
The importance of securing water sources has many interpretations when used in the context of a global watershed. In reports and briefs issued by the United Nations, there are two important topics used to approach water allocation in the developing world. These are water security and water equity (Water, 2013). Water security is defined as the safeguarding of water sources used for “sustaining livelihoods, human well-being, and socio-economic development; for ensuring protection against water-borne pollution and water-related disasters; and for preserving ecosystems in a climate of peace and political stability” (p. 1). Equity is an assumed allocation scheme that achieves water security that is fair to all stakeholders (p. 1). Issues pertaining to both water security and water equity have nuanced understandings in the practice of water governance at the domestic level. Jessica Barnes’s *Cultivating the Nile: The Everyday Politics of Water in Egypt* (2014) demonstrates how local understandings of a watershed in a developing nation often do not conform to global understandings of how equity is achieved among water allocation schemes. Barnes does this through detailing 14 months of personal field research in Egypt’s Fayoum Province on a tributary of the longest river in the world, the Nile River.

The thesis of Barnes’s field research—concluded shortly before the Arab Spring—explores the daily practice of water allocation and monitoring. Through the analysis, Barnes illuminates how a country’s water resource is made and not given. The question of “how a nation allocates water” is replaced with “what is a nation’s water” (pp. 3-4). Barnes addresses the need to reframe the critical analysis of water governance by focusing on how countries define what a nation’s water is when examining allocation schemes. Riparian positionality assumes an upstream water user to have favorable outcomes during allocation schemes (Barnes, 2014). In the context of the Nile River’s international basin, however, Egypt serves as an example of a region with a lower riparian position having great influence over the use of an international waterway. Barnes’s narrative purposely does not use alarmist wording such as global crisis, climate change, or “water wars” in effort to capture both the social conflict and cooperation that take place when a dam is opened or closed, a channel is dredged, or a faucet is turned.

This book review will explore how Barnes illuminates some of the nuanced understandings of water security and water equity by broadly exploring two themes from the book. The first section of the review will examine the theme pertaining to how water security relates to the ideational value that physical structures have to governments as well as to rural populations. The second section of the review will explore the micro-analysis of Barnes’s study of a watershed by discussing the informal water practices of the Fayoum Province through the theme of water bureaucracies and how equity is a discursive process. Finally, a general critique will be presented.

The Ideation of Physical Structures

Barnes asserts that there is an ideational component to water use and allocation that fuels the ambition of governments to construct symbolic structures such as dams. Such structures serve as physical examples of governmental effectiveness in maintaining water security. Barnes highlights this observation by demonstrating how both (1) social forces seen in economic proliferation and (2) symbolic features—including dams and dikes that alter the course of the river—permeate politics and livelihoods. Rivers conduct the physical process of water and sediment transfer (Richards, 1982). Manipulation of either water or sediment creates an imbalance, consequentially altering the course of a river, hence causing
environmental degradation (Lane & Richards, 1997). In the book’s background history to the analysis, Barnes asserts that the construction of the Aswan High Dam1 can be perceived as an ideated structure used to control the international waters of the Nile by means of Egyptian political processes. The potential for a physical structure to become a symbol of political authority takes precedence over the understanding of how the physical structure will impact the environment. A dam “shows” citizens how strong the government is through the ideational characteristics of the dam’s concrete structure, almost as though the nature itself. Unfortunately, focusing on the ideational values of dams and other structures to the exclusion of any concern for the social value of water at the local level of watershed management typically results in environmental degradation. Barnes brings attention to how ideation regarding the ability to control a river’s waters also creates conflict in rural areas.

With the ideation of dams as a form of maintaining water security by political bodies, the social component of water abstraction is seen in the facilitation of aggressive agriculture projects. These projects change how the river basin’s land is used, which leads to physical imbalances that perpetuate basin dynamics. This break or manipulation of the water cycle is understood as the physical characteristics of the basin being historically altered as a result of political influence and decisions. As Barnes suggests, this is in effort to form a “command and control” system of water governance. The end result is that allocation of the water source must be facilitated amidst both the political motivations of the government and the pluralistic views and needs of the local population. Barnes distills this concept to the local level of governance by associating the ideational value of physical objects that manipulate basin dynamics. For example, the ideational value of a large dam as a symbol of governmental efficiency is found, at the domestic and rural level, in small mechanical water pumps. The ownership and availability of pumps that pull and transport water to farmland is viewed as a means of facilitating land reclamation; ownership of pumps promotes the image of strength in an economy dependent upon agriculture. This observation on the ideation of the physical tools used to allocate water extends to those in community leadership that control the opening of community faucets and channels.

The notion of the value of water is emphasized as the backdrop of Barnes’s work. The value and understanding of water is “unique to a given moment” (p. 172). Water passes through the politics of governmental facilitation at the same time that it provides eco-functionality to the area through which it passes, as Barnes shows. Hence, when Barnes examines the managerial structure of water governance in her research, she is examining the discursive practices associated with the “command and control” approach to water management, ideated through dams, pumps, and channels.

**Water Bureaucracies and Informal Processes**

Water user associations (WUA) are often the governing body that determine equitable allocation schemes in rural areas, as Barnes mentions. These organizations, which Barnes identifies as “water bureaucracies,” ultimately determine which areas will experience water scarcity and which will have sufficient water. These water bureaucracies are the symbolic amalgamation of both the conflict and cooperation of water decisions. Ultimately, equity is never fully achieved, as the book illustrates. There is a give-and-take nature embedded in the practices of water governance that assumes that achieving water equity is not to presume that all stakeholders are granted all of their demands. Conflict and cooperation coexist, as Barnes explains. This observation pairs with similar research performed outside of the Nile River basin, as seen in the work of Mirumachi (2015), which explores conflict and cooperation in transboundary river basins such as the Ganges, Orange-Senqu, and Mekong River Basins.
Therefore, true water equity can be considered a conceptual nirvana, a “perfect” governing process that is unachievable and even has elements of ideation (Molle, 2008). The command and control structures of water bureaucracies can be seen in Barnes’s work to have gaps between rhetoric and practice. Individuals placed by governing authorities to monitor water levels and water abstraction (i.e., those with the ‘key’ to release water from a channel or faucet) tend to produce incomplete record keeping. Numbers in datasets are absent, smudged, taken at the wrong time of day, or are simply incorrectly documented, as observed by Barnes. In the conclusion of Barnes’s study, it can be said that the informal processes of water governance are just as important as the formal process in order to better understand how to achieve the elusive notion of equity.

On the Nile River, the construction of the Aswan High Dam demonstrates how an ideational symbol of water resource management is perceived. The result of the building of physical structures to manipulate the flow of and access to water represents a command and control style of management. Barnes illustrates through field research how water allocation is facilitated at the micro-level of management. Every decision made at the local level is reflective of the political climate of the area. The process of attempting to achieve water equity is performed amidst assumptions of command and control models of management. It is important to note that Barnes’s observations were recorded before the Arab Spring. As such, Barnes’s observations are important to take into account in understanding not only how marginalized populations resist their disenfranchisement with respect to their access to water but also how water bureaucracies react to volatile political climates. As seen in a Pietz (2015) study of China’s Yellow River, ideation of structures used to manipulate waterways often represent opportunities for governments to display power during times of political change. This observation would assume competition for pumps and control of the physical elements of controlling water will only increase in light of Egypt’s recent governmental transition.

References

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