Water management and the procedural turn: norms and transitions in Alberta

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1. Introduction

In 2003, the Canadian province of Alberta adopted *Water for Life: Alberta's Strategy for Sustainability* (Alberta Environment 2003a). Impetus for the strategy came from several directions. In 2001, a severe drought had pushed total licensed withdrawals in southern Alberta past total available water for the first time ever (Alberta Environment 2005). Subsequent studies revealed the 20th century as abnormally wet and exposed the incongruence of Alberta's hydro-climatic history and its supply-side water development path (Sauchyn et al. 2003; Laird et al. 2003; Schindler and Donahue 2006; Shepherd et al. 2010). These challenges were set within the context of Alberta's water laws, which had been designed to facilitate southern irrigation but not for Alberta's large northern energy industry – the Oil Sands – where resource extraction from some of the world's largest reserves of unconventional fossil fuel impact water quality and quantity (Kelly et al. 2009, 2010; Rooney et al. 2012; Kurek et al. 2013). Also significant across Alberta were the on-going struggles of indigenous First Nations for recognition of water rights (Bartlett 1986; Phare 2009).

In this context, *Water for Life* inaugurated Alberta's shift from 'government to governance' through new institutional relationships and the cultivation of new norms, or rules of right conduct. Interestingly, the strategy considers aspects of law, management and policy that the literature on Transition Management (TM) identifies as key understanding changes in

complex socio-technical systems. As such, this paper examines *Water for Life* in light of concerns in TM regarding the role of political and ethical norms (Loorbach 2010; Meadowcroft 2011). The first section of the paper explores what I term the "procedural turn" in water management and the ways that new normative expectations come to characterize issues of fairness and legitimacy. The second examines Alberta's *Water for Life* strategy from 2001-2008, the period in which the strategy was developed, implemented and renewed. Through semi-structured interviews it examines governance transitions under *Water for Life* and the tensions that arise as new procedural norms are made operational.

2. Water management's procedural turn

For several decades there has been a rejection of 'command and control' resource management paradigms due to their mismatch with complex and changing social-ecological systems (i.e. Holling and Meffe 1996). In response, there has been a "procedural turn" where resource management does not seek to secure some predetermined end or good, but to find techniques that fit management aims with decision making formats that reflexively incorporate feedback from multiple stakeholders and from social-ecological systems (Gunderson et al. 2002; Durant et al. 2004). The water sector has similarly favored the design of management institutions that allow for multiple viewpoints, multiple objectives and the capacity to reflexively respond to surprise and uncertainty (Sabatier et al. 2005; Feldman 2007). This procedural turn has a normative dimension due to expectations that democratic institutions should be neutral with respect to the different values and beliefs of constituents (see Sandel 1996). That is, the

expectation is that decision making will take place through procedures that do not intrinsically favor the beliefs – the substantive goods – of any particular group.

A key consideration of the procedural turn is fitting institutional norms to social-ecological systems under conditions where knowledge is positioned and partial (Bromley 2012). A particular challenge for water management is that problems are often ambiguous, with multiple legitimate ways to bridge from positioned and partial understandings to policy rationale (Brugnach et al. 2011). One strategy has been to shift from the exercise of democratic rights (i.e. voting) towards the inclusion of representative discourses that bring multiple perspectives to bear on a particular issue (Dryzek 2000). Within this context, there has likewise been increased attention given to policy discourse (Hajer 1995; Rydin 2003). In the literature on participatory water management, organizing the positioned and partial perspectives of multiple stakeholders is often accomplished in reference to Habermas' theory of communicative rationality (i.e. Pahl-Wostl 2002; Priscoli 2004).

The appeal to Habermas (1984a,b) provides a philosophical basis for the 'procedural turn' by offering a way to preserve a rational basis for water management while recognizing that no single perspective represents all constituents. This is accomplished by focusing on the procedural rules that allow meaningful deliberation to take place. For Habermas (1996), the rules governing communication, together with the ways we come to accept or reject the claims made by others, provide the basis for legitimacy. Sustained treatments of Habermas have been offered as the basis for social learning and adaptive management (i.e. Norton 2005). These emphasize

that legitimacy arises through those affected by decisions reaching consensus, and the design of procedures that allow consensus to be reached without coercion.

Once the procedural turn is conceptualized, a significant challenge in water management is how to approach issues of fairness or coercion in contexts where certain actors hold more political power. Those with legally entrenched water rights, for instance, hold more power than those who do not. Studies by social psychologists suggest that achieving agreement regarding what constitutes "fairness" is possible (Syme and Nancarrow 1996; Syme et al. 1999). But what remains elusive is the transition itself – a way of incorporating new norms and decision criteria, such as those for instream flow requirements (Postel and Richter 2003; Wescoat and White 2003). In this context, the literature on Transition Management (TM) offers an approach to organizing complex social, legal and management systems in ways that allow for the diverse set of values and possibilities held by those affected by resource decisions to become effective contributors in management decisions (Olsson et al. 2006).

TM uses a threefold characterization of multi-level institutions where strategic, tactical and operational scales of decision making have respective (though not isolated) tasks of setting the vision, agenda and experimental goals (Kemp et al. 2007). Sensitivity to cross-scalar dynamics is designed to link TM with a general account of complex systems and to facilitate sustainability by fitting socio-technical systems of governance to complex social-ecological systems (van der Brugge and van Raak 2007; Rotmans and Loorbach 2009). Achieving normative legitimacy is key to TM because how stakeholders frame the problems, processes and solutions affecting socio-technical systems affects the role of knowledge within them

(Meadowcroft, 2007; Loorbach 2010; Smith and Stirling 2010; Voß and Bornemann 2011). In water management, the highly interconnected nature of water across different levels of government, social customs and legal histories further complicates transitions due to the number and nature of participants affected by changes (Pahl-Wostl et al. 2010; Pahl-Wostl et al. 2011). Olsson et al. (2006) point out that complicated scenarios are often aided by "shadow networks," such as civil society partnerships, that have evolved outside of formal arrangements in ways that can provide valuable institutional models, and alternate sources of legitimacy, during transitions.

Despite its promise, Hendricks (2009: 342) argues TM has not been adequately developed with respect to the political aspects of transitions because it has not been "explicitly concerned with 'the political' dimensions of transition processes, and the 'politics' they generate." This distinction between 'the political' and 'politics' draws on Mouffe (2005), who argues that the antagonistic power conflicts found in human societies should be understood as constituting 'the political' while 'politics' should be understood as the practices and institutions through which agreements regarding social order are made within the broader context of conflict. Anecdotally, we can imagine how antagonistic water management conflicts come to characterize the 'politics' of new institutions. For instance, the evolution of prior the appropriation doctrine in the western United States is a case where rights codified community norms to manage conflicts regarding capitalist speculators accumulating water rights (Schorr 2005).

In drawing a distinction between 'the political' and 'politics', Mouffe (2000; 2005) argues that Habermas is mistaken in his assertion that neutral procedures can be found for deliberative democracy. Hendrick's (2009) likewise argues that the multiple spheres of

legitimacy affecting socio-technical systems do not always conform in practice to the sorts of theoretical claims offered by proponents of deliberative democracy. This is because the practice of democracy already depends on political and ethical norms for coordinating decision making and existing power relations that may be contested by certain groups, such as indigenous groups (Espelund 1998; Boelens et al. 2010). In this light, it is therefore critical that different modes of knowledge production or social coordination not be 'integrated' into procedures or paradigms that are unable to accommodate social or political difference (Brugnach and Ingram 2012).

One way to clarify these normative concerns is to explicitly address values. This is the suggestion of a growing literature on water ethics where the aim is to identify the values that already exist in a particular socio-technical system and to reference governance transitions to sources of normative legitimacy, such as those found in religion or law (Butler 2000; West 2007; Chamberlain 2008; Peppard 2014). Schmidt (2010) suggests, following Habermas, that ethical issues in water management arise regarding: (1) claims about personal beliefs or values, (2) claims about facts or states of affairs, and (3) claims regarding correctly ordered social relationships. Priscolli (2000) treats these broad and overlapping concerns by arguing that water ethics should be historically informed in order to gain a sense of realism regarding the norms that have evolved over time as societies and ecological systems mutually interact. This suggests two tasks. One is to identify values supported or oppressed under previous management regimes (Feldman 1995; Whiteley et al. 2008). This helps to situate the conflicts that precipitated management changes (i.e. to explain 'the political' antagonisms). A second considers the existing philosophic approach to conflicts for how it addresses issues of fairness or justice (or does not) within existing socio-technical systems (Tisdell 2003; Feldman 2007). This step

provides a basis for thinking about how previous conflicts shaped the 'politics' of new management regimes.

Considering the procedural turn, an explicit focus on political and ethical norms may help reveal how transitions appeal to existing values while seeking to address the conflicts that prompted management reforms. In this sense, attending to water ethics offers a way to bridge between inherited norms and new institutions by considering how norms act during periods of transition. In so doing, water ethics can identify ways in which new procedures are not designed in a neutral context while also helping to explain on-the-ground attempts at deliberative democracy. Alberta's *Water for Life* strategy has been described as fostering a new water ethic (Alberta Water Council 2007) and as an instance of "watershed democracy" (Bakker 2010). As such, this paper examines what the Alberta case reveals about how policy norms affect transitions in complex socio-technical systems.

3. Watershed management transitions in Alberta

Transitions to watershed management in Canada have not proceeded under a single model (Senecal and Madramootoo 2005). A trend exists, however, towards using the 'watershed' as an administrative unit and as a tool for re-scaling management (Cohen 2012). Alongside the rise of watershed management, several Canadian jurisdictions including Alberta, Quebec, Nova Scotia and the Northwest Territories have crafted water strategies. Alberta's water strategy was developed and implemented with explicit attention to values and to the re-scaling of

management. As such, it offers an opportunity to consider how norms operate in the transitions prompted by conflicts and how they affect the politics of new institutions.

This part of the paper examines the Alberta case in two steps. The first uses a modified content analysis to examine the development, implementation and renewal of Alberta's *Water for Life* strategy from 2001-2008. The analysis follows Bakker's (2004) suggestion that hypothesis-building presents a strategy for linking water reforms to the attitudes, data and political institutions that explain complex, contextually nuanced policy uptake. As such, the content analysis followed Krippendorff's (2004) suggestion that because the researcher always makes contextual judgments conclusions should understood abductively – as inferences to the best explanation (see also Gabbay and Woods 2005). The second reports on interviews (n=25) conducted from 2009-2012 at two levels of Alberta's new multi-level water governance system: the provincial Alberta Water Council and regional Watershed Planning and Advisory Councils (WPACs).

The rationale for conducting interviews over several years is that WPACs were established at different times across Alberta and an attempt was made to conduct interviews during the construction of "state of the watershed" reports, which represent the first opportunity to assess 'politics' after Alberta's procedural turn. Following Baxter and Eyles (1997), rigour was established by purposively sampling for knowledgeable members of Alberta's water governance system and iterative reflection on the judgments of the researcher. The positioned, non-neutral perspectives of both interviewees and the interviewer present a perennial challenge in interview analysis (Rose 1997; Law 2004; Kvale and Brinkmann 2009). And to help situate

each, both the claims of interviewees and the interpretation of results were triangulated wherever possible against grey literature, the minutes of legislative debates and scientific studies (for full methodological details see Schmidt 2012). A semi-structured interview format was used to assess common themes across all WPACs, such as models of achieving consensus. On these, saturation was reached as the procedural dimensions of WPACs were often, as shown below, part of an existing institutional network. On other themes, however, there were divergent findings on how procedures should be applied to specific contexts and constituencies. From these, no attempt is made to generalize. Quotations were chosen to illustrate the challenges of transitioning socio-technical systems.

3.1 Alberta's water policy context

Alberta's recent water management reforms followed immediately upon a conflict in the 1980s regarding the construction of the Oldman Dam. The conflict galvanized a coalition of activists, scientists and landowners and drew into its ambit long-standing tensions between Alberta, Canada's federal government and indigenous First Nations (Glenn 1999). Several historical reasons explain why the conflict took shape as it did. One was legal. In this regard, water allocations were licensed through a 'first in time – first in right' system of prior appropriation first set in place in 1894 under the *North-west Irrigation Act* and which persisted under Alberta's 1931 *Water Resources Act* (Percy, 1977). The original aim of the NIA was to maximize water's utility with a single substantive good in mind: enhancing national welfare, or what the NIA's key architect William Pearce (1891) described as the best interest of the community. This "community" did not extend to First Nations, who are not mentioned in the

NIA and have never had water rights formally recognized in Alberta (Matsui 2009; Phare 2009). Complicating this further is that, while Alberta holds constitutional control over water, the responsibility to negotiate with First Nations lies within federal jurisdiction (Bartlett 1986).

A second dimension of the Oldman Dam conflict was tied to the sort of management regime that had evolved to enhance the national interest. Originally, Alberta's water allocation licenses were granted appurtenant to the lands and uses identified in the original application and this curtailed the ease with which they could be transferred to new areas of demand (Percy 1986). Over the 20th century, regulatory piecework did create some ad hoc room for increasing water availability (Percy 1996) but, in the main, demand was met through supply-side increases to water availability (see Armstrong et al., 2009). Supply-side management required federal funding for water infrastructure projects and this created tension as the Alberta sought increased provincial control over decision making (Marchildon 2009). One other piece of regulatory work was the creation of "Instream Objectives" that put limits on water allocation to ensure the demands of licensed water users would be met. Instream Objectives were not, however, referenced to environmental criteria (Alberta Environment 2005). As a result, when Alberta gained full control over infrastructure in the 1970s and, coincidentally, when irrigation rapidly expanded it did so in tension with growing environmental awareness and the emergence of environmental law in Canada and Alberta (see AIPA 2002; Wood et al. 2010).

In this context, the Oldman Dam can be seen as the last in a series of supply-side water management solutions in Alberta. Without detailing the intricacies of the conflict itself with respect to Supreme Court decisions regarding the lack of environmental assessments, the politics

of federal-provincial relations or negotiations regarding First Nations rights (see Glenn 1999), one of the main outcomes of the conflict was that Alberta immediately embarked on water management consultations in the early 1990s. After public consultations and in response to the pressure of coalitions formed during the Oldman Dam controversy, the government passed the 1996 *Water Act*, which came in to force in 1999 and created the possibility for regional watershed management plans and a provincial water strategy (Heinmiller 2013). Shortly thereafter, consultations began for what became *Water for Life: Alberta's strategy for sustainability*.

3.2 *Water for Life:* 2001-2008

Alberta's *Water for Life* strategy promoted a procedural turn in line with several aspects of Transition Management. The first stage of *Water for Life* was the formation of an 'Ideas Group' of key stakeholders that met in 2001 and positioned Alberta's nascent strategy in reference to "systems thinking," stating that governance "[r]esults are affected by feedback in the system (i.e. people learn about other options and try to use them; people adapt more efficiently if they learn about changes in the system as people respond to the options available)" (McMillan 2001: 2). According to the Ideas Group, a systems approach would link four governance pillars in a non-hierarchical strategy: the environment, human water uses, knowledge and a sustainable economy. Procedurally, "[t]he Ideas Group imagined a possible world in which water management is largely undertaken through an open management system..." where the government transitions from management to "setting the rules" (McMillan 2001: 5).

Public consultation on *Water for Life* was held in spring of 2002, after which the government hosted a Ministerial Forum that convened a larger group of stakeholders and experts. Participants at the forum were divided into working groups to address: "water conservation, water quality, drinking water, aquatic ecosystems, water supply, water and its role in the economy, or governance" (McMillan 2002b: 1). The water conservation team first referenced the idea of creating a 'water ethic' by noting that, "the provincial government must challenge Albertans and user sectors to establish and implement a water conservation ethic…as one element of a sustainable water strategy" (McMillan 2002b: 11). Across working groups, participants emphasized watersheds as the appropriate management scale (McMillan 2002b). Additionally, a four-fold governance structure was proposed, including: a Provincial Authority integrated with the government, policy advisory boards at the provincial and watershed levels and, finally, Water Basin Authorities "empowered to make decisions and oversee implementation of water management" (McMillan 2002b: 21).

In March 2003, Alberta Environment (2003b) circulated its draft *Water for Life* strategy. The governance structure, however, was not that suggested by the Ministerial Forum. The source of the new structure is not stated but in it all regulatory authority remains with the government and a three-tier system was created, comprised of: a provincial advisory board (the Alberta Water Council), regional watershed planning and advisory councils (WPACs), and community-based water stewardship groups. This governance structure mirrors the division of labor identified in Transition Management, with the Alberta Water Council focusing on strategies and visioning, WPACs focused on tactics and planning, and local stewardship groups targeting operations.

The final version of *Water for Life* was published in November 2003. The strategy maintained a non-regulatory nature and trimmed the four governance pillars of the Ideas Group to three by excluding "knowledge" – which was originally defined as what is "…needed to make wise choices about water" (McMillan 2001: 2). The three remaining pillars – aquatic ecosystem health, safe and secure drinking water, and a sustainable economy – are introduced in *Water for Life* as critical for Alberta's transition away from a supply-side era to one in which "population growth, droughts and agricultural and industrial development are increasing demand and pressure on the province's water supplies, and the risk to the health and well-being of Albertans, our economy and our aquatic ecosystems" (Alberta Environment 2003a: 5).

Since *Water for Life* was adopted, the Alberta Water Council has been charged with its assessment and renewal. The council was initially envisioned as an expert panel, but as its 24-member constituency has evolved, it is now seen as a window into provincial-level stakeholder concerns (personal interview 1). The Council's renewal documents attempt to bridge stakeholder differences through appeals to norms and the idea of fostering a new 'water ethic'. For instance,

- "The Alberta Water Council believes the *Water for Life* strategy creates the possibility for a new water ethic in Alberta—one based on conservation, sound science and shared responsibility for watershed management planning" (Alberta Water Council 2007: 1).

More recently, the Alberta Water Council (2008a: 15) stated that a key direction for Alberta was that: "All sectors understand how their behaviours impact water quality, quantity and the health

of aquatic ecosystems, adopt a 'water conservation ethic' and take action." In a content analysis of the documents leading up to *Water for Life* and following upon it, three normative elements were identified as central to fostering this ethic: (1) conservation, (2) sound science, and (3) shared governance. These fit well with the notion that procedural norms linking water management and ethics involve: (1) claims based on experience, (2) claims regarding facts, or states of affairs, and (3) claims regarding correctly ordered social relationships (Schmidt 2010). Each is considered in turn below.

In terms of conservation, phrases like 'wise use' or 'wise choices' are used in all the analyzed policy documents from 2001-2008. This way of characterizing conservation hearkens back to the 'wise use' movement of the early 20th century and is employed to balance current and future demands with the experiential wisdom of Alberta's water management stakeholders. In this way, even though *Water for Life* removed 'knowledge' as a governance pillar for 'wise decision making', there is an emphasis on the experience and understanding of those affected by decisions. For instance, *Water for Life* charges governance partners with the responsibility for "the wise management of Alberta's water quantity and quality for the benefit of Albertans now and in the future" as well as stating that "citizens, communities, industries and governments all share responsibility for the wise use and sustainability of their watersheds" (Alberta Environment 2003a).

In terms of sound science, Alberta's new water ethic is characterized by a changing perspective towards how to incorporate facts, or states of affairs, into 'state of the basin' reports. These reports are the first task WPACs undertake and are designed to provide a 'snapshot' of

watershed health and to reflect concerns regarding water quality, quantity and social demands. Interestingly, the content analysis revealed that the difficulty of assembling or adjudicating amongst different types of data was not explicitly recognized during the design or approval of *Water for Life*. Soon after, however, the difficulty of assessing and monitoring diverse types of data is identified (Alberta Water Council 2007). This recognition of complexity recurs in all subsequent policy documents.

In terms of governance partnerships, the Alberta Water Council (2008b) began an analysis of the "policy gap" that arose as the "number and sophistication of *Water for Life* partnerships has increased, and an already-complex system of multiple stakeholders operating in a multi-jurisdictional environment has become more complicated." This growing recognition of complexity can be seen in tandem with how multiple stakeholders at various scales began to interpret the procedural norms of *Water for Life*. And it became particularly problematic, according to the Council (2008a), because these new "…organizations, their relationships to one another, and how they would function existed only on paper." As shown below, however, this a-political context for partnerships did not reflect the reality on the ground.

Before considering how management transitions were effected in Alberta, we might ask why there was such an emphasis on a new water ethic. One explanation is Alberta's informal governance structure required sources of legitimacy outside of regulatory authority. In this sense, an emphasis on norms explicitly links Alberta's water management heritage with the challenge of finding procedures that can incorporate a diverse constituency of stakeholders. If we applied Mouffe's (2005) partitioning of 'the political' from 'politics' we might characterize Alberta's

focus on conservation, sound science and partnerships as one where the 'politics' of discourse reflect an attempt to manage water in the broader context of conflicts after the Oldman Dam (i.e. 'the political'). Whether this procedural turn effectively addresses conflicts is explored next.

3.3 Multi-level watershed governance in Alberta

As Olsson et al. (2006) argue, 'shadow networks' operating outside of formal arrangements can be key to the successful management of transitions. This was the case in Alberta, where civil society groups had, prior to *Water for Life*, formed watershed alliances and river-keeping groups to advocate for improved water stewardship. Many of these began in the 1990s in response to the Oldman Dam controversy (personal interview 2). Interestingly, these existing networks were targeted as the primary groups for forming regional WPACs. In fact, the Bow River Council in southern Alberta became the model for WPACs under *Water for Life* (personal interview 2). Contrary to the Alberta Water Council's (2008a) claim then, how partnerships might function did not exist "only on paper." Rather, civil society groups brought alternate networks, partnerships and practices with them. This section reports on interviews with individuals involved with WPACs and the Alberta Water Council. Due to the small nature of Alberta's water community and conditions of confidentiality, respondents are not identified. The analysis builds on the above themes: conservation, sound science, and governance partnerships.

3.3.1 Conservation

The ability to balance Alberta's water history and future challenges characterizes wise-use conservation. On the ground, interviewees contextualized this challenge through an appreciation of existing water use practices, acknowledgment of existing rights, the need for public education, and the shifts required to manage at a watershed scale. Several interviewees reflected on these demands through a combination of ambivalence towards the constraints of existing norms tempered by a sense of goodwill. Across all WPACs and the Alberta Water Council the model of decision making was by consensus. Interviewees noted that consensus was typically achieved, but also that many contentious issues remained to be decided upon after the "state of the basin" report was complete and an integrated management plan was being devised. In terms of representation, many participants at both the WPAC level and with the Alberta Water Council are paid to participate as stakeholders by various government agencies or private firms and these have a greater capacity for participation than less well-funded or geographically distant stakeholders.

As suggested in the introduction, one of Alberta's water challenges is growing awareness that water availability in the 20th century was atypical. With regard to conservation and conditions of climate uncertainty, respondents had two main concerns. First, assessing climate risks to future water supplies produced too much uncertainty. Several interviewees expressed concern that more needed to be done in terms of increasing adaptive capacity in view of likely climate changes, but that broad scale uncertainty led to reduced policy advice and increased difficulty of finding consensus. As one participant stated,

> "We get questions about climate change and so on. And we, more or less, don't really know what to do there…If somebody can tell you that the river flow was going to be down by 20% in 20 years, 40% in 40 years, then you could do something for it." (Personal interview 3).

The difficulties of addressing large-scale uncertainties had an interesting effect of consolidating efforts to find consensus to actionable items, such as the need to address issues of over-allocated waters, public education and so forth. But interviewees did not appeal to localism and most respondents recognized their position in much larger complex systems. Rather, the opportunity for action on climate would depend, as it always had, on finding ways of sharing water in communities and finding ways to work with or around formal government policy.

3.3.2 *Sound Science*

The first task of all WPACs is to conduct a 'state of the basin' report. In regions where civil society groups previously existed, this process was undertaken more quickly because organizational capacity was already in place. Typically, the task of drafting the report across both organizationally mature and newly created WPACs was contracted out to consultants, with interviewees noting that routinely using consultants produced biases: "[w]hen you're a hammer, every problem looks like a nail. So when you're an oil and gas, a strong oil and gas consultant, you tend to go to what you know" (personal interview 4). Nevertheless, "most members defer to the technical experts as to what was needed to really show the health of the watershed" (personal

interview 5). More broadly, interviewees across the province remarked on challenges of grounding 'state of the basin' reports in sound science:

> "I mean, some data exists, but what you really need are 20 parallel river systems, in which you manipulate them in various ways by manipulating flow and seeing what the environmental impacts are. Well, that simply can't be done. So we need to get at important things in other ways." (personal interview 6)

> "With the suite of indicators that we actually require to actually do an assessment of the condition [of the watershed], we need 33 indicators looked at across all sub-watersheds. And at this point we have data for 11 of them, and of those 11 only 4 can we actually do comparative work across all sub-watersheds." (personal interview 7)

As one interviewee remarked, 'state of the basin' reports are really reports on the current state of knowledge, not an empirical 'snapshot' of the watershed *per se*. And it is noteworthy that no WPACs had the capacity to commission new studies for assembling state of the watershed reports. This produced variance regarding the integration of data coming from multiple sources, sometimes from several years (or decades) prior and often not targeted to systemic concerns but rather to specific questions, such as those regarding sport fisheries. As a result, some stakeholders noted that data for important contemporary questions, such as the impact of new technologies on aquatic health, were missing. In this regard, the claims about states of affairs were not free from normative content regarding what data should be used. This issue was also apparent in issues of how partnerships affected the tasks undertaken by WPACs.

3.3.3 Partnerships

The role of partnerships was the most contentious. As mentioned above, civil society groups had previously formed networks and these included partnerships with municipalities, fish and game organizations, NGOs, forestry, industry and agricultural groups. As such, when these networks became part of Alberta's WPAC system it was not a single organization that was transitioning, but an entire network of relationships. In some cases, existing partners backed out entirely or significantly reduced their contributions due to the new role of the government. This created a critical issue regarding how WPACs were funded. At first, government funds were provided in the form of grants and essentially replaced any lost network support with few conditions. But, more recently, they have shifted to a contract basis. As interviewees put it,

> "…we are resistant to that because contracts have confidentiality agreements, and so on and so forth. And we don't want our hands tied like that. If we detect a problem in the watershed, we want to talk about that problem in the watershed, and we don't want any kind of political pressure on us to say, 'Oh, we just want to hush that up right now,' or 'We're not ready to talk about that.' Unfortunately, those political things can happen, and we don't want any part of that type of thing." (Personal interview 6)

> "I think that the percentage of funding we get from the province really, really drives what we do…we should be thinking about being independent because in some sense if we're

just a contract deliverer for the province, that's not a tremendous reason for existing" (Personal Interview 8).

Concerns over the funding model were also of concern for the creation of new partnerships. In particular, a challenge across Alberta is the participation of indigenous First Nations. And while a full account of the reasons and history behind this is beyond the scope of this paper, numerous respondents suggested that the lack of participation could be due to: the legal status of First Nations, issues of capacity or those of trust. Others, however, identified the contractual basis of funding as a barrier because of the condition that all knowledge would become the intellectual property of the government. For several First Nations, this preempted participation because it would make Traditional Ecological Knowledge government property (personal interview 7).

Contract clauses were not the only concerns at play. Another involved the coordination of the multi-level governance system itself. In this sense, the informal governance regime was created without clear linkages (even on paper) between different scales of decision making at the provincial, watershed, or community level. Several participants noted that, apart from one stakeholder seat on the Alberta Water Council, there are no formal mechanisms for knowledge exchange or for linking policy advice to across scales WPACs. This meant Alberta's new management system was not initially coordinated, although a number of WPAC summits have been organized to share learning experiences. This lack of coordination also existed between WPACs and local Watershed Stewardship Groups because no formal arrangements or guidelines

were in place for integrating the "information they [Watershed Stewardship Groups] generate or where it goes to or who owns it or whatever" (Personal Interview 3).

3.4 Case-study Conclusion

Changes to water management in Alberta emerged within a context of conflict – 'the political' – and created new institutional orders – 'politics' – that turned towards procedural techniques for generating normative legitimacy. In this way, Alberta's *Water for Life* strategy appealed to aspects of both deliberative democracy and transition management, including decentralized, stakeholder driven models of watershed planning and the creation of multi-level governance structures. This suite of reforms was explicitly positioned in normative terms. At both the policy and practical level, the fostering of a new 'water ethic' can be seen as an interesting policy bridge between the idealized conditions of reaching consensus found in deliberative democracy and the role of existing power relations and conflicts that affect water management decisions. Before considering these theoretical implications, two conclusions might be drawn from the Alberta case.

First, while *Water for Life* aims to coordinate stakeholders beyond just water license holders and encourages participation from multiple sectors, these efforts are removed from direct regulatory influence. This implies that *Water for Life* must rely on the normative force of better arguments for policy influence. This has two consequences. First, that arguments – themselves developed in reference to conservation, sound science and agreeable partnerships – must be taken seriously by decision makers in the Alberta government. Second, actors who choose to

remain outside of *Water for Life*, perhaps because they hold substantive goods that do not properly reduce to the procedural norms of deliberative practices, are left in an ambiguous position with respect to participating in watershed management decisions that may affect them. For instance, First Nations who chose not to participate (i.e. for reasons related to the conditions of funding contracts) do not have a clear channel for communicating their concerns. On the other hand, there is a possibility that powerful actors may bi-pass the management structure of *Water for Life* and seek direct influence on government decision makers.

Second, Alberta's *Water for Life* strategy was explicitly modeled on networks and partnerships that emerged from civil society. Yet this context was not explicitly acknowledged in the discourse or design of new management institutions. This became an important issue for WPACs. In this regard, the funding shift from grants to contracts, coupled with the withdrawal of previous civil society partnerships as the result of new government relations, had the effect of weakening the position of civil society as WPACs came to have a dependent relationship on the government. In this way, the political economy of new management institutions became an important factor in management transitions, but this issue received no attention in the design, appraisal or renewal of *Water for Life*. This has affected both the independence of WPACs vis-à-vis the perceived security of their funding and on the ability to incorporate knowledge from First Nations.

4. The procedural turn: broader lessons

One of the key reasons for effecting the 'procedural turn' has been the rejection of 'command and control' resources management. And, in principle, fair procedures should ensure fair outcomes. In practice, however, the authority to implement decisions must back up procedural mechanisms. As such, procedures used to manage transitions in any particular socio-technical system are set within a broader context – within the political – and this influences how procedures negotiate existing power relationships. This troubles theoretical appeals to neutrality. For instance, Canada's First Nations hold unique legal standing by virtue of various treaties and aboriginal rights and title associated with the fact that did not cede sovereignty to the Canadian state. As such, the requirement for them to articulate claims through procedures backstopped by the authority of the Canadian state does not fit with notions of fairness that respect their rights to alternate systems of resource management or self-governance (Tully 1995). Interestingly, recent court decisions in New Zealand allow for different legal traditions to operate between indigenous peoples and the state, albeit in limited fashion (Strang 2014).

Existing political practices compromise the claimed neutrality of the procedural turn since it requires those contesting existing practices to conform to the procedures set out by those with political power as a condition of participation. Here, Schmidt's (2010) claim that water ethics are about disagreements over beliefs, states of affairs or correctly ordered social relationships must be expanded to include the rules governing legitimacy. At the same time, and to consider Hendricks (2009) deployment of 'the political' and 'politics', transitions in water management do not reduce to issues of power alone. The Alberta case reveals that we cannot universalize the 'conflictual society' theorized by Mouffe (2005) because, even if water management reforms are catalyzed by conflict, it is not the case that resolving conflict is the *only*

consideration of water management reforms. The creation of "state of the watershed" reports, for instance, can be seen as an effort to establish a baseline for decision making irrespective of political differences and even to prevent conflicts – with the caveat that this process is not free of choices about knowledge sources. So Hendricks' proposal helps in understanding how transitions are affected by conflict but considerations might still be made for seeing transitions in cooperative terms.

Finally, theoretical and political considerations of transition management are routinely referenced to the need for reflexive responses to feedback from multiple sources affecting socio-technical systems (Meadowcroft 2009, Loorbach 2010). In normative terms, however, reflexivity is necessary but not sufficient. In this sense, the choice to pursue procedural governance techniques should be recognized as the political choice of a particular policy community (Kysar 2010). In normative terms, then, reflexivity should be complemented with reflective judgments regarding policy objectives and management ends and how they issue from the norms and categories of particular groups. For instance, instead or alongside of Alberta's procedural turn, space could have been made to revisit or expand who counts as part of the "community" in order to replace narrow notions of the 'national interest' with sensibilities tuned to ecological considerations and indigenous rights. Here, questions arise regarding how to organize water management in ways that does not require conformance to procedural norms as a condition of participation. And this points to the need for transition management to undertake research on how multiple systems of praxis can be coordinated. This is a complementary goal, but also one that recognizes how the 'procedural turn' can further entrench inequities if the existing practices of democratic institutions insufficiently address inequity.

Acknowledgements

This work was supported by the Trudeau Foundation and the Social Sciences and Humanities Research Council of Canada.

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