituando la ciencia más para fines políticos que para renovar la objetividad neutral. *Palabras clave: ambientalismo, expertise, oleoductos, populismo.*

Although recent scholarship largely associates populism with demagoguery, authoritarianism, and reactionary illiberalism (Müller 2016; Mudde and Kaltwasser 2017; Scoones et al. 2018), this assessment has been countered by a “persistent counter-refrain” (Grattan 2016, 19) that understands progressive or left populism as a counterhegemonic performative construction of “the people.” Various understood as “grassroots populism,” “everyday populism,” or “democratic populism” (Grattan 2016, 33), such emergent “environmental, pro-democracy, and anti-corruption mobilisations” (Gerbaudo 2017, 6) are distinguished from right-populisms through their desires to actualize an ideal of popular sovereignty. Such progressive populism has consistently animated leftist and radical movements in the U.S. Great Plains since the 1890s to the extent that the Marxist historian Pollack (1976) approvingly claimed that in the Midwest, “populism described the results of ideology, and Marx its causation” (72). I argue that this genre of oppositional, cross-class populism is at work in aspects of some contemporary oil pipeline opposition movements.

Even narrowly defined, progressive, grassroots populism has been incredibly divisive for the political left. On the one hand, some theorists suggest that “racism is essential” (Rancière 2016, 102) in the creation of the collective subject of populism, such that populism “harbors ... a long term proto-fascist tendency” (Žižek 2008, 280). Such a position is shared by the political center and Keynesian liberals, for whom “every populism, right or left, is equally suspect, because each one represents the pathologically unhinged demos that the existing institutional order seeks to moderate, filter, and contain” (Riofrancos 2017; see also Mann 2017). On

the other hand, Laclau and Mouffe contended that populism “must be conceived as a ‘radical reformism’ which strives to recover and deepen democracy” (Mouffe 2016) and that it is “the royal road to understanding something about the ontological constitution of the political as such” (Laclau 2005, 67). Assessments of populist politics in the global climate justice movement are also deeply split. From the World People’s Conference on Climate Change and the Rights of Mother Earth at Cochabamba, Bolivia, to the People’s Climate March in New York City, scholars and activists disagree. Some suggest that “low-carbon populism” (Huber 2017), “a sustained and populist climate movement” (Klein 2014, 157), or “a popular movement for climate justice ... is a necessary condition for more radical actions” (Smucker and Premo 2014). Others assert that such strategies smack more of a “corporate PR campaign” (Gupta 2014) “which, because its demands are amorphous, can be joined by anyone” (Hedges 2014).

For the progressive environmentalists, landowners, and community organizers fighting the Keystone XL and Dakota Access pipelines in the U.S. Great Plains, environmental populism unfolded precisely through an iterative politics of scientific counterexpertise. To be clear, not all pipeline opposition is populist in character, nor did it necessarily uphold counterexpertise. Struggles for decolonization and Native sovereignty, for example, did not emphasize retrieving a supposedly lost U.S. American democracy or popular sovereignty. Nonetheless, many progressive citizens’ groups opposing pipelines were decidedly populist, and some explicitly called themselves populists. This fact that should give those conflating populism and the political right some pause. In this article, I contend that contesting the

scientific process of environmental review through counterexpertise was one important condition that consolidated a collective identity of “the people.” To pipeline opponents, the failure of environmental review demonstrated that fossil fuel industries had so deeply influenced third-party contractors and state agencies that they could no longer grasp the truth. This consolidated their opposition to both the state and fossil fuel firms, creating conditions for more radical political possibilities. This research further suggests that both climate change denial and technocratic liberalism might be challenged by resituating scientific knowledge production toward clear political ends.

Populism and Environmental Expertise

Populism is a contested concept. At its most general level, it is defined as the performative political act that constructs “the people” as a unified, collective body in opposition to the perceived corrupt power of institutionalized elites or outsiders (Canovan 1981; Laclau 2005). As a colloquial signifier and political discourse, “populism” is frequently used to symmetrically equate extreme positions on both the political left and right, both of which are said to express grievances against institutionalized liberalism. This recently common use of populism has its roots in denunciations of agrarian politics in modernization theory and, most famously, the work of Hofstadter (1960), who understood populism as paranoid, anti-intellectual, and antidemocratic.¹

This use of populism cannot be upheld when applied to left populisms, because no symmetry exists in the political discourse or social formation of left- and right-wing populisms and the manner in which they construct the people (Sibertin-Blanc 2013). For the political right, the language of the people substantializes nationalism, nativism, and reactionary politics. By contrast, a growing body of political theory argues that left populism can be distinguished by its desire to enact democracy as popular sovereignty, against the lip service it is paid by elites, elected politicians, and the liberal state more generally (Grattan 2016; Gerbaudo 2017). With its roots in the agrarian and producerist movements of the Farmer’s Alliance and the People’s Party (or Populist Party) of the late 1800s, “democratic populism” or “grassroots populism” could seem like a regionally specific U.S. understanding. Yet Gerbaudo (2017)

showed how this definition of left populism can have broad application to social movements around the world fighting for justice, equality, and a deeper democracy.

Analyses of left-populist discursive strategy are still fundamentally split. The position upheld by Laclau (2005) and Mouffe (2016) claims that populism is an authentic expression of radical democracy with the flexibility and creativity to counter institutionalized postpolitics. By contrast, many Marxists uphold the position that “populism places too little emphasis on class” (Dean 2017, S44). By refusing to name a particular, properly political subject (e.g., the proletariat), populism is too vague a political identity to enact justice (Swyngedouw 2010). Such normative dismissals have some merit but hardly explain populism’s ongoing persuasive abilities (Kazin 1998). Through what processes does left populism enroll its subjects, and with what effects? It is my contention that, in the arena of environmental politics, disputes over expertise play an important role unacknowledged by contemporary scholarship.

Meyer (2008) argued that U.S. environmentalist discourse is split between a paternalistic and a populist persuasion. Paternalistic environmentalism consolidates elite power through a white, upper-class orientation and demonizes the poor and marginalized peoples as mindless, antiecollogical masses. The close relationship between some elements of science and environmental governance has undoubtedly contributed to further consolidation of paternalistic power. In this situation, “politics more and more becomes a struggle between those who have expertise and those who do not” (Fischer 2000, 23). This is evidenced in the United States by the manner in which “Big Green” nongovernmental organizations attempt to retain this exclusive power through their supposed expertise or counterexpertise (Eden 1996; Klein 2014).

On the other hand, environmental populism, like contemporary anti-extraction movements worldwide, “perhaps ... shouldn’t be referred to as an environmental movement at all, since it is primarily driven by a desire for a deeper form of democracy” (Klein 2014, 295). Yet environmental populism adds a new valence to left populism through its emphasis on “local knowledge rooted in the particularities of place and community” (Meyer 2008, 225). Because many contemporary North American environmentalisms forefront expert knowledge as a site of struggle,

they can provide an important case of the understudied manner in which contestation of expertise can generate populism.

Swyngedouw (2010) claimed that any sense that “the people know best” is upheld by their investment in evidence emerging from a “scientific technocracy assumed to be neutral” (223). For this reason, he argued that environmental populism is “inherently non-political and non-partisan” (Swyngedouw 2010, 223). This argument runs counter to Meyer’s sympathetic view, which sees the populist persuasion elaborating not a faith in technocracy but instead in experiential, nonscientific knowledges. In my assessment, both of these positions see the role of environmental expertise in environmental populism as too instrumental.² Each suggests populism does not actually hinge on practices and processes of scientific knowledge production but only claims-making based on contesting scientific results. For its critics, populists suspiciously subordinate ecological expertise to the conspiracy theories of the people. For its champions, populists already have all of the knowledge they need in their lived experiences and thus need no supplementary scientific expertise.

What remains scarcely explained by such detractors of the contemporary consolidation of expert knowledges is how the development of practices of counterexpertise could condition the emergence of environmental populism. Fischer (2000) noted that reactions against expertise can engender “both right- and left-wing populisms, [which] hold out a return to grassroots democracy as the key to revitalizing American society” (28). Although it is clear that divisions in types of knowledge can engender resentment against elites, I demonstrate how the process of developing counterexpertise can contribute to the populist political form.

With what concepts can we understand the construction of the people through rather than only against expertise? First, I would argue that we must take the postfoundationalist stance that there is no essential identity to the people, that in a phrase Deleuze (1989) drew from Paul Klee, “the people are missing” (216). This position counters the dismissive thesis that populisms are merely reactionary movements concerned with “‘THE’ Environment and ‘THE’ People, Humanity as a whole” (Swyngedouw 2010, 221). Contrary to this claim, much of environmental populist discourse is characterized by an

intense attention to place-based, open-ended constructions of “a people,” constructed through provisional alliances (Iveson 2014; Hébert 2016; Grossman 2017; Andreucci 2018). In such formulations, the people is not assumed as a given nation or population, let alone all of humanity, but instead must be carefully and provisionally assembled, always with the risk of failure.

Second, through attempts to mobilize expert knowledge, environmental populisms are frequently constructed through minor sciences that leak from or cut at the edge of elite or “major” science. A minor science could be understood to be involved in the never-finished, always-processual construction of an oppositional sense or tone that composes a people through alliance or affinity (Katz 1996; Thoburn 2016; Barry 2017). Importantly, minor science takes part in “the organization of the social field,” the latter being immanently “a part of that science itself” (Deleuze and Guattari 1987, 368–69). Counterexpertise could be considered minor science, insofar as it is an iterative process of scientific contestation through *bricolage*, a “taking up of whatever is at hand” (Secor and Linz 2017, 568) that goes beyond common sense, lay, or experiential knowledge toward developing new, scientific skills among the people. Seeing counterexpertise as a minor science confounds the assumed division between elite science and popular or lay knowledge. Both counterexpert and lay knowledges are capable of engendering or being captured by either “paternalistic” or “populist” environmentalisms. Thus, a situation in which counterexpertise congeals a collective subject of the people can teach us much about contemporary populism. Indeed, because environmental populism decomposes and recomposes scientific knowledge precisely as if it were not neutral, it is capable of grounding a distinctly political (rather than depoliticizing) science.

Briefly contrasting such a position from contemporary Gramscian political analyses of both populism and experiential knowledge (Mann 2009; Hart 2012; Crehan 2016) can elucidate the specific relationship between science and politics at stake, which otherwise has much in common with an analysis of minor science (see Keeling 2007; Featherstone 2011). Gramsci understood the construction of a people through the counterhegemonic process of unraveling “common sense” to contest the hegemonic consolidation of knowledge and national identity. Although

Gramsci's analysis should not be understood as economically or class reductionist, he was undoubtedly drawn toward understanding counterhegemonic knowledge production that is emergent from subalternity, marginality, or class struggle. By contrast, the portion of the antipipeline movement I examined did not, in my assessment, hinge on a pedagogy, knowledge, or category of "the oppressed." This is not to say that it could not eventually lead to a praxis-oriented politics (see Carter and Kruzic 2017) but that open-ended, performative construction of the people elaborated in pipeline opposition cut across various class positions, social identities, and spaces.

Second, whereas Gramsci paid close attention to popular culture and knowledge, vigorously contesting positivist theories of knowledge, he devoted less attention to science and expertise as a field of struggle. Gramscian analysis has instead paid more attention to how "experiential, placed-based, and nonscientific knowledge" (Rice, Burke, and Heynen 2015, 254) exceeds and challenges science, taking the latter to be evidence of depoliticization. By contrast, Wainwright and Mercer's (2009) understanding of a Gramscian elaboration of situated science as a social process of iterability is closer to the concept of minor science. The minor for Deleuze and Guattari (1987) emerges not in outright opposition to the major but from within "a scientific field" (367). Thus, counterexpertise as minor science does not elaborate an alternative epistemology based in common sense, popular culture, or lay knowledge but is constructed by augmenting scientific practices. Insofar as minor science strategically affiliates, it has further affinity with Haraway's (1990) political tendency toward a feminist coalitional or "united front politics" (151).

This conceptual framework further reiterates that left and right populisms are not at all symmetrical in form despite the fact that both construct the people against "elites." On the political right, petro-populism and conservative skepticism of climate science hinge on fear of institutionalized elites and government interference in the market (Huber 2013) to consolidate the normative force of a determinate, substantialized, majoritarian people, namely, white Americans. On the other hand, minor science exposes and unravels the majoritarian people through staging its own performative assembly toward a utopian and not-yet-existent popular

sovereignty (Sibertin-Blanc 2013; Butler 2016). There is no reason to be especially romantic about minor science. In the case of pipeline opposition, it was partial, fragmentary, and largely unsuccessful in constructing a durable political subject. Yet, important, the development of expertise as a minor science and subsequent populist social movements also created the conditions of possibility for deeper resentment toward state and corporate forces as well as opening possibilities for more politically radical forms of pipeline opposition.

The People versus the Pipelines

A number of climate activists recall that "in the mid- to late-2000s, the US climate movement was flailing and fractured, and had not unified around common opponents" (Russell et al. 2014, 167). Focusing on climate policy at a national level seemed to reach a final death knell with the failure of the American Clean Energy and Security Act in 2009. On the international stage, the Copenhagen Summit was a disappointment. Yet at the same time, on the Great Plains of the upper Midwest, a new and different kind of environmental movement was forming. Antipipeline sentiment had been bubbling in the Dakotas and Nebraska, where farmers, ranchers, Native nations, users of public parks, and drinkers of water were increasingly disgruntled by the sudden appearance of TransCanada's plans for the Keystone XL pipeline. As these emerging antipipeline sentiments coalesced into organized opposition, mainstream climate activists began to see this movement as "more capable of keeping carbon in the ground than lobbying efforts" (Russell et al. 2014, 168). The strategy and discourse of populist opposition would have a transformational effect on U.S. environmentalism.

TransCanada's Keystone pipeline system is a network of proposed and completed oil pipelines designed to bring diluted bitumen over 2,000 miles from the Canadian tar sands near Hardisty, Alberta, across the continental United States to storage facilities in Cushing, Oklahoma, and refineries near Port Arthur, Texas, and Patoka and Wood River, Illinois. The Keystone XL phase of the system was proposed in 2008 and included a route from Hardisty to Steele City, Nebraska, traversing Montana and South Dakota to also interlink to the Bakken oil field in North Dakota. Although Keystone I, an

earlier TransCanada pipeline routed through the eastern Dakotas, was finished in 2009, Keystone XL became mired in controversy as it crossed hundreds of parcels of private land, ecologically sensitive wetlands, and the historic land base of the Oceti Šakowin̄ Oyate—the Lakota, Dakota, and Nakota people—as well as several other Native nations. Dozens of public comment sessions, public scoping meetings, and evidentiary hearings served as hotbeds for opposition from 2010 to 2014. Just when it appeared likely that the permit for Keystone XL would be ultimately rejected by the Obama administration in 2015, the Dakota Access Pipeline (DAPL) was being permitted by Energy Transfer Partners (ETP) to connect increasingly desperate Bakken producers to Patoka by way of South Dakota and Iowa. Because DAPL was determined to require no federal environmental impact statement (EIS), it was pushed through state public utilities commissions at breakneck speed before its rise to international prominence due to the blockade near the Standing Rock Sioux reservation. In January 2017, President Trump reversed the former administration's decision on Keystone XL as his first act of office, symbolically demonstrating the significance the project holds for the political right.

The pipeline buildout provoked numerous political actions at different scales, including testimony at hearings, public protest, concerts, cookouts, and blockades. From 2014 to 2016, I acted as a participant-observer at more than forty of these events, recording public discourse of the people, helping build counterexpertise where I could and tracking grievances and successes throughout the Dakotas, Nebraska, and Iowa. My object of analysis was left-populist responses to the pipelines; this then excluded mainstream Big Greens on the one hand and radical autonomist, anarchist, or decolonial activism on the other. I further conducted twenty-three semistructured interviews with community organizers, landowners, and activists who saw themselves as part of this movement. Finally, I coded and analyzed a sample of 700 unique written and oral public comments recorded during the Keystone XL EIS permitting process (2008–2015) and the South Dakota Public Utilities Commission evidentiary hearings for both Keystone XL (2009 and 2015) and DAPL (2014) for language of the people and its connection to grievances against expertise.

Among various political activities taken against the pipelines, populist discourse and activity emerged in a manner oblique to the mainstream environmentalism of Big Greens and the radical tactics of direct action and sabotage. Rather than appeal to the power of policymakers, the people was taken to be the principle subject capable of enacting democracy and defending the land. Protest signs and public testimony frequently displayed slogans such as “people power,” “people > pipelines,” and “we the people ...” as grounds for opposition. Comments on the EIS were replete with the sentiment that, in the words of one commenter, “We have sent a clear message to President Barack Obama, TransCanada, and the U.S. Congress. They need to listen to us, because We Are The People” (U.S. Department of State 2013a, 84). Due to the history of successes of the Farmer's Alliance and the People's Party (or Populist Party) in the region, populism has long played a role in the cultural identities of the upper Midwest and has resulted in its identification at times with grassroots environmentalism (Ostler 1993; Husmann 2011; Lee 2011; Ferguson 2015). One nonprofit leader involved reflected on the evident desire for “less establishment [and] more populism,” claiming that “a movement of We the People, in the Heartland of America, is one of the big reasons we stopped a pipeline” (Kleeb 2016). Importantly, then, populism became not just a political ascription from the outside but also an identity of pipeline opponents.

Yet this populist identity or political formation did not precede a politics of knowledge that was then instrumentally organized in support of the campaign against the pipelines. Instead, I argue that populist discourse emerged from struggles over expertise. Many pipeline opponents took offense to the sense that TransCanada, ETP, or the federal government considered the people to be unintelligent. As one public commenter put it, “It shocks me to think that those people who work in government (on the dime of We the People) seem to believe that we, out here in the rest of the country, are morons” (U.S. Department of State 2013a, 13). To properly understand the emergence of populist politics in the contestation of the pipelines, we need to examine how individuals and groups had to position themselves as knowing more than these outside entities.

Counterexpertise Conditions the Emergence of the People

In response to the overwhelming amount of evidence under review in the EIS, individuals and groups took it upon themselves to educate each other about subjects as diverse as environmental law, pipeline spill cleanup regulations, soil science, economics, and hydrology. The purpose of developing counterexpertise was initially to contest the evidence presented in environmental review. As these attempts failed, however, this minor science frequently began to serve another function: to consolidate the oppositional identity of the people. It was through demonstrating that the traditional legal mechanisms for adjudicating knowledge were exhausted that the people emerged as a subject of identification.

Scoping meetings, public comment sessions, and evidentiary hearings served as initial sites of the coherence of a populist subject against pipelines. These participatory governance mechanisms were historically created with the idea that the recognition of public knowledge could enhance success of development projects. Interfacing with the public might also create broader acceptance of industrial change. At early public meetings, many pipeline opponents embraced the opportunity to testify, enthusiastically building a case that the pipeline would result in negative impacts to tribal land and water, farm and ranchland, and sensitive ecological areas. Early testimony served to ground opposition in experience, local knowledge, and long-term heritage and frequently contested the scientific understandings of land and water described in the EIS.

For example, citing their long-term life and labor on the land in question, ranchers testified that the high water table in south central South Dakota and northern Nebraska was not adequately considered in the EIS. They argued that a pipeline leak in this area could result in contamination of the Ogallala Aquifer. Lay opponents and scientists both testified that the “boundaries” of the Sandhills bioregion corresponding to this unique hydrogeology as mapped by the Nebraska Department of Environmental Quality (NDEQ) did not correspond to its actual extent. Opponents made such a good case that Keystone XL was rerouted around the new boundaries of the Sandhills. From the perspective of the environmental review process, this might appear to

be a prime example of the importance of public testimony. Yet, of course, a simple rerouting of the pipeline was deeply unsatisfying to opponents, who were forced to develop new evidence against the pipeline. Understanding the limits of lay knowledge, they instead began conducting their own research to try to demonstrate what the boundaries of the Sandhills were, taking soil samples, and remapping the Sandhills region based on this evidence. The mobilization of expert evidence, the failure of lay knowledge, and the subsequent development of counterexpertise only strengthened the resolve of pipeline opponents in Nebraska.

State-scale evidentiary hearings put expertise on trial, as landowners, Native nations, and environmental and community groups honed their arguments while attempting to discredit those of TransCanada. Differences in performance, professionalism, dress, knowledge of the law, and argumentation between paid experts and unpaid lay people augmented perceptions of knowledge and expertise. At the first South Dakota Public Utilities Commission (SD PUC) evidentiary hearings in 2009, the parade of expert witnesses took on a near-absurdist quality. One commenter captured this sense particularly well in suggesting that “TransCanada cannot even get their lies straight between their own expert witnesses. They have to bring in an expert witness to refute what other expert witnesses say when it does not fit their agenda” (Public Utilities Commission of South Dakota 2009b, 27). Another individual involved in the second set of evidentiary hearings in 2015 later described to me how TransCanada “continually called people as experts [who were in fact] senior company people who knew virtually nothing about any of the things that were going on ostensibly under their direction.” When these experts were less than convincing, TransCanada simply “tried to distance themselves as far as possible from anything that could have given them a fault.”

Like many of my interlocutors, I found it difficult to find a real differential in expertise on display in evidentiary hearings. Just like the various kinds of experiential, lay, and local knowledge laid out against the pipeline, emergent scientific counterexpertise tended also to be dismissed. Climate change was not allowed to be discussed in the state-level review process in South Dakota. When scientific evidence was brought from expert witnesses called

by pipeline opponents, it was often unclear how it was being judged. Independent paleontologist and *Tyrannosaurus rex* expert Peter Larson testified that Keystone XL construction could harm fossils in the rich Hell Creek Formation in northwestern South Dakota that date from the late Cretaceous. He argued that this would further affect the ability to understand prehistoric mass extinction caused by drastic climate change, a rather important set of evidence given contemporary global warming. Later, his testimony was disputed when a state witness suggested that although they were “not an expert,” they did not expect paleontological resources to be harmed because “if you go to any museum that has fossils, you’ll see them in pieces” (The Public Utilities Commission of South Dakota 2009a, 259). The dispute around paleontology did not provide enough evidence for the SD PUC. Instances such as this, in which evidence and expertise seemed to actually favor those against the pipeline, left many with the feeling that it was not the evidence itself but the stakes of scientific inquiry that were on trial.

Grievances toward the “major” mode of expertise leveraged in federal environmental review coalesced into the construction of the populist subject position. The connection between scientific expertise and will of the people is perfectly captured by one public comment:

The State Department statements regarding the Keystone XL review are incomprehensible and an outrage against the concept of scientifically robust analysis—even American democracy itself. If I am to take reported comments and analysis seriously, there is a dramatically evident disconnect between what State Department looks at on one hand, and what any competent evaluator would look at to judge the long term safety, health, environmental and economic merits of the project. We The People who care about this and related issues devote tremendous time and energy to pursuing fact-based information upon which we rely to make our decisions as “informed citizens.” ... The State Department must go back to the beginning and do a competent review and report that will withstand the scrutiny of the scientific community and We The People. (U.S. Department of State 2013b, 469)

As this comment demonstrates, expertise was often part of the composition of the subject position of “We The People” as well as what that subject took to be at stake in environmental permitting. The commenter demanded recognition of the

complementarity of scientific and popular authority. Yet federal environmental review would respond to an abridged version of this comment by omitting its political content, instead arguing simply that the EIS sufficiently “presents information and analyses regarding indirect cumulative impacts and lifecycle GHG emissions, including the potential impact of further development of the oil sands on climate change” (U.S. Department of State 2013c, 181).

Pipeline opponents found that the minor strategies of public testimony and counterexpertise were even less successful in arguing against DAPL. Many felt forced to go beyond the established political process, which had quickly approved the pipeline. Organized in part through the Science and Environmental Health Network, Indigenous Environmental Network, and Dakota Rural Action, the Bakken pipeline watchdogs network was one new strategy. The group began monitoring the nascent DAPL construction process, using the law to delay construction while legal cases and blockades escalated opposition elsewhere. This strategy required not only that opponents understand environmental laws and regulations but also that they cultivate the skills to see violations. The pipeline watchdogs held trainings that helped attune themselves to violations of the law, basic surveillance skills, and the fortitude to follow and observe construction crews. The construction watchdogs shared images of legal violations from all along the 1,200-mile pipeline route. Countermapping was a crucial aspect of monitoring, as a public map that displayed active work sites and completed portions of the pipeline was frequently updated. In addition to actions that took place within the rule of law, some pipeline opponents began to cultivate their knowledge of how to sabotage construction equipment. Crucial to such actions were also a range of scientific and technical knowledges but, departing from populist strategy, these skills did not circulate in public until long after the pipeline’s completion.

The failure of acts of counterexpertise to prevent pipeline permitting or construction might seem like an example of the depoliticizing effect of technocratic politics and a political dead end. I was surprised, however, to find that many pipeline opponents, reflecting on their participation in practices of counterexpertise, disagreed with this sentiment. The belief that “the people know best” grounded their opposition well beyond whatever

form of expertise the state recognized. The problem was not that they lacked expertise but that they lacked financial resources comparable to those of TransCanada to hire experts to give testimony in evidentiary review. Contrasting the populist movement in South Dakota with the strategy of the Big Greens, one organizer suggested that “if we could get 350.org [to] give us 1 percent of their public relations budget, we could downright pay the lawyers and pay the experts.” Another landowner told me, “I have nine boxes of evidence printed out back home, but none of it matters.” She felt that her testimony would not make a difference.

Nonetheless, opponents found that the development and performance of their counterexpertise reinforced their commitment. The disheartening experience of going through the environmental review process and losing despite the obvious truth of their position reinforced the identities of resentment and resistance that composed populist politics. One community organizer attested to both of these sentiments while also taking a characteristic trust of the people and skepticism toward elite environmentalisms.

You know TransCanada didn't have any problem paying for its so-called experts and all the PUC with our money. And we ... could not call or it was very difficult to call [upon experts] because you know just trying to raise resources to do that. ... The so-called Big Greens are so caught up with their multimillion-dollar projects and, and, just trying to play nice, um, and they had no time let alone any willingness to invest resources—a fraction of what they're using on their full page ads in the *Washington Post* or whatever—to help us with experts or anything like that. It's a little bit disconcerting but it's all educational. We know that ultimately any protection of our water resources is gonna come from the people here and that's the only place it'll come from. ... Sometimes you have to push some of these agencies to do their jobs and if you get them to do it, great, that's what we want them to do, and if you can't, hopefully people will learn that you need to try something else.

Although the position of pipeline opponents was increasingly cynical about the role of counterexpertise in environmental review, they did believe that the minor science of self-education was crucial. Through such acts, they exhausted the political potential of contesting the pipeline through official channels and demonstrated that the people ultimately need to take power themselves. When the organizer earlier noted that “it's all educational,”

they are suggesting that the people are learning how to contest through expertise and that politics actually emerges beyond that very venue. The failure of minor science to actually stop DAPL should not obscure its success in enabling a collective of political subjects increasingly capable of moving beyond that sphere to do “something else”—communicate, inform, organize, blockade, or even sabotage.

Conclusion

It is important to attest to the wide range of expert knowledges that were contested by pipeline opponents. These further included disputes about aquifer boundaries and communication, diluent chemical composition, cultural resource surveys, flow rates of heavy crude in water systems, the economic impact of pipeline construction and oil export, and several other micro- to macro-antagonisms surrounding the supposed “national interest” in constructing new oil pipelines. Through this engagement with struggles over and within expertise, pipeline opponents came to understand a fundamental split—not between elite knowledge and local or lay experience but between a science in the interests of the state and capital and a minor science—what we might call a science for the people. This understanding led to disaffection with traditional routes of political contestation and eventually a path more open to radical politics.

Since the initial rounds of public review, pipeline politics has become even more polarized. Fossil fuel-funded public relations firms attempt to dispel any counterexpertise through “transparent fact-checking” Web sites. In response to the supposed success of “fake news” in capturing the rural masses, many political analysts have doubled down on the liberal distrust of populism, left or right. Others on the political left believe that in forming their identities as an alternative to elites, populists are doomed to subordinate proper politics to unprincipled argumentation with experts. These uncharitable views, I have argued, miss the ways in which populism can incrementally construct itself out of a minor science. Although it might be insufficient in itself, populism thus can produce conditions of possibility for subjects willing to go beyond the status quo, intriguingly by maintaining a ground in practices of scientific counterexpertise that were precisely interested rather than objective. Pipeline opposition demonstrates

that common people are keen at developing expertise in a wide range of knowledges, including the art of politics. Given that no political collective is born with a ready-made critique of the state and capital in hand, these minor sciences offer a glimpse at the cultivation of radical opposition without recourse to a messianic event to come.

The strategies of pipeline opponents have a final implication for combating the depoliticization of climate science, suggesting that climate denial and postpolitical governance might be more effectively challenged if scientific and expert practices are not understood to be modes of depoliticization opposed to local experience. Minor sciences split scientific epistemology from within, creating points of alliance and leverage through which the hold of the state and fossil fuel industry on the scientific field can be severed. This strategy offers no guarantees. The risk of even minimal left populism activating nationalisms or other reactionary or authoritarian mobilizations in the United States is very real. The deeply American understanding of popular sovereignty relies on either forgetting settler coloniality or appropriating indigenous resistance (Bosworth forthcoming). Nonetheless, taking scientific counterexpertise as a fundamentally depoliticizing aspect of populism runs counter to the lessons of the struggle against Keystone XL and DAPL. If a mass mobilization is indeed necessary for any chance at climate justice, we will have to learn from activists and organizers that perhaps belief in the rule of expertise could lead affirmatively to a science for the people.

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Notes

1. Prior to the 1950s, populism in the United States was largely understood as a left-wing—even vaguely

socialist—form of politics. Yet emergent forms of modernization theory and postwar Keynesian fears of the people attempted to redefine populism as an irrational and anti-Semitic form of politics. This meaning was challenged by U.S. historians, especially Pollack (1976) and Goodwyn (1976, 1978). In Europe, however, populism continued to be associated with the political right such that something like left populism could seem an oxymoron. Jäger (2017) meticulously traced this “semantic drift” in the meaning of populism, with the conclusion that “recent conceptualizations [of populism] may lack an awareness of the implications of the vocabulary it deploys” (311).

2. A similar bifurcation has structured historians' assessments of the Farmer's Alliance and the People's Party. As Postel (2009) wrote, “Historians have tended to cast academic experts in the role of modernizers battling to overcome the inertia of ‘reluctant farmers,’ who were mired in tradition and unconvinced of the value of education” (47). Postel challenged this thesis through evidence of a massive campaign of counterexpertise that fought not against the modernizing ideals of agricultural science but against the method and ends to which they were used.

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