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RESEARCH ARTICLE

Nation and Region in the Post-Partition Remaking of the Indus River Basin

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Abstract

The Indus Waters Treaty (IWT) of 1960, though subject to increasing stresses in recent decades (and "suspended" by India in 2025), was long hailed as one of the great success stories of international water disputes. A treaty negotiated to divide the Indus rivers to conform to the new territorial boundaries of the subcontinent's 1947 partition, the IWT's ultimate result was to effectively create two separate river basins operating in, and helping to define, distinctive Indian and Pakistani "national spaces" of water control—and "water nationalism." However, another effect of this approach was also to encourage increasing internal competition—and conflict—over water within each country. This article argues that the roots of this structure go back to the abstract, and environmentally disconnected, form of "nationalism" that dictated the drawing of the original 1947 partition line, and to the ways that state water policy—and the IWT itself—reflected and responded to this.

Keywords: India; Pakistan; Indus Waters Treaty; Punjab; partition

The Indus Waters Treaty (IWT) of 1960 has often been hailed as one of the great success stories of international water disputes. As Syed S. Kirmani put it in 1990, "The Indus Waters Treaty is one of the most remarkable examples of a treaty that led to successful management of conflicts between sovereign riparian countries of a large river basin and served to promote development and prosperity in both countries."[1] The Treaty in fact continued to function in the face of several wars between India and Pakistan, and led to an explosion of new works on both sides of the border.

Since Kirmani wrote, the operation of the IWT has generated increasing tensions in a number of areas. The treaty's award of the use of the three eastern rivers (Beas, Sutlej, and Ravi) to India and the use of the three western rivers (Chenab, Jhelum, and Indus) to Pakistan has come under increasing strain over the past twenty-five years,

[1] S. S. Kirmani, "Water, Peace and Conflict Management: The Experience of the Indus and Mekong River Basins," *Water International* 15, no. 4 (1990): 202.

particularly as disputes have arisen over the nature of India's run-of-the-river uses of the western rivers, as they flow through Indian-controlled Kashmir. Indeed, recent disputes have made clear how the original treaty's attempts to completely sidestep the ongoing conflict over Kashmir in the interests of an overall water agreement, which was viewed by some as one of the treaty's central strengths, represented a critical weakness in its structuring.[2] Questions relating to water projects in Kashmir tested the treaty's capacity for dispute resolution, and also showed the impossibility of fully separating the treaty from the politics of continuing conflicts over Kashmir.[3]

Equally important, it has also been evident for some time that the treaty produced environmental consequences as well as heightened forms of competition for water that played out not just between India and Pakistan, but in far more dramatic ways both *within* India and *within* Pakistan, manifested in particular by the competition between individual provinces (or states as they are called in India) and the conflicts this generated between provinces and the central government.[4] Given this reality, the relationship of the Indus basin case to the larger literature on the relationship of water to national identity also raises critical questions. Much recent research has focused on the role of water in the interlinked processes of state-building and nation-building as a global phenomenon, a role that Jeremy Allouche labelled "water nationalism."[5] Allouche himself uses the Indus basin in the years following partition as a major case study of this phenomenon, and there was certainly evidence of this in the strong connections between territorial nationalism and the accelerated state-led infrastructure development that followed the signing of the IWT.[6] Indeed, in the wake of the division of territory marking partition, there is little doubt that both India and

[2] For a good discussion of the role of Kashmir in the treaty's negotiation and final framing in a way that sidestepped any suggestion that it would have implications for Indian and Pakistani territorial claims on Kashmir, see Daniel Haines, *Rivers Divided: Indus Basin Waters in the Making of India and Pakistan* (New York: Oxford University Press, 2016), 59–82.

[3] Though conflicts (and adjudications) relating to India's use of flows in Kashmir under the terms of the treaty have a long history, tensions with regard to the treaty's relationship to ongoing political violence in Kashmir escalated after the election of Narendra Modi as India's Prime Minister in 2014, particularly due to his declaration in 2016 with regard to political violence in Kashmir, that "blood and water cannot flow simultaneously" (Indrani Bagchi & Vishwa Mohan, "'Blood and water can't flow together': PM Narendra Modi gets tough on Indus Treaty," *Times of India*, 27 September 2016, https://timesofindia.indiatimes.com/india/blood-and-water-cant-flow-together-pm-narendra-modi-gets-tough-on-indus-treaty/articleshow/54534135.cms). This sentiment led most recently to India's announcement in April 2025 that it was unilaterally "suspending" the treaty (or putting it "in abeyance") after accusing Pakistan of complicity in a violent attack on tourists in Pahalgam in Indian Kashmir. The legal (and other) implications of this remain unclear, as the treaty has no formal provision for such a suspension. For background, see Christopher Rossi, "Blood, Water, and the Indus Waters Treaty," *Minnesota Journal of International Law* 29, no. 2 (2020).

[4] See, for example, Rohan D'Souza, "Towards an Environmental History of the Indus Water Treaty," in *Ideas, Institutions, Processes: Essays in Memory of Satish Saberwal*, ed. N. Jayaram (Hyderabad: Orient Black Swan, 2014), 157–170.

[5] Jeremy Allouche, *Water Nationalism: An Explanation of the Past and Present Conflicts in Central Asia, the Middle East and the Indian Subcontinent?* (PhD diss., Institut Universitaire des Hautes Etudes Internationale, Geneva, 2005). Questions of water's relationship to state- and nation-building in a global and comparative context have also been taken up in Filippo Menga and Erik Swyngedouw, eds., *Water, Technology and the Nation-state* (London: Routledge, 2018).

[6] Allouche develops the Indus basin as one of his central comparative cases. See Allouche, *Water Nationalism*, 113–140, 219–236.

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Pakistan came to powerfully associate "control over water with control over territory," as Daniel Haines puts it.[7]

To put the Indus basin story in comparative context, however, discussion must also engage with the distinctive forms of nationalism that, in the wake of British colonialism, shaped India's partition in 1947 and, in particular, the lines that defined India's and Pakistan's new borders—and which thus provided the initial framework for water conflict. If these lines set the stage for the emergence of "water nationalism," one of their most noteworthy features was how they did so in ways that were strikingly oblivious to the connection between national territory and water. The delineation of separate Pakistani and Indian territories in 1947 was, in fact, dictated by a conception of nationalism that was largely divorced, at least with respect to the line drawn through the Punjab, not only from concerns relating to the relationship between nation and water, but also from any relationship between territory and dynamic environments at all.

At the root of India's 1947 partition was instead a definition of "nation" conceived as a community of abstract, census-enumerated individuals, whose "national" identity lay in essentialized religious identities that fully transcended attachment to specific environments.[8] This abstract vision of nationhood had been articulated in Muhammad Ali Jinnah's "two-nation theory" in 1940, and was eventually translated into a partition line based on the delineation of "Muslim majorities" within particular census-defined geographical units. While discussions about water, and the Indus basin irrigation system, occasionally appeared in debates over the creation of Pakistan, as did appeals to more grounded forms of religious identity (such as those associated with Sufi shrines), these were tangential to the major articulations of the highly abstract, religiously-based national identity that ultimately determined the boundary commission's territorial delineation of the two new nation-states. It is important to stress also that, although the roots of a partition based on these forms of identity lay in the Muslim League's demand for Pakistan along these lines, the borders that emerged were not solely a product of this demand, as they also reflected the ways in which the Indian National Congress, in its response to the Muslim League, eventually mobilized the same logic of census-determined "religious majorities" in insisting on the partitions of Punjab and Bengal as an accompaniment to the larger partition of India. Indeed, it was this provincial partition, as much as the Pakistan demand itself, that led to a territorial division of the Indus basin water system, cutting in two the rivers and canals of a complex and long-developing hydraulic structure in which millions of people were environmentally embedded.

This is not to say that Sir Cyril Radcliffe, who drew the line, paid no attention to water issues—far from it. Indeed, he saw water as the most important among the "other factors" (beyond religious majorities) that he was allowed to take into account in drawing the partition boundary.[9] But despite some attention to the positioning of

[7] Haines, *Rivers Divided*, 2.

[8] This is not to say that forms of religion in the Indus basin were, in general, unrelated to environmental structures, but that these relationships had virtually no connection to the ways the Radcliffe line was drawn.

[9] For a good overview, see Lucy Chester, *Borders and Conflict in South Asia: The Radcliffe Boundary Commission and the Partition of Punjab* (Manchester: Manchester University Press, 2009), 73–105, chapter 4: "'Water was the key': Radcliffe's Private Deliberations."

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the line with respect to irrigation infrastructure in Gurdaspur and Ferozepore districts, none of his attention to "other factors" changed the fundamental nature of the line as one based on a vision of "nation" conceived as disconnected from the environment—and from water. No discussion of subsequent "water nationalism" in the Indus basin can ignore, therefore, a "national" origin story shaped by partition's principles and their relationship to environmental issues, which have had ramifying effects right up to the present. In fact, the aftereffects of this were dramatized by David Lilienthal, the former chairman of the American Tennessee Valley Authority, who toured the Indus region in 1951 to assess the consequences of the water conflicts that partition unleashed. As Lilienthal discovered, so little had the environmental consequences of the division of the basin's waters entered popular consciousness in 1947 that he found few who could actually comprehend exactly why a division of territory so oblivious to the water environment had occurred in these circumstances: "Why the flow of the Punjab's lifeblood [i.e., water] was so carelessly handled in the partition," he wrote, "no one seems to know."[10]

None of this is to suggest that questions of national access to water did not soon loom large in shaping the events that led ultimately to the Indus Waters Treaty. But the legacies of a founding national moment in which a long history of adaptations to and engagement with the Indus region's water environment had been largely ignored, superseded in the region by a nationality tied to abstract religious identities, had significant ongoing consequences. Indeed, if the environmental interdependencies of the Indus basin water system were ignored in the drawing of the partition line, they were largely ignored once again in the structure of the IWT in 1960. Rather than propose a sharing of water based on the river basin's longstanding cultural relationships between environment and community—which had been disrupted by partition—the treaty was predicated on treating the partition's abstracted cultural/religious definition of national territory as primary, dictating that pre-existing environmental connections between community and territory would be manipulated in order to make the flow of water itself conform to the separated national territories defined by partition. The treaty thus required, in essence, the formal breaking apart of the old structure of river basin flows, so that water could be re-assigned to partitioned territory, whatever the disruption to deeply embedded environmental connections this required. Pulled out of their old river basin relationships, the waters of the three major eastern Indus tributaries (Ravi, Beas, and Sutlej) were thus assigned wholly to India, while the waters of the Indus itself and its two "western" tributaries (Jhelum and Chenab) were assigned to Pakistan.[11] The key provisions of the treaty thus focused far less on embedded environmental realities than on the technical and financial mechanisms through which the two new national states would ultimately achieve what amounted to a heroic (and extremely expensive) separation of the rivers.

[10] David Lilienthal, "Another Korea in the Making," *Colliers Magazine*, 4 August 1951, 58.

[11] This structure of national separation, rather than cooperative management, defined the essence of the treaty. There were, at the same time, certain limited structures of cooperation set up to sustain this structure and deal with the limited forms of use allowed to the other party with respect to the divided rivers. Critical for this was the Permanent Indus Commission, which was intended to meet once a year for the sharing of data and dealing with dispute resolution when it came to interpreting the treaty's provisions.

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In examining the subsequent history of "water nationalism" in the Indus basin, this article thus focuses on how the particular *form* of abstract nationalism that partition entailed—one predicated on a deep disconnect between the principles of national identity and the physical environment—shaped the subsequent history of water relations in the basin. This article argues that this led to a structure of water relations that had three basic aspects. First, it led to significant state efforts on both sides of the border to give the "thin" definition of territory that had shaped partition (that is, one with almost no environmental grounding) greater environmental depth largely through state technical action, which found its ultimate expression in a treaty structured to remake the environment itself to adapt to partition's abstract "national" definition of territory. Within the framework of the treaty, "water nationalism" at the central state level was thus tied to a vision of the nation linked to the environment through largely technical means. But this intersected with the second critical reality of emerging water relations, namely that the pre-existing relationships between water and cultural identities that had long existed in the Indus basin before partition—and which were largely ignored in the treaty's structure—now found their strongest expression in subnational regional identities and the tensions these generated in water matters with the two new "national" states.[12] As Daanish Mustafa has insightfully put it, in the wake of the "amputation surgery" on the river basin accomplished by the IWT, the "social and ecological consequences" of the division were left to be "negotiated at the subnational scale."[13] This produced the third critical element in the structural relations between water and culture in the post-partition era, namely that these relationships between regional cultural identities and water played out within a post-IWT structure in which state-directed technicalism and developmentalism emerged as a frame, intimately related to the importance of water in the Indus basin, through which the national states of India and Pakistan attempted, if in different ways, to contain and manage—both internally and with respect to the international order—the legacies of a founding national moment in which environment and community had been deliberately divorced, and in ways that profoundly shaped subsequent water development and conflict.

National identities within a divided river basin

The paradox of partition itself—an event with massive environmental consequences that were never seriously engaged at the time—thus provides the inescapable backdrop to this story. Recognizing the looming character of this problem, and his own inability to do anything about it, Radcliffe reportedly broached, in the summer of 1947, the possibility of linking partition to a post-partition system of joint Indian-Pakistani river basin management as an answer. This seems to have been rejected by Jinnah and Nehru with almost no serious discussion.[14] The result was a partition unaccompanied by any serious water planning. In the wake of the mass migration and

[12] The importance of provincial identities in water matters had been compounded by the fact that water had been a provincial issue within the constitutional structure that existed at partition.

[13] Daanish Mustafa, *Hydropolitics in Pakistan's Indus Basin* (Washington, DC: US Institute of Peace, 2010), 1.

[14] Chester, *Borders and Conflict in South Asia*, 81.

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violence accompanying the drawing of the partition lines, the chief engineers of East and West Punjab signed, in December 1947, a "standstill agreement" providing "that the pre-Partition allocation of water in the Indus Basin irrigation system would be maintained," at least until 31 March 1948. But this, too, was linked to no long-term planning.

What galvanized attention to the issue was India's sudden and dramatic stoppage of water flow in the main canals crossing central Punjab on 1 April 1948, the day after the standstill agreement expired.[15] This was an event with ramifying implications, though it caught many officials by surprise, not only in Pakistan, but even in India itself—where the decision to stop water flows was initiated not by the central government but by provincial engineers and officials in East Punjab who, within British India's pre-partition structure, had primary responsibility in matters of irrigation. On one level, the water "blockade" (as it was labeled by many in Pakistan) represented an effort, fueled by the animosities generated by the migration and violence of partition, to use the partition line to claim territorial ownership of water based on Radcliffe's line. Its longer-term significance, however, lay in the fact that it finally forced the new governments of both India and Pakistan to confront partition's environmental implications, a process seemingly requiring a reconciliation of the abstract nature of "national" territory defined by partition with the complex social and political history of Indus basin water relations between upstream and downstream water users—now that India and Pakistan had become upper and lower riparians respectively.[16]

Linking water to "national" territory: Pakistan and the Bambanwala-Ravi-Bedian-Dipalpur Canal

To explore these issues, let us take Pakistan's reactions first, for it was in Pakistan that the immediate effects of the April 1948 water blockade were most dramatic. In the short run, the water stoppage created an environmental spectacle that seemed to challenge Pakistan's claims to full control over its own territory, for it made clear that much of Pakistan's water supply now flowed from outside the country. The water blockade thus attracted wide popular attention, particularly in Lahore, the capital of the most productive, and heavily irrigated, agricultural province in Pakistan—and the direct witness to the cutoff of the Lahore branch of the Upper Bari Doab Canal (UBDC), which flowed through the city, bisecting the civil lines and the cantonment. Though the overall impact of the stoppage on the Upper Bari Doab and Dipalpur canals affected, in Aloys Michel's estimates, only 5.5% of Pakistan's total kharif

[15] This is not to say that the specific partition line, which became the subject of much controversy, had no implications for the structuring of irrigation or water conflict. In fact, these implications were several, particularly as they related to Ferozepore and Gurdaspur districts. See Chester, *Borders and Conflict in South Asia*, 73–105. The point here is rather that, given the foundations for partition, there were no options for drawing *any* line that would have significantly obviated the conflicts over water flows that emerged.

[16] For a good overview of "sub-national" scale water conflict in Pakistan, with discussion of its pre-partition roots, see Daanish Mustafa, *Contested Waters: Sub-national Scale Water and Conflict in Pakistan* (London: I. B. Tauris, 2021).

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cropland, it produced losses that were estimated by the *Pakistan Times* at two crore rupees—and its impact was jolting.[17]

Faced with these pressures, a hastily arranged Inter-Dominion conference met in Delhi in early May 1948, where the parties signed an agreement to restart water flows, but with Pakistan being forced (under duress, as they later charged) to pay a "seigniorage" to India in recognition of India's territorial rights over all waters flowing through east Punjab. For the first time, Pakistan's position as lower riparian thus seemed to threaten its territorial autonomy and self-sufficiency, a realization that produced, as the *Pakistan Times* put it, deep "apprehension and anxiety" that the resumption of water flows could "hardly dissolve."[18] Pakistan's negotiators returned from Delhi with an urgent sense of the need to respond to establish autonomous hydraulic control over its own territorial space. As one Pakistani engineer, Bashir Malik, later told the story, senior Irrigation Department engineers were summoned almost immediately after the water flow resumed in May 1948 to respond to the threat of a future water cutoff as a "national emergency."[19] They quickly began to construct a new "Sutlej link-channel" circling around the Ferozepore Barrage to maintain access to Sutlej flow should India try to stop it again.[20] But most important, they also launched a large new canal project (known ultimately as the Bambanwala-Ravi-Bedian-Dipalpur [BRBD] Canal) that would track the new border, carrying water diverted from the Upper Chenab Canal to feed the Upper Bari Doab system. Beginning as a more limited "Ravi-Bari Doab connecting channel," this canal ultimately carried water from the Chenab in a large siphon underneath the Ravi, intercepting all the UBDC branches along the border in order to free them from the now Indian-controlled Madhopur headworks on the Ravi. The BRBD Canal was, in this sense, the first distinctly "national" Pakistani canal, whose resonance as a defensive canal extended ultimately even beyond irrigation, when it later took on military significance as it ran along the border, gaining a reputation in Pakistan's 1965 war with India as a "Ghazi [or warrior] canal," a sentinel of protection against India's tanks.[21]

Perhaps most importantly, the nationalist associations of the canal were reflected in its framing not simply as a state-controlled engineering project, but as one of popular, patriotic (and anti-Indian) mobilization in the Punjab.[22] The labor to dig the canal came not just from state contractors but from volunteers, such as the students from Muhammadan Anglo-Oriental College in Lahore, who came to join in a national project (much like Pakistan's creation), posing for a newspaper photograph at the canal site, spades in hand.[23] As Bashir Malik described it, "tens of scores of students; both boys and girls, were brought to dig the channel. It was symbolic of patriotic

[17] Aloys Michel, *The Indus Rivers: A Study of the Effects of Partition* (New Haven: Yale University Press, 1967), 202; Staff correspondent, "East Punjab Water Blockade Lifted," *Pakistan Times*, 6 May 1948.

[18] "Fruits of Folly" (editorial), *Pakistan Times*, 6 May 1948.

[19] Bashir Malik, *Indus Waters Treaty in Retrospect* (Lahore: Brite Books, 2005).

[20] This proved in the end a fruitless effort in the face of India's construction further upstream of the Harike Barrage, the headworks ultimately for the Rajasthan canal.

[21] Malik, *Indus Waters Treaty*, 104.

[22] This is discussed in David Gilmartin, *Blood and Water: The Indus River Basin in Modern History* (Oakland: University of California Press, 2015), chapter 6.

[23] *Pakistan Times*, 11 July 1948.

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fervor aroused by full-throated media hype."[24] Government ministers toured villages along the route, which were mobilized in the digging of canal segments, hailing their work in the language of national sacrifice and offering a prize of Rs. 1,000 to the first village to finish its "allotted share of digging."[25] The ultimate goal, as Ghazanfar Ali Khan, a Pakistani minister, declared, was to "make Pakistan independent of any outside influence."[26]

Yet the popular mobilization associated with the construction of the BRBD Canal also crystallized the larger dilemma facing Pakistan in its attempt to come to terms with the implications of partition's division of the river basin and the relationship between control over water and control over territory. Whatever the symbolic significance of the hype associated with the launching of BRBD construction in the wake of the Delhi agreement, particularly in Lahore and central Punjab, the canal could in no way protect Pakistan from the full reality of its position as lower riparian—and from its consequent reliance on water flowing from India, particularly for the watering of the large Sutlej Valley project in southern Punjab and areas further south. No strategy focusing on popular "national" mobilization in the name of self-sufficiency for the territories carved out at partition, such as that which had marked the initial launching of the BRBD project, could possibly meet fully the challenges posed by the realities of gravity, whatever the seeming power of the abstract national will reflected in Pakistan's creation, which was now rhetorically linked to self-sufficiency in water. The prospect of negotiating with India for downstream water "rights" suggested instead a vision of "water nationalism" of a very different sort. This required a vision of the nation's relationship to the environment that transcended the fixed territorial separation of partition, recognizing the continuing existence of an interconnected river basin still binding India and Pakistan together in relations of environmental interdependence, and which also bound them to an international legal order.

As Pakistan thus opened longer term negotiations with India in the aftermath of the crisis following the 1948 water cutoff, its mobilization of "water nationalism" took at least two different—and contradictory—forms. Increasingly, negotiations with India came to hinge on engineering and diplomatic expertise aimed at winning Indian and international recognition of Pakistani rights tied to its prior beneficial appropriation of downstream Indus basin flows—even as this continued to operate in counterpoint to the emphasis on self-sufficiency. Popular, nationalist rhetoric linked to water issues hardly disappeared, even in the context of international negotiations, as such rhetoric was at times still mobilized by the state to strengthen its hand in international opinion.[27] But as Majed Akhter has argued, Pakistan's negotiating strategies within this new framework hinged increasingly on the primacy of engineering knowledge and technical data as a "depoliticized" framework for

[24] Malik, *Indus Waters Treaty*, 105–107.

[25] *Pakistan Times*, 19 May 1948.

[26] *Pakistan Times*, 6 June 1948. The aim, as the *Pakistan Times* subsequently put it (11 July 1948), was to make Pakistan "self-sufficient."

[27] See Embassy of Pakistan, *Pakistan: The Struggle for Irrigation Water—and Existence* (Wahington, DC: Embassy of Pakistan, 1953).

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giving weight to Pakistan's international legal case, particularly after the World Bank joined the negotiations in 1951 as a mediator.[28]

Nevertheless, the tensions within Pakistan's position remained, particularly as the state tried to balance the contradictory sides of its approach to the water issue. Indeed, the complex relationship of water control to Pakistan's claims to territorial self-sufficiency at times brought water issues into ongoing debates on the very nature of Pakistani nationalism, and to the relative positions within its framing of the state and the people. Access to water was still mobilized as an emotive bond linked to the fulfillment of partition. Yet, the protection of Pakistan's water supply also suggested the primacy of the state as the protector of Pakistani livelihood, which required technical and diplomatic resources—and expert environmental knowledge—that could be effectively mobilized only when the emotive pressures arising from partition, linked to the abstractions of identity, could be kept in check. The significance of this dynamic was illustrated in early 1953, when the Chief Minister of Punjab, Mumtaz Daultana, who was maneuvering for political power against the central government at the time, criticized the center's role in water negotiations for its lack of adequate connection to the people of Punjab, for whom water was, as he put it, "a life-and-death question." Daultana attempted to cast himself as spokesman for the people of Punjab, the vanguard of Pakistan's struggle for independence dating back to partition, whose commitments, he implied, transcended the claims of the central state to speak for the people based on technical and diplomatic expertise. "If the people of the Punjab were confronted with a situation of death by starvation, or by fighting," he declared, referencing the seeming stalemate in water negotiations as India went ahead with new water projects across the border, "they would obviously, as brave and self-respecting people, prefer the latter course of action."[29] Couched in terms of selfless willingness to fight for Pakistan's right to water against India, this was easily read as a critique directed at the central government of Pakistan. And for Daultana, such declarations were at that time seemingly of a piece with his role not long after in helping to foment anti-Ahmadi riots in Lahore targeting the central state for inadequate support of Pakistan's distinctive Muslim national identity.

The seriousness with which the center viewed such challenges was suggested by the alacrity with which it subsequently removed Daultana as Punjab's Chief Minister and appointed a court of inquiry to report on the riots in Lahore.[30] The events of this period in fact suggested the underlying contradictions in "water nationalism" and the ways it could be mobilized to challenge the state. But these events also illustrated, even more dramatically, the significance of a form of technicalized water nationalism as a powerful counterweight to such destabilizing forms of populist nationalism. This crystallized most clearly later in the decade when, after Ayub Khan's military coup in 1958, the new Pakistan government gave heightened significance to the World Bank-

[28] Majed Akhter, "Desiring the Data State in the Indus Basin," *Transactions of the Institute of British Geographers* 42, no. 3 (2017): 377–389. Akhter links a state emphasis on the collection of ostensibly depoliticized data to the ongoing practices of territorial state-building itself.

[29] Daultana's quote is taken from Niranjan D. Gulhati, *Indus Waters Treaty: An Exercise in International Mediation* (Bombay: Allied Publishers, 1973), 114.

[30] For a discussion of the eventual Court of Inquiry report (the Munir Report), see Asad Ahmed, "Advocating a Secular Pakistan: the Munir Report of 1954," in *Islam in South Asia in Practice*, ed, Barbara Metcalf (Princeton: Princeton University Press, 2009), 424–437.

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mediated water negotiations with India as a vital key in Ayub's projection of an "apolitical" frame for the "developmental" governance of the new military state. The technical and financial aspects of the central state's water negotiations were now projected as the key to the solution of Pakistan's national water problems in ways that transcended the rhetoric of Pakistan's internal "politics."

This paved the way for the IWT's signing in 1960. In fact, seen in light of the decade-long "struggle for irrigation water" (in the words of an earlier government pamphlet) that began on 1 April 1948, the treaty's ultimate terms could hardly be heralded as an unmitigated negotiating success for Pakistan. Given the government's long effort to gain both Indian and international recognition of its legal "right" to pre-existing flows within a still functioning river basin, the treaty was easily read as a failure by some of the government's critics.[31] Despite this failure, however, the treaty was most significant precisely for its structuring of a settlement that provided water self-sufficiency by linking the primacy of territory as defined by the 1947 partition line to a plan to replace the waters lost to India with massive new works intended, in effect, to break apart the old river basin with the explicit purpose of assigning the waters of separate rivers to the separate territories of India and Pakistan. The treaty's greatest success for Pakistan thus lay in the ways that it fundamentally built on the original vision of the partition line as a boundary defined by an abstract community unconnected to the environment and then recognized the critical position of the Pakistani state, defined by its technical and diplomatic expertise, as the necessary key to a program of providing water self-sufficiency to the territories delimited in 1947. The vital position of the state was underscored by the huge inflows of foreign capital that lay at the heart of this solution, with the resources for the treaty's structure coming not from the people (or from any willingness, as Daultana had suggested, to fight for their water supply) but from the state's immersion in the Cold War alliance structure that delineated the flow of money and expertise. It was thus a technical solution that brought Pakistan perhaps as close to water self-sufficiency as was possible for a lower riparian, while at the same time allowing the government to frame its "water nationalism" in "apolitical" terms that sought to contain (if not wholly coopt) the rhetoric of abstract Muslim identity that had shaped partition.

This was a settlement, however, that came with at least two ironic corollaries. The first had to do with the treaty's implications for Pakistan's hydraulic "self-sufficiency." However much the treaty offered Pakistan a seeming escape from the dependencies associated with its position as lower riparian, it did so only by embedding the government in an unprecedented level of technical and financial dependence on the "West," particularly the World Bank and United States. It was only

[31] The treaty gave Pakistan continuing access to downstream flows from the "eastern rivers," but only for a specified time period—ten years—until the provisions for separating the rivers for each country would come into effect. It also mandated that India make some payments to Pakistan as compensation for the end of these flows, as well as gave India rights to make use of the "western river" flow in Kashmir so long as these uses did not significantly diminish flows into Pakistan. Criticisms of these provisions in Pakistan were most noteworthy when linked to critiques of the policies of the Ayub regime in general; when Fatima Jinnah contested Ayub for Pakistan's presidency in 1965, for example, she pointedly criticized Ayub for having failed to protect Pakistan's water interests in the IWT. See Amit Ranjan, "Indus Waters Treaty Negotiations: Geopolitics, Disputes and Cooperation," *South Asia Research* 45, no. 1 (2025): 120.

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the massive foreign financing of the "Indus Basin Project" for the construction of the dams, barrages, and link canals necessary to move waters from the western rivers to compensate for lost flows from the Ravi, Beas, and Sutlej that made the treaty's structuring possible. Whatever the relationship of this foreign aid to the moral claims to water based on prior appropriation put forward by Pakistan during the negotiations (despite their legal rejection in the treaty), this funding was primarily driven by Cold War concerns, linking Pakistan powerfully into the larger Cold War alliance structure.[32]

But that was not all. The pressure on the water of the western rivers to now meet the irrigation needs of a defined "national" hydraulic territory also brought significantly heightened competition for water *within* Pakistan. Provincial conflicts in the Indus basin were not, of course, new. Growing water competition between Punjab and Sindh had marked the system even before partition, but such pressures now increased dramatically with the launching of new works specifically focused on damming and storing waters from the western rivers that had previously flowed through the Indus main stem into Sindh. But more than that, the treaty created a structure that, while making the central state the technical arbiter of a new "national" water system, left the most powerful cultural arguments linking water, identity, and territory to be asserted at the provincial level.

Water and nation in India: Punjab, the Bhakra Dam, and the Rajasthan Canal

Similar tensions defined the aftermath of the Indus basin's partition in India as well, though the creation of a new national hydraulic space east of the partition line produced a frame in which "water nationalism" took a very different form. Two key elements were central to this difference. First, unlike Pakistan, India found itself from the beginning in the position as upper riparian to assert new national claims over water through unilateral action, as the April 1948 water cutoff illustrated. But second, India also found itself embedded in far more immediate tensions than Pakistan between the center and its states—particularly in Punjab—due to the manner in which partition occurred. As already noted, the Congress Party (and subsequently the Government of India) found itself fully complicit in the creation of national boundaries tied to the abstract (and environmentally decontextualized) religious identities that partition represented—a direct result of its insistence on the partitions of Bengal and Punjab based on these principles. And yet, these provincial partitions also occurred against the backdrop of a government led by Nehru that was highly ambivalent about these principles and the threat they represented to a very different vision of national unity transcending religious divisions. This, in fact, colored Nehru's vision of what was at stake in the management of the Indian side of the Indus basin from the beginning, and shaped his projection of water management as a key to containing the forms of "communalism" that had determined the drawing of the partition line.

[32] For a larger discussion of the Indus Waters Treaty in a Cold War context, see Majed Akhter, "The Hydropolitical Cold War: The Indus Waters Treaty and State Formation in Pakistan," *Political Geography* 46 (2015): 65–75.

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The ambiguities in Nehru's position were evident in his reactions to the water cutoff of 1948. He was reportedly furious when confronted with the event as a fait accompli. However linked the cutoff was to claims of provincial water ownership on the east Punjab side of the partition line, for Nehru it was easily read as a carryover into water matters of the "communalism" that had driven partition violence. Large numbers of refugees had crossed the Radcliffe line amidst this violence, and for many landowners—Sikhs in particular—the loss of the vast irrigated canal colony lands of west Punjab was acute, and control over east Punjab water flows offered a way to strike back, as well as send a message about Sikh concerns not only to the Muslims of west Punjab but to Delhi as well. For Nehru, however, concerns for India's international reputation in the wake of the violence of partition trumped any concerns to mollify Punjabi refugees. "Whatever the legal and technical merits may be," he thus wrote to East Punjab's Chief Minister, Gopichand Bhargava, after the April 1 water stoppage,

> there is little doubt this act will injure us greatly in the world's eyes . . . I have little doubt that water will have to be allowed in future because such stoppages cannot occur normally unless there is actual war. To stop water for fields is supposed to be rather an inhuman act.[33]

In other words, East Punjab's actions carried national and international implications that transcended any provincial water interests, and, for Nehru, were linked to a vision of national identity quite different from that which had shaped the territorial division of Punjab.

Yet, in framing the issue in telegrams exchanged with Pakistani officials after the water stoppage, Nehru was also careful not to entirely repudiate the substantive claim to water that India's new status as upper riparian conveyed. Despite his discomfort with Punjab's actions, he made clear in his dealings with Pakistan that partition had given India new rights to use water on its own side of the partition line without the constraints that had marked pre-partition negotiations concerning downstream flows. Nehru too, like his counterparts in Pakistan, had to balance the pressures resulting from the forms of nationalism implicit in the partition line's drawing through Punjab, with the assertion of broader principles of rule transcending the terms of partition and linking the country to the international community of nations. While deeply suspicious of the intrusion of "communalism" (in both Sikh and Hindu forms) into Punjabi politics (and water policy), Nehru saw the new claims on water that partition had given to India as providing a critical tool for undercutting "communalism" in Punjab by assimilating the province into a larger nationalist framework with "development" at its heart. He was only too willing to justify this attitude by arguing that Pakistan had ample water to protect its agricultural livelihood without worrying about the loss of flows from India. "They have an inexhaustible supply of water for their canals," he said. "Under the circumstances, why should there be complaints and outcry?"[34]

[33] S. Gopal, ed., *Selected Works of Jawaharlal Nehru*, vol. 6. (Delhi: Jawaharlal Nehru Memorial Fund, 1987), 61–78.

[34] Jawaharlal Nehru, "The Temples of Modern India," speech while inaugurating Bhakra-Nangal canal system at Nangal, 8 July 1954; S. Gopal, ed., *Selected Works of Jawaharlal Nehru*, v. 26 (Oxford: Oxford University Press, 2001), 130–143.

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This was nowhere more clearly reflected than in his making the new Bhakra and Nangal dams on the Sutlej River poster children for the central government's new water development priorities after partition. Discussions about the construction of a major dam at Bhakra had in fact gone back to the early 20th century, but planning for the dam had been repeatedly caught up in disputes between Punjab and Sindh about its potentially negative effects on downstream flows.[35] In the wake of partition, however, India could now claim the freedom to act on the construction of the dam without reference to Sindh's downstream claims, and thus frame the dam as the center's gift to Punjab, a critical element in efforts to stabilize east Punjab.[36]

In his famous speech opening a part of the Bhakra-Nangal project in 1954, Nehru used the Bhakra Dam to evoke a larger vision of developmental benevolence, which the center's sovereignty over the rivers flowing through India's territory now allowed it to bestow on Punjab. Dams, in general, were, as Nehru put it, the "temples of new India," a language linking sovereign control over water to the central state's own sovereign legitimacy, and one that self-consciously invoked not only modernity and science, but also an environmentally grounded vision of religion as an antidote to the forms of environmentally decontextualized religious identity associated with partition. This language evoked, in other words, a form of "water nationalism" that linked religion, environment, history, and modern science in a vision suggesting intimate community ties to both territory and the environment, a vision quite different from that which had dictated Radcliffe's line.[37] Yet this form of water nationalism also depended on the new claims to water that the partition line had delivered as it cut across the river basin, for it was only in claiming the complete flows of the Sutlej for the Bhakra project that the center's "sovereign benevolence" could be sustained. On both a practical and an ideological level, the Bhakra-Nangal project thus played an important role in Nehru's plans for the "national" integration of Punjab in the 1950s, as the former Punjab princely states and the new Punjab state were gradually integrated into a Congress Party-dominated structure of rule in which state patronage of water delivery was critical.[38]

The Bhakra project was not the only water project that was critical to the "national" reconstruction of the eastern rivers after partition, however. Equally important, though in a very different way, was the Rajasthan Canal project, a large canal drawing on the waters of the Ravi and Beas, that was projected to carry water along the new Pakistani border into the Thar desert south of Punjab. As a canal

[35] A good short account of the long-term planning of the Bhakra project, before partition and immediately after, is in Shripad Dharmadhikary et. al., *Unravelling Bhakra: Assessing the Temple of Resurgent India* (Badwani, M.P., India: Manthan Adhyayan Kendra, 2005), 15–31, chapter 2: "Planning the Bhakra Project".

[36] India's legal claims were developed in large part to counter Pakistani claims based on prior appropriation, and for many years focused on the so-called "Harmon doctrine" (asserted at one time by the US in its water disputes with Mexico, but with little to no currency in the contemporary operation of international water law), largely to provide a veneer of legal legitimacy for the unfettered control of the upper riparian.

[37] See Kathleen Morrison, "Dharmic Projects, Imperial Reservoirs, and New Temples of India: An Historical Perspective on Dams in India," *Conservation and Society* 8, no. 3 (2010): 182–95.

[38] The fact that the project was located in one of these states, Bilaspur, facilitated the central state's efforts to maintain control of the project (despite the local conflicts this generated). For a discussion of these issues, see Daniel Haines, "Development, Citizenship, and the Bhakra–Nangal Dams in Postcolonial India, 1948–1952," *The Historical Journal* 65 (2022): 1124–1144.

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project reflecting the new "water nationalism" emerging after partition, this was a canal that in some ways mirrored the BRBD Canal on the Pakistan side. Like the BRBD, it was intended to give concrete environmental grounding to the new border that it paralleled, but its genesis and relationship to the definition of state authority were quite different from those of the BRBD, which was launched in 1948 in direct response to the deep anxieties in Pakistan provoked by India's water cutoff. As the upper riparian, India faced no similar national threat to its existing water supplies and no water blockade to prompt popular calls for a canal to guarantee livelihood and survival in the face of such a threat. Though the Rajasthan Canal was, like the BRBD, projected by some as having important defensive military implications, its most critical significance within an emerging discourse of "water nationalism" lay in a very different direction from Pakistan's BRBD.[39] As a canal designed to underscore the Indian state's rightful succession to the "modern" mission of hydraulic conquest that had marked the most dynamic element in the Indus basin's pre-partition colonial history, the canal was first and foremost an attempt by India to lay claim to the historical legacy of the British canal colonies in western Punjab, which had gone to Pakistan at partition. As a massive new canal carrying water into the "wastelands" of the desert, the planned Rajasthan Canal in a sense linked India's now truncated Indus basin territory to the larger history of the basin, as one defined by the long-term productive conquest of an arid environment. In other words, by replicating the Punjab canal colonies in Rajasthan, India signaled its intent to accept no loss of developmental dynamism as a result of the territorial quirks of the Indus basin's partition, another key argument for Nehru in linking water to a national identity that transcended the communal foundations of partition in the construction of Indian national identity.

It was in this context that, in the years immediately following partition, Indian engineers developed the Rajasthan Canal project in a language redolent with the longstanding global engineering mission of taming "wastelands" through irrigation, now incorporated into the remaking of the basin of the "eastern rivers" as a national space transformed by the technical prowess and developmental drive of the state itself.[40] Critically, this also provided a key justification for India's effort to lay claim, in its negotiations with Pakistan, to all the water that had previously flowed into Pakistan, even though much of this could not be immediately used. As N. D. Gulhati (a leading Punjab engineer and water negotiator) noted, it was the very fact that water

[39] The point on the defensive military implications of the Rajasthan Canal is made in Daanish Mustafa, "Hydropolitics in Pakistan's Indus Basin," 5. Though never quite gaining an image akin to that of the BRBD in Pakistan as a "ghazi" canal during the 1965 India-Pakistan war, the Rajasthan Canal's potential military significance in running along the desert border with Pakistan was clearly suggested by the approach of Kanwar Sain, the canal's chief designer, to India's Defense Ministry in the 1950s when seeking additional monetary support for the project. Kanwar Sain, *Reminiscences of an Engineer* (New Delhi: Young Asia Publications, 1978), 296–97.

[40] For a contemporary account capturing much of this sensibility, see Arnold J. Toynbee, *Between Oxus and Jumna* (New York and London: Oxford University Press, 1961), 36. Toynbee visited the planned route of the Rajasthan Canal in 1960, the year the IWT was signed. "Within a few years from now the westernmost and thirstiest fringe of Rajasthan, along the Indo-Pakistani border, is going to be brought to life by the digging of what will be the longest irrigation-canal in the World up to date. . . . Two million people will live by agriculture in an area which, at present, maintains no more than 100,000 pastoralists."

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had been appropriated earlier to transform canal colony lands that were now in Pakistan that gave India the right to divert that water for India's own "wastelands." Of the twenty-six million acres irrigated by Punjab's canals in 1947, he noted, India could claim only five million, as compared to Pakistan's twenty-one million.[41] Appropriation of the flows of the eastern rivers to construct the Rajasthan Canal—and to develop India's own new canal colonies in the Rajasthan desert—was, in this framing, projected as simply a matter of historical equity.

But in terms of the state-center dynamics involved, particularly with Punjab, this also added a new layer of tension, as it involved transferring water (on a large scale) out of Punjab. At the very same time that Punjab was allocated full control over Sutlej waters for the Bhakra project, the larger part of the waters of the two other eastern rivers, the Ravi and Beas, were now to be allocated at the center's behest to a state, Rajasthan, that had had no actual riparian frontage on the Indus rivers. The legal justification for Rajasthan's inclusion in the plans for disposition of the Indus rivers lay in the participation of the princely state of Bikaner in the pre-partition Sutlej Valley project during the 1920s and 1930s.[42] But the fact of Rajasthan's being a non-riparian state (and thus, in the eyes of some, not part of the Indus River basin at all) provided a framework for growing resentment in Punjab, whose special claim to water (as reflected in the original 1948 stoppage) was conceived in terms of its special cultural association with the Indus waters—and indeed, with the canal colonies themselves, whose irrigated lands large numbers of Punjabis had been forced to abandon. The vision of central developmental prowess embodied in the Rajasthan Canal, along with the center's attempted appropriation of the history of the canal colonies, thus seemed to challenge Punjab's own distinctive cultural claims—and associations—with these waters. If this underlying conflict was muted in the period before Nehru's death in 1964 as the Bhakra scheme progressed, the stage was thus set for a "national" hydraulic settlement of the "eastern rivers" after the signing of the IWT in 1960 that was deeply enmeshed in interstate and center-state conflict.

The division of waters and regional conflict

The key to the internal conflicts that developed on both sides of the border after 1960 lay in the logic of the IWT itself, as a treaty was predicated on the massive reorientation of the hydraulic environment to match the new territorial divisions created by a partition line with little environmental underpinning. This reorientation occurred on both sides of the border, though with far less dependence in India on foreign aid than in Pakistan. In both cases, however, the treaty dictated that the respective governments undertake large-scale water transfers to spread the waters of

[41] Nilanjan Das Gulhati, *Indus Waters Treaty: An Exercise in International Mediation* (Bombay: Allied Publishers, 1973), 59.

[42] Kanwar Sain, the chief state engineer in Bikaner at the time of partition, thus became one of the chief champions (and ultimately designers) of the Rajasthan Canal project. Sain, *Reminiscences of an Engineer*, 126–130, 288–300. He even reputedly played a role in influencing Mountbatten to suggest to Radcliffe the importance of drawing his partition line so as to give the Ferozepore headworks on the Sutlej to India for the explicit purpose of protecting canal flows into Bikaner. See Chester, *Borders and Conflict in South Asia*, 119–124, for analysis. The story from Sain's point of view is told in his autobiography, Sain, *Reminiscences of an Engineer*, 117–124.

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the "eastern" and "western" rivers respectively across their own newly demarcated "national" territories, thus obviating the need to cooperate as upper and lower riparians on the same rivers. As we have seen, these efforts prompted internal water conflict on each side of the border, which reflected the tensions between "water nationalisms," often linked to technical and developmental authority, and old, often regionalized, cultural associations with water on the other.

The post-treaty water order and interstate competition in India

In India, these tensions can be tracked, in part, through the checkered progress of the Rajasthan Canal as construction moved toward the much-delayed completion of its first stage in the 1980s.[43] The canal took off from the Harike Barrage on the Sutlej, just below its confluence with the Beas (which supplied most of the canal's water volume). Fed by Ravi-Beas waters, including those stored upstream on the Beas at the Pong Dam (completed in 1974), the canal, ultimately the longest in India, gradually opened a large, previously desert area to agricultural settlement.

Punjabi resentment at the large volume of water earmarked for the canal can be dated back to the earliest stages of the canal's planning, though it received far less public attention in the 1950s than the Bhakra Dam. Congress control in Punjab provided the backdrop for the central government's engineering of an interprovincial water agreement in 1955, which formally awarded the greater part of the flows of the Ravi and Beas rivers to Rajasthan for the new canal, even as Sutlej flows above the junction with the Beas remained committed to the Bhakra project.[44]

But the issues of inter-state water distribution with respect to Punjab gained new significance after the decision to divide Punjab in 1966 into two states, a Punjabi-speaking Punjab (with a Sikh majority population) and a Hindi-speaking Haryana. Though water management remained a state prerogative under the Indian constitution, the center, anticipating conflict over the distribution of water, inserted into the 1966 Punjab Reorganization Act (which created the two new states) a provision granting Delhi the right to impose a water settlement on the two new states if they could not agree between themselves, thus suggesting the center's distinctive—and continuing—national interest in water issues in this region. This interest dated back to partition and Nehru's use of water policy as a mechanism for trying to manage and control the forms of communal politics that the creation of Pakistan—and the congress's own support for the religious partition of Punjab—had unleashed. With Punjab and Haryana subsequently unable to come to an independent agreement, the

[43] Interestingly, in spite of the large award to Rajasthan, there was also some friction that developed between the center and Rajasthan concerning the canal, though of a far different sort from that relating to Punjab. Rajasthan had little interest in completing the canal quickly, as the canal, with its "national" resonances and central backing tied to the treaty negotiations, had no strong constituency in Rajasthani state politics. Yet Rajasthan also resisted central political intrusion to speed up construction. "Irrigation is a state subject," Kanwar Sain, the Chairman of the Rajasthan Canal Board, explained, "and so Rajasthan has adamantly refused to part with control." See Chaitanya Kalbag, "Rajasthan Canal: Mirage in the Desert," *India Today*, 31 July 1983, updated 2013–14, https://www.indiatoday.in/magazine/special-report/story/19830731-political-disinterest-change-of-plans-corruption-delay-completion-of-rajasthan-canal-770871-2013-07-18. Thus, the pace of canal construction was slow.

[44] The terms of this agreement awarded 8 million acre-feet (MAF) to Rajasthan: 7. 2 MAF to Punjab and Patiala and East Punjab States Union (PEPSU) which were amalgamated in 1956; and 0.65 MAF to Kashmir.

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center ultimately issued its own award in 1976 (during Indira Gandhi's "emergency").[45] Allocations to Rajasthan were not directly involved in the terms of this intervention, but the contest between Punjab and Haryana brought to the surface long simmering Punjabi resentments toward the center around water issues, which were themselves bound up in the reconstruction of the eastern rivers that followed the IWT. From the beginning, large water transfers out of the old limits of the river basin on the Indian side provided justification for India's claim to the full flow of the eastern rivers—and the challenges these transfers represented only took on greater cultural significance, as they were now linked to mandated water transfers to Haryana.

Conflict on this issue was crystallized in a dispute over the building of a new canal, the Sutlej-Yamuna Link (SYL) Canal, which was initiated to carry water from the Sutlej to the Yamuna (in Haryana) in order to comply with the water shares laid out in the 1976 agreement. Punjabi (particularly Sikh) opposition to the construction of the SYL Canal burst into public prominence with the launching of a significant Akali-led protest against the center in the early 1980s, rallying popular support around the slogan "Nahar roko!" (Stop the canal!). The focus was on the center's support for a canal carrying Punjab's already stressed water supplies to Haryana, but it was hardly a surprise that, within the framework of these protests, the 1955 interprovincial agreement that awarded more than 50% of the combined Ravi-Beas flows to the Rajasthan Canal now also came under increasing public critique.[46] The protests dramatized the degree to which the center's post-partition reconstruction of the eastern river basin now framed significant resentment against a hydraulic order defined by perceived water shortages, but which was also tied to the structure of a treaty settlement predicated on spreading the water of the eastern rivers that previously flowed into Pakistan across an area that included two non-Indus riparian states, Haryana and Rajasthan.

It is critical to note, of course, that such political mobilizations around water issues in Punjab had also been significantly intensified by the agricultural transformations that marked Punjab since 1966, particularly those associated with the water-intensive green revolution technologies that transformed the region into one of the most productive in India. But even a vast expansion in groundwater pumping to supplement surface flows did little to alleviate the water anxieties that came with this. By the end of the 20th century, increasing groundwater stress only accentuated the acute Punjabi awareness of a post-partition water settlement that had led to perceived water shortages across the territories now watered by the reconstituted "eastern rivers." Yet the resentments this created were not a product simply of water shortages, but of Punjab's perceived cultural association with the old Indus basin,

[45] The center's 1976 water award in fact led, in turn, to a series of court cases contesting the award, which were punctuated in the succeeding years by further negotiated, but ultimately contested, agreements. In 1981, Indira Gandhi forged an agreement between the states, but this was later repudiated by Punjab. Later, under the terms of the Rajiv-Longowal Accord of 1985, a Ravi-Beas tribunal (the Eradi Tribunal) was constituted in 1985 and issued a new award in 1987. This award was also never fully accepted by Punjab. For an overview, see S. K. Garg, *International and Interstate River Water Disputes* (New Delhi: Laxmi Publications, 1999), 54–62.

[46] Some Sikhs now claimed that the 1955 agreement had been forced on Punjab under duress. See Gurdev Singh, *Scramble for Punjab Waters* (Chandigarh: Institute of Sikh Studies, 2004), 52.

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whose waters were now spread across a "national" space arising from partition and the subsequent IWT, encompassing states outside the old river basin.

In challenging this "national" vision of the hydraulic space now assigned to the eastern rivers, the Akalis sometimes harked back to the structure of pre-partition flows to underscore the cultural foundations of their distinctive water claims. Punjab, after all, was the "land of the five rivers," whose historical and cultural claims to Indus waters were projected as being of an order far different from those of either Rajasthan or Haryana. But broader tensions—going back to Nehru's deep concerns about Punjab's communal politics and his initial resistance to the creation of a separate Punjabi state—also shaped the ways that water issues had, by now, become deeply entangled in state-center conflict. This only escalated following the center's military action at the Golden Temple in Operation Bluestar in 1984, an attack shaped by suspicions of an increasingly threatening Sikh cultural nationalism. When Indira Gandhi was assassinated by her Sikh bodyguards in November 1984, leading to anti-Sikh pogroms in Delhi in which the Congress Party was deeply complicit, it was hardly a surprise that the center underscored the long-standing character of its own vision of "water nationalism" on the eastern side of the Indus basin—and its understanding of water's central significance to the effort to tame the "communalism" that dated back to partition—by officially renaming the Rajasthan Canal the Indira Gandhi Canal in honor of the slain prime minister. This was a dramatic statement of the center's claim to "national" dominance in a water system marked by significant tensions dating back to partition and the water blockade of April 1948.

The events of 1984 did not, of course, resolve these tensions, which continued even in the aftermath of the suppression of the Khalistan insurgency that convulsed Punjab in the 1980s and early 1990s. Indeed, as water shortages in Punjab became increasingly acute, the dispute gained a new lease on life in the 21st century, focusing attention once again on the still unfinished Sutlej-Yamuna Link Canal that had been launched to carry water from the Sutlej to Haryana.[47] When the Supreme Court issued a judgment in 2002 ordering Punjab to complete the canal on the basis of previous agreements, Punjab responded with the "Punjab Termination of Agreements Bill, 2004," which repudiated all earlier agreements relating to the SYL's completion. As an act directed not only against Haryana, but also, more importantly, in defiance of central authority, this prompted India's president to immediately refer the issue to the Supreme Court. But critically, even as the issue was caught up in internal political jockeying within Punjab and at the center, it remained rooted in the cultural legacies of the river basin's partition. Indeed, some appealed to the idea of the historical, pre-partition river basin to underscore the autonomous cultural foundations of Punjabi (and Sikh) water claims, thus challenging the entire structure of "national" claims to water that followed from the technical, center-led reconstruction of the eastern Indus basin under the auspices of the IWT. As one Sikh author thus wrote in 2004, in a continuing critique of the still unfinished SYL, the three erstwhile eastern rivers of the Indus basin (Ravi, Beas, and Sutlej) had, "even in their most playful abundance,"

[47] For an overview of the new environmental pressures on irrigation supplies in both Punjab and Haryana, and how these (along with "political opportunism") have shaped the continuing 21st-century controversies surrounding the SYL, see Sucha Singh Gill, "Water Crisis in Punjab and Haryana: Politics of Sutlej-Yamuna Link Canal," *Economic and Political Weekly* 51, no. 50 (2016): 37–41.

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never "cultivated any riparian relationship with Haryana or Rajasthan."[48] In contrast, he wrote, the "common denominator" of Punjabi identity was to be found in the long-standing "silvery wreath" of the five rivers that gave Punjab its name.[49] It was as if the rivers lost to Pakistan continued to resonate in the construction of an unencapsulated Punjabi cultural identity associated with the old (natural and undivided) river basin environment, even as the territorial boundaries of east Punjab had been fixed by the abstract religious identities shaping partition–and subsequently encompassed in the state-structured hydraulic order of the IWT.

In practice, legal cases concerning Punjab's repudiation of the agreement to build the SYL continued, with the Supreme Court finding the "Termination of Agreements" Act invalid in 2016 and ultimately ordering Punjab and Haryana to reach an agreement on the SYL Canal issue, mediated by the center.[50] As the case has continued to be argued before the court in the 2020s, the stakes have only risen with the intensifying impacts of climate change and falling groundwater tables, developments inseparable from the long-term environmental consequences of the IWT's own emphasis on large-scale water transfers in order to fix a new hydraulic order on the region's post-partition territory. It was hardly a surprise that Punjab's lawyers argued before the Supreme Court in 2023 that there was simply not enough water left in the Beas and Sutlej to fulfill Punjab's original commitment to send water to Haryana.[51] In the meantime, the center's focus on the treaty had become increasingly intertwined with a focus less on Punjab than on the role of control over water in fixing its "national" military control over Kashmir.

The Indus basin project and provincial water competition in Pakistan

Similar dynamics were evident in Pakistan, though the form of water conflict on the Pakistani side reflected a somewhat different relationship between water and territory. In Pakistan, as we have seen, the withdrawal of eastern river water precipitated a different imperative for the redirection of water flows; an imperative defined not so much by the spread of water to conquer new wastelands (though that in fact continued too in Pakistan's Thal project), but by the existential need to *remake* the flows of the river basin in order to compensate for the large quantities of water lost in India's gaining full control of the eastern rivers. Whatever the differences, a commonality lay in the fact that the reorientation of water flows signaled by the treaty necessitated a significant expansion of water use and development on *both* sides of the border. In Pakistan, however, where this depended on the use of the waters of the western rivers to encompass the entire, reconstructed western river basin, the scale of this expansion dramatically exceeded anything found in India. Even if measured on a global scale, the size of Pakistan's post-treaty "Indus basin project" was immense. Fueled by Pakistan's huge foreign aid package, it was, as Aloys Michel put it, "the largest single irrigation project in history."[52]

[48] Singh, *Scramble for Punjab Waters*, 22.

[49] Ibid., 57.

[50] Abraham Thomas, "SC Directs Centre to Look into SYL Canal Dispute Mediation Process," *Hindustan Times*, 5 October 2023, https://www.hindustantimes.com/india-news/sc-directs-centre-to-look-into-syl-canal-dispute-mediation-process-101696446255504.html.

[51] Ibid.

[52] Michel, *The Indus Rivers*, 248–265.

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Pakistan's attempted creation of a new national hydraulic space thus had a far more profound impact then India's on the transformation of its state bureaucracy as a whole. Among the critical new central state institutions linked to the project was the Water and Power Development Authority (WAPDA) of West Pakistan (founded in 1958), which was given significant operational and planning authority (even as local distribution and management were left in the hands of provincial irrigation departments). WAPDA in fact soon became, as James Wescoat puts it, "one of the largest river basin planning organizations in the world—a Tennessee Valley Authority (TVA) on a national scale."[53] Critically, and again in contrast to India, this "nationalization" of water management was both encouraged by—and itself, in turn, encouraged—broader political developments reshaping relations between provinces and the center in Pakistan as a whole. Pakistan's amalgamation of all of West Pakistan into a single unit in 1955 was largely undertaken to "balance" East Pakistan with a single West Pakistan within the country's constitutional structure. But the connection of the "one unit" scheme to the remaking of the Indus River basin in the wake of partition was made clear by Ayub Khan, then Commander-in-Chief of Pakistan's armed forces, in 1954. "Lying as it does in the basin of the Indus river and its tributaries," Ayub wrote, West Pakistan's "future economic development must be considered as a whole to achieve maximum results." Whatever other considerations were involved, this was critical, Ayub implied, in dictating that West Pakistan "must be welded into one unit, and all artificial provincial boundaries removed."[54] Yet, even with provincial voices somewhat silenced during "one unit," it was hardly a surprise that heightened central water control led to increasing resentments. This provided the context for the ultimate eruption of serious interprovincial conflict over water in Pakistan when military rule ended and provincial governments were restored in the early 1970s.

As in India, heightened water shortages framed many of these conflicts, but also as in India, disputes took on their most dramatic forms as they drew on regional cultural associations with the basin and its rivers. As the most water-rich of these rivers, it was now the Indus River itself that became the major focus for these efforts, and it was the province most directly dependent on the Indus, Sindh, that objected most vociferously to the restructuring of the "western" river basin mandated by the IWT.[55] Water disputes between Sindh and Punjab dated back to the years before partition, but the construction of the large Tarbela Dam (opened in 1976) and several

[53] James L. Wescoat Jr., "The Historical Geography of Indus Basin Management: A Long-term Perspective, 1500–2000," in *The Indus River: Biodiversity, Resources, Humankind*, eds. Azra Meadows and Peter S. Meadows (Karachi: Oxford University Press, 1999), 424.

[54] Muhammad Ayub Khan, *Friends Not Masters: A Political Autobiography* (Karachi: Oxford University Press, 1967), 187.

[55] This is in no way to dismiss the importance of the Jhelum and Chenab rivers to these processes. The large Mangla Dam on the Jhelum, which opened in 1967, played a critical part in the post-IWT reorientation of flows from the western rivers. The dam's storage capacity (which was also used to produce electricity) facilitated the movement of water flows through links moving water from the Jhelum toward the Ravi and Sutlej to compensate for lost water from the eastern rivers. But it was the Indus that contributed "by far the largest inflows into the Punjab, average 62 MAF per year . . . " James L. Wescoat, Afree Siddiqi, and Muhammad Abubakr, "Socio-Hydrology of Channel Flows in Complex River Basins: Rivers, Canals, and Distributaries in Punjab, Pakistan," *Water Resources Research* 54 (2018): 5.

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large downstream link canals for the impoundment of Indus waters to be transferred to southern Punjab provoked increasingly vociferous demands by Sindh for the protection of Indus flows. Fueled by evidence of the growing environmental consequences of Indus diversions—including the increasing desiccation of the Indus delta—controversy over the diminution of Indus flow into Sindh subsequently took many forms, including a long-running conflict over central government proposals to build a second large dam on the Indus at Kalabagh. But noteworthy was the fact that, as in Indian Punjab, Sindhi claims to Indus waters were cast not simply in terms of claims to equity within a national system (however important that was), but in terms of cultural claims to the water deeply rooted in Sindhi culture and history.

The very name of the Indus River in Urdu, Darya-i Sindh (River of Sindh), suggested the framework within which Sindh now sought to assert its special claims to the river. As one Sindhi author thus explained, the Indus River was an integral part of the "culture, personality and psyche of the Sindhi people."[56] However, as in the case of Indian Punjab's claims against Haryana and the center that crystallized most dramatically around a single canal in the early 1980s (the Sutlej-Yamuna Link), Sindh's special cultural claims to the waters of the Indus crystallized around opposition to the building of one particular link canal in Punjab, the Chashma-Jhelum Link (CJL) Canal, completed in 1971, which was intended to move water out of the Indus to compensate for lost Sutlej/Beas/Ravi waters in southern Punjab. This was a canal whose purpose, for many Sindhis, symbolized the ways in which the IWT, in mandating the reconstruction of the "western" Indus basin as a technical, centrally-controlled project intended to compensate for the loss of the "eastern rivers" to India, had in fact compromised Sindh's special claims on the waters of the Indus, as the river central to its cultural identity and survival.

The building of the CJL (along with the Taunsa-Panjnad Link further downstream and the Tarbela Dam higher up on the Indus) was, in fact, integral to the entire Indus basin project, following from the IWT and thus seen by many in the central government and Punjab as serving "national" water interests. But the charged implications of tapping Indus flows through these links was evident in a public controversy that exploded during the early years of the Zulfiqar Ali Bhutto regime, after the end of "one unit," and almost immediately after democracy first returned to Pakistan in the early 1970s. When, in early 1972, engineers sought to fully open the CJL to divert water from the Indus for use in southern Punjab at a time of critical water shortages throughout the system, some Sindhi leaders portrayed this as nothing short of the "loot and plunder" of *their own water* by Punjab, abetted by the central government. One prominent Sindh writer and political activist, Rasul Bux Palijo, thus referred to the CJL as a "robber canal" (a moral canal personification that can be contrasted with the "national" personification of the BRBD Canal as a "ghazi" during the 1965 Indo-Pakistan war).[57] Bhutto's government responded to the controversy by appointing an ad hoc commission of provincial governors (headed by Mumtaz Bhutto), which initially made recommendations favorable to Sindh,

[56] J. R. Laghari, "The Kalabagh Dam and Loss of Waters to Sindh," *Sindh Quarterly* 14, no. 4 (1986): 29.

[57] Rasul Bux Palijo, *Sindh-Punjab Water Dispute, 1859–2003* (Hyderabad: Center for Peace and Civil Society, 2003), 64.

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essentially giving it a veto on the canal's opening during times of shortage.[58] This hardly settled the issue, however, and became the subject of subsequent controversy.

Indeed, Sindh's claims to the Indus brought forth counter-reactions in Punjab, suggesting the larger cultural issues that shaped provincial responses to the issue on all sides, even in the face of the central government's continued framing of the large-scale water transfers that shaped the Indus basin project in technical engineering terms. When debate on the CJL resurfaced in the mid-1980s, questions related to its opening and closing in times of overall water shortage once again provoked bitter recriminations between the provinces and led to a protracted debate in the Punjab Assembly on whether Sindh had the right within the larger Pakistani water system to demand the closure of the canal. Such a right was powerfully contested by a range of Punjabi leaders, who generally relied on a vision of "national" water management as a technical matter, embedded in the "national" principles that had underlain the reconstruction of the Pakistani side of the river basin under the terms of the IWT, to counter Sindh's cultural claims. To the extent that their own water interests seemed at times threatened by Sindh's demands, however, they too asserted their "rights" to water in cultural terms.

Such an approach was evident, for example, in a book published in the 1980s by Hanif Ramay, an important Pakistan People's Party leader and former Punjab chief minister during the Bhutto years, which, in making "Punjab's case," made reference to the controversies over the CJL closings. Sindh's emotive claims to the Indus were, in his eyes, worthy not just of technical answers, but also required answers in cultural terms. To deny water to the people of the Sutlej Valley in southern Punjab by barring transfers from the Indus was akin, he suggested, to exposing them to the thirst and suffering experienced by the supporters of the Prophet's grandson Husain in their paradigmatic struggle against oppression in the Iraqi desert at Karbala. "The closing of the Chashma-Jhelum link canal," he declared, thus "created a Karbala in the Punjab," awakening a "sleeping feeling of *Punjabiyat* [Punjabiness]" in Punjab's people as a critical element shaping their position in the reconstructed water system.[59] On one level, this rhetoric seemed to hark back to the visions of abstract Muslim identity that had driven partition, though it was now applied to water and the importance of the community's connections to a dynamic arid water environment in ways that it had not been during partition.[60] Even as such references suggested the potential importance of local and regional appeals to water's cultural meaning in shaping popular responses to the IWT system, however, it hardly signaled a widespread challenge in Punjab to the technicalization of national authority associated with WAPDA and the Indus basin project that had marked the distinctive forms of "water nationalism" associated with the post-IWT Pakistani state. This was reflected in Ramay's own suggestion that perhaps the Indus, Darya-i Sindh, might be renamed Darya-i Pakistan to signify its critical place not just as a Sindhi but as a *national* river,

[58] Laghari, "The Kalabagh Dam," 26–27. The commission ruled that the CJL should be opened only in years when Sindh's water was in surplus and, even then, only with Sindh's prior approval.

[59] Muhammad Hanif Ramay, *Punjab ka Muqaddimah* (Karachi: Jang Publisharz, 1985), 149.

[60] For some examples of Karbala imagery in the Pakistan movement, see David Gilmartin, "Muslim League Appeals to the Voters of Punjab for Support of Pakistan," in *Islam in South Asia in Practice*, ed. Barbara Metcalf (Princeton: Princeton University Press, 2009), 409–423.

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and one whose water transfers into southern Punjab were integral to the post-IWT hydraulic order. In reality, of course, Punjab's claims were already baked into the IWT settlement's technical structure, based as it was on the moving of water from the Indus to compensate for lost water from the eastern rivers. It was no surprise in these circumstances that his river-renaming suggestion found little support even in Punjab, not to mention in Sindh.

Still, the conflicts over the CJL, like those in India over the SYL, suggested how regional water disputes drew readily on the historical connections between water and cultural identities, even as these were subsumed within the framework of a larger "national" water system closely tied to the state's control over technical expertise and international funding. This has continued to shape the structure of water conflict in Pakistan, even as water problems have, on both sides of the border, become increasingly complex. Continuing Sindhi complaints have focused not only on the opening and closing of the CJL, but also on long-standing controversies concerning the Kalabagh Dam and other planned Indus dams.[61] Meanwhile, smaller-scale protest movements have also developed all along the Indus, relating, for example, to diminished flows in the Indus delta and the disruption of Indus water access in the Siraiki-speaking areas of southern Punjab.[62] As in India, resistance to "water nationalism" has tapped into regional cultural meanings linking water to community identity. Particularly powerful in Pakistan have been associations with the Indus basin's many sufi traditions, which have long connected water matters to local community solidarities. evoking moral claims transcending the abstract identities that determined thepartition boundary. id At times these have provided for some an Islamic language of moral resistance to full encapsulation into the hydraulic order that the IWT defined.[63] At the same time, few movements of resistance to this order have been practically possible without engagment with the technical language of water measurement and distribution that defined the "water nationalism" that shaped the IWT settlement.

Conclusion

The story of the IWT and its impact on the complex relationships between state, water, culture, and nationalism in the Indus basin cannot be understood independent of the distinct forms of nationalism that shaped the end of British colonialism and

[61] After 1991, the opening and closing of the CJL came under the purview of Pakistan's new Indus River System Authority (IRSA), set up by the interprovincial water accord of 1991. Despite the IRSA's role (which has itself become politically contentious), however, opening and closing of the CJL has continued to be a source of controversy right up to the present.

[62] For a discussion of the Siraiki region protests relating to the remodeling of the Taunsa Barrage on the Indus (the offtake of another critical link canal moving water from the Indus to the east), see Ahsan Kamal, *Saving Sindhu: River Defense along the Indus River in Pakistan* (PhD diss., University of North Carolina-Chapel Hill, 2020), 161–212, chapter 4: "Sath and Sindhu." Kamal discusses an organization called Sindhu Bachao Tarla (Plea to Save the Indus River).

[63] Though his work is not focused on the Indus river itself, Abdul Aijaz, for example, explored in a recent article the intersection between local narratives of Sufi power in controlling water and larger narratives of scientific hydraulic control shaping statist irrigation narratives in Punjab. See Abdul Aijaz, "State, Scarcity, and Survival: A Minor History of People and Place in the Lower Bari Doab, Punjab," *Environment and Planning E: Nature and Space* 6, no. 4 (2023): 2576–2594.

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partition of the subcontinent in 1947. Partition not only split the Indus basin and its integrated irrigation works in two, but did so on the basis of a form of nationalism that was singularly oblivious to concerns over water or the natural environment more broadly. The nationalism bequeathed to India and Pakistan in this region was shaped by the principles of the Radcliffe partition line, which was predicated on the imagining of opposing national communities defined in terms of abstract, census-defined individuals whose national identities and national territories (shaped by the concept of "religious majority") had little to no connection with the specific environments they inhabited.

This did not mean, of course, that the local communities or everyday lives of the people in this region were in fact divorced from their environments, but that these were ignored in the symbolic constitution of the national communities on which partition was based—one prominent reason for the great unmooring from local environments that partition generated. The tension between partition's foundations and the realities shaping the lives of the majority of the people thus drove subsequent efforts to construct new forms of "water nationalism" that linked the new states of the Indus basin—and their imagined communities—to the physical environments they actually inhabited. Yet, from the beginning, these efforts were caught up in a paradox. The environmental reality of a divided river basin emerged into popular consciousness only with the water "blockade" of April 1948, in the wake of partition's migrations and violence. For both sides, the blockade brought to the fore the critical imperative of establishing clear state control not only over the waters of their new partition-defined territories, but also over the constructions of national identity that had seemingly unmoored the populations from their environments at partition. This was evident, for example, in Pakistan's initial attempts to channel popular anger after the water cutoff into popular mobilization for the construction of the new BRBD Canal. But the contradictions in the positions of both Pakistan and India were manifest. Pakistan's new partition-based emphasis on territorial water self-sufficiency soon clashed with its recognition of the need for negotiation (and international support) to maintain its access to flows coming from India, even as India's initial flexing of upper riparian muscle clashed with Nehru's private critique of the water cutoff as a threat to India's international reputation. Perhaps equally important, however, both governments now recognized the importance of water control to cementing territorial control in the wake of the disruptions inherent to the distinctive mobilizations of identity associated with the principles of partition. Nowhere was this clearer than in Nehru's laying full claim to the waters of the Sutlej (despite his internal critique of the water cutoff) in order to facilitate construction of the Bhakra Dam as a project vital to central influence over the disrupted Punjab. For both states, "water nationalism" represented a critical mechanism specifically directed not only toward "national" control over water, but also toward using state water policies to *tame* the abstract forms of nationalism, dramatized by the water "blockade," that had arisen as a direct outgrowth of the terms of partition.

Such tensions were, at least, partly resolved by the Indus Waters Treaty signed in 1960, but, ironically, in a context in which the original foundations of partition as a boundary out of sync with the structure of the Indus River basin environment were, despite these contradictions, reaffirmed. Rather than adapting to the structure of water flows in the Indus basin, the treaty sought to break these flows apart, precisely

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so that they could then be adapted to a territorial division that had decoupled national identities from the river basin's environment connections. Ignoring the relationship between upstream and downstream users that had long defined water relations *within* the river basin (whether at local or interprovincial levels), the treaty instead structured water relations around a *separation* of individual rivers, awarding the waters of the Indus and its individual tributaries (three rivers each) to India and Pakistan. It was, in other words, the environment that would be remade to match the territory of the abstract nation, rather than vice versa. This reflected, on one level, a powerful form of "water nationalism" in which the environment gave way to the "national" definitions linking territory to abstract visions of identity at partition. On another level, it also represented a framework for state control over the implications of those divisions. Indeed, the treaty turned the central Indian and Pakistan states into instruments of an unprecedented program of transformative environmental intervention—on both sides of the Radcliffe line—that would fundamentally reorient the basin's structure to contain the new forms of national identity created by partition. The treaty was, in this sense, not simply an agreement, it was a mandate for one of the greatest programs of river basin reconstruction in human history, and one that undergirded significant state efforts on both sides of the border to contain partition's implications, if—as events were to show—not wholly successfully.

This played itself out in different ways in India and Pakistan, as a result of both the inescapable directionality of water flows within the old basin and the Indus basin's relatively smaller footprint on the totality of Indian territory as compared to Pakistan. But a powerful commonality nevertheless bound them together in their relationships to the divided river basin, underscoring the importance of treating the two countries comparatively—and together—in discussions of the environmental impacts of partition. Perhaps most importantly, in the wake of the treaty, both countries faced a situation in which large programs of state-directed, technical and developmental transformation were juxtaposed, as scholars such as Daanish Mustafa and Majed Akhtar have argued for Pakistan, against important movements of cultural resistance to the "national" remaking of hydraulic space largely associated with sub-national and regional populations. This framework is critical to understanding the fate of the water environment on both sides of the partition line—and the connections between water and politics—despite the significant differences between the histories of the two countries. On both sides of the border, the assertion of provincial/state cultural claims on water challenged the legitimacy of the formal state appropriation of the eastern and western rivers under the treaty. This frame of resistance was perhaps most clearly symbolized in provincial mobilizations against new link canals, the SYL in India and the CJL in Pakistan, which came to symbolize the injustices of a post-treaty hydraulic order that seemed to mandate large-scale water transfers to fulfill the reconstruction of the basin to match the territorial division mandated by partition, even as the treaty's structure represented an attempt by the two states (with the infusion of huge international resources in the case of Pakistan) to control partition's implications. Indeed, such protests were perhaps most noteworthy in the ways they deployed cultural claims that harked back to the structure of Indus basin flows long before the treaty, and in some cases even before partition, to challenge the new statist order that had been created. In India, Punjabi (most particularly Sikh) claims to water were cast not only in terms of the technical

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language of tightening water shortages, but also of water claims linked to cultural, river-based identities that resisted full cultural encapsulation within the treaty's hydraulic order. Similarly, Sindhi (and Siraiki) claims to the waters of the Indus in Pakistan were linked to bonds between the river and cultural identities that long predated the "national" repurposing of the Indus to fulfil its assigned roles within the treaty's larger hydraulic structure.

The relationships between culture and conflicts relating to the technical reorganization of the Indus basin under the treaty regime thus remain complex, taking on new forms in recent years in the face of increasing water stress on both sides of the basin. New pressures relating not only to climate change but also new stresses in the relationship between the governments of India and Pakistan themselves have led to calls for the revision (or, most recently, "suspension") of the IWT. These tensions reflect the fact that the treaty was never able to effect the *full* "separation" of the rivers on which it was based, a fact most evident in disputes relating the waters of the Jhelum and Chenab as they flow through Kashmir. The tensions also equally reflect the fact that the treaty was itself embedded in the environmental contradictions of partition; a moment of national "origin" that attempted to inscribe distinctive national identities on the Indus basin's territory in ways that largely ignored its people's deep connections to its riverine environment.

Competing interests. The author declares none.

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