Adkin, Laurie E. (ed). 2016. First world petro-politics: the political ecology and governance of Alberta. Toronto, Buffalo, and London: University of Toronto Press. 696pp. ISBN 9781442612587; US\$37.46, lower through resellers.

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For those readers interested in the Albertan petro-plays, Adkin's *First world petro-politics* is a must-read. For those uninterested or more likely unaware of Alberta's place in the global hydrocarbon industry, this volume serves notice: pay attention. Right off the bat, Adkin highlights the prominence of Alberta in the dizzyingly complex interconnectedness of global petroleum markets. This interconnectivity, which signals the introduction of the overarching theoretical perspective of political ecology, emphasizes not only the iterative relationship between natural and social worlds but also considers the political, economic, and environmental aspects across historical and scalar webs in which actors find themselves operating. Methodologically, the volume takes a discursive or constructivist tack, in which the voices of these diverse actors are either amplified or repressed vis-à-vis their relationship to the Albertan petro-state. In Adkin's words,

Political discourses jostle to establish hegemonic interpretations of such concepts as 'sustainable development,' 'human nature,' or 'democracy.' Seeking justification of their interpretations, actors appeal to different types of evidence or reasoning, which may be experiential, religious, cultural, or scientific. (p.9)

But these discourses did not just appear from nowhere. The Albertan petro-state is unique and this case study offers new insights of interest to petro-state literature in general, via political ecology. Big issues such global or fossil capitalism, democracy, ecological sustainability, and neoliberalism are interrogated in all their contradictory complexity in a format that is organized and accessible across audiences. Adkin begins the work of injecting political ecology's strengths in her introduction by providing a brief history of Alberta's culture and class system, approximately from the early twentieth century to present. From a region dominated by small commodity producers characterized as liberal-individualistic and populist-liberal-evangelical to a fully industrialized, petroleum-dominated economy fraught with wage gaps between male and female workers and active dispossession of aboriginal lands, what is important for Adkin is that these things matter.

While the task Adkin sets out for her contributors may seem mammoth, "what holds it all together?" is the commitment shared by her contributors to political ecology's normative orientation and optimism about the possibility of both social justice and ecological sustainability (p.11). Thus, questions of political governance and democratic theory must be brought to the forefront to answer not only "how Alberta's reliance upon oil and gas revenue... has driven bureaucratic restructuring, government investment priorities, public policy political rights and representation, and citizenship", but also how it may be done better in a post-carbon and a socially just world (p.13). Thus, it seems Adkin sets up two goals for her contributors. First, Alberta, as a first world petro-state, warrants not just exploration along political, economic or social axes, but also requires more attention to its history and multi-scalar place in the world. Second, there is a critical and normative pledge that in doing so, we may be left with a breath of hopefulness for ecological sustainability and social justice. Do the substantive chapters live up to the billing? In short, absolutely.

Theoretically, petro-state issues are the least represented throughout the volume with two important exceptions. Carter and Zalik's contribution applies rentier state theory to the Albertan case to argue that this theory would be usefully updated by considering the history of, and transnational influence on, the Albertan petro-state. One of the more interesting points here is the assertion that across geopolitical scales the resulting actions can be "sometimes erratic" (p.52). While somewhat glossed over, this point brings a sense of complexity and even uncertainty that may warrant further discussion elsewhere. Likewise, in Chapter 17, Adkin interrogates and problematizes the 'First Law of Petro-politics' – that the price of oil and democracy are inversely related – on the grounds that it does not consider the political and economic milieu in which various petro-states emerged. Furthermore, she questions the assertion of some petro-state theorists who characterize Canada as democratic and diversified, and therefore an exception to the First Law. The volume offers 16 convincing chapters to back up this challenge. However, the case of Alberta offers a unique

opportunity to engage the rentier state literature theoretically through an exploration of seemingly democratic "techniques of governance" that actually only serve the interests of a few. Democracy, then, "is both a condition and an outcome of a societal transition to a low-carbon model of development" (p.591).

On the question of governance, the volume offers three especially telling chapters on how the Albertan state has failed on issues of environmental regulation. In Chapter 3, Adkin discusses the 'Alberta Advantage', the official stump for neoliberal governance. She finds, perhaps predictably, that the Albertan Ministry of Environment with its rather amorphous structural setup has not been up to standard in meeting its obligations to Albertans and in delivering environmental protection. This has led to a paradoxical situation – and Adkin's exasperation is palpable – in which, the government has created a quasi-independent body that must be protected from meddling by the Ministry of the Environment. Similarly in Chapter 5, Carter outlines the environmental costs of tar sands development and reviews trends in environmental regulation, which again are dismal given the political lobbying of the oil and gas industry. While Carter ends with very specific policy recommendations, perhaps a more thought-provoking point is the proposition that better hydrocarbon policy may require a "re-articulating and re-engaging with Alberta's diverse political history and culture" (p.176). In Chapter 11, Zalik explains how the state has shirked its responsibilities - namely the responsibility to consult with stakeholders - and passed them on to corporations. Using a comparative approach, she finds that the "merging of public and private interests" (p.375) results in the corporation being understood as part of a greater social good while those opposed are somehow impeding 'sustainable' development. In response, she suggests, "stringent, legally enforceable state monitoring policy... [and] the criminalization of corporate malfeasance, in lieu of the criminalization of protest actions against extractive capital" (pgs.356-357).

Four chapters in the middle of the volume are particularly strong on what might be called a methodological front that examines issues of discourse and representation. In Chapter 6, Adkin and Stares examine hegemonic politics, particularly the discursive response of the Albertan petro-state to increased criticism of its extractive economy. The provincial government has not only seen an institutional reorganization around the needs of the petroleum industry but since about 2008, it has also engaged in political marketing or rebranding of its fossil products as clean and environmentally responsible. This discourse of 'sustainable development' has revolved around posing technology as a solution, the rhetorical minimization of impacts, and the projection of confidence in the state to manage any negative consequences from extraction. However, most interestingly Adkin and Stares identify a hegemonic discourse of "nativist neoliberalism" at work in which the Albertan, settler, and peripheral population are pitted against the machinations of the central Canadian state (p.219). In Chapter 9, Garvin highlights the ways in which the right kind of participants are constructed, and are therefore included or excluded from political participation. Locals increasingly feel that they are being asked to assume higher environmental and health risks associated with sour gas extraction. Meanwhile the benefits accrue at a provincial, national or multinational level. So there is a need - or perhaps a demand - for greater public participation. On the one hand, Garvin argues that the regulatory apparatus, in framing policies of public participation, constructs the right kind of participants allowed into the discussion: as passive receivers of information, as consultants whose concerns need to be heard, and finally as collaborators whose concerns need to be addressed. This is a tentatively hopeful construction. On the other hand, she finds that community members closest to sour gas development express a lack of trust in the government, particularly the urban and national governments, and they agree that greater access to information would be helpful. Yet, they are reticent to criticize, or at least stalwartly resist, the idea of sour gas extraction.

Outside, but not unrelated to state constructions, Davidsen makes the point that environmental problems are "selective observations out of a vast and complex array of multidimensional connections overlaps and dynamic changes" (p.243). This is very true in the mass media age, as media coverage is made as short, simple, polarized, digestible, and spectacular as possible. Furthermore, the ways that environment problems might possibly be confronted are severely limited by the neoliberal capitalist societies in which they are found. Thus, there is need for more mainstream media transparency, critical reflection on the problems faced, and most importantly public, structural literacy. In Chapter 8, using a feminist political ecology lens, O'Shaughnessy and Doğu offer an account of the gendered and racialized subjects involved in a mining boomtown. They outline the hegemonic, frontier masculinity and traditional family values discourse.

Particularly insightful is how they delve into the complex, intersectional, and even contradictory ways that gender and race operate across different scales to produce subjectivities. O'Shaughnessy and Doğu's work reminds us that from "royalty rates to worker shortages and statistics on emissions, barrels produced per day and required pipeline capacity, that it is easy to miss the fact that at the heart of it all are people whose lives are being fundamentally altered as result of oil sands development" (p.263).

Alas, all hope is not lost, and the volume offers substantive accounts of resistance strategies that have proven moderately effective. In Chapter 10, Parlee identifies five strategies for indigenous environmental governance in response to increasingly grave consequences of oil sands development. From the fiduciary commitments of the state to consult with first nations to bilateral and multi-stakeholder agreements, Parlee provides a balanced sketch of inclusion strategies but ultimately finds that Indigenous populations can boast only negligible influence over the development of their traditional lands. However, Parlee is also cautiously optimistic about the prospects of community-based monitoring of the oil-sands and public outreach and advocacy especially internationally. In Chapter 12, Adkin and Courteau examine the controversy surrounding Imperial Oil's attempt to ship Korean mining equipment—the Kearl Module Transportation Project—through Idaho and Montana. They find that Montana's unique resource-based economy, environmental protection in her state constitution, and the intellectualism provided by the University of Montana have all contributed to a healthy and inclusive environmental movement. In Chapter 13, Stendie and Adkin ask

how the decision-making process [related to Enbridge's Northern Gateway Pipeline] implemented by the federal government tells us about the nature of environmental citizenship in Canada today, and how this model of citizenship accommodates, excludes, or otherwise relates to the sovereignty claims of Aboriginal peoples. (p.418)

They find that in this case the duty to consult with Aboriginal peoples was not met (duties are ambiguous under Canadian law, and consultation duties were delegated to Enbridge) and the scope of discussion was narrowed to exclude larger socio-environmental concerns such as climate change and greenhouse gas emissions. They argue that, procedurally, public consultation processes should be capable of incorporating different interests and values. Moreover, insisting on science-based environmental citizenship, while sounding nice, may occlude different risk valuations, and promote faith in technology yet to be invented, or questionable 'scientific' evidence. Here, Stendie and Adkin think philosophically and ask us to consider what may "constitute a good life" (p.444). The authors offer a number of suggestions for moving towards a better deliberative democracy: impartiality procedurally and politically, inclusiveness in participation and scope, free prior informed consultation and consent for Indigenous people, and imagining Alberta without extractive capital.

Finally, we are left with some hope moving forward. In Chapter 4, Quinn et al. offer a spatial landscape change simulation model that allows us to actually "'imagine' or 'see' the long-term consequences of current growth patterns" (p. 115). The black and white visualizations (one wishes they had opted for color) are quite damning especially when combined with their discussion of the energy sector's impact on health, lifestyles, and other extractive sectors like forestry. This mapping approach aims to correct some of the political and institutional failings by suggesting increased attention to the cumulative effects of energy - a balance between government mandates for growth with environmental destruction, and better integration of citizen concerns in its decision-making apparatus. In Chapter 14, Haluza-Delay and Carter examine social movements against Alberta's petro-hegemony and argue that "effectively countering Alberta's petrocapitalism will require rethinking the material processes of production and social reproduction as well as reimagining the cultural foundations and collective identities of Albertans beyond being producers of energy" (p.457). They outline a variety of resistance strategies across scales and interests, and they distil and evaluate some of the major strategic trends, including: looking for external sites of resistance, delegitimizing the hegemony of the oil industry, and uneasiness with regard to the environmental justice framework. Ultimately, they argue that much of the work to be done in terms of resistance to petroleum development is in the cultural realm as much as the material. In Chapter 15, Weis et al. provide a unique contribution to the volume where they examine the current, largely coal-powered electricity system in Alberta and offer an economic projection of energy sources to best meet future energy needs. They forecast an increase in capital and fuel

costs for coal-fired electricity, cheaper infrastructure for renewables, increased liability concerns for larger power plants, and increasing competitiveness of renewable technology, especially if the costs of coal-powered production were to be internalized. As to what determines energy generation, on the one hand the authors note that the deregulated energy market in Albert has opened a space for renewable energy development. On the other, they find there are barriers to this approach as the electricity transmission systems in place are built for large, centralized power plants and favoring coal.

There is hope, however, as the provincial government has taken steps to reduce GHG emissions, the federal government has banned new conventional coal plants without CCS technology, Albertan's concern over energy security is on the rise, and large oil companies recognize an improvement in their reputations with investment in clean energy. Overall, they argue that a transition to more renewable energy sources for electricity generation is possible, even necessary, but will require careful study and planning. In Chapter 16, Adkin and Miller discuss Albertans' growing dissatisfaction with the petro-state governance model and outline some potential inroads to renewable transitions. Drawing largely on public polling data, they note that Albertans are willing to pay more for energy but also unhappy with how resource rents are being spent, they want to increase corporate taxes, they want a higher share of oil rents, and they also want to save and invest rents better. While it will be difficult to battle the behemoth that is the oil and gas industry, the authors posit that "cracks in the foundation of the petro-state model have indeed widened" (p.528).

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