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THE DAKOTA ACCESS PIPELINE (DAPL). THROUGH THE LENS OF RESPONSE ASSEMBLAGES (RAS)

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Abstract

Natural resource use can produce conflicts, especially when new resource plans threaten existing practices. Such is the case, for example, with the Dakota Access Pipeline (DAPL), constructed 2016–2017. However, such conflicts can be complicated and difficult to decipher. In recent years, the concept of Response Assemblages (RAs) has become an increasingly used tool of analysis. Simultaneously, differing notions of RAs have emerged. This article applies varying conceptions of Response Assemblages (RAs) to the conflict surrounding the construction of the Dakota Access Pipeline (DAPL) to provide better understandings of both RAs and the conflict.

This article focuses on the court cases that ensued from the time that the DAPL was approved by the Trump administration in January 2017 until May 2021.

Key words

Dakota Access Pipeline (DAPL), oil, water, protests, Response Assemblage (RA), Socio-Ecological Systems (SESs).

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1. Retrospective propaganda “news” analysis

In June 2014, Dakota Access, LLC, a subsidiary of Dallas-based Energy Transfer Partners, L.P. announced that it planned to build the Dakota Access Pipeline (Business Wire, 2014). Construction began two years later, in June 2016 (Nicholson, 2017a). The DAPL's purpose has been to transport oil from the Bakken and Three Forks shale oil fields in northwest North Dakota to Patoka, Illinois (Energy Transfer Partners, L.P., 2017) (see Figure 1). Not surprisingly, because the pipeline needed to stretch 1,886 km (1,172

miles), across four states, it inevitably conflicted with existing land-uses and lead to conflict. Indeed, many landowners, for example, primarily white farmers, opposed the DAPL and resisted.

So did Native Americans, mostly notably from the Standing Rock Reservation, its supporters, and its allies. At the same time, numerous government entities from the local, state, and federal levels played decisive roles in decision-making and outcomes. In other words, numerous entities had interests and were able to exert their power in varying ways.

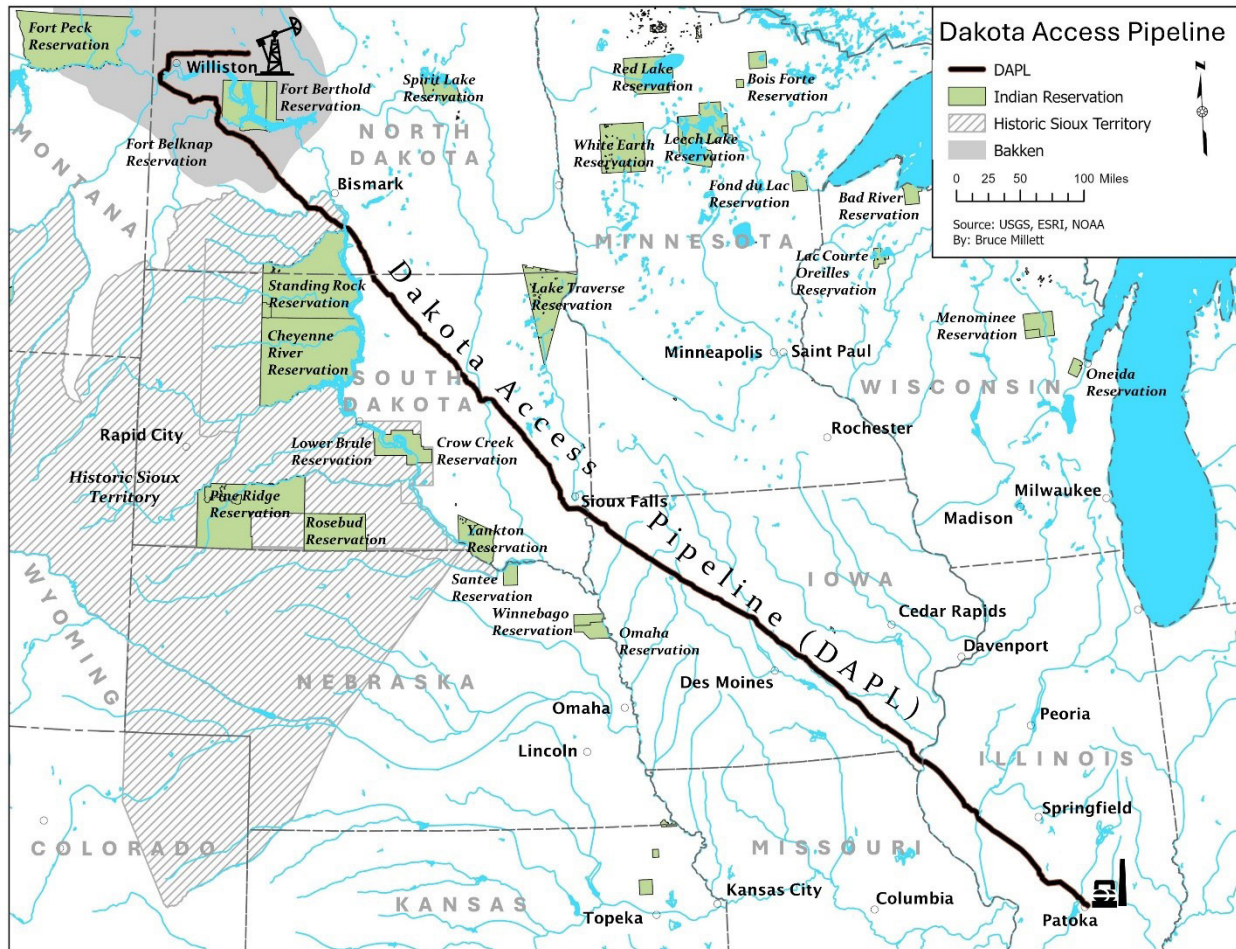


Fig. 1. DAPL Route.

Source: ArcGIS Hub: Esri U.S. Federal Datasets, United States Geological Survey (USGS), Environmental Systems Research Institute (ESRI), and National Oceanic and Atmospheric Administration (NOAA). Pipeline: The U.S. Energy Information Administration (EIA). Indian reservations: U.S. Census Bureau, Department of Commerce TIGER/Line Shapefile, 2018, nation, U.S., Current American Indian/Alaska Native/Native Hawaiian Areas National (AIANNH). Cartography: Bruce Millett.

The concept of Response Assemblages (RAs) offers a framework for identifying entities, understanding their roles, and then analyzing their interactions as means of understanding processes and outcomes that affect the natural environment. However, as the concept of RAs has evolved, it has been conceptualized in differing ways. The DAPL provides an opportunity for applying the concept of RAs to reveal which of their conceptualizations are most explanatory and useful. This research draws its data from presidential decisions and the court cases that ensued after then-president Trump green-lighted the project in January 2017 until the conflict subsided in May 2021.

This research first applies the concepts of “response assemblages” (RAs) and their “socioecological fit” (SEFRA) as articulated by Helen Briassoulis (2017) to the opposition of the DAPL. Briassoulis’ concepts seem particularly designed to explain the DAPL conflict. However, the application of Briassoulis’

conception of “response assemblages” to the DAPL conflict reveals that Briassoulis’ conception of RAs does not fully represent all conceptions of RAs. Noteworthy, Briassoulis derives many of her ideas primarily from Manuel DeLanda (2006a, 2006b, 2011), but also from individuals such as Jane Bennett (2005) and Ben Anderson et al. (2012). Ian Buchanan (2015, 2020) argues that Manuel DeLanda committed an “error” when he reformulated assemblage theory as originally conceived by Gilles Deleuze and Félix Guattari (1983). He argues that “DeLanda ‘improves’ on Deleuze and Guattari by reformulating their concept in such a way that it lacks all analytic power” (Buchanan, 2015, pp. 387–388). Through the DAPL case, this research affirms this assertion, and likewise seeks a refinement of assemblage theory that offers more explanatory power. For this, this research builds upon Eden Kinkaid’s argument that assemblage theory needs to be developed along the lines of an “assemblage-as-ethos” trajectory to

become meaningful (Kinkaid, 2019). He provides some avenues for such development. This research on the DAPL considers these avenues.

Helen Briassoulis' serves as a good starting point because, in part, her conception of Response Assemblages represents a current articulation of the concept, and, in part, because Briassoulis provides vocabulary and concepts to make sense of real-world situations, which then can serve as tools for analysis. Specifically, Briassoulis states that Response Assemblages (RAs) are comprised of autonomous components which interact with one another (Briassoulis, 2017, p. 169). How these autonomous components interact depends on a Response Assemblage's *properties, tendencies, and capacities* (Briassoulis, 2017, p. 170). Other concepts include *possibility space, basin of attraction, Socio-Ecological System (SES), attractor, and critical component*. In addition to providing a vocabulary to explain the interaction of actors in a situation, Briassoulis also is interested to know if these interactions produce better methods of environmental conservation. For this, she uses the terms *territorialization* to denote improved methods and *deterritorialization* to signify the opposite (e.g., environmental degradation) (Briassoulis, 2017, pp. 169–170, 176, 179).

This terminology easily applies to the case of DAPL. Dakota Access, LLC, governmental agencies, members of Standing Rock Reservations, its supporters and allies all are *components* in a Response Assemblage. *Critical components* are those with greater power and thus can bring about more change. The "local results of [their] interactions" represent their *properties* (Briassoulis, 2017, 170; Anderson et al., 2012). *Tendencies* describe components' patterns of behavior. Components' exertion of power represents their *capacities*, and their sum total of capacities denotes their *possibility space*, within which is the *basin of attraction*—the location of the *Socio-Ecological System (SES)*. The *attractor* indicates the orientation and final location of a SES within the basin of attraction (DeLanda, 2002).

Over time, many attractors can exist, and when they do, they pull the SES in differing directions with varying forces. Two of the most relevant ones for this case study are clean water and oil, of which oil emerged in the last few years and is the cause of change and conflict. This research applies the concept of the Response Assemblage (RA) and its vocabulary to the DAPL focusing specifically on the decision-making of three U.S. presidents and the court cases that ensued after then-president Trump began used his presidential power to support the DAPL beginning in January 2017. To support such an analysis, it is necessary to provide some of the most relevant details of the DAPL's history.

2. History of the DAPL

The plan to construct the DAPL developed after hydraulic fracturing made oil from the Bakken and Three Forks shale oilfields in northwest North Dakota very profitable (Berman, 2015; Energy Transfer Partners, L.P., 2017; Lynch, 2017). To reap these profits, a new pipeline was needed to connect the oilfields to the existing oil pipeline network (Reuters, 2012). However, the route for the proposed DAPL passed by Standing Rock Reservation, notably near the Cannon Ball, North Dakota and then was to pass under Lake Oahe on the Missouri River (see Figure 2). To stop the project, Standing Rock Reservation filed a lawsuit on July 27, 2016, alleging that the DAPL threatened the Reservation's water supply, and its construction would desecrate the Tribe's sacred sites. Through the late summer and fall, members of Standing Rock Reservation, its allies, and its supporters conducted onsite protests against DAPL. Often violence ensued (White et al. 2021).

On 2 November, President Obama intervened and indicated that USACE was going to search for a new route for the DAPL (Hersher, 2017a). On 8 November, Donald Trump was elected the U.S. president. Nevertheless, subsequent to President Obama's statement, on 18 January 2017, the USACE published a public notice stating that it was working on the Environmental Impact Statement (EIS) for the DAPL where it crossed Lake Oahe on the Missouri River. The public notice solicited public comments, which could be submitted until 20 February 2017 (Army Department, 2017a). However, on 24 January, President Trump directed the USACE to expedite the process in an executive memorandum (The White House, Office of the Press Secretary, 2017), representing a reversal and a defeat for those opposed to the DAPL. With Donald Trump taking office on 20 January, the memorandum was one of Donald Trump's first presidential decisions. Then on 2 February 2017, the Deputy Assistant Secretary of the USACE sent a memo to Congress stating that the USACE was allowing the DAPL to be constructed under Lake Oahe. The memo also noted that the USACE would "waive its policy to wait 14 days after Congressional notification before granting the easement" and would grant permission as soon as the afternoon of the next day (Hersher, 2017b). Energy Transfer Partners immediately proceeded with construction.

As noted, the Standing Rock Reservation filed a lawsuit on 27 July 2016. From that summer until Donald Trump's inauguration in January 2017 is the period known for protests against the DAPL, most notably taking place near the construction site near Cannon Ball, North Dakota.

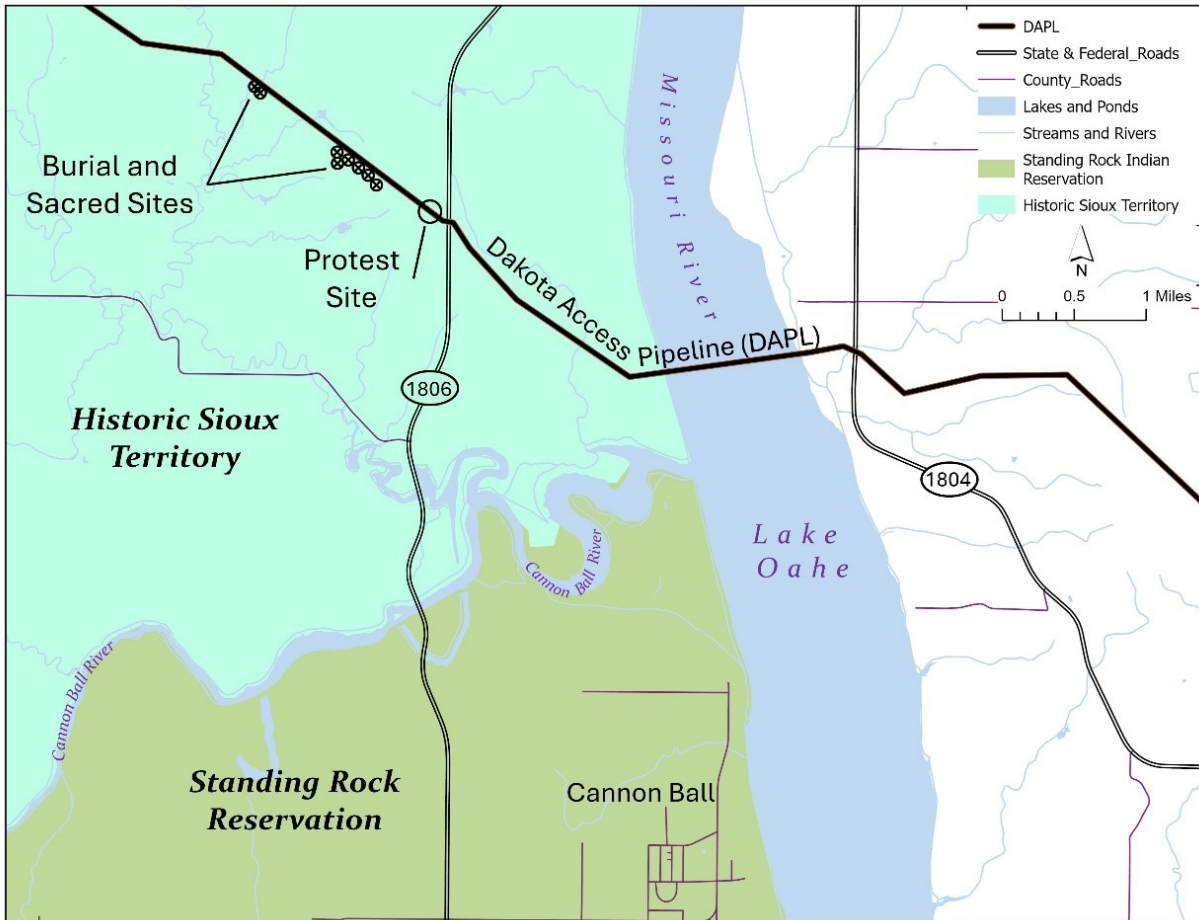


Fig. 2. DAPL Contested Area.

Source: ArcGIS Hub: Esri U.S. Federal Datasets, United States Geological Survey (USGS), Environmental Systems Research Institute (ESRI), and National Oceanic and Atmospheric Administration (NOAA). Pipeline: The U.S. Energy Information Administration (EIA). Indian reservations: U.S. Census Bureau, Department of Commerce TIGER/Line Shapefile, 2018, nation, U.S., Current American Indian/Alaska Native/Native Hawaiian Areas National (AIANNH). ND Department of Transportation. US Geological Survey - original linework development of Digital Line Graphics, ND State Water Commission - final compilation, merging, attribution. Paul Horn Inside Climate News. Cartography: Bruce Millett

After Donald Trump assumed office, the protests mostly ended, and the dispute moved to the courts, primarily pursued by Standing Rock Reservation and its allies. It is this segment of the dispute that is the subject of this research vis-à-vis the application of Response Assemblages.

3. Data: Key Findings of the Courts

On 9 February 2017, The Cheyenne River Sioux Tribe filed a legal challenge against the DAPL in the Washington D.C. federal court citing that the pipeline violated their sacred land and could contaminate their water supply (Associated Press, 2017). Standing Rock Sioux Tribe officially joined the challenge days later, but U.S. District Judge James Boasberg denied the motion because the pipeline was not yet operational. However, he required an update

from Dakota Access LLC on February 21, "and every Monday thereafter as to the likely date that oil will begin to flow beneath Lake Oahe" (Hersher, 2017a).

On 15 February, Cheyenne River Sioux Tribe and the Standing Rock Sioux Tribe sought a summary judgement against the U.S. Army Corps of Engineers (USACE) and Dakota Access LLC claiming that these entities had violated tribal land rights under the 1868 Ft. Laramie Treaty. They also argued that the USACE's granting of an easement was "arbitrary, capricious, and contrary to law" (Hersher, 2017a). The Oglala Sioux entered the response assemblage by also filing a lawsuit against the USACE (Anderson, 2017). These actions were in addition to the lawsuit that these tribes and the Yankton Sioux filed in July 2016 (Nicholson, 2019a). On 17 February, the USACE published a notice in the Federal Register that formally ended the environmental review with a declaration that it was terminating the 18

January statement in the same publication that it would accept public input until 20 February. The USACE also stated that it “no longer intends to prepare an environmental impact statement (EIS) in connection with the Dakota Access, LLC” (Army Department, 2017b). On 7 March, Judge Boasberg denied the motion made by Standing Rock Sioux Tribe and Cheyenne River Sioux Tribe on 14 February for a preliminary injunction against Dakota Access, LLC (United States District Court for the District of Columbia, 2017a). Construction of the DAPL progressed essentially unimpeded towards completion. Oil began regularly flowing through the DAPL on 1 June 2017.

Opponents of the DAPL, namely the four aforementioned tribes primarily led by Standing Rock Reservation with legal support from the NGO Earth Justice, filed a new lawsuit against the USACE arguing that the USACE had violated the National Environmental Policy Act (NEPA) when it completed an Environmental Assessment (EA) instead of the required Environmental Impact Statement (EIS) (Bennett, Stern, 2017; Hasselman, 2018a). Judge Boasberg agreed on 14 June 2017, but also stated that the USACE “‘largely complied’ with environmental law when approving the pipeline but didn’t adequately consider some matters important to the Standing Rock Sioux”; thus, he ordered additional analysis (Nicholson, 2017b). These matters included “impacts of a spill on hunting rights, fishing rights and environmental justices” (Kazdin, 2017). He also stated, “Compliance with NEPA cannot be reduced to a bureaucratic formality, and the Court expects the Corps not to treat remand as an exercise in filling out the proper paperwork post hoc” (United States District Court for the District of Columbia, 2017b, p. 28). Nevertheless, the judge allowed the continued transportation of oil despite although the DAPL already experienced an oil leak on 6 April, before it was fully operational (Levin, 2017).

As opponents to the DAPL worked to shut the pipeline down, Energy Transfer Partners responded within the assemblage on 22 August. It sued environmental groups such as Greenpeace, BankTrack, and Earth First for criminal trespass and “interfering with business, facilitating acts of terrorism, inciting violence, targeting financial institutions that backed the project, and violating defamation and racketeering laws” (EELP Staff, 2017; Nicholson, 2019b). However, a federal judge dismissed these lawsuits in February 2019.

Despite additional requests from tribal representatives, Judge Boasberg ruled on 11 October 2017 that the DAPL could continue transporting oil pending assessments and decisions. According to the Associated Press, Judge Boasberg found that the USACE “would be able to justify previous decisions

made while permitting the pipeline” (United States District Court for the District of Columbia, 2017b). He stated in his Memorandum Opinion that “the Corps must simply connect the dots. This, then, is not a case in which the agency ‘must redo its analysis from the ground up’” (United States District Court for the District of Columbia, 2017b, p. 11). He also noted that the situation had been partly mitigated by the relocation of Standing Rock’s water intake structure, “situated approximately 50 miles further downstream from the Lake Oahe crossing than the old site, and it is outside even the furthest radius suggested by Standing Rock as appropriate for evaluating the environmental-justice impacts of the pipeline” (United States District Court for the District of Columbia, 2017b, p. 14; see also Scheyder, 2016).

Days later, the Standing Rock Sioux and the Cheyenne River Sioux requested a spill response plan (EELP Staff, 2017). Following a 210,000-gallon oil spill from the nearby Keystone Pipeline in South Dakota on 16 November (Cuveas, Almas, 2017), Judge Boasberg agreed and ordered Energy Transfer Partners LP to work with the USACE and local tribes to create an oil-spill response plan and asked Energy Transfer Partners to submit bi-monthly safety reports on conditions around Lake Oahe (EELP Staff, 2017; McKenna, 2017). He also stipulated an independent review by an engineering company but also reaffirmed that the DAPL could continue pumping oil pending decisions (Nicholson, 2017b).

Standing Rock Sioux Tribe prepared a report explaining why it believed the USACE’s permit was not sufficient and submitted it to the USACE on 21 February 2018 (McKenna, 2018). However, the USACE did not submit a new environmental analysis by April 2 as it previously stated that it would, blaming a lack of cooperation from tribal representatives whom it accused of not providing requested information (Associated Press, 2018). Standing Rock leaders accused the USACE of “stonewalling” tribal members (Bender, 2018) and asked Judge Boasberg to be more involved in the project, but Judge Boasberg refused to intervene and noted that Energy Transfer Partners had created a spill response plan and the independent firm had completed its review. He stated that the tribes could pursue an argument that the USACE’s review was flawed after the USACE completed its review (Associated Press, 2018).

In compliance with Judge Boasberg’s remand for additional analysis, the USACE filed a two-page Memorandum for Record on 31 August 2018 (Hudson, 2018). First, the memorandum concluded that “the potential impacts of an oil spill to hunting and fishing resources did not reveal any significant impacts because the risk of an incident is low and any impacts to hunting and fishing resource will be of limited scope and duration”. Second, regarding

the issue of environmental justice, it concluded that “the DAPL under federally-owned Corps-managed land does not result in disproportionately high and adverse human health or environmental effects on minority populations, including Tribes, and low-income populations”. Finally, the memorandum concluded that no additional “analysis or any new mitigation” beyond what was completed on 8 February 2017 was needed (Hudson, 2018). In response, Mike Faith Jr., Standing Rock Chairman, stated that “[t]he Army Corps’ decision to rubber-stamp its illegal and flawed permit for the DAPL will not stand” (Gardner, 2018).

The USACE submitted its full 140-page report on 1 October 2018. In response, the “Standing Rock Sioux Tribe Council, the Tribe’s governing body, voted unanimously on Oct. 18 to challenge the remand decision” and then filed a “supplemental complaint” calling for a complete and accurate analysis of the risks and impacts of the DAPL oil pipeline on Standing Rock Sioux Tribe reservation (Hasselmann, 2018b). On 1 November, Chairman Mike Faith stated that

The Corps has conducted a sham process to arrive at a sham conclusion, for the second time. The Dakota Access Pipeline represents a clear and present danger to the Standing Rock Sioux Tribe and its people, and we will continue to fight until the Corps complies with the law (West, Sass, 2019).

Concerning the USACE’s final analysis that an oil spill would not unfairly affect the four tribes, on 3 January 2019, Judge Boasberg granted the four tribes the right to dispute the USACE’s final analysis (Nicholson, 2019a), but he also barred the tribes from introducing any new claims not directly connected to the additional study produced by the USACE. He instructed the USACE to grant the tribes access to the information that it compiled for its study, naming a 31 January deadline. On 28 February, Standing Rock officials referenced a February 2018 draft memo from the USACE to Judge Boasberg stating that the agency “has identified no new information” and then a May 2018 official memo with additional details, notably information about meeting with tribal representatives who did not reveal any significant environmental concerns. Tribal representatives pointed out that the memos predated the USACE’s meeting with tribal representatives and thus proved that the USACE did not seriously consider tribal input. “I don’t think it’s any new fact to anybody that this was a sham from the beginning, but it was startling to see it written down so plainly”, said Jan Hasselmann, Standing Rock attorney (Nicholson, 2019c).

On 16 August 2019, the Standing Rock Sioux Tribe filed a motion in federal court for summary judgement to stop the DAPL’s operations

(Earthjustice, 2022). Despite this legal filing, Dakota Access LLC sought permission from the North Dakota Public Service Commission (PSC) to build a pump station in order to increase DAPL’s “capacity from 570,000 barrels per day (bpd) to 1.1 bpd” (Nickel, 2019). At proceedings of the North Dakota PSC, Standing Rock representatives expressed their concerns about a pipeline leak, especially under the increased pressure needed for the increased capacity. Nevertheless, on 19 February 2020, the North Dakota PSC unanimously granted permission to Dakota Access LLC to expand the DAPL (Sisk, 2020). PSC commissioners stated that Standing Rock’s concerns were outside their jurisdiction and instead under that of the U.S. Pipeline and Hazardous Materials Safety Administration.

The situation changed on 25 March 2020 when United States District Judge James E. Boasberg ruled in favor Standing Rock’s motion to stop the DAPL’s operations. He stated that “Unrebutted expert critiques regarding leak-detection systems, operator safety records, adverse conditions, and worst-case discharge mean that the easement approval remains ‘highly controversial’ under NEPA” [National Environmental Policy Act] (Farah, 2020). He further stated, “As the Court thus cannot find that the Corps has adequately discharged its duties under that statute, it will remand the matter to the agency to prepare an Environmental Impact Statement” [EIS] (Farah, 2020).

The USACE and Dakota Access LLC filed briefs asking the court to allow the DAPL to operate while the EIS was being prepared. Standing Rock and its allies filed a legal brief asking for the DAPL to be shut down during the preparation. On 6 July 2020, Judge Boasberg ordered a shut down of the DAPL and for the DAPL to be emptied of oil by 5 August (Fortin, Friedman, 2020). On 14 July, 18 states (Indiana, Montana, Alabama, Arkansas, Iowa, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Nebraska, Ohio, South Carolina, South Dakota, Texas, Utah, West Virginia and Wyoming) state filed an amicus brief claiming that a shutdown of DAPL would create “intractable railroad congestion, rotting grain, higher food prices and, ultimately, a potential for food shortages” (quoted from Kub, 2020; Neeley, 2021a, 2021b, 2021c, 2021d) as oil normally pumped through the DAPL then would have to be shipped by rail and hence would compete with other commodities. Amicus briefs against the shutdown also were filed by the “North Dakota Water Users Association, Western Dakota Energy Association, the state of North Dakota, North Dakota Farm Bureau, North Dakota Grain Dealers Association, North Dakota Grain Growers Association, South Dakota Grain Growers Association, South Dakota Farm Bureau Federation, South Dakota Grain and

Feed Association and the South Dakota Soybean Association.” (Neeley, 2021a, 2021b, 2021c, 2021d). On 5 August 2020, a federal appeals court reversed Judge Boasberg’s order to shut down the DAPL pending the preparation of the EIS but upheld Judge Boasberg’s order for an EIS (McPherson, 2020). The USACE and Dakota Access LLC filed appeals to reverse the court’s decision. On 26 January 2021, the U.S. Court of Appeals issued its ruling: “We agree with the district court that the Corps acted unlawfully, and we affirm the court’s order vacating the easement while the Corps prepares an environmental impact statement.” “But we reverse the court’s order to the extent it directed that the pipeline be shut down and emptied of oil” wrote Judge David Tatel (Farah, Anchondo 2021). Upholding the requirement for an EIS but, nevertheless, allowing Dakota Access, LLC to pump oil through the DAPL effectively meant that Dakota Access, LLC was pumping oil illegally with the government’s consent.

Another component in the Response Assemblage was the Mandan, Hidatsa, and Arikara (MHA) Nation, which received approximately 80% of its fiscal budget from oil and gas royalties and tax revenue. It shipped about 60% of its oil through the DAPL, which enabled the tribe to receive many of these royalties and tax revenues (Neeley, 2021b; PR Newswire, 2021). On March 23, the tribe’s chairman, Mark Fox sent a letter to the USACE seeking “immediate consultation on the alternatives being considered by the Corps regarding continuity of operations of the Dakota Access Pipeline or alternative delivery systems while any NEPA-related or other federal review of DAPL is conducted.” (quoted from Jean, 2021). In April, he filed a sworn declaration to the U.S. District Court for District of Columbia expressing his concerns about the impact of a DAPL shutdown on his tribe (PR Newswire, 2021). By then, Joseph Biden had become President of the United States. Just as President Obama and President Trump had directed the USACE to take particular action concerning the DAPL, President Biden had the same opportunity but did not exercise such authority (Neeley, 2021c). Instead, lawyers for the Biden administration argued in court against a shutdown (Friedman, 2021). Subsequently, on 21 May, the Federal Court denied Standing Rock’s request for an injunction to shutdown the DAPL (Neeley, 2021d). Oil continued to flow through the DAPL.

4. Discussion and Conclusions

Helen Briassoulis conception of “response assemblages” (RAs) and their “socioecological fit” (SEFRA) (Briassoulis, 2017) provide a certain usefulness for explaining the conflict that surrounded

the DAPL. However, the DAPL case also reveals that Briassoulis’ conception is incomplete. Briassoulis’ ideas of territorialization and deterritorialization, which are elaborations of Manuel DeLanda’s conception of assemblages, represents the greatest weakness concerning Briassoulis’ and DeLanda’s conception of assemblages. Quite simply, their version of assemblages as applied to the DAPL controversy cannot explain whether the DAPL conflict produced “best practices” and good environmental conservation and /or preservation or not. DAPL proponents claim territorialization, and opponents claim deterritorialization, with each side referring to facts supporting their respective arguments, but the truth is not clear. For example, supporters of President Trump’s intervention (a component employing its capacity) argue that the approval process had become too bureaucratic and cumbersome (Epstein, 2016; Mufson, Olorunnipa, 2019).

Consequently, oil was transported by rail and truck, potentially leading to greater environmental damage than an oil leak from a pipeline. However, Judge Boasberg had found no evidence to support this assertion (United States District Court for the District of Columbia, 2017b). More broadly, could the President of the United States inserting himself or herself into the decision-making process really represent territorialization? Even if the approval process had become slow and cumbersome, the approval process did not change for all oil pipelines despite President Trump’s actions. Overall, the approval process seems subject to the will of the President of the United States and his or her views on such matters. This aspect alone suggests that deterritorialization can occur at any time regardless of the official approval process.

The DAPL also illustrates that individual components can use their capacities in ways that lead to territorialization or deterritorialization. Perhaps the most illustrative examples are U.S. presidents Barack Obama, Donald Trump, and Joseph Biden. President Obama slowed the permit approval process by insisting on a further and more thorough review. President Trump latter reversed the direction of the process, and President Biden, despite pursuing an alternative energy agenda and shutting down other oil pipelines (Friedman, 2021) has done little concerning the DAPL other than to argue against shutting it down. Moreover, it was astonishing that it took only a matter of days for President Trump to reverse the entire process despite all the governmental acts that had been put in place over more than a century to protect both environmental quality and the rights of Native Americans (White, Millett, 2019). Certainly, the abilities and actions of the U.S. presidents support

the notion that deterritorialization occurred though environmental damage has not yet occurred.

The facts surrounding the DAPL call into question Briassoulis' ideas of territorialization and deterritorialization and her entire conception of "response assemblages" (RAs). Anderson and McFarlane classify the application of assemblages by various researchers into three basic categories: "assemblage-as-descriptor", "assemblage-as-concept", and "assemblage-as-ethos" (see Kinkaid, 2019, p. 2). The first two describe what Briassoulis has accomplished in elaborating on DeLanda's conception of assemblages. First, her conception creates, to use the words of Eden Kinkaid, a "spatial imagery to describe the formation of a given socio-spatial order" but then attempts to be more "analytically engaged" with the application of such terms as "de/territorialisation" (Kinkaid, 2019, pp. 2–3). However, when applied to the DAPL, it remains unclear whether territorialization and deterritorialization occurred. Consequently, Briassoulis' conception of assemblages is incomplete. At best, it demonstrates that the DAPL is nothing more than another case of business as usual concerning the politics of resource use, a nice description with little deep analysis or explanatory power.

Briassoulis does not engage in "assemblage-as-ethos" as she does not call "into question dominant socio-spatial orders" (Kinkaid, 2019, p. 3). The DAPL highlights this need as well as the need to further develop this underdeveloped aspect of assemblage thinking. To do this, it is necessary to consider that Briassoulis and other proponents of assemblages overstate the power of agency and undervalue structure, power, and historical processes despite some of their claims to the contrary (Kinkaid, 2019, p.3). Indeed, Eden Kinkaid argues that "assemblage-as-ethos" requires deeper introspection by researchers. Most noteworthy, proponents of assemblages share with neoliberalism an unrecognized common emphasis on "mobility, flexibility, and transformation" and a similar "focus on agency independent of structural forces, symbolic and material inequality, and categories of social difference" (Kinkaid, 2019, p. 4). Considering that many researchers mostly have existed solely within a neoliberal world, Kinkaid's observation is significant and in need of consideration. Thus, it is likely that the architects of assemblages simply have reproduced neoliberal conceptions of the world with their theorizing. As Kinkaid notes "(...) echoing Kaplan and Massey, I worry that the ethos of assemblage thinking ends up celebrating a distinctly neoliberal ethos and white male subjectivity (...)" and consequently produce "geographic accounts that are anything but 'radical'" (Kinkaid, 2019, p. 5).

The application of Briassoulis' conception of assemblages to the DAPL case validates Kinkaid's worry. It simply describes how Dakota Access, LLC was able to obtain the necessary agency permissions and gain favorable court decisions to achieve its goals with little modification (i.e., build an oil pipeline) without providing any tools to analyze the political structures that allowed its success or consider the "ethos" that created these political structures. Nevertheless, each Native American loss became evermore glaring as each loss called attention to the nature of the system. Native Americans continually couched their arguments in a holistic worldview, emphasizing such issues as historical injustice and cultural rights. In contrast, Dakota Access, LLC focused on the legal technicalities needed at any given moment to push the project to the next step in the completion process. It succeeded because it and the political and legal systems were products of Western white values. Both were mutually reinforcing and also explain why Native Americans felt that the process was a "sham" (Nicholson, 2019c; West, Sass, 2019).

It also means that racism was baked into the process though not clearly seen but are exemplified by the glaring differences between the Western legal system and Native American worldviews. For example, U.S. District Judge James Boasberg's statements indicated a genuine sympathy for Native American arguments while Boasberg simultaneously allowed Dakota Access, LLC to proceed with the DAPL. He admonished Dakota Access, LLC for weak arguments and insufficient work, but his admonishments and demands for more thorough work also were limited to legal technicalities. Eventually, Judge Boasberg ruled that the USACE had not "adequately discharged its duties under that statute" [the National Environmental Policy Act] (Farah, 2020) and ordered the DAPL to be shut down. However, the U.S. Court of Appeals intervened and allowed the DAPL to continue operating though agreeing that the USACE had not issued a valid permit (Farah, Anchondo, 2021). The combination of these two decisions effectively meant that the U.S. Court of Appeals was allowing the DAPL to pump oil illegally. Moreover, the Biden administration supported the continued operation of the DAPL.

These events and actions affirm Laura Pulido's arguments article about "Environmental racism, racial capitalism and state-sanctioned violence", in which she declares that

the state is deeply invested in not solving the environmental racism gap because it would be too costly and disruptive to industry, the larger political system, and the state itself. Instead, the state has developed numerous initiatives in which it goes through the motions, or, 'performs' regulatory activity, especially

participation (London et al., 2008; Kohl, 2015), without producing meaningful change. The problem is not a lack of knowledge or skill, but a lack of political will that must be attributed to racial capitalism. Environmental racism must be seen in the context of a long line of diverse forms of state-sanctioned violence that facilitates racial capitalism (Pulido, 2017, p. 529).

Pulido, therefore, argues that “in the US most activists and researchers are steeped in a liberal politics in which they work with the state” (Pulido, 2017, p. 525). This statement echoes Kinkaid’s concern that the architects of assemblages simply

have reproduced neoliberal conceptions of the world with their theorizing. To counter this bias, Pulido argues that researchers need “to begin seeing the state as an adversary that must be confronted in a manner similar to industry” and “to develop a research agenda that recognizes the degree to which environmental racism is a function of racial capitalism, but one that is also linked to the needs of vulnerable communities” (Pulido, 2017, 530). The case of the DAPL illustrates that assemblage theory needs to incorporate “ethos” and racial justice into its frameworks for more meaningful analysis.

References

- Anderson B., Kearnes M., McFarlane C., Swanton D., 2012, On assemblages and geography, *Dialogues in Human Geography*, 2(2), 171–189. doi: 10.1177/2043820612449261
- Anderson M., 2017, Oglala Sioux sue Army Corps of Engineers over water rights. *Rapid City Journal*, 15 February, https://rapidcityjournal.com/news/ogla-la-sioux-sue-army-corps-of-engineers-over-water-rights/article_a427a10c-32e3-54f2-8d91-117bc1ddd4b8.html (accessed 15 July 2024).
- Army Department, 2017a, Notice of intent to prepare an environmental impact statement in connection with Dakota Access, LLC’s request for an easement to cross Lake Oahe, North Dakota. *Federal Register: The Daily Journal of the United States Government* 18 January, <https://www.federalregister.gov/documents/2017/01/18/2017-00937/notice-of-intent-to-prepare-an-environmental-impact-statement-in-connection-with-dakota-access-llcs> (accessed 16 July 2024).
- Army Department, 2017b, Notice of termination of the intent to prepare an Environmental Impact Statement in connection with Dakota Access, LLC’s request for an easement to cross Lake Oahe, North Dakota. *The Daily Journal of the United States Government* 17 February, <https://www.federalregister.gov/documents/2017/02/17/2017-03204/notice-of-termination-of-the-intent-to-prepare-an-environmental-impact-statement-in-connection-with> (accessed 16 July 2024).
- Associated Press, 2017, The latest: Challenge to the pipeline finish to be heard Monday. 9 February, https://apnews.com/646280df730d4c22be4a447b53db117c?utm_campaign=SocialFlow&utm_source=Twitter&utm_medium=AP (accessed 16 July 2024).
- Associated Press, 2018, Standing Rock & Cheyenne River nations not allowed involvement in court-ordered review of DAPL. 19 April, <https://wqad.com/2018/04/19/standing-rock-cheyenne-river-tribes-not-allowed-involvement-in-court-ordered-review-of-dapl/> (accessed 16 July 2024).
- Bender A., 2018, Oil keeps flowing as Corps misses deadline for DAPL environmental study. *People’s World* 4 April, <https://www.peoplesworld.org/article/oil-keeps-flowing-as-corps-misses-deadline-for-dapl-environmental-study/> (accessed 16 July 2024).
- Bennett D.M., Stern W., 2017, Dakota Access Pipeline project update—Corps’ NEPA Analysis flawed-in part. *Lexology* 22 August, <https://www.lexology.com/library/detail.aspx?g=37f12b71-2e58-436e-bc57-d9bdb1175fd6> (accessed 16 July 2024).
- Bennett J., 2005, The agency of assemblages and the North American Blackout. *Public Culture* 17(3), 445–465.
- Berman A., 2015, Only 1% of the Bakken play breaks even at current oil prices. *Forbes Magazine* 3 November. <https://www.forbes.com/sites/arthurberman/2015/11/03/only-1-of-the-bakken-play-breaks-even-at-current-oil-prices/#9d47ea069469> (accessed 16 July 2024)
- Brissoulis H., 2017, Response assemblages and their socioecological fit, *Dialogues in Human Geography*, 7(2), 166–185. doi: 10.1177/2043820617720079
- Buchanan I., 2015, Assemblage theory and its discontents, *Deleuze Studies*, 9(3), 382–392.
- Buchanan I., 2020, *Assemblage theory and method*, Bloomsbury Academic, New York.
- Business Wire, 2014, Energy Transfer Announces Crude Oil Pipeline Project Connecting Bakken Supplies to Patoka, Illinois and to Gulf Coast Markets. 14 June, <https://www.businesswire.com/news/home/20140625006184/en/Energy-Transfer-Announces-Crude-Oil-Pipeline-Project> (accessed 16 July 2024).
- Cuveas M., Almasy S., 2017, Keystone Pipeline leaks 210,000 gallons of oil in South Dakota. *CNN* 17 November, <https://www.cnn.com/2017/11/16/us/keystone-pipeline-leak/index.html> (accessed 16 July 2024).
- DeLanda M., 2002, *Intensive Science and Virtual Philosophy*, Continuum, London.
- DeLanda M., 2006a, *A New Philosophy of Society: Assemblage Theory and Social Complexity*, Continuum, London.
- DeLanda M., 2006b, Deleuzian social ontology and assemblage theory, [in:] M. Fuglsang, B.M. Sorensen (eds.), *Deleuze and the social*, Edinburg University Press, Edinburg, 250–265.
- DeLanda M., 2011, *Philosophy and Simulation: The Emergence of Synthetic Reason*, Continuum, London.
- Deleuze G., Guattari, F., 1983, *Anti-Oedipus: Capitalism and Schizophrenia*, Athlone, London.
- EarthJustice, 2022, FAQ: Standing Rock Sioux litigation: About the Standing Rock Sioux Tribe’s lawsuit challenging the

- Dakota Access Pipeline. 22 February. <https://earthjustice.org/features/faq-standing-rock-litigation> (accessed 16 July 2024).
- EELP Staff, 2017, Dakota Access Pipeline. *Harvard Law School (HLS): Environmental & Energy Law Program* 24 October, <https://eelp.law.harvard.edu/2017/10/dakota-access-pipeline/> (accessed 16 July 2024).
- Energy Transfer Partners*, L.P., 2017, Energy Transfer Announces the Bakken Pipeline is in Service Transporting Domestic Crude Oil from the Bakken/Three Forks Production Areas. 1 June, <http://ir.energytransfer.com/phoenix.zhtml?c=106094&p=irol-newsArticle&ID=2278014> (accessed 16 July 2024).
- Epstein R., 2016, Lawless Bureaucratic Obstruction is No Substitute For The Rule of Law In The Dakota Access Decision. *Forbes* 9 December, <https://www.forbes.com/sites/richardepstein/2016/12/09/lawless-bureaucratic-obstruction-is-no-substitute-for-the-rule-of-law-in-the-dakota-access-decision/#78edf1481b9d> (accessed 16 July 2024).
- Farah N.H., 2020, Judge axes NEPA review of Dakota Access. Will it shut down? *E&E News* 26 March. <https://www.eenews.net/stories/1062701917/print> (accessed 16 July 2024).
- Farah N.H., Anchondo C., 2021, Court rules against Dakota Access Easement in win for tribe. *E&E News* 26 January. <https://www.eenews.net/stories/1063723561> (accessed 16 July 2024).
- Fortin J., Friedman L., 2020, Dakota Access Pipeline to shut down pending review, federal judge rules: The ruling, a victory for Native American and environmental groups who oppose the pipeline, said that it must be emptied of oil by Aug. 5. *The New York Times* 6 July. <https://www.nytimes.com/2020/07/06/us/dakota-access-pipeline.html?searchResultPosition=5> (accessed 16 July 2024).
- Friedman L., 2021, Biden's fossil fuel moves clash with pledges on climate change. *The New York Times* 28 May. <https://www.nytimes.com/2021/05/28/climate/biden-fossil-fuels-climate-Willow.html> (accessed 16 July 2024).
- Gardner T., 2018, U.S. Army Corps stands by permit for Dakota Access Pipeline. *Reuters*. 31 August. <https://www.reuters.com/article/us-north-dakota-pipeline-dapl/u-s-army-corps-stands-by-permit-for-dakota-access-oil-pipeline-idUSKCN1LG2Z9> (accessed 16 July 2024).
- Hasselman J., 2018a, On the U.S. Army Corp's Aug. 31 decision on the Dakota Access Pipeline. *Earth Justice*, <https://earthjustice.org/features/inside-the-legal-case-dapl-update> (accessed 16 July 2024).
- Hasselman J., 2018b, The renewed legal challenge against Dakota Access Pipeline. *Earth Justice* 1 November, <https://earthjustice.org/features/explainer-renewed-legal-challenge-dakota-access> (accessed 16 July 2024).
- Hersher R., 2017a, America: Key moments in the Dakota Access Pipeline fight. *National Public Radio* (NPR) 22 February, <https://www.npr.org/sections/thetwo-way/2017/02/22/514988040/key-moments-in-the-dakota-access-pipeline-fight> (accessed 16 July 2024).
- Hersher R., 2017b, Army Approves Dakota Access Pipeline Route, Paving Way for Project's Completion. *National Public Radio* (NPR) 7 February, <https://www.npr.org/sections/thetwo-way/2017/02/07/513951600/army-approves-dakota-access-pipeline-route-paving-way-for-the-projects-completi> (accessed 16 July 2024).
- Hudson J.L., 2018, Memorandum for Record. Department of the Army, Corps of Engineers, Omaha District 31 August, <https://www.indianz.com/News/2018/09/04/usace083118.pdf> (accessed 16 July 2024).
- Jean R., 2021, MHA Nation seeks consultation with U.S. Army Corps of Engineers on fate of Dakota Access Pipeline. *Williston Herald* 31 March. https://www.willistonherald.com/news/dakota_access/mha-nation-seeks-consultation-with-u-s-army-corps-of-engineers-on-fate-of-dakota/article_25ae7c7e-9266-11eb-bf12-0bb085a2e1b0.html (accessed 16 July 2024).
- Kazdin C., 2017, The Sioux lost a key battle in their struggle against the DAPL: The tribe's latest attempt to shut down the pipeline temporarily ended in failure. *Vice* 12 October, https://www.vice.com/en_us/article/paknq8/the-sioux-lost-a-key-battle-in-their-struggle-against-the-dapl (accessed 16 July 2024).
- Kinkaid E., 2019, Assemblage as ethos: Conceptual genealogies and political problems, *Area*, 52(3), 1–8. doi: 10.1111/area.12600
- Kohl E., 2015, *Surviving unregulatable places: Race, gender, and environmental justice in Gainesville, GA*. PhD dissertation, University of Georgia, Athens, GA.
- Kub E., 2020, Basis apocalypse-rail congestion possible if DAPL shuts down. *Progressive Farmer* 16 July. <https://www.dtnpf.com/agriculture/web/ag/news/article/2020/07/15/basis-apocalypse-rail-congestion> (accessed 16 July 2024).
- Levin S., 2017, Dakota Access pipeline has first leak before it's fully operational. *The Guardian* 10 May, <https://www.theguardian.com/us-news/2017/may/10/dakota-access-pipeline-first-oil-leak> (accessed 16 July 2024).
- London J., Sze J., Lievanos R., 2008, Problems, promise, progress, and perils: Critical reflections on environmental justice policy implementation in California, *UCLA Journal of Environmental Law and Policy*, 26(2), 255–289. doi: 10.5070/L5262019559
- Lynch M., 2017, The next oil price collapse. *Forbes Magazine* 19 December. <https://www.forbes.com/sites/michaelylynch/2017/12/19/the-next-oil-price-collapse/#5559a9a46126> (accessed 16 July 2024).
- McKenna P., 2017, Judge orders Dakota Access Pipeline Spill Response Plan with tribe's input. *Inside Climate News* 5 December, <https://insideclimatenews.org/news/05122017/dakota-access-pipeline-ruling-standing-rock-emergency-spill-response-plan-keystone> (accessed 16 July 2024).
- McKenna P., 2018, Standing Rock: Dakota Access Pipeline leak technology can't detect all spills. *Inside Climate News* 9 March, <https://insideclimatenews.org/news/09032018/dakota-access-oil-pipeline-leak-detection-technology-standing-rock-water-safety-energy-transfer-partners> (accessed 16 July 2024).
- McPherson J., 2020, Court reverses order to shut down Dakota Access Pipeline. *Associated Press* 5 August. <https://apnews.com/article/environment-dakota-access-pipeline-u-s-news-courts-731d4e549040ae37c2884a1d0960bcf3> (accessed 16 July 2024).

- Mufson S., Olorunnipa T., 2019, Trump issue executive orders seeking to speed up oil and gas pipeline projects: Oil and gas companies have complained that protests and court cases have slowed construction of pipelines needed as U.S. fossil fuel production expands. *The Texas Tribune* 10 April, <https://www.texastribune.org/2019/04/10/trump-issues-executive-orders-speed-oil-and-gas-pipeline-projects/> (accessed 16 July 2024).
- Neeley T., 2021a, Dakota Access Pipeline to stay open: Federal court rules Corps violated law on pipeline easement. *Progressive Farmer* 20 January. <https://www.dtnpf.com/agriculture/web/ag/news/article/2021/01/28/federal-court-rules-corps-violated> (accessed 16 July 2024).
- Neeley T., 2021b, Dakota Access fights potential closure: Tribes along the pipeline tell court closure would harm their oil business. *Progressive Farmer* 21 April. <https://www.dtnpf.com/agriculture/web/ag/news/article/2021/04/21/tribes-along-pipeline-tell-court-oil> (accessed 16 July 2024).
- Neeley T., 2021c, Corps: Keep Dakota Access Pipeline open: Corps tells court environmental study of Dakota Access could last into 2020. *Progressive Farmer* 4 May. <https://www.dtnpf.com/agriculture/web/ag/news/article/2021/05/04/corps-tells-court-environmental-last> (accessed 16 July 2024).
- Neeley T., 2021d, Pipeline to remain open: Judge rules Dakota Access Pipeline can remain open during Corp's environmental review. *Progressive Farmer* 21 May. <https://www.dtnpf.com/agriculture/web/ag/news/article/2021/05/21/judge-rules-dakota-access-pipeline> (accessed 16 July 2024).
- Nickel R., 2019, Dakota Access oil pipeline eyes expansion over tribe's objections. *Reuters* 13 November. <https://www.reuters.com/article/us-energy-transfer-oil-pipeline/dakota-access-oil-pipeline-eyes-expansion-over-tribes-objections-idUSKBN1XN2IB> (accessed 16 July 2024).
- Nicholson B., 2017a, \$3.8 billion Dakota Access oil pipeline begins service. *Chicago Tribune* 1 June, <https://www.chicagotribune.com/nation-world/ct-dakota-access-oil-pipeline-20170601-story.html> (accessed 16 July 2024).
- Nicholson B., 2017b, Ruling on Dakota Access pipeline surprises oil industry. *Houston Chronicle* 15 June, <https://www.houstonchronicle.com/business/energy/article/Ruling-on-Dakota-Access-pipeline-surprises-oil-11224278.php> (accessed 16 July 2024).
- Nicholson B., 2019a, Judge allows tribe to challenge Corps' Dakota Access study. *The Seattle Times* 7 January, <https://www.seattletimes.com/business/judge-allows-tribes-to-challenge-corps-dakota-access-study/> (accessed 16 July 2024).
- Nicholson B., 2019b, Racketeering lawsuit by Dakota Access developer dismissed. *Associated Press* 14 February, <https://apnews.com/7889c4a09e2d4f0ba4b7bfecdedd509/> (accessed 16 July 2024).
- Nicholson B., 2019c, AP News Break: Tribe says Corps' pipeline findings preordained. *Associated Press* 28 February, <https://www.apnews.com/276a1851383d44dd867454396e39a603> (accessed 16 July 2024).
- PR Newswire, 2021, Chairman Fox's declaration to the U.S. District Court explains extreme impacts of a DAPL shutdown: Financial losses estimated to exceed \$250 million over two years. 28 April. <https://www.prnewswire.com/news-releases/chairman-foxs-declaration-to-the-us-district-court-explains-extreme-impacts-of-a-dapl-shutdown-301279405.html> (accessed 16 July 2024).
- Pulido L., 2017, Geographies of race and ethnicity II: Environmental racism, racial capitalism and state-sanctioned violence, *Progress in Human Geography*, 41(4), 524–533.
- Reuters, 2012, Plains reaps benefits of low-priced Bakken crude. 9 February. <https://www.reuters.com/article/plains-bakken-eastcoast/update-1-plains-reaps-benefit-of-low-priced-bakken-crude-idUSL2E8D9GKT20120209> (accessed 16 July 2024).
- Scheyder E., 2016, For Standing Rock Sioux, new water system may reduce oil leak risk. *Reuters* 22 November. <https://www.reuters.com/article/business/environment/for-standing-rock-sioux-new-water-system-may-reduce-oil-leak-risk-idUSKBN13H27C/> (accessed 16 July 2024).
- Sisk A.R., 2020, North Dakota Regulators OK Expansion of Dakota Access Pipeline. 19 February. https://bismarcktribune.com/news/state-and-regional/north-dakota-regulators-ok-expansion-of-dakota-access-pipeline/article_918e2a50-9a2c-5098-9dd1-5d0144aa409b.html (accessed 16 July 2024).
- United States District Court for the District of Columbia, 2017a, Standing Rock Sioux Tribe, Plaintiff, and Cheyenne River Sioux Tribe, Plaintiff-Intervenor, versus U.S. Army Corps of Engineers, Defendant, and Dakota Access, LLC, Defendant-Intervenor and Cross-Claimant: Civil Action No. 16-1534 (JEB), Document 159. 7 March, <https://www.documentcloud.org/documents/3509171-170307-DenyInjunction.html> (accessed 16 July 2024).
- United States District Court for the District of Columbia, 2017b, Standing Rock Sioux Tribe, Plaintiff, and Cheyenne River Sioux Tribe, Plaintiff-Intervenor, versus U.S. Army Corps of Engineers, Defendant, and Dakota Access, LLC, Defendant-Intervenor and Cross-Claimant: Civil Action No. 16-1534 (JEB) (and Consolidated Case Nos. 16-1769 and 16-267). 11 October, <https://www.indianz.com/News/2017/10/11/04516256846.pdf> (accessed 16 July 2024).
- West D., Sass J., 2019, Standing Rock: Gross underestimates of DAPL expansion risks. *NRDC* 23 December. <https://www.nrdc.org/experts/jennifer-sass/standing-rock-gross-underestimates-dapl-expansion-risks> (accessed 16 July 2024).
- White G.W. Millett B.V., 2019, Oil transport and protecting clean water: The case of the Dakota Access Pipeline (DAPL), *Present Environment and Sustainable Development*, 13(2), 115–128. doi: 10.15551/pesd201913200
- White G.W. Millett B.V., Johnson Maier K., 2021, The Dakota Access Pipeline (DAPL): The political geographies of a controversy, *Human Geography Journal*, 31, 7–18. doi: 10.26565/2076-1333-2021-31-01
- The White House, Office of the Press Secretary, 2017, Construction of the Dakota Access Pipeline. 24 January, <https://www.npr.org/assets/news/2017/01/DakotaAccessConstruction.pdf> (accessed 16 July 2024).