



Negotiating hydro-scales, forging states: Comparison of the upper Tigris/Euphrates and Jordan River basins

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A B S T R A C T

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In this comparative study of two water basins in the Middle East, we examine the hydro-political construction of scale as central to state and nation building, and their territorial consolidation. We argue that scalar negotiations and constructions of freshwater became central to the very consolidation of both Turkey and Israel. The examples we offer also illustrate the usefulness of a performative approach to scale, benefiting from but moving beyond a politics of scale approach. The comparative focus on hydro-scalar politics and performativities in relation to state and nation building offered a) lends to an enriched understanding of water politics in these two contested river basins, b) enables fuller understanding of how water becomes central to the processes by which nations, states, and territories are consolidated in this region, and c) contributes to recent debates in political geography by demonstrating the value of scalar and performative approaches. Underscoring these linkages, the analysis differs from many works on water in the Middle East, contributes to studies of state and nation building as contested processes, and avoids the assumption of state or national scales as ontological pre-givens.

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Introduction: water scales and critical hydro-politics

In justifying Turkish state led damming and development of the Tigris and Euphrates rivers in Upper Mesopotamia, planners are quick to note that the twin rivers represent over one quarter of Turkey's freshwater resources and a similar percentage of Turkey's hydroelectric potential. During the first decade of the Israeli state, 1948–1959, water experts strongly disagreed over the estimates of water potential and the most appropriate institutional and technical apparatuses to utilize that potential (Alatout, 2007b, 2008a, 2008b). To date, many investigations of water politics or state building in the Middle East have largely ignored the tight link, implicit in both cases, between hydro-politics, technical and political constructions of scale, and state and nation building. Here, we extend insights from other studies (e.g., Giglioli & Swyngedouw, 2008 for Sicily; Swyngedouw, 1999 for Spain) by investigating these linkages in two Middle Eastern contexts. Drawing on the contemporary example of Turkey and the historical example of Israel, we find that the scalar and technical constructions of hydrologic geographies have been

enrolled in the service of defining and consolidating the national–territorial spaces of both Turkey and Israel, as well as in supporting state-building projects—understood as the construction of an administrative framework that lays claim to those territories.

Conceptually, we argue that a scalar perspective is crucial to debates about water resources (consistent with earlier work by Alatout, 2008a; Feitelson & Fishhendler, 2009; Harris, 2002; Sneddon & Fox, 2006; Sneddon, Harris, Dimitrov, & Özsmi, 2002; Swyngedouw, 1999). We also push this further to show that attention to scalar constructions of water, in particular, is crucial to understand processes related to state and nation building, be those contemporary or historical (Swyngedouw, 1999; see also the call in Kuus & Agnew, 2008 to examine states as processes, rather than as pre-existing entities).

Toward this end, we find that analytics offered by recent discussions on the performativities of scale (Kaiser & Nikiforova, 2008) are particularly fruitful. While sharing many elements of politics of scale approaches, performative approaches place emphasis on the iterative and contested dynamics of scalar constructions. Performative approaches also emphasize the maintenance of scalar notions through focus on the necessity of iterative citation to lend the *appearance* of scalar fixity. The performative analytic also leaves open the possibility for shifts of constructions over time and in response to particular contestations.

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We begin by providing a brief conceptual discussion of the politics and performativities of scale in relation to broader debates in geography. We then use this framework to explore hydro-geographies of Turkey and Israel. There are numerous reasons why the comparison between the contemporary example of Turkey and the historic example of Israel is compelling and informative. Most importantly, a focus on scalar hydro-politics is central in both cases for the consolidation and maintenance of strong, centralized states. Further, while the literature on water politics in the region is vast, only a handful of scholars have made explicit connections between scalar constructions of water, state building, and territorial consolidation (Alatout, 2008a; Feitelson & Fishhendler, 2009; Harris, 2002). We conclude by synthesizing major themes of the paper and underscoring the mutual constitution of techno-political processes, hydrologic scalar constructions, and geopolitical considerations (Alatout, 2008b; McCarthy, 2005; Sneddon & Fox, 2006; Swyngedouw, 1999).

Politics and performativities of scale

There has been a flurry of debate in recent years on the value of scalar analytics for understanding socio-natural processes (Kaiser & Nikiforova, 2008; Leitner, Sheppard, & Sziarto, 2008; Moore, 2008). Marston, Jones, and Woodward (2005) suggest that it might be better to abandon 'scale' altogether given key ambiguities and conceptual traps associated with the term (e.g., hierarchical understandings). While we find such cautions useful, we defer to several thoughtful responses to their work (Kaiser & Nikiforova, 2008; Leitner & Miller, 2007), and argue that continuing attention to scalar processes, discourses, and practices is crucial for understanding socio-political and nature–society relations (see also Boyle, 2002; Neumann, 2009; Paasi, 2004). Among those demonstrating the usefulness of these approaches, some have emphasized the political construction of scale, i.e., the ways scales are framed, consolidated, and invoked for political ends (Delaney & Leitner, 1997; Swyngedouw, 1999). Others have analyzed 'scale frames' and 'scalar narratives' invoked by certain actors or encoded in laws and institutions (Alatout, 2007a; González, 2006; Kurtz, 2003; McCarthy, 2005; Taylor & Buttel, 1992). With attention to scale, a range of interesting questions are brought to the fore: How and why are certain 'scales' invoked in relation to political discourses, and what influence might this have? What does framing an issue as a 'local', 'regional', 'national', or 'global' concern mean for enabling or curtailing potential responses? Or, how might activists seek to strategically deploy notions of 'global human rights', 'global environmental responsibility', or other scalar constructions to push a particular agenda? Scholars have also asked how and why certain 'scales' are constructed in relation to different political-economic projects (e.g., 'local knowledges' in the case of indigenous rights, or devolution trajectories vis-à-vis neoliberalism)? One of the important insights that emerge from this literature is that scales themselves should not be understood as pre-given, but rather as the outcomes of, or as constituted through, discourse and practice.

In studies focused on nature–society relations, several contributions have highlighted scale as key to contextualizing recent socio-natural and institutional shifts (Mansfield, 2001; McCarthy, 2005; Neumann, 2009). Among them, Boyle (2002) suggests that the scaling of environmental governance makes a difference for the kinds of transformations of nature that are possible. Drawing on the case of waste governance in Ireland, he argues that ecological projects are both produced by, and implicated in, the structuration of scale. Together with Neumann (2009) these authors argue for closer engagement between political ecology and scale discussions in geography. For Boyle, this opens up a host of interesting issues for analysis, including power discussions in terms of who is able to define the scalar scaffolding against which solutions to ecological

problems are framed, or in terms of how scale might be central to supporting or limiting particular political-economic accumulation strategies. Neumann (2009) identifies still other themes to advance a political ecology of scale, including the possibility of more focused attention on the state, and its ability to recalibrate scales, particularly to consolidate authority. These are precisely the types of questions we take up here, with the specific aim to illustrate, and understand, linkages between hydro-politics, scale, and state and nation building in our two case studies.

While our analysis is consistent with the politics of scale approaches, we also wish to push these discussions further by engaging recent literature on 'performativities of scale' as outlined by Kaiser and Nikiforova (2008). These authors argue that we need to be *attentive to the iterative processes and practices through which scales become (seemingly) fixed and naturalized, and to what effects*. As they write,

"The performativity of scale focuses attention not on the production of scales and scalar hierarchies as end products of social construction, but on 'the reiterative and citational practices by which discourse produces the effect' of scale. Instead of treating scales as things in the world that (inter)act ... performativity approaches (seek to understand) scale as a naturalized way of seeing the world, and *explore the enacted discourses that over time work to produce 'scale effects'* (543, emphasis added)"

The approach is thus responsive to Marston et al.'s (2005) critique that some works on scale are problematic to the extent that scales are taken as fixed, pre-given, or hierarchical. Indeed the challenge of a performative approach is precisely to analyze the very practices by which scales *seemingly* become fixed or naturalized. Responding directly to Marston et al. (2005), Kaiser and Nikiforova (2008) argue to write 'scale' out of the geography and social science lexicon would work precisely to hide the processes, discourses, and practices through which scales are constructed, thus obscuring important power dynamics that rely on 'scale effects' (see also Jonas, 2006; Leitner & Miller, 2007).

With a performative approach to scale, a key question becomes: What are the iterative and citational discourses and practices that work to stabilize particular scalar categories and what are the effects of these materializations over time? This approach thus differs slightly from other constructivist approaches in that we are not interested in excavating an originary moment of scale construction, but underscoring the iterative practices that are necessary to maintain particular scalar effects (cf. González, 2006). Further, a performative approach accentuates the possibility that scalar discourses and practices necessarily shift (with citationality, meaning is constantly shifting even when producing sedimented understandings).

Before turning to the case studies, it is worth mentioning that several previous studies have highlighted political constructions of scale in relation to water resources (Alatout, 2008a, 2008b; Bakker, 2003; Biro, 2007; Harris, 2002; Sneddon, 2003; Swyngedouw, 1999). These works have collectively made the case that scalar practices are central to understanding water resources and hydro-geographies. Indeed, Sneddon and Fox (2006) argue that a scalar focus is foundational to a critical hydro-politics. Other key contributions include that offered by Swyngedouw (1999) on shifting scales of water governance in relation to Spanish state and nation building, or that offered by Biro (2007) with interest in exploring the effects of naturalizing particular scales of water issues (e.g., what does it mean to speak of a global water crisis, or to naturalize local scales of governance?). Consistent with studies of this type and politics of scale approaches we ask: What are the political effects of techno-scientific or policy constructions of scale in relation to water resource issues in the Tigris–Euphrates and Jordan basins, both contemporary and historical? How do states or other actors

strategically invoke certain notions of scale to further particular agendas? Extending the analysis through a performative approach we also attend to other key issues: How is it that scales themselves are produced as ‘scale effects’ through these iterative invocations and deployments? And, how might attention to shifting and iterative scalar constructions of water geographies enable new insights related to state and nation building processes in the Middle East or elsewhere? We now turn to the Turkish and Israeli case studies.

Upper Tigris–Euphrates basin, Turkey

‘To mitigate the effects of the GAP project¹ on downstream countries, Turkey has proposed to Syria and Iraq a joint study of the utilization of the waters of the Euphrates–Tigris basin, taken as a whole, arguing that with proper management there should be enough water for everyone. This proposal has been turned down, as the two Arab states claim a right to a major share in this Turkish resource.’

(Mango, 2001: 197, emphasis added)

One can readily find quotes such as the one above throughout the literature on water in the Middle East, and with respect to the Tigris and Euphrates rivers specifically. This quote is notable for a few reasons. Andrew Mango informs the reader that Turkey has offered options to its downstream neighbors and had the Turkish proposal been accepted, there would be enough water for everyone. Regrettably, Turkey has been turned down. More important for our analysis, his choice of language pits Turkey against Arab states downstream (the binary Turk–Arab is established). Perhaps most critical, the waters are firmly cast in this quote as *Turkish*, minimizing claims to the waters from Syria and Iraq. Even as Mango represents an academic voice, this quote nonetheless offers a clear example of the political and nationalist constructions of scale in relation to water geographies in the basin. With examples of this type, the waters are read through particular constructions of nation, state, and territory—at once deemphasizing alternative constructions (e.g., of a resource shared by all co-riparians). Throughout this section, we draw on similar discourses of state planners, politicians, and academics to unpack the effects of common hydro-scalar politics and performativities.

Techno-political consolidation of the Turkish nation, state, and territory

Previous work on the Tigris–Euphrates basin has emphasized that attention to multiple scales of analysis adds a degree of complexity to ongoing debates on both river development and ‘water and conflict’ (Harris, 2002). For instance, much of the discussion of costs and benefits of water development projects such as the GAP in southeastern Turkey focuses solely on the ‘national’ scale, inevitably obscuring other key dynamics (local, regional, etc.) that are also crucial for such assessments. If one considers reduced quantity and quality of water flows in the rivers at the basin-wide scale (including outcomes in downstream Syria and Iraq), for instance, a very different sense of the outcomes associated with ongoing water diversion and damming efforts comes to light. Similarly, highlighting more local scales and dynamics might bring attention to histories of conflict related to the Kurdish issue, as GAP is occurring in a region that has also been a locus of violence and concerns related to Kurdish cultural rights (Harris, 2002, 2008; Öktem, 2005). With these sorts of illustrations, it has been argued that we need to be attentive to multiple temporal and spatial scales in analysis of changing water uses and conditions. For debates related to ‘water and conflict’ in particular, a multi-scalar perspective exposes weaknesses of over-focus on state or national

scales, often hiding other key intra-state, or regional processes (Harris, 2002; Sneddon & Fox, 2006).

The point that is only implicit in these works, and that is emphasized here, is that it is also imperative to analyze the ways that particular hydro-scalar constructions are deployed for particular political ends (politics of scale), and serve to consolidate the very ideas of state, nation, and territory (performativities of scale). In addition to ways these elements are suggested by the Mango quote above, consider that figures offered by the GAP Regional Development Administration (GAP-RDA) related to the need to develop the basin, such as: Tigris–Euphrates waters represent 28% of Turkey’s freshwater potential, 25% of Turkey’s hydroelectric potential, and 90% of Euphrates river water originates in Turkey (e.g., Bilen, 2000; Ünver, 1997). These technical ‘facts’ about water geography are frequently presented in such a way that they appear to be apolitical and indisputable, based on (objective) science. However, invoking these types of statistics at once serves to cite, and reify, the ‘national’ scale (taken as the indisputable scale for hydrologic assessments, water potential, or cost–benefit analyses), the legitimacy of Turkish territory (despite overt challenges to such), and the Turkish state itself as the appropriate entity to ‘develop’ the rivers. The Turkish state is positioned as having the ability to provide such statistics, and is also implicitly situated as the ‘natural’ unit to carry out any needed alteration of the rivers. Such invocations are significant; especially when we consider that the southeast of Turkey where the rivers originate is also a majority Kurdish-speaking region, and the seat of decades-long Kurdish separatist movement.

Naturalness of a conjoint basin?

As another example of the ‘politics of scale’ of the Tigris and Euphrates rivers, many scholarly and government documents highlight that it is necessary to analyze the rivers as a *joint* basin. In a book written by researcher Özden Bilen (2000), yet published by the GAP-RDA, it is noted repeatedly that based on ‘technical’ facts (read: objective scientific truths that cannot be challenged), the twin rivers must necessarily be considered conjointly as *one unit*. For instance, the author writes in the preface, ‘in the Middle East, it is a rather frequently used method for political purposes to distort facts by playing with figures related to water resources.’ To remedy this Bilen offers to undertake an “actual (technical) assessment of the water problem in the Middle East (xvi)”. As the analysis here reveals, his ‘technical’ assessment is nonetheless infused with politics (see also Altınbilek, 2004).

Similar statements are made elsewhere by independent scholars, for instance, Bagis (1997: 579) writes “The Euphrates and Tigris have to be considered together as forming one single transboundary watercourse system with the two rivers joined, not just at their natural confluence, the Shatt-al-Arab waterway, but also by man-made canal... Consequently ... Irrigation water for areas fed by the Euphrates may also be supplied from the Tigris.” Yet another clear example is provided by political scientist Aysegül Kibaroglu (2002: 160), “We observe, in conformity with the expert judgments of geographers, that the Euphrates and the Tigris are considered as forming one single transboundary watercourse system.”

Even the term ‘twin rivers’ often used to denote the Tigris and Euphrates signals a natural and necessary conjoining. In Bilen’s language,

“It is misleading to focus on the River Euphrates or the River Tigris in isolation from each other. These two rivers form *one single basin* having an annual potential of 87.2 BCM and should be taken as part of the same system. There is no natural barrier between the two rivers and they come very close to each other in Iraqi territory. It is even very difficult to demarcate the

watershed boundaries in Iraq near the confluence point. For this reason, the *relevant* literature gives the watershed of both rivers jointly as 884,000 Km². The list of river basins published by the UN also cites this figure” (2000: 50). (Emphasis added)

With this statement, it is noted that it would be ‘misleading’ to focus on the rivers in isolation. The necessity of thinking of them as a single basin is backed up by scientific/hydrologic data (their joint potential/capacity, even as clearly this doesn’t logically support the *necessity* of joining the basins, but rather simply provides an estimate of the potential of both rivers), by the topography and geography of the region, and by invoking the United Nations as an important, internationally recognized body that has treated the Tigris–Euphrates as an integrated watershed (the hyphen also stylistically accentuates the necessary linkage of the rivers). What is served by invoking, and cementing, the naturalness and inevitability of a conjoined basin?

First, there is a clear politics associated with citing a conjoined basin, particularly from the Turkish perspective. As some of the legal bases for making claims to transboundary waters rely on a notion of ‘contributions’ to the waters from a particular territory, to consider the rivers conjointly ensures that Turkey figures as the majority contributor, providing an estimated 52.9% to both rivers. If the rivers were considered separately, Turkey would figure as contributing an overwhelming majority on the Euphrates (90%), but only approximately 40% to the Tigris. Under this principle, Iraq would have effective claim to Tigris waters, contributing 60% (Harris, 2005, 2007). Given that the Tigris represents about 150% of the flow of the Euphrates, Turkey has a clear interest in being able to assert majority contributions to the conjoint system.

Second, related to this, the idea of ‘excess’ flow in the Tigris is invoked by Turkish planners and academics to argue that waters should be transferred from the Tigris to the Euphrates (as is being done with the existing canal in Iraq). The possibility of transfer of waters between the rivers is affirmed by the analytical construction of a joint river basin (it is one system, so water ‘naturally’ flows between them). To be able to add to the Euphrates flow also effectively displaces attention from Turkish withdrawals from that river. In an interesting discussion on the possible transfers from the Tigris to Euphrates, Altinbilek (2004: 16) echoes the quote at the beginning of this section, “a Turkish offer to compensate for the scarcity in the Euphrates by the surplus in the Tigris was rejected.” Here, we see the same discursive maneuver with the idea that the rational technical solution of water transfers was ‘offered’ by Turkey, only to be turned down by its co-riparians.

Later in that piece Altinbilek (2004: 32) writes, “the analyses of the water budget for the Euphrates–Tigris basin ... all indicate that the Euphrates basin will experience water deficiency and the Tigris basin may have a surplus of water.” Again, there is a clear politics, and politics of scale, embedded in language of this type. The river system is taken as one unit, and Turkey is able to ‘offer’ excess waters from the Tigris to compensate for scarcity (even as Iraq provides the majority contributions to that river). In terms of the effect of this narrative, we see repetition of the storyline in which Turkey is positioned as hero, having extended an offer, only to be rebuffed. If shortages are experienced, it would be the fault of downstream states, given that they did not accept the assistance and solutions offered by Turkey. Even suggesting the possibility of surplus in the Tigris in future scenarios is effectively to negate Iraqi claims and planned uses of these waters, instead, making them appear ‘available’ for use by the co-riparians.

Contesting alternate scales: resisting regional constructions of the “Middle East”

The insistence on treating the rivers conjointly is also interesting in contrast with the frequent insistence expressed by Turkish

planners and academics that water issues should not be dealt with on the regional scale, particularly for the Middle East on the whole. Apart from the likelihood that regional constructions may call attention to the interests and needs of all states that share the rivers, Turkey also has rejected regional constructions for other reasons. Historically, and contemporarily, the argument has frequently been made that ‘solutions’ must consider water use and availability for the entire Middle East, often with ideas of transfers from ‘water rich’ to ‘water poor’ regions. In these constructions, Turkey often figures as ‘water rich’ relative to many of its neighbors with frequent proposals that Turkey could divert some of its ‘excess’ water capacity to alleviate ‘regional’ water concerns. Such proposals have been floated repeatedly over the past decades, and have been included in negotiations related to the Middle East peace process. Examples of such include options that proposed by Hillel (1994) related to a Middle East regional ‘solution’ for water sharing, or other proposals that have called for a direct diversion of 1.1 BCM from the Euphrates to be distributed between Syria, Jordan, Israel and the West Bank. Discussing these proposals that suggest that Turkey, or the Tigris–Euphrates specifically could better serve water needs in Jordan and Israel to the south, Bilen counters,

‘the water problem in the Middle East has been conceptualized as constituting a unified whole. However, such an approach would only complicate technical matters further (2000: 32).’

He goes on to say that for instance, the idea has been floated that Turkey could give just 1% more to the water flow presently allocated to Syria on the Euphrates (above the 500 m³/s currently agreed upon). If this were to occur, Syria would not need water from the Yarmuk, and those waters could then be allocated exclusively to Jordan and Israel downstream. Bilen responds by saying “such a plan is not possible at all in terms of both technical considerations and international law” and further suggests that any additional allocation would simply disappear through leakage and evaporation, so would be unwise (32). Bilen attempts to seal off such ‘region’-wide constructions for addressing water issues in other ways as well: “it is necessary to take each of the rivers, Euphrates–Tigris, Orontes, Jordan, Litani and the Nile, separately and produce solutions as such (32).” This insistence on keeping the rivers separate in discussing solutions is striking compared with statements noted above that insist that the Tigris and Euphrates rivers must be considered jointly. Indeed, the tension between insistence on considering rivers separately, yet listing the ‘Euphrates–Tigris’ as a single entity is striking (the use of the hyphen here does a lot of work to allow this sentence to read logically).

Realizing a Kemalist vision and other nationalist hydrologic constructions

If connections to Turkish nationalism are not yet clear from the above discussion, we provide a few additional illustrations to make this point. In Turkish planning documents, the very concept of developing the rivers is attributed to Mustafa Kemal Atatürk, the founder of modern Turkey. It is said that Atatürk noticed these untapped resources and raised the possibility that the rivers could be used more effectively. The attribution of the idea to develop the rivers to Turkey’s leading national figure discursively connects water resource development to the very establishment and sanctity of ‘Turkey’, and to Kemalist bases of Turkish state building and nationalism. Atatürk is *the* symbolic figure of the nation, and his image invokes ideals related to ‘Turkishness’, and the unification of Turkish citizens and territory in one state and nation (Harris, 2008; Öktem, 2005). Based on a singular construction of ‘Turkishness’ regardless of ethnic and linguistic differences, this unification

necessarily results in the disenfranchisement of Armenians, Kurds, and other minority populations (ibid?). Atatürk's invocation also recalls military campaigns that he led following the collapse of the Ottoman Empire. He rose to prominence as a military general who defended Turkish territory against 'colonizing' influences at the end of WWI (credited with removing Greece, France, and others who were seeking to exert control), enabling the establishment of an independent Turkish republic in 1923.

As such, the discursive linkages between Atatürk and Turkey's ongoing water development serve to also underscore the need to defend Turkish autonomy—lending force to the idea that Turkey must independently determine the fate of the rivers. Former President Demirel said in reference to claims on the Tigris and Euphrates from downstream Syria and Iraq, "Water is an upstream resource and downstream users cannot tell us how to use our resource. By the same token oil is an upstream resource in many Arab countries and we do not tell them how to use it" (Bagis, 1997: 577).² In such examples, discursive construction of the rivers connects directly to ideals of Turkish nation, state, and territory, linking water resources (and certain hydro-scales) to the legitimacy, sanctity, and unity of 'Turkey'.

These examples show clear politics associated with invoking the 'national scale', the conjoint 'basin' or in resisting constructions at broader 'regional' scales. The performative approach to hydro-scalar discourses and practices here also underscores the many instances in which the legitimacy of the Turkish state, the sanctity of Turkish territory, and even the unity of the Turkish nation are implicitly (or explicitly) invoked and iteratively cited. The Turkish state is also repeatedly cited as the appropriate entity to use and maintain the waters. As we detail further in the conclusion, a performativity of scale approach serves to highlight the effects of these iterative citations—suggesting ways that Turkish 'nation', 'state' and 'territory' are constituted as effects of these reiterative scripting of hydrologic geographies.

We now turn to the example of Israel and the Jordan River basin. While the evidence and approach are somewhat distinct from those offered for the Turkish case, the outcomes are the same—consolidation of particular scalar geographies in relation to water resources holds similar significance for invocations and reifications of nation, state, and territory.

Jordan River basin, Israel³

Science and policy debates during the 1950s in nascent Israel resulted in contested discourses and ideals on the nature of the state, its water potential, and appropriate approaches to water management. In this section, we detail (1) Ben-Gurion's dominant political concept of *mamlakhtiyut*, which focused on building strong state institutions and centralizing Jewish political life within the state, (2) the techno-scientific struggles over the water potential of Israel and its resolution in favor of water scarcity, (3) the institutional and technical struggles over the management of water resources and its resolution in favor of centralization, and (4) the spatial and territorial struggle over determining appropriate scales of water management and its resolution in favor of the national space as a singular category. These four elements (*mamlakhtiyut*, technoscience, institutional and technical politics, and spatial politics) are clearly related; indeed, it was the very articulation of these elements with one another that served (in part) to consolidate the contemporary Israeli state. Sharing many foundational elements with the Turkish example discussed above, the discourses, practices, and institutions in the Israeli example similarly highlight constructions and contestations of hydrologic scale as central to consolidation of particular visions of nation, state, and territory. Indeed, we suggest that the Israeli state and its territorial expression

must be understood as having emerged, in part, as an effect of these interlinked hydro-scalar contestations and performativities.

In the early years of the Israeli state, the country's annual water potential was a hotly contested category. Prior to Israel's establishment, the water potential of Palestine played a role in determining the annual 'appropriate' level of Jewish immigration. The British mandate, through its Water Department, on the one hand, argued that the water potential was too meager to allow for an open immigration policy into Palestine. Zionist water and political experts, on the other hand, argued that Palestine's water potential was abundant and allowed for an open immigration policy (Alatout, 2007b, 2009).

One would reasonably assume that after the establishment of Israel in 1948, debates over the water potential of the state would be resolved in favor of abundance. After all, at this time Zionist experts now controlled all scientific and political institutions. However, a continued focus on abundance was not borne out historically. Instead, consensus slowly emerged around the idea of water scarcity, with important implications for state and nation building in this context.

These debates also proved to be strongly tied to different spatial and institutional politics of the ensuing decades (cf. Feitelson, 2005; Menahem, 2001). On the one hand, frameworks of abundance were linked to institutional politics of decentralization and to a hybrid spatial politics that incorporated different scales of water management (privileging both the local and the regional over the national). On the other hand, frameworks of scarcity promoted strong institutional politics of centralization and a framework that focused on the nation and its territory. In both cases, the politics of water potential were tightly coupled with a politics of scale, each underscoring different conceptualizations of the role and future of the Israeli state. To make the case for how technical, scientific, and administrative debates related to water resources served to cement particular scalar imaginaries related to state, nation and territory in Israel, we offer our discussion of the four interlinked processes: *mamlakhtiyut*, technoscience, institutional politics, and spatial politics.

Ben-Gurion and the concept of mamlakhtiyut

Ben-Gurion's notion of *mamlakhtiyut*, is often translated as statism, with particular meaning for Israeli identity and politics during the years immediately following Israel's establishment (Avi-Hai, 1974; Troen & Lucas, 1995). *Mamlakhtiyut* is important for our story because it provided the needed legitimacy not only for centralizing water institutions, but also for framing water management in national—territorial terms.

For Ben-Gurion, *mamlakhtiyut* underscored the state as *essential* for the meaning of Jewish history, identity, and life. According to this idea, the state is not only representative of the Jewish people, but more importantly, is where the Jewish people acquire meaning (Avi-Hai, 1974; Troen & Lucas, 1995). By extension, the fulfillment of Jewish subjectivity is possible *only* through support of the state and its mandates.

Water policymaking became one of those sites of struggle between forces of centralization and those against it. The vast spaces of the Negev Desert, border areas between Israel and its neighboring states at the time (Lebanon, Syria, Jordan, and Egypt), all constituted security threats, either because they were presumably empty or because they were heavily populated by Palestinians. The dispersal of new Jewish immigrants, who doubled the state's Jewish population by 1952, required a water policy that would make the settlement of the Negev Desert and border towns possible. It was then that the many water and hydroelectric plans drawn throughout the first half of the twentieth century and

manifest in the Lowdermilk/Hays plan of 1948 became a real possibility (Hays, 1948).

While policymakers from all stripes agreed on the water conveyance project, they agreed on little else: What institutions should represent state interests in water policymaking? Was the technical apparatus for conveying water from the north to the south to be a centralized apparatus that regulates all the water of the state or was it to be a limited mandate for conveying water to the Negev Desert? Consequently, was the water to be managed in a singular fashion throughout the whole state or was it to be treated differently depending on local, municipal, and regional conditions? In other words, during the early 1950s, the question of the appropriate institutional scales for the management of Israel's water resources remained an open, and hotly debated, question.

Water abundance versus water scarcity

Without denying the richness and diversity of water expertise in early Israel, it is important to note that two schools of thought dominated early debates on water availability. These are detailed at greater length elsewhere (Alatout, 2007a, 2008a, 2008b), so here we provide only a brief overview. One group, led mainly by Simcha Blass (Director for the Water Department of the Ministry of Agriculture), argued that the water resources were abundant. This was based on the theoretical potential for water based on estimates of rainfall and rates of percolation, as well as a biblical–historical narrative that understood Palestine to be a land of abundance that was able to support a population of more than ten million (e.g., Lowdermilk, 1944).

This Biblico-theoretical conception ran counter to the framework championed by Aaron Wiener, Chief Engineer of *Mekorot*, a Zionist institution established in 1937 that was given a monopoly over the excavation and distribution of water resources in the early years of the state. While for Blass national water policy should take into account the abundance of water, promised by the theoretical–historical narrative, Wiener thought national water policy could not afford the luxury of unproven resources and should be organized around water stress as a fundamental fact, empirically demonstrated and known. He summarized his view succinctly as “the annual potential of water is the water you already have.”⁴ Differences on the issue of the water potential spread to a number of issues including those of appropriate institutional arrangements, appropriate technical apparatuses, and even appropriate water pricing.

In 1952 a new public company, *Tahal*, was established, in part to resolve the conflicts between the Water Department of the Ministry of Agriculture and *Mekorot* and to take charge of national water planning. Headed by Blass, and with Wiener as the Deputy, both frameworks were forced to coexist in the same institution. Without delving into the details of the story (for more see Alatout, 2008b), *Tahal* drilled more than 200 exploratory wells in order to map out Israel's hydrological potential. By 1953, little evidence appeared to support Blass's position and by the end of the year he resigned his position as Director. Even faced with this dearth of evidence, Blass never changed his mind about the water potential of the state. He often emphasized that the dominance of the security notion was due to the unwillingness of the Israeli state, like the British Mandate before it, to spend money to discover new sources of water. He was replaced by Wiener who stayed at the helm of *Tahal* until 1977 and who remained important to Israeli water policymaking throughout that time.

Even with Blass's resignation, the shift from a conception of abundance (more than 3000 mcmy) to one of scarcity (less than 1800 mcmy) was gradual. Between 1950 and 1957 seven interim and two master plans for the development of water resources were

published (the first three by the Water Department and the rest by *Tahal*). While initially on the rise, the estimates of the water potential were gradually decreased—with the plan of 1957 putting the estimate at 1500 mcmy (Alatout, 2008b).

Centralization of institutional and technical apparatuses

Water estimates, i.e., assumptions about water abundance and scarcity, are not only important for what they might say about the environmental conditions at the time. Their significance lies in the role they played in underwriting a host of political and technical apparatuses that led to the centralization of water policymaking and consolidation of centralized Israeli state apparatuses. In brief, the debates about abundance and scarcity, and their eventual resolution in favor of scarcity, served as iterative citations of a particular scalar politics for the effective management of Israel's water resources—one that moved away from decentralization and furthered a centralized state apparatus.

In this way, the conflict between Blass and Wiener was not limited to differences over water estimates but extended to appropriate styles of water governance with scalar and territorial political implications. Two tightly coupled elements were important: first, what type of technical apparatus was needed for the management of water resources, and, second, what type of institutional apparatus was needed for resource governance?

Blass thought of the National Water Carrier (NWC), which was to convey water from the upper reaches of the Jordan River to the Negev Desert, as a stand-alone technical project, that should be separated from local and regional networks for water management. Nothing in the mandate to divert Jordan waters to the Negev Desert for Jewish immigration and settlement necessitated that the NWC be an instrument for centralizing all of the water resources of the state and, for Blass, it was precisely the idea that there was enough water to satisfy the needs of the state that allowed him to imagine multiple management schemes operating on different geographic scales. Even as the NWC was clearly a national project, then, Blass's conception of abundance meant that the state did not need to control all water resources to fulfill this mandate.

Wiener had a different understanding. For him, conveying water from the Jordan River was important to overcome scarcity in the desert. More important, however, was the idea of water scarcity itself. As a paramount concern, scarcity necessitated the careful management of water resources. Consequently, he argued that the NWC needed to be a centralized technical apparatus through which all of Israel's water would be regulated. Contrary to Blass, then, he saw no room for local and regional technical networks as this could lead to the inefficient management of water. Instead, water management for Wiener was necessarily singular and national–territorial—coordinated by the state and the state alone.

These differing opinions on water potential and the needed technical apparatus for its management were thus articulated institutionally as well. While Blass strongly argued for a hybrid institutional framework (a cabinet level position for the management of the Jordan waters and a decentralized institutional structure for the management of local and regional water resources), Wiener argued for a centralized institutional apparatus for the management of *all water* to ensure it was used as efficiently as possible.

In the end, the fact that scarcity became the hegemonic discourse of the mid- to late-1950s, Wiener's positions won the day in almost all other aspects: the NWC became a centralized technical apparatus through which all the water of the state was regulated; water management was centralized under the Water Commissioner in the Ministry of Agriculture, albeit distributed among two main institutions (*Tahal* for water strategic planning and *Mekorot* for distribution networks).

From hybrid to singular territorial framework

As we have seen, the construction of water scarcity as *fact* legitimized the centralization of both technical and institutional apparatuses of water management, thus fulfilling Ben-Gurion's political philosophy of *mamlakhtiyut*. Indeed, it was the very articulation of Wiener's ideas with *mamlakhtiyut* that enabled, at least in part, their ascendancy as the dominant framework. For the first time, there was a techno-institutional apparatus that not only represented the state, but also served to fulfill its mandate. By extension, debates over water resources (e.g., their scarcity or abundance, and appropriate scales of water management) helped to consolidate the very ideas of Israeli state, nation, and territory.

These debates over water potential, water management, and institutional structures all depended on and constructed different spatio-territorial scales. For Blass, the ingathering of Jewish immigrants required thinking of the national space as a whole. However, his faith in the abundance of water allowed him to also maintain a complex notion of space that was not limited to the national–territorial scale, but allowed for water resources to be governed at smaller scales. This hybrid notion included a role for national–territorial constructs, as well as management linked to very local scales, be that a *kibbutz* or a municipality.⁵

Wiener promoted different hydro-scalar conceptions. While he agreed with Blass on the importance of the national–territorial scale for the project of ingathering and dispersal, he believed that given water scarcity, only the national scale was appropriate for water management. He often argued that there was no place for inefficiency, and thus no place for local management (believing local and regional governance to be inherently inefficient and politically driven). Thus, the only appropriate spatial arrangement for water resources was national–territorial, and the only appropriate institutions were centralized and statist.⁶

As we have suggested, in the end, Wiener's conception prevailed, in part due to its articulation with other national ideals. It is precisely at the intersection of these ideas and contestations that we can understand the Israeli state as an expression, and as an outcome, of these complex scalar performativities related to water. Scarcity as a general framework of government in the early years of the state (of territory, of money, of people, of resources) justified the emergence of a strong, centralized state in a number of policymaking areas not limited to water resources management (education, labor exchange, defense, etc.). However, this case shows the centrality of negotiations and contestations over scales of water governance to the consolidation of Israeli state, nation, and territory.⁷

Conclusions: scalar politics of state and nation building

In this paper we offer a study of two distinct yet compelling cases for the interconnections between politics of hydrological scale and nation and state building. Our examples are chosen, in part, because of the strength of these connections in both cases, with both cases showing that the repeated invocation and expression of hydro-scales have been foundational to consolidate and maintain nations, territories, and state forms. Our selection of these two case studies is also significant given that hydro-politics continue to play central roles in contemporary geopolitics of the Middle East, and given that these two cases in particular are central to any discussion of politics, water sharing, or socio-political exclusions in the region.

To recap, in the Turkish example, we see numerous instances where assumptions and assertions about scale with respect to water resonate very clearly with ongoing political negotiations (e.g., the need to consider the Tigris and Euphrates rivers jointly or to avoid regional water proposals). The invocation of certain ideas

about water also serves to performatively cite the very ideas of Turkish nation, of territory, and the legitimacy of the Turkish state in developing and managing water resources. These iterative citations at once displace and marginalize other possible claims to resources (e.g., either by downstream states, or by the Kurdish populations in the southeast, for instance).

In the Israeli example, we see that the 'hydrological' debates over the water potential of the state were resolved in favor of scarcity. While interesting in their own right, debates over water potential are even more interesting with respect to the scalar politics they invoke and underwrite. As we detail, the resolution of debates over the water potential of Israel in favor of scarcity also decidedly favored statist and national–territorial institutional approaches. Especially with their articulation with Ben-Gurion's nation of *mamlakhtiyut* (in ways that parallel connections to ideals of a unitary state and nation linked to *Kemalism* in the Turkish case), this meant greater centralization of administrative apparatuses for the management of water resources, creating a strong, centralized nation-state.

Even as we have argued that states are consolidated in relation to certain scalar constructions of water resources, these constructions are not fixed, are frequently challenged, and may shift over time in important ways (such as Kurdish or Palestinian opposition movements in both contexts or the shift from abundance to scarcity in Israel/Palestine). A key insight we draw from all such examples is that debates about water, whether the 'facts' of hydrology and water potential or ideas about appropriate scales for water governance, may be central to the very definition and consolidation of nation, territory, and state. Although emphasizing these processes in Israel and Turkey, we consider that these processes are likely to be significant in other contexts as well—among others, one can think of other Middle Eastern states such as Jordan and Egypt, in addition to similar processes in Spain (Swyngedouw, 1999).

Just as we do not consider these processes to be exclusive to the contexts we study, we also do not consider that it is only in the realm of water that such processes may be traced. Similar scalar constructions and politics can likely be observed with respect to the military, educational policy, or other processes. As such, our analysis focused on water management shares strong affinities with others who have argued that nations become naturalized through maps, museums, or print media [as with Benedict Anderson's classic discussion, 1991, or Radcliffe & Westwood, 1996 for a contemporary example from Ecuador].

With this intervention, we would like to also emphasize a theoretical argument about nation-states. While many Weberian (Weber, 1978) state theorists emphasize the military (Tilly, 1985) and socioeconomic (Mann, 1993) consolidation of the territoriality of the state, our example points to non-military and non-economic processes through which territoriality is also constructed (Jasanoff, 2004). Water politics—including hydrological knowledge production, competing methodologies, conflicting views on what constitutes evidence, contested notions on what constitutes a river basin, or competing views about appropriate water management—all have a hand in the construction of the nation-state, and associated visions of territoriality and government.

Returning to our focus on performativity, our approach emphasizes that states, and territories are never fixed, even if there is an appearance of fixity though repeated invocation of the conjoint Tigris–Euphrates system, or of scarcity in the Israeli context. We have endeavored to lay bare some of these possible effects of these hydro-scalar constructions and linked naturalizations. Doing so allows for an analysis that highlights diverse and iterative practices that operate to maintain the territorial, nationalist, or institutional underpinnings of state forms (Kuus & Agnew, 2008). As such, we are able to take seriously Wainwright's (2005) call to critically investigate the consolidation of territories, or political units, particularly

for work interested in resource use and access. As he argues, if we fail to consider such dynamics, we risk obscuring key dimensions of 'politics' that often condition differential access to resources (see also Alatout, 2006). Instead of taking territory, resources, or population as given in our scholarship, the task is rather to uncover how various territorial expressions emerge and are reinforced through discourse and practice. As Wainwright asks, 'how is it that particular geographies become naturalized and sedimented through political and cultural practices?' Part of the answer for the two cases we study rests with the techno-political invocations of scale in relation to hydro-geographies.

More discussion on ways that politics and performativities of hydro-scales operate in other contexts, or ways that politics and performativities of scale might further enrich key debates in political geography and political ecology, including attention to marginalization of certain spaces and populations⁸ are all likely to be productive avenues for future work. Pursuits along these lines will likely result in novel insights related to the inter-citatorial practices that link, and co-produce scale, states, histories, and water geographies.

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Endnotes

¹ GAP stands for 'Southeastern Anatolia Project', a large-scale damming and water diversion project in the upper Tigris–Euphrates basin (Harris, 2002, 2008; Öktem, 2005 for critical analyses, including relationship of this project to Kemalism and effects for Kurdish populations; and Ünver, 1997 for overview).

² According to Gruen (2000: 572), the official position of Turkey is in fact that the Euphrates is not an international river, but rather a transboundary river. As such, Turkey maintains exclusive sovereign rights to the water until it crosses the border. However, the International Law Commission considers all shared rivers to be 'international watercourses'.

³ During our period of concern, riparian states of the Jordan River were Israel, Jordan, Lebanon, and Syria. We do not consider the Israeli case to be one of exception, even as it is exemplary for our argument. Similar processes of scalar- and hydro-politics were likely to be at work in all of these riparian states, as well as on a regional scale (Alatout, 2009).

⁴ Interview 25 August 1997.

⁵ To illustrate, Wiener described what he thought of as Blass' "obsession" with "local and regional projects" and his "failure" to see the importance of a nationally organized and centralized project. In Wiener's words, Blass "was unable to move beyond his experiences in the 1940s" (when he worked as a water consultant for Mekorot). This is an overly simplistic reflection on Blass' position, which argued both for national planning and regional and local planning (Interview with Wiener on 6 September 1998).

⁶ This is the story of Israeli scalar hydro-politics from the 1950s until the early 1980s. More recent shifts in scalar politics further confirm the central thesis of this article: politics of hydrological scale matter. An excellent recent work (Feitelson & Fishhendler, 2009) demonstrates the fluidity of scalar constructions in this context. They conclude that the national-territorial scalar construction of early statehood in Israel gave way to a hybrid construction of scale with multiple frameworks operating concurrently.

⁷ As we mentioned briefly, Israeli water policymaking along with its national-territorial, and institutional, scalar focus became possible in part by the necessary othering of Palestinian inhabitants and, more forcefully, by denying their presence as a political community with historical rights to the water resources of the region. For example, many water development projects were legally entrusted

to Jewish development agencies, including the Jewish National Fund (JNF) and the Zionist Organization. Unlike the state focus on equality of all citizens, these entities promoted Jewish immigration and settlement in ways that had clear consequences for exclusion of Palestinians, including expropriation of large tracts of land for water works that did not benefit those communities (Alatout, 2007a; Davis, Maks, & Richardson, 1980).

⁸ The processes of state and nation building detailed here are made possible through the negation of minority rights to territory and resources. Despite our recognition of the centrality of these questions, we bracket these issues in favor of focusing on the more general questions of this paper. For more on the importance of the Kurdish question to questions of water development and constructions of Turkish identity and state see Harris (2002, 2008), and Öktem (2005). For more on issues of importance for the Palestinian population in the process of Israeli state building and hydro-geographies, see Alatout (2007b) and Feitelson (2005).

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