

Networks and Frames in Pipeline Resistance

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Abstract

Extensive media coverage has been devoted to the proposed Keystone XL and Northern Gateway pipelines. Analysis of this coverage allows for analysis of pro- and anti-pipeline frames employed to try to sway public opinion and the choices of decision makers. It also provides a starting point for a network analysis of the organizations and individuals involved in pipeline resistance.

1 Introduction and context

Particularly since 2011, pipelines originating from Canada’s bitumen sands have received focused attention from climate change activists in the United States and Canada. Anti-pipeline campaigns reveal how networks of brokers and local campaigners collaborate, while disagreements about objectives and strategy remain prominent among environmentalists and climate change activists. Extensive media coverage of these campaigns highlights how framing is a central element of contention: whether pipelines are primarily interpreted in terms of trade and economic output, a threat to waterways or indigenous rights, or in terms of a finite global carbon budget and a corresponding need to transition to low-carbon forms of energy.

These pipelines illustrate the turbulent politics of energy in North America.^{1,2} The TransCanada Keystone XL (KXL) project was proposed in 2008. The pipeline was a rallying point for Canadian and U.S. climate change activists, with high-profile protest actions including mass civil disobedience outside the White House in summer 2011, leading to 1,253 arrests.³ In November 2011, the Obama administration announced that they would delay a decision on whether to approve the pipeline until after the 2012 election.⁴ Obama eventually rejected the pipeline in 2015, saying: “if we’re going to prevent large parts of this Earth from becoming not only inhospitable but uninhabitable in our lifetimes, we’re going to have to keep some fossil fuels in the ground rather than burn them and release more dangerous pollution into the sky”.^{5,6} This led to a threatened lawsuit from the pipeline proponents.⁷ After his surprise election in November 2016, Donald Trump signed a presidential memorandum in January 2017 to expedite the environmental review process for a reincarnated KXL.⁸ The motivations and strategies of contention against KXL discussed below remain in place and continue to create some risk that the project will not be completed. The Enbridge Northern

¹Many of the dynamics at work with KXL and NGP can be seen in resistance to other pipelines transporting bitumen sands oil, including the proposed TransCanada Energy East pipeline, Enbridge’s Line 9 conversion and reversal, and Kinder Morgan’s Trans Mountain Pipeline. This is also true for pipelines intended to transport other unconventional oil, including the Dakota Access Pipeline.

²See: Campbell, *‘Those are our Eiffel Towers, our pyramids’: Why Standing Rock is about much more than oil.*

³Meisel and Russell, *Case Study: Tar Sands Action.*

⁴Broder and Frosch, *U.S. Delays Decision on Pipeline Until After Election.*

⁵Obama, *Statement by the President on the Keystone XL Pipeline.*

⁶See also: The Economist, *Keystone flops.*

⁷Lou, *TransCanada’s \$15 billion U.S. Keystone XL NAFTA suit suspended.*

⁸The Economist, *Donald Trump backs two big oil pipelines.*

Gateway pipeline (NGP) — proposed in 2006 — was approved by Stephen Harper’s cabinet in 2014 (subject to 209 conditions imposed by the National Energy Board joint review panel), leading to a Federal Court of Appeal challenge from ForestEthics Advocacy, the Living Oceans Society, the Raincoast Conservation Foundation, and BC Nature.^{9,10,11,12,13} In 2012, Canada’s federal government substantially cut back federal oversight over projects like pipelines, including reduced fishery protections and giving cabinet the final say over energy projects.¹⁴ In a non-binding plebiscite of Kitimat residents in April 2014, 58.4% opposed the pipeline compared with 41.6% in favour.¹⁵ In January 2016, the B.C. Supreme Court found that the B.C. government had breached its duty to consult with First Nations in approving the project.¹⁶ In June 2016, the Federal Court of Appeal overturned the pipeline’s approval on the basis of “brief, hurried and inadequate” First Nations consultation.¹⁷ In November 2016, B.C. premier Christy Clark said she would only support the NGP and Kinder Morgan proposals subject to five provisions: regulatory approvals, “world-leading” marine- and land-spill response, indigenous participation, and “a fair share of benefits for British Columbia”.¹⁸ Referring to a section of British Columbia’s temperate rainforest which the pipeline would cross, Justin Trudeau asserted that “the Great Bear Rainforest is no place for a pipeline” while he was campaigning.¹⁹ The NGP was killed by Justin Trudeau in 2016, and may be permanently blocked by a tanker ban off the north coast of BC.^{20,21} At root, the debate about both pipelines speaks to the question of what sort of energy infrastructure ought to be developed in North America and whether continued expansion of Canada’s bitumen sands makes economic, environmental, and ethical sense.

The pipelines are politically linked because of these broad questions but also because of a political calculation from bitumen sands proponents: that at least one export corridor must be permitted, if not Keystone XL then perhaps Northern Gateway or something similar.²² They also both illustrate tensions between fossil fuel producing jurisdictions intent on producing as much oil as possible and exporting it widely and national governments which have at least notionally committed to aggressive decarbonization strategies compatible with the 1.5–2.0 °C temperature targets in the Paris Agreement. Further contention is ongo-

⁹Canadian Press, *How the Northern Gateway oil pipeline saga has played out so far*.

¹⁰Whittington and Campion-Smith, *Conservatives approve Northern Gateway pipeline*.

¹¹Payton, *Northern Gateway pipeline approved with 209 conditions*.

¹²Omand, *Environmental groups in federal appeal court to oppose Northern Gateway pipeline*.

¹³Williams, *Environmentalists file suit over Trans Mountain pipeline, calls expansion a ‘death knell’ for endangered species*.

¹⁴The Economist, *The great pipeline battle*.

¹⁵CBC News, *Kitimat, B.C., votes ‘no’ to Northern Gateway in plebiscite*.

¹⁶Morton, *Ruling could affect more than Northern Gateway*.

¹⁷Proctor, *Northern Gateway pipeline approval overturned*.

¹⁸The Georgia Straight, *Premier Christy Clark issues statement on Trudeau cabinet’s decisions on Northern Gateway and Kinder Morgan projects*.

¹⁹Fekete, *Trudeau says rainforest no place for pipelines, as Enbridge eyes alternative endpoints for Gateway*.

²⁰Tasker, *Trudeau cabinet approves Trans Mountain, Line 3 pipelines, rejects Northern Gateway*.

²¹Stueck, *Ottawa introduces law to ban oil tankers off northern B.C. coast*.

²²See: Hoberg, “The battle over oil sands access to tidewater: a political risk analysis of pipeline alternatives”.

ing between pipeline proponents and indigenous peoples and communities, as well as within an environmentalist movement torn between persuasive and confrontational tactics and uncertain about whether capitalist democracy as currently practiced can be reconciled with avoiding the worst impacts of climate change.

Looking at KXL and NGP media coverage helps reveal the activist networks working to resist both projects. North American anti-pipeline movements are notable for functioning simultaneously at different scales while lacking formal hierarchies and even linkages between organizations.²³ Though not consistently mentioned in news coverage, broker organizations like 350.org and the Canadian Youth Climate Coalition are involved in opposing many proposed pipelines which are expected to increase total historical greenhouse gas emissions, and they work deliberately to disperse strategies, tactics, and theories of change among other organizations. More conventional environmental organizations are more frequently interviewed in the media. Groups like the Sierra Club and Natural Resources Defense Council place more emphasis on threats to fresh water and marine spill risk. Partly in pursuit of journalistic balance, media coverage also reveals networks of pipeline proponents that include corporations, chambers of commerce, and sympathetic politicians.

Competing frames are a central feature of the contention around energy policy in the U.S. and Canada.^{24,25,26,27,28} Pro-industry frames include the contribution of fossil fuel projects to jobs and economic growth, as well as the benefits of fossil fuel use and sometimes the fossil fuel dependence our lifestyle creates. Central environmentalist frames emphasize local risks from toxic contamination and the questionable safety record of the fossil fuel industry. They raise the broad context of climate change less often, particularly in terms of decarbonization and a finite global carbon budget. Perhaps the most integrated framing of climate activism is Naomi Klein's notion of "Blockadia": "a roving transnational conflict zone that is cropping up with increasing frequency and intensity wherever extractive projects are attempting to dig and drill, whether for open-pit mines, or gas fracking, or tar sands oil pipelines".^{29,30} While the notion has appeal as a means for justifying mutual support between geographically- and conceptually-disconnected progressive social movements, evidence that such a coherent effort is emerging isn't particularly supported by an analysis of recent North American pipeline controversies. Indigenous frames are more complex. Sometimes the analysis is highly transactional, focusing on how it's inappropriate to force pipeline risks on indigenous communities, but also sometimes stressing the right of these communities to allow pipelines when they perceive the benefits to be sufficient. In a broader and more philosophical sense, indigenous perspectives raise issues like intergenerational justice, the long-term viability of "extractivist" economic models, and spiritual obligations to protect land and wa-

²³For an exemplary example of the study of such climate activist networks through a variety of methodologies, see: Hadden, *Networks in Contention: The Divisive Politics of Climate Change*.

²⁴On framing in general, see: Snow and Benford, "Master frames and cycles of protest".

²⁵Snow, Benford, et al., "Ideology, frame resonance, and participant mobilization".

²⁶Benford and Snow, "Framing processes and social movements: An overview and assessment".

²⁷Goffman, *Frame analysis: An essay on the organization of experience*.

²⁸Capek, "The "environmental justice" frame: A conceptual discussion and an application".

²⁹Klein, *This Changes Everything: Capitalism vs. The Climate*, p. 294–5.

³⁰See also: Bradshaw, "Blockadia rising: rowdy greens, direct action and the Keystone XL pipeline".

ter. One instructive account of resistance to the Dakota Access Pipeline at Standing Rock explains: “To categorise Standing Rock as anti-industry or solely an environmental protest is to misunderstand the context”.³¹ Media accounts of the Unist’ot’en camp in B.C. suggest that resistance there is partly motivated by a similar perspective, as well as a determination to assert First Nations sovereignty. Perhaps the greatest public relations accomplishment of those resisting the Dakota Access pipeline has been winning media acceptance of the idea of themselves as “water protectors”.³² The framing is powerful both because it speaks to a universal value (water protection) and frames those involved as positively promoting an agenda rather than primarily as resisting in the face of someone else’s.

2 Methodology

Initially, I hoped to assemble a representative sample of media stories on each pipeline using the Factiva and Canadian Newsstream Complete databases. Factiva is based on over 32,000 global sources, including newspapers, magazines, and transcripts from television and radio. The Canadian Newsstream database includes full text from over 280 Canadian news sources, including the *Globe & Mail*, *National Post*, and *CBC*. In both cases, I restricted results to newspapers only. This sample was to be used to begin identifying the network of activist organizations, organizers, and brokers involved in resisting both pipelines, as well as the common framings used by pipeline opponents and proponents. Limitations in the databases make this either impossible or extremely laborious as they both contain duplicates, tags like “editorial” are not always consistently applied, permanent links to search results are not provided, algorithms for sorting articles by “relevance” are proprietary black boxes, and the geographic boundaries of news sources to include in database queries cannot be set with much confidence or flexibility.³³ The Factiva relevance algorithm seems dominated by recency, with top ranking articles for KXL all being from the last couple of months, despite the long-running controversies about both projects. Strangely, the top 50 Factiva results for NGP include numerous articles going back to 2012, though somewhat surprisingly former Prime Minister Stephen Harper wasn’t mentioned into 70 articles into the review.

Despite the limitations in the databases, summary statistics on media coverage about the pipelines are in some ways revealing.

Because of the number of total results and the limitations of the databases, this paper will not seek to comprehensively analyze the news database results for framing or activist networks. Rather, it will simply seek to establish the plausibility of undertaking such analysis based on these databases by examining a small and non-representative subset of the available content. To that end, I reviewed the top 50 results for “Keystone XL” and “Northern Gateway pipeline” in Factiva and Canadian Newsstream’s newspaper content, sorted by

³¹Campbell, *‘Those are our Eiffel Towers, our pyramids’: Why Standing Rock is about much more than oil.*

³²Iyuskin American Horse, *‘We are protectors, not protesters’: why I’m fighting the North Dakota pipeline.*

³³I am grateful to the Jesse Carliner, the Political Science librarian at Robarts Library, for his help in understanding the strengths and limitations of these tools.

Table 1: Total database results

Search term	Database	Restrictions	Results
Keystone XL	Factiva	2008–present; English	102706
Northern Gateway pipeline	Factiva	2006–present; English	25687
Keystone XL	Canadian Newsstream	2008–present; English	17734
Northern Gateway pipeline	Canadian Newsstream	2006–present; English	19488
Keystone XL	Factiva	2008–present; English; Newspapers only	42781
Northern Gateway pipeline	Factiva	2006–present; English; Newspapers only	11981
Keystone XL	Canadian Newsstream	2008–present; English; Newspapers only	14788
Northern Gateway pipeline	Canadian Newsstream	2006–present; English; Newspapers only	17067

their opaque “relevance” ranking.³⁴ For each article, I recorded any anti-pipeline groups or individuals referenced. For quoted activists, I noted which if any frames of analysis they emphasized. I also noted any frames used by proponents or the article’s author. These were documented in three spreadsheets: one listing 273 individuals, another with 78 organizations, and one identifying 34 frames used in 161 articles.³⁵

Beyond questions about what material is included in the Factiva and Canadian Newsstream databases, some problems with the output from these systems complicates analysis. Factiva frequently outputs garbled text like:

bumped his target to \$24 from \$22 with an “utperform”ating. ”e expect Enerflex to outperform the broader OFS index

And:

”aris is a robust agreement but other countries looking at us and saying ‘hy should we do anything then?’s a risk.

Both systems also produce anomalies because of diacritical marks and ‘smart’ quotations. This would complicate any effort at automated text analysis. In addition, because I did not index at what time any particular individual or organization expressed support or opposition for KXL or NGP, this analysis misses cases where people switched from being proponents to opponents and vice versa (for instance, Gitxsan hereditary chiefs who partnered with Enbridge in 2011 only to have the agreement fall apart subsequently).

The substantial corpus of journalism about KXL and NGP creates an opportunity for scholars to study climate and environmental activist and indigenous rights social movements in action by identifying the networks of influence and support among them any by analyzing the strategies through which they seek to shift elite and public opinion. By incorporating evidence from multiple articles, this review allowed for information not included in one place

³⁴Searching for only “Northern Gateway” produces irrelevant results like the Chinese city of Jiangsu’s aspiration to be a northern gateway to Shanghai, or the “Northern Gateway masterplan” for commercial and residential development in Derbyshire.

³⁵The sheets are available online: [People](#), [Organizations](#), [Frames](#).

to be linked after the fact: for instance, when individuals had affiliations not mentioned in all articles quoting them. Similarly, in some cases individuals or organizations are mentioned but not clearly identified as pipeline proponents or opponents, meaning better information about their positions can be determined from an integrated analysis.

As opposed to my limited sample and three spreadsheets, it would be preferable to create a dynamic database with data on which articles make reference to which people, frames, and organizations and which can be configured to display the connections in any combination. A custom graphical interface could significantly improve the rate of manual categorization by providing the ability to simply click pre-identified frames to link them to an individual or article. Connections in the database could be presented in a variety of ways, from showing every article quoting an individual and the frames they used in each to showing an organization, all its quoted spokespeople, and the media sources that have covered it. It would also be preferable to use a larger sample of articles sorted by a less opaque mechanism than “relevance”, or even to use automatic text processing tools to parse through the full set of articles referencing KXL and NGP. One challenge to any automated approach is that the context of statements made on behalf of individuals and organizations probably requires active human effort to identify; an automatic scan of articles would have a hard time working out which pipeline is being discussed (since articles tend to discuss several, including projects other than KXL and NGP) and what frames are being employed. Some articles only peripherally mention the pipeline, or even contain only a link or reference to a pipeline-related article.

3 Frames

With the important caveat that the set of articles examined was not representative, we can look at the relative occurrence of different pro- and anti-pipeline framings, both in terms of whole articles and in terms of the positions taken by individuals in all sampled media references. Most articles include at least some rationale for opposing or opposing the pipeline, as do many quotes from individuals, though perhaps a surprising number of media reports simply state that one person or another supports or opposes the project without listing any reasons.

At least four major frames have been emphasized by KXL and NGP proponents: jobs and economic prosperity, the benefits of fossil fuel use, and national unity and fairness between jurisdictions.

By far the most prominent framing used to discuss KXL and NGP is that of jobs and economic prosperity, frequently extended to include the consequences of those things for tax revenues. Virtually every figure quoted supporting either pipeline, from politicians to academics to corporate proponents, makes the case that pipeline construction will create temporary jobs and that new fossil fuel export capacity will fuel the Canadian economy. The U.S. State Department estimated 3,900 part-time construction jobs from building KXL,

Table 2: All identified frames

Frame list	Pro or Anti	Σ from people	Σ in articles	Total
Access to new markets	Pro	17	35	52
Anti-capitalism/anti-corporation	Anti	1	1	2
Assumed inevitability of oil burning	Pro	4	6	10
Balance (economy and environment)	Pro	3	1	4
Canada-US relations	Pro	13	12	25
Canada's geopolitical stability	Pro	7	5	12
Canadian oil price gap (anti-pipeline)	Anti	0	2	2
Canadian oil price gap (pro-pipeline)	Pro	8	19	27
Climate risk	Anti	10	21	31
Dedication to safety (pro-pipeline)	Pro	14	24	38
Ecosystem/species protection	Anti	3	18	21
Exports don't improve energy security	Anti	1	6	7
Indigenous rights	Anti	31	31	62
Indigenous rights (pro-pipeline)	Pro	13	14	27
Intergenerational ethics	Anti	1	2	3
Intergenerational ethics (pro-pipeline)	Pro	0	1	1
Interprovincial issues/national unity	Pro	8	19	27
Jobs and economic growth	Pro	51	61	112
Jobs and prosperity from decarbonization	Anti	1	4	5
Marine spill risk	Anti	10	24	34
Oil dependence (anti-pipeline)	Anti	1	1	2
Oil dependence (pro-pipeline)	Pro	7	6	13
Opposition to eminent domain	Anti	6	5	11
Opposition to unrefined product export	Anti	5	8	13
Pipelines safer than transport alternatives	Pro	3	8	11
Risk to investor confidence	Pro	0	3	3
Risk to tourism and fisheries	Anti	3	7	10
Size of Canadian reserves (pro-pipeline)	Pro	1	1	2
Social license (anti-pipeline)	Anti	6	2	8
Threat to health	Anti	0	1	1
Threat to water	Anti	20	36	56
US energy independence	Pro	10	17	27
Would encourage oilsands development (anti-pipeline)	Anti	10	19	29

with 35 people to run the pipeline subsequently.^{36,37,38} Enbridge claimed that NGP would create 3,000 construction jobs and 560 long-term jobs in B.C.³⁹ Critics generally respond by arguing that the number of jobs created is exaggerated by proponents, or by arguing that there is more employment in industries threatened by pipelines like fishing and tourism. Even those sympathetic to the case for new pipelines are sometimes critical of jobs as a justification. In a memorable bit of satire, Andrew Leach, Associate Professor at the Alberta School of Business, proposed facetiously that a 1,200 kilometre bucket brigade would create four million permanent jobs plus “10 million indirect and induced jobs”, compared with “a

³⁶The Economist, *Fuelling anger*.

³⁷The Economist, *Back in the pipeline*.

³⁸In a *New York Times* interview, Obama cited 2,000 temporary jobs and 50–100 permanent ones The Economist, *It's hard to XL*.

³⁹CBC News, *Northern Gateway pipeline project: 6 things to know*.

Table 3: Top 8 pro- and anti-pipeline frames

Frame list	Pro or Anti	Σ from people	Σ in articles	Total
Jobs and economic growth	Pro	51	61	112
Access to new markets	Pro	17	35	52
Dedication to safety (pro-pipeline)	Pro	14	24	38
Canadian oil price gap (pro-pipeline)	Pro	8	19	27
Indigenous rights (pro-pipeline)	Pro	13	14	27
Interprovincial issues/national unity	Pro	8	19	27
US energy independence	Pro	10	17	27
Canada-US relations	Pro	13	12	25
Indigenous rights	Anti	31	31	62
Threat to water	Anti	20	36	56
Marine spill risk	Anti	10	24	34
Climate risk	Anti	10	21	31
Would encourage oilsands development (anti-pipeline)	Anti	10	19	29
Ecosystem/species protection	Anti	3	18	21
Opposition to unrefined product export	Anti	5	8	13
Opposition to eminent domain	Anti	6	5	11

few hundred” projected for NGP.⁴⁰ Economists are quicker than politicians to recognize that jobs in themselves are of little benefit if the activity being undertaken isn’t valuable, bringing us to questions about how well served Canada will be by new fossil infrastructure.

A core justification for “Oil Sands Access to Tidewater” is the development of new markets for Canadian bitumen sands production, which might lead to a reduction in the price penalty for “Western Canadian Select” heavy crude oil compared with other benchmark oil classifications. This argument gets intertwined in complex ways with assertions about Canada as a geopolitically stable oil supplier to the U.S. and thus a contributor to U.S. “energy security” or “energy independence”. At times, Canadian politicians used the prospect of non-U.S. exports as a kind of rhetorical cudgel to try to pressure the Obama administration to approve KXL, arguing that the U.S. will otherwise lose the oil which the pipeline would carry to other buyers, like China. Other Canadians stress the risks associated with having the U.S. as the dominant buyer of Canadian oil, arguing that this depresses the price per barrel which Canadian firms earn and creates the danger that Canadian prosperity will be excessively tied to the United States, or that the explosion in oil and gas output from fracking across the U.S. will constrain the growth of the comparatively high-cost bitumen sands.

When pipeline proponents stress the supposedly exceptional and effective safety measures to be incorporated into NGP and KXL, they are seeking to rebut prominent concerns from pipeline opponents about toxic contamination and other damage from pipeline ruptures and marine spills. It’s a challenging argument to make, regardless of the number of valves and computer monitoring systems deployed, given how many pipeline ruptures and marine spills are on the public record in Canada and the U.S. and the emphasis placed upon them by pipeline opponents and the media. Public skepticism about corporate safety claims has also been exacerbated by public relations failures, such as when Enbridge deleted 1,000 square

⁴⁰Leach, *Who needs pipelines, the Oil Bucket Brigade is ready.*

kilometres of islands from a video description of the NGP tanker route through the Douglas Channel.⁴¹ Nonetheless, the frequency with which safety claims are emphasized demonstrates how pipeline proponents perceive a need for anticipatory rebuttal in this domain.

Two other frequently-deployed frames from pipeline proponents are the benefits we derive from fossil fuels (and our collective dependence upon them) and the national unity implications of pipeline construction. In the general conversation about climate change, those opposed to rapid decarbonization through the phase-out of fossil fuels often emphasize the material benefits — from staple foods and inexpensive transport to luxury products — associated with fossil fuel use, and sometimes argue that a prosperous or tolerable life is otherwise impossible.⁴² Both of these general arguments are present in media about KXL and NGP, and are comparatively rarely rebutted with arguments about how climate-safe forms of energy may provide an alternative or even a superior basis for enduring material prosperity. The concept of pipeline construction as patriotic duty is epitomized in then-natural resources minister Joe Oliver’s famously intemperate 2012 open letter in which he accused “environmental and other radical groups” of “threaten[ing] to hijack our regulatory system to achieve their radical ideological agenda” and “use funding from foreign special interest groups to undermine Canada’s national economic interest”.⁴³ A similar sentiment was expressed more recently about opposition to the Trans Mountain pipeline by Alberta premier Rachel Notley, who emphasized that “there are no tools available for a province to overturn or otherwise block a federal government decision to approve a project that is in the larger national interest”, equating such an action with having “one province or even one region ... hold hostage the economy of another province or, in this case, the economy of our entire country”.⁴⁴ Policy makers in countries existentially threatened by fossil fuel-driven sea level rise may have a different interpretation of who is whose hostage.

A key frame employed by pipeline proponents in the Trudeau government is “balance” between economic development and environmental protection. In December 2015, the Speech from the Throne from the 42nd Parliament argued: “a clean environment and a strong economy go hand in hand. We cannot have one without the other”.⁴⁵ The Prime Minister, Minister of the Environment, and others have argued that by taking steps to mitigate Canada’s contribution to climate change, we can justify further bitumen sands expansion. For reasons that exceed the scope of this paper, this position is unconvincing.⁴⁶ Nonetheless, it aligns with a central doctrine of journalism — ‘telling both sides of the story’ — which carries the danger of false equivalence. The fact that one is taking some sort of precautionary action (say, opening a large umbrella) may not balance a choice like jumping off a five story building. Similarly, incremental actions to reduce Canadian emissions below a business-as-usual trajectory do little to respond to concerns about the consequences of Canada’s massive fossil fuel production, use, and export. When Prime Minister Trudeau

⁴¹Lavoie, *Enbridge depiction of clear tanker route sparks outrage*.

⁴²See: Inyckyj, *Canadian Climate Change Policy from a Climate Ethics Perspective*, p. 10–13.

⁴³Oliver, *An open letter from Natural Resources Minister Joe Oliver*.

⁴⁴Tait and Hunter, *No B.C. government has right to block Trans Mountain pipeline expansion: Notley*.

⁴⁵Government of Canada, *Making Real Change Happen*.

⁴⁶See: Inyckyj, *Canadian Climate Change Policy from a Climate Ethics Perspective*.

argued that “No country would find 173 billion barrels of oil in the ground and leave them there” he was either undermining the whole premise of the 2016 Paris Agreement (which relies on mutual restraint of this kind from all countries) or indirectly asserting that some sort of technological or geoengineering response will emerge to negate the consequences of those emissions.^{47,48,49}

The major frames emphasized by pipeline opponents include local risks of toxic contamination in land and water, the incompatibility of new fossil fuel infrastructure with climate change mitigation efforts, the assertion of local land rights and opposition to eminent domain, and the violation of indigenous rights.

Right from the outset, the relative frequency of frame use reveals a puzzle: references to climate change and especially to society-wide decarbonization and the intergenerational impacts of fossil fuels are comparatively infrequent in media reports and the arguments of activists. Why then have anti-pipeline struggles become so much more prominent and contentious in recent years? If anything, we might expect the risks of pipeline ruptures and marine spills to be decreasing with improved monitoring systems and materials. Before looking at various anti-pipeline frames in more detail, three answers seem plausible. First, while local concerns may have more emotional relevance and hold more interest for media outlets, high-level decision makers may now have climate change as a background concern, heightening the controversy about bitumen sands pipelines in particular. Second, the anti-pipeline movement is part of an evolving set of social movements, including climate justice, and brokers within these movements are diffusing strategies, tactics, and theories of change which are strengthening local anti-pipeline efforts. Third, particularly in Canada, indigenous resurgence is an increasingly potent political force. Patterns of fossil fuel production, transport, and use are closely linked to extractivist and colonial mindsets and one of the more politically and economically salient manifestations of a growing indigenous rights movement is demand for control over and potentially an ability to veto new fossil fuel development.

One challenge to the “Blockadia” framing is that opposition to pipeline projects may be motivated more by local concerns than by the global threat of climate change. In 2012, Andrew Barton drove the proposed pipeline route from Bruderheim, Alberta to Kitimat, B.C.⁵⁰ Among pipeline opponents, he found considerable concern about a pipeline spill on land or maritime tanker spill, but little concern about climate change. Often the foremost concern of those opposed to KXL and NGP has been local toxic contamination from pipeline leaks, or tanker spills in the case of NGP.⁵¹ KXL and NGP would carry diluted bitumen as opposed to conventional crude oil, and many commentators assert that this is a more corrosive fluid correspondingly more likely to cause pipeline ruptures and that it causes more

⁴⁷CBC News, *Trudeau: 'No country would find 173 billion barrels of oil in the ground and leave them there'*.

⁴⁸On geoengineering, see: Gardiner, “Is “Arming the Future” with Geoengineering Really the Lesser Evil? Some Doubts About the Ethics of Intentionally Manipulating the Climate System”.

⁴⁹Keith, *A Case for Climate Engineering*.

⁵⁰Barton, *Place and Pipelines: The Northern Gateway Pipeline and our Home Places*.

⁵¹While a major purpose of KXL would be refining diluted bitumen on the U.S. Gulf Coast for further export via tanker, the issue of tanker spills never arose in the selected media coverage on KXL, while it was featured prominently in NGP coverage.

enduring ecological damage when spilled. The 2010 diluted bitumen spill into the Kalamazoo River has been both a source of motivation for anti-pipeline volunteers and organizers and a point frequently raised in the media by pipeline opponents.⁵² Local risks are also central to arguments about a risk-benefit disjuncture with pipelines, where their operation clearly benefits producers and consumers at either end while not necessarily compensating those living beside the pipe for the risks they face as a consequence. In the cases of NGP and KXL, adjacent areas with heightened sensitivity to environmental damage and unusual economic and ecological importance have played a role in public debate and the deliberations of policy makers. For NGP, the rugged coastline of British Columbia, which has so much importance for the tourism industry and the self-perception of British Columbians, is frequently held up as something precious and imperilled by pipeline development. So too are B.C.'s commercial fishery and seafood resources that have sustained indigenous communities for millennia. In the U.S., perhaps the most vehement opposition to KXL arose from concern about the threat to the Sandhills of Nebraska, as well as the massive Ogallala Aquifer which is a key freshwater source for eight states. In 2011, Dave Heineman, Republican governor of Nebraska, called for the pipeline to be re-routed around the aquifer.⁵³

While certainly present, climate risks associated with fossil fuel development are less emphasized in media coverage. The *Toronto Star* article “How Canada’s pipeline splits America” notes how “not once has a single person we have encountered” mentioned climate change, until they meet with Jane Kleeb in Newport, Nebraska.⁵⁴ Certainly, threats to local water are the most documented concern of KXL and NGP opponents, despite how concern about climate change is the central mobilizing force for groups like 350.org. In general, those calling for more energetic action in the face of climate change employ scientific, numerical, and climate justice frames.⁵⁵ A numerical framing emphasizes factors like the 1.5–2 °C temperature target from the Paris Agreement, estimates of safe atmospheric carbon dioxide (CO₂) concentrations like 350 parts per million, and the comparison between total global fossil fuel reserves and a safe global carbon budget.⁵⁶ Scientific framing emphasizes evidence, data, the scientific process of theory evaluation, and the use of historical evidence and forward-looking models to try to predict future impacts. The climate justice frame — which is highly prominent in the internal deliberations of climate and other social justice activists — was essentially absent from the news stories examined here.

Perhaps the most extreme form of climate change framing ever used can be found in writing by former NASA climatologist James Hansen, generally considered to be one of the most important scientists to warn policy makers and the general public about climate change. In his 2010 book, he argued:

After the ice is gone, would Earth proceed to the Venus syndrome, a runaway greenhouse effect that would destroy all life on the planet, perhaps permanently?

⁵²See: Barton, *Place and Pipelines: The Northern Gateway Pipeline and our Home Places*, p. 35.

⁵³Broder and Frosch, *U.S. Delays Decision on Pipeline Until After Election*.

⁵⁴Potter, *Keystone XL: How Canada’s pipeline splits the U.S.*.

⁵⁵See: Schittecatte, “The effects of framing on support for political action on climate change”.

⁵⁶See: McKibben, *Global Warming’s Terrifying New Math*.

While that is difficult to say based on present information, I've come to conclude that if we burn all reserves of oil, gas, and coal, there is a substantial chance we will initiate the runaway greenhouse. If we also burn the tar sands and tar shale, I believe the Venus syndrome is a dead certainty.⁵⁷

Hansen called KXL a “fuse to the biggest carbon bomb on the planet” and said exploiting Canada’s bitumen sands would be “game over for the climate”.^{58,59,60} In 2013, Hansen clarified, regarding the Venus scenario, that what he described in his book would be “a consequence of burning all fossil fuels over a period of several centuries, with warming further amplified by ignition of PETM-like hyperthermal warming” and that “it is not an exaggeration to suggest, based on best available scientific evidence, that burning all fossil fuels could result in the planet being not only ice-free but human-free”.⁶¹ In a less severe scenario where we “we continue business-as-usual fossil fuel burning”, he expects “an extended phase of extreme climate chaos”.⁶² Anti-KXL activists including 350.org founder Bill McKibben widely emphasized the “game over” line in the media, while citing Hansen’s scientific credibility and history of raising concerns about climate change which subsequently proved justified.^{63,64} “Game Over” has appeared on anti-KXL banners, including some held by protestors being arrested in the 2011 civil disobedience outside the White House. Hansen was also quoted in the June 2011 email in which McKibben, Maude Barlow, Naomi Klein, David Suzuki, and Hansen himself called for people to sign up for the White House action.⁶⁵ In addition to questions about which scenarios are scientifically plausible, Hansen’s comments also raise questions about how scientists ought to communicate, and particularly how they should engage with the difficulty climate change can have in generating an emotional response because it seems distantly situated in space and time. If people are making wrong policy decisions because climate change isn’t sufficiently morally salient, does that justify the use of such evocative and emotionally-charged scenarios? Or does the risk that such claims will later appear hyperbolic — or that presenting the problem in such stark terms will yield paralysis rather than action — mean that scientists would be better off sticking to more subdued prose of the sort used in the authoritative assessment reports of the Intergovernmental Panel on Climate Change?

Based on this sample of media reports, the central message of organizations like 350.org has not been widely discussed. Indeed, the organization itself gets surprisingly little mention given its major coordinating role in the most visible protests against KXL. The very name of

⁵⁷Hansen, *Storms of My Grandchildren: The Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity*, p. 236.

⁵⁸McGowan, *NASA’s Hansen Explains Decision to Join Keystone Pipeline Protests*.

⁵⁹Hansen, *Game Over for the Climate*.

⁶⁰A Factiva search for the phrase “game over” and the terms “climate” and “Hansen” yields 417 results, including articles about NGP and KXL.

⁶¹Hansen, *Making Things Clearer: Exaggeration, Jumping the Gun, and The Venus Syndrome*.

⁶²Ibid., p. 6.

⁶³Stuart, *Bill McKibben on Obama’s Keystone XL Rejection: ‘The Tide Is Starting to Turn’*.

⁶⁴See also: Wilford, *His Bold Statement Transforms the Debate On Greenhouse Effect*.

⁶⁵McKibben, *Environmental Leaders Call For Civil Disobedience to Stop the Keystone XL Tar Sands Pipeline*.

the organization is meant to draw attention to the safe upper limit for CO₂ concentration in the atmosphere, in order to avert the worst impacts of climate change. Such a stabilization target implies a limited global carbon budget incompatible with developing and burning most of the world's remaining fossil fuels, as well as rapid decarbonization pathways for advanced economies like Canada's.⁶⁶ In such a scenario, further bitumen sands development loses its financial justification, since the rational way to plan a rapid decarbonization scenario involves using the least costly and environmentally damaging fraction of the world's remaining fossil fuels, not those with exceptionally high costs of production and levels of associated environmental harm. While convincing from a scientific and economic perspective, this frame has little visibility in the contemporary Canadian and U.S. newspaper discourses on pipelines.

A variation on locally-motivated opposition is the form not based on the risk of spills *per se*, but by arguing that building pipelines like KXL is an abuse of the eminent domain powers of the Canadian and U.S. governments. David Daniel, a landowner in Texas, pursued this claim in court and also built a network of treehouses occupied by Tar Sands Blockade activists.⁶⁷ The eminent domain argument is also associated with Nebraska-based anti-KXL activist Jane Kleeb who has criticized the effectiveness of framing climate change as a scientific issue: "One thing the climate organizations don't get is that the scientific numbers don't move people ... People here care about their neighbors".⁶⁸ While the eminent domain concern is certainly not divorced from concerns about toxic local pollution, it carries special emotional relevance for landowners not generally involved in environmental activism. It also draws some people who are skeptical or even hostile toward environmentalism and environmental organizations into anti-pipeline fights. A framing focused on eminent domain is arguably somewhat ironic, or at least perplexing, as it emphasizes the defence of a legal fiction (private property rights as conditionally recognized by governments) while de-emphasizing real physical phenomena like the changing temperature of the planet. Nevertheless, in the context of American politics where a Lockean notion of the inherent justifiability of property rights remains widely accepted, this framing has political relevance in part because it draws citizens who are not normally supporters of progressive parties into anti-pipeline efforts.

Arguments made by indigenous individuals and groups draw from both pro- and anti-pipeline framings, with some emphasizing economic opportunity and the moral importance of poverty reduction and others stressing intergenerational responsibility and an obligation to protect the land and water. A Working Group on Natural Resource Development established by Prime Minister Stephen Harper and former National Chief of the Assembly of First Nations Shawn Atleo argued that resource development provides an "unprecedented opportunity exists for all Canadians, industry and governments to partner with First Nations in ways that truly unleash economic growth while incorporating socially responsible

⁶⁶See: Ilnyckyj, *Canadian Climate Change Policy from a Climate Ethics Perspective*, p. 8–19.

⁶⁷Elbein, *Jane Kleeb vs. the Keystone Pipeline*.

⁶⁸Ibid.

approaches to natural resource development”.^{69,70} In contrast, the Treaty Alliance Against Tar Sands Expansion argues that bitumen sands transport “threaten[s] many Indigenous Nations’ territories, waterways, shores and communities with the very real risk of toxic and hazardous oil spills”; that expansion of the bitumen sands poisons the adjacent and downstream lands, waters, and air; and that bitumen sands expansion “unquestionably fuel[s] catastrophic climate change [which] has already started to endanger our peoples’ way of life and now threatens our very survival”.⁷¹ Indigenous responses to pipeline setbacks have also differed substantially. For example, while it was broadly celebrated by environmental and indigenous activists, Elmer Ghostkeeper of the Buffalo Lake Metis Settlement, Chief Elmer Derrick of the Gitksan Nation, and Dale Swampy of the Samson Cree Nation spoke to the media about their disappointment about the NGP project’s cancellation.⁷²

4 Networks

A challenge in studying environmental activism and pipeline resistance as social movements is the frequent absence of formal linkages or hierarchies between activist organizations.^{73,74,75,76,77,78} Particularly for low-staff, low-resource organizations with a focus on wild growth such as 350.org, nobody even maintains detailed records on the initiatives of local affiliates, much less seeks to direct their behaviour in an ongoing manner. Activist networks also overlap between issues, and some of the key sources of internal contention among environmental and climate change activism concern questions of allyship and intersectionality: which causes and organizations should activists support, and on the basis of what normative and strategic considerations?

Since centralized sources of information on anti-KXL and anti-NGP activism are generally unavailable, media coverage provides one starting point for building a network analysis of the movements. Media accounts almost never provide details of coordination or collaboration between activist groups, except when sets of organizations are described as being part of discrete joint efforts like lawsuits. Nonetheless, they provide some starting points for a network analysis of the pipeline resistance movement by identifying active organizations and

⁶⁹Working Group on Natural Resource Development, *First Nations and Natural Resource Development: Advancing Positive, Impactful Change*, p. 1.

⁷⁰McCarthy, *Resource revenues could lift some First Nations out of poverty, report urges*.

⁷¹Treaty Alliance Against Tar Sands Expansion, *Treaty Alliance Against Tar Sands Expansion*.

⁷²Cattaneo, ‘*We are very disappointed*’: *Loss of Northern Gateway devastating for many First Nations, chiefs say*.

⁷³On the study of networks in the study of politics, see: Davis et al., *Social movements and organization theory*.

⁷⁴Hadden, “Explaining variation in transnational climate change activism: The role of inter-movement spillover”.

⁷⁵Klandermans and Oegema, “Potentials, networks, motivations, and barriers: Steps towards participation in social movements”.

⁷⁶McAdam and Boudet, *Putting social movements in their place: Explaining opposition to energy projects in the United States, 2000–2005*.

⁷⁷Tarrow, *The New Transnational Activism*.

⁷⁸Keck and Sikkink, *Activists beyond borders: Advocacy networks in international politics*.

spokespeople, providing a starting point for broadening research effort. If we imagine activist networks as a spiderweb, news stories don't reveal much about connecting threads but can be used to identify the vertices where they connect. Media reports may also partly substitute for institutional memory when studying informal organizations with a rapid turnover of volunteers, allowing volunteers and organizers from non-overlapping eras to be identified, further researched, and perhaps interviewed.

The first obvious limitation in using media databases for a network analysis of anti-pipeline activism — demonstrated by the summary statistics above — is the vastness of the media coverage on these two pipelines, to say nothing of the broader discussion of climate change and energy policy. While access to news databases like Factiva and Canadian Newsstream Complete provides a useful starting point, they have at least three important flaws. First, they lack tools for identifying and addressing duplication; an article from a national news agency like the Canadian Press may appear many times in search results due to syndication, and sometimes nearly identical articles are released with different headlines by different news sources. Second, while the ability to narrow down results by article type (such as editorials), geographical region, or specific publication do exist, the tagging that serves these functions isn't sufficiently standardized to yield confidence that everything appropriate has been included and everything appropriate excluded. Third, while both services usefully allow for as many articles as are shown on one page of results to be downloaded, neither offers a straightforward mechanism for downloading the full text of all articles identified through a search. Those seeking to apply techniques like computational text analysis or data mining may require either laborious manual access and downloading or the development of 'web scraping' software which may conflict with the services' terms of use.

These barriers impede efforts to draw strong conclusions about the relative amounts of news coverage on different topics, or to assemble a representative sample of coverage on any particular topic. These barriers may be less of an impediment to those seeking to use news databases as an input to network analysis than to those whose intention is a more substantive analysis of the content of the articles. Identifying anti-pipeline individuals and organizations does not require a representative sample or an exhaustive review.

5 Conclusion and implications

In a political context where the comfortable centrist position is that meaningful climate change action can be reconciled with new fossil fuel development (as argued by Obama and Trudeau), anti-pipeline movements represent an important normative and practical challenge to the current North American political leadership. Efforts from both pipeline proponents and opponents have sought to craft emotionally evocative narratives, including by presenting their positions as 'grassroots' and representative of ordinary people, as well as through the theatrical dimensions of protest, non-violent direct action, and civil disobedience. It's plausible that the determination of activists to defy the U.S. Park Police and continue protesting outside the White House until arrested in the hot summer of 2011 first credibly signalled what a battle would be fought over KXL.

The various kinds of framing used in the media to describe the arguments for and against pipeline projects can be considered and interpreted in a range of ways, including the sort of crude numerical comparison undertaken above. Going beyond that, it would be possible to look with much more detail about cycles of claims and counterclaims: for instance, contestation of job creation estimates or safety assertions from pipeline proponents, or of alleged threats to ecosystems or fisheries by opponents.⁷⁹ It would also be desirable to gain a greater understanding of what effect media coverage actually has on the worldview and political preferences of decision makers and the general public. When seeking to understand the media's role in North American climate change and energy politics, it's notable that news outlets share one of the main failings of the general public and decision makers when it comes to climate and energy policy making — an excessive focus on the visible and the immediate. This likely helps to explain why the broad decarbonization framing espoused by 350.org is not well represented in media accounts.

In itself, a review of news stories about KXL and NGP tells us little about the networks of opposition operating against the projects. It allows for the identification of organizations that have taken sufficiently newsworthy actions to be noticed, whether those are acts of civil disobedience or non-violent direct action, or the filing of lawsuits. It also allows for the identification of individual spokespeople for both proponent and opponent organizations, and for some cataloguing of the means of persuasion being employed by each. If the motivation is not to immediately generate a comprehensive understanding but rather to develop leads which can be followed then perhaps a methodology based around media analysis can contribute usefully to broader projects seeking to understand pipeline resistance and the broader contentious politics of climate change.

In summation, the analysis of media reports about contested fossil fuel infrastructure can have value if you don't expect too much. By itself it cannot provide a comprehensive or representative account of networks of anti-pipeline organizations or individuals, but it can provide data points to begin populating that set by other means. Since framing efforts undertaken by both infrastructure proponents and opponents are specifically intended to influence public opinion partly through the mechanism of the media, analysis of news stories alone can provide more comprehensive information about framing than about networks. Major challenges exist in undertaking framing or network analysis of large numbers of media reports, first, in putting the raw material from news databases into a format that can be interpreted through automatic tools and, second, in designing tools that can go beyond tracking keywords to identifying lines or argumentation like 'jobs' or 'risk to fisheries'. Nonetheless, the sheer bulk of media reporting on pipelines and pipeline resistance suggests that efforts of that sort may be necessary for those seeking to understand activist efforts and outcomes at national and international scales and multi-year timespans.

⁷⁹In June 2014, Trudeau claimed: "The Northern Gateway Pipeline threatens not only the British Columbia coastal economy but the jobs of thousands of people who live on the ocean". Judd, *Justin Trudeau says if he becomes PM, Northern Gateway Pipeline will not happen*.

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