## **Review:** Faisal H. Husain, *Rivers of the Sultan: The Tigris and Euphrates in the Ottoman Empire*. New york: Oxford University Press, 2021.

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In *Rivers of the Sultan: The Tigris and Euphrates in the Ottoman Empire*, Faisal H. Husain examines the early modern Ottoman state's management of the Tigris and Euphrates rivers. Building on the foundational works of Alan Mikhail and Sam White, *Rivers of the Sultan* is the latest book to enhance our understanding of the environmental history of the Ottoman Empire during the early modern period. Divided into three parts ('The Amphibious State,' 'The Water Wide Web,' and 'The Rumblings of Nature'), the book guides readers through the political developments and environmental factors that shaped Ottoman rule in the Tigris-Euphrates basin between the sixteenth and eighteenth centuries. The final product is an empirically rich and methodologically sophisticated study that makes high-stakes contributions to various historiographies.

The narrative that emerges from *Rivers of the Sultan* is straightforward enough. Between the sixteenth and seventeenth centuries, the Ottomans expanded their territorial reach by acquiring lands spread across the Tigris-Euphrates basin. This eastward thrust brought the Ottomans into conflict with the neighboring Safavid state, marsh-dwelling Arabs who jealously guarded their autonomy, and European powers seeking to assert themselves in the Indian Ocean. Thus, from the very beginning of Ottoman expansion into the Tigris-Euphrates basin, military considerations necessarily shaped the Ottoman state's relationship with the Tigris and Euphrates. For the Ottomans, this entailed the construction of forts and shipyards at strategic points along the rivers. It also meant taking advantage of the rivers' natural flow to facilitate the movement of food, weapons, and timber for constructing vessels that projected Ottoman power in the empire's eastern frontier. Once achieved, the political unification of the Tigris and Euphrates brought several benefits to the Ottomans that went beyond those that came from promoting irrigation throughout the Iraqi alluvium—the geographic region corresponding roughly to the area between Baghdad and Basra in the southernmost reaches of the Tigris-Euphrates basin. For

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example, the Ottomans successfully integrated pastoral nomads by organizing them into large herders' associations that could be taxed for allowing their livestock to feed on the lush pastures watered by the Tigris and Euphrates. Moreover, the Ottomans even benefited from the rivers' wetlands, as these were particularly well-suited to highly profitable and taxable activities, such as rice cultivation and water buffalo husbandry. For much of the sixteenth and seventeenth centuries, then, the central Ottoman state exercised great control over the Tigris-Euphrates basin.

However, as *Rivers of the Sultan* makes clear, this situation would soon change beginning in the late seventeenth century. Specifically, the effects of drought caused by climate irregularities were exacerbated by an ill-conceived water management project that caused the middle Euphrates to change its course. Villages that depended on the waters of the middle Euphrates soon found themselves deprived of this vital natural resource, while others began experiencing disastrous flooding as they encountered the river's changed courses. Herders' associations unraveled as the Ottoman state began taxing them heavily to make up for lost revenues resulting from this ecological crisis. Still, others, such as the Khaza'il tribal confederation, benefited greatly from these developments, as they began retreating into marshes created by the middle Euphrates' changed course. From there, they regularly challenged Ottoman authority. Significantly, these developments coincided with the broader localization of political authority across the empire. The implications of that change for Ottoman management of the Tigris and Euphrates were no less profound: decisions regarding irrigation and navigation were now increasingly made by provincial authorities, rather than those in the imperial capital. However, beginning in the late eighteenth century, the Ottoman state worked to restore centralized rule in the Tigris-Euphrates basin. By the early nineteenth century, that development brought with it a new vision of water management, which prioritized the modernization of the hydraulic infrastructure of the Tigris and Euphrates.

In relating this story, *Rivers of the Sultan* conveys a clear message: the Tigris and Euphrates rivers both facilitated and circumscribed statecraft in the eastern frontier regions of the Ottoman Empire. Building on that central insight, Husain offers several important historiographical arguments and interventions. At the most basic of levels, he fills an incredibly important lacuna in the broader history of the Tigris and Euphrates rivers by examining a feat never achieved by the Ottoman Empire's many predecessors and successors—the political unification of the entirety of the Tigris-Euphrates basin by a single state. The historiographical stakes of doing so are high. For example, it allows Husain to contribute to ongoing historiographical debates concerning Ottoman expansion

and integration during the early modern period. Specifically, he demonstrates that the consolidation of Ottoman authority in the Tigris-Euphrates basin was characterized by the same flexibility, pragmatism, and adaptability that characterized Ottoman state-building during the early modern period more broadly. Especially important in that regard is Chapter 4 ('Grasslands'), which convincingly challenges received wisdom about the contributions of pastoral nomads to the economic development of the early modern Ottoman state. In Husain's words: 'Ottoman agrarian predilections could be tempered with realism in a landscape well suited to animal rearing like Iraq, giving a free rein to a pastoral engine of economic development no less important than arable production" (80). Beyond Ottoman history, however, Husain also engages with important historiographical debates in the field of World History, particularly for the early modern era. Worth noting here is Husain's argument in Chapter 2 ('Shipyards') about the Ottomans' use of navigable rivers in warfare, which Husain argues is an overlooked example of the broader Military Revolution of the early modern period. Whereas most historians of early modern warfare have identified the use of guns on ships as a characteristic development of the Military Revolution, they have examined it exclusively in the open seas, while ignoring the Ottomans' use of this tactic in the Tigris-Euphrates basin, which predated by several centuries similar tactics used by European imperialist powers during the nineteenth century (41). Environmental historians-and particularly those interested in global environmental history-also stand to benefit from Rivers of the Sultan. For example, in Chapter 6 ('Havoc') Husain contextualizes the ecological and political crises that gripped the Iraqi alluvium during the late seventeenth century within climate irregularities associated with the Late Maunder Minimum (1675-1715) and presents them as illuminating Ottoman cases of the broader history of the 'seventeenth century crisis,' with its 'fatal synergy between natural and human disasters,' as recently examined by Geoffrey Parker.

Historiographical arguments and interventions of this sort must be based on strong empirical evidence, and on that front, *Rivers of the Sultan* more than delivers. Indeed, Husain deserves much credit for being able to weave such a remarkably complex (and fascinating) story for a region of the Ottoman Empire whose history is notoriously difficult to examine on account of a dearth of archival sources, particularly in Iraq—one of the many unfortunate results of wars in recent decades. Accordingly, as Husain notes, one of his goals is to 'suggest strategies to overcome the enormous loss and damage that the Iraqi archives have sustained' (19). Toward that end, Husain mines well-known Ottoman chronicles and local histories, such as Raşid Mehmed Efendi's *Tarih-i Raşid* and Murtaza

Nazmizade's Gülsen-i Hulefa (among others), to find information about the complexities of Ottoman water management in the Tigris-Euphrates basin. As for Ottoman archival sources, Husain makes excellent use of the Mühimme Defterleri (Registers of Important Affairs) (among other archival collections in the Ottoman Archives in Istanbul) to track down Ottoman imperial orders concerning the management of the Tigris and Euphrates rivers. However, Husain is perhaps at his most innovative in making use of the rarely used Land Register and Cadasters archive in Ankara. For this reviewer, a particularly noteworthy example of the usefulness of this archive comes from Chapter 7 ('After the Flood'). Here, Husain locates the Khaza'il's '[entrance into] the historical record following their encounter with an agrarian, state-organized, and literate society,' before proceeding to chart their gradual transformation from 'a humble tribe' into 'kings of the Middle Euphrates' (131-2). Beyond these sources, Husain also uses Ottoman and European travelogues to fill in important details about local irrigation practices, animal rearing, and crop cultivation in the Tigris-Euphrates basin. Finally, as an environmental historian, Husain is also well-equipped to use the 'archives of nature' by incorporating dendrochronological data to examine the effects of regional drought in the Tigris-Euphrates basin.

Rivers of the Sultan is as methodologically sophisticated as it is empirically rich. A particularly useful feature of the book is Husain's use of the comparative method. Indeed, in certain cases, the strength of some of Husain's arguments come from his ability to situate Ottoman practices of environmental management within larger contexts that nonspecialists can appreciate. Examples of this abound: Ottoman irrigation practices are compared to those in China, India, Mesoamerica, and West Asia more broadly to reveal that Ottoman management of the Tigris and Euphrates rivers was achieved through a careful balance of state and local action (62); Ottoman herders' associations are examined within broader patterns of state-sponsored pastoral nomadism also historically prevalent in Mediterranean societies (89); and whereas most early modern states sought to drain wetlands, the Ottoman state figured out how to 'incorporate wetlands for its economic interests' (107). The book's conclusion—which serves as a useful summary of the book's arguments and an epilogue that identifies important continuities and changes over the millennia-long history of water management in the Tigris-Euphrates basin-may have benefited from the further use of the comparative method in this way, particularly given Husain's careful attention to themes of global historical importance. For example, one is left wondering what the broader implications of the story of Ottoman water management examined in Rivers of the Sultan are for the history of riverine environments elsewhere in the world during the early modern period. To be sure, that question, more than anything else, is a testament to the thought-provoking nature of Husain's work, which, like all excellent research, raises just as many questions as it answers. *Rivers of the Sultan* will doubtless contribute to the comparative environmental history of rivers during the early modern period and beyond.

In sum, *Rivers of the Sultan* is an important contribution to Ottoman history, the environmental history of the Middle East, global environmental history, and World History. It makes a powerful case for the usefulness of environmental history to the historiography of the Ottoman Empire and the usefulness of Ottoman history itself for historiographical debates in other fields. Written in lucid and accessible prose, *Rivers of the Sultan* also serves as a model for how to write the environmental history of rivers. Husain is to be commended for this excellent research.