Chapter – 1

Water Management through People’s Participation:
Theoretical Understanding

Theoretical Context
Consciousness towards the environment has been a way of life in the Eastern world or the so-called ‘Oriental societies’ since time immemorial. In the West, concern for environment, known as ‘Environmentalism’, gained attention after the realization of the consequences of Industrialization and its impact on nature and environment. But the initiation point of environment concern here itself is in debate. In the conventional Western or so-called modern social theory, this concern for environment is known as Environmentalism. Kay Milton (1996) in ‘Environmentalism and Cultural Theory’ writes,

"Environmentalism appears to have grown, over the past thirty years, out of long-standing but relatively low-key minority interests, to become significant, but far from dominant political influence at national and international level. Environmentalism is a feature of what I have chosen to call ‘industrial’ society. Within this context, because it is seen as a relatively new and growing phenomenon, analysts often describe it as a social movement. And because it has become an important and distinctive component of political discourse, it is often characterized as an ideology."
Environmentalism in Indian context does not correspond to the Western notion. The term 'environmentalism' in the Indian context seems to be irrelevant. There is no such movement in India, if we look in terms of Key Milton. Here, it is a way of life, to be lived, not to be demonstrated.

**Sociological Theory and Environment**

It is predicted that the 21st century will be characterized by a massively endangered natural environment and this trend will become increasingly dominant in all fields - politic, foreign affairs, development policy, education, technology and research (Goldablatt, 1996; Munshi, 2000).

Scholars have pointed to the limitations of the theoretical legacy of classical social theory of Marx, Weber, Durkheim for examining the issue. Weber’s work shows the least engagement with natural world. Even Marx and Durkheim, Goldblatt (1996) argues, who saw the relation between human societies and the natural world as central to historical change, did not pay much attention to the impact of economic and demographic processes on ecosystems. In fact, classical social theory was concerned more with how pre-modern societies had been constrained by their natural environments than with how modern society will lead to environmental degradation. Nor could it see at the time that capitalism would prove to be environmentally problematic in a fundamental sense (Munshi, 2000).

Others like Ted Benton (1994) argue that there is much in the corpus of Marxian Historical Materialism which is compatible with an ecological perspective. According to him, Marx and Engels did recognize the historical necessity of human dependence upon external conditions in nature and limits to their social activity. Textual evidence suggests that Marx quite explicitly advocated ecological sustainability as a ‘regulating law’ which would govern socialist agriculture as different from its capitalist form. It is often pointed out that one of Engels earliest works *The Condition of the Working Class in England* was a denunciation of the environmental consequences of capitalist industrialization (Ibid: 254).
Classical Sociological Thinkers on Environment and Society

The idea of social theory is not a simple one. Ted Benton has argued (of sociology in general, rather than social theory) that the way in which sociology came to define itself, especially in relation to potentially competing disciplines such as biology and psychology, effectively excluded or forced to the margins of the discipline... questions about the relations between society and its ‘natural’ or ‘material’ substrate’ (Benton 1994).

In the first half of nineteenth century both Auguste Comte and Herbert Spencer considered sociology to be epistemologically and ontologically dependent on, or subordinate to, biology. Comte drew biological analogies and metaphors of form and function and the relationship between organism and organs to explore the interrelationship of individuals and institutions in modern societies, while Spencer’s work was the first of many attempts to marry Darwinian models of evolution, selection and change of social development (Spencer 1972).

More concretely the work of the classical political economists returned again and again to the relationship between the natural environment and the human economic prospect. Malthus, most obviously, inquired into the social consequences of rapid population growth in the context of limited environmental resources with which to feed that population. Both David Ricardo and John Stuart Mill explored the potential limits to growth in an expanding but essentially agrarian economy; and they both concluded, though by different argumentative roots, that the explosive growth of the early nineteenth century would eventually reach both natural and economic limits of exhausted soil and declining rates of return.

By the third quarter of the nineteenth century the explosive pace of Western industrialization had rendered the gloomy prognosis of both Malthusian demographics and Ricardian agrarian economics redundant; population growth continued unabated at historically high rates, while agrarian productivity continued to rise and formed a diminishing role in a much broader process of economic growth. It is therefore no surprise that those early attempts
to engage with the social and economic origins and consequences of environmental change were bypassed.

Of the classical trinity, Weber’s work conducts the most limited engagements with the natural world. There are some reflections on the environmental origins and implications of nomadism in his study of Judaism. Yet his historical investigations of antiquity, despite the centrality of agrarian production in his work, yielded little direct study of the historical impact and social implications of differing natural environments (Weber 1952). His studies of China and India are no more environmentally informed. Indeed the only relevant discussion appears in a few paragraphs in the opening chapter of Economy and Society (Weber 1968).

Durkheim, in taking population density and its relationship with material resources to be the driving force behind the evolutionary stratification of human societies, made the natural world a decisive causal factor in human history (Durkheim 1991). Marx had acquired a persistent concern with the notion of the natural from his study of Hegel. However, it is not his discussions of human nature and species being, but his material understanding of human labour that concerns us. Like Durkheim, Marx placed the economic interface of human societies and the natural world at the center of historical change. By contrast, Weber never gave demographics a central causal role in history, while his theory of economic action significantly differs from Marx. Weber defined action by reference to the ideal type of purposive rational action. Therefore the relationship between means and ends was more significant than the ontological relation between human object and natural object. In any case, whereas Marx defined economics in terms of production and the transformation of the natural world, Weber understood it primarily in terms of peaceful exchange.

It is necessary to consider the modern sociological theories because the question of causes and consequences of the present ecological crisis is a more recent concern. Here the works of Mahatma Gandhi and A. Giddens are worth mentioning. According to Giddens (1990) the debate about whether capitalism or industrialism has been the prime mover in shaping the modern world, until relatively recently, ignored the destructive effects that the modern production
The theoretical understanding of Gorz's (1975) work to our concerns is fourfold. His studies draw on the work of environmental economists, and show sensitivity to the detailed dynamics of contemporary capitalist economies. He explores mechanisms of environmental degradation; the impact of modern consumption and environmental impact of technologies. He pays attention to the socioeconomic consequences of environmental degradation. The most important aspect of Gorz's work is his reflections on socialism and the means by which cultural preferences and the demand for environmental sustainability can triumph over the dynamics of economic and political interests.

In *Ecology as Politics*, Gorz's pre-eminent concern was with the economic and political implications of ecological damage. Gorz argued that the environmental consequences of capitalist economic growth would have to be quelled, but this could not be achieved by the transformation of economic organization alone. The dominant cultural understandings of the wealth, which fuelled economic growth, would have to be redefined as well. Gorz's integration of environmental issues into a broader political economy is an advance in itself. His focus on consumption, cultural interpretations of wealth and well-being and technology have all advanced our understanding of the political economy of environmental degradation.

Habermas (1982) distinguishes between two categories of social movements: emancipatory, and resistance and withdrawal. The women's movement is the emancipatory movement *par excellence*, while the ecological movement falls in the second category. The resistance movements can be subdivided into 'the defence of traditional and social rank' (based on property) and a defence that already operates on the basis of a rationalized lifeworld and tries out new ways of cooperating and living together. This distinction allows Habermas to separate middle-class protest groups and movements for regional autonomy from his main concerns: youth, peace and ecology movements.

For Habermas, the tangible, material destruction of the natural and urban environment accounts for the emergence of an environmental politics. In wrestling with environmental degradation i.e., 'developments that noticeably affect the organic foundations of the lifeworld', the ecology movement is
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of life. They live it in day-to-day life, right from getting up in the morning to going to the fields for answering nature's calls to work in the fields and then going back to sleep. The villages in the region were independent till last few decades. The wave of development in the colonial period did not affect the villages of the region, as they were different from the villages of other provinces of the country. They were part of the princely states of Rajputana and it saved them from the clutches of the British to an extent. With the independence and the development thereafter, the region became dependent on the other regions. And this is the story of most of the villages in the region. Their economy was of the 'ecosystem' kind rather than of the 'biosphere' one in terms of Dasmann.

The opposition between industrial and non-industrial relationships with the environment is neatly encapsulated in Dasmann's (1976) distinction between ecosystem people and biosphere people. Ecosystem people are those who live within a single ecosystem, or at most within one or two adjacent ecosystems. Dasmann included within this category traditional, non-industrial societies, and people who have opted, or been pushed, out of 'technological' society. Biosphere people are those whose way of life is tied in with the 'global technological system', they use the resources of the whole biosphere. This study will take into consideration the difference among the communities in the rural and urban settings with regard to this differentiation.

Key Milton simply rejects the distinction between ecosystem people and biosphere as misleading. But this distinction provides an attractive idiom to discuss the relationship between environmental sensitivity and environmental exploitation. The history of colonial expansion and industrial progress can be seen as a process in which ecosystem people have been transformed into biosphere people, often unwillingly, often forcibly, but often with their enthusiastic co-operation. And this is what has exactly occurred in the region, and in that respect with the whole country in the last century. In Rajasthan, it happened later than other parts of India because of the disguised blessing of the Rajput Raj.

In the context of the growing environmental challenge, leading to the mankind's first ever global crisis, Gandhi seems to be increasingly relevant in a
rather unexpected area of ecology. In a way Gandhi was the world’s early environmentalist – in vision and practice. In Hind Swaraj, Gandhi stated, that the civilization of the West though welcomed in India in the name of modernity, is a ‘Bhasmasur’ (the monster who converts anything he touches into ashes). It is a civilization which equates consumerist lifestyle and abundance with development and as such cannot be termed as a civilization in real sense of the term. Man’s progress and the road to development have led to the deterioration of nature. In his quest for fulfilling his needs, he has exploited nature to its maximum. It is the development which is ecologically unsustainable. In the words of James Mc Hall, the human being has become the most dangerous organism that the planet has ever hosted. There is no end to the desire of man; the indiscriminate satisfaction of his wants has led the West to have mastery over nature. (He distinguished between the needs and the wants of the human beings). In his practice, Gandhi promotes many constructive programmes like health and hygiene in rural area, promotion of Khadi and village industries etc, which limits the use of machine and environmental degradation. Most importantly Gandhi emphasized non-violence, as in the other fields, in context of nature. Nature was to be approached with a sense of reverence. It should not be hurt. Man being the most powerful living being on the earth should not cause violence to sentient beings including the plants and animals. This was the meaning he gave to ecological balance and peace¹.

Gandhi’s concept of ‘Gram-Swaraj’ was a kind of ecosystem economy where the villagers would be independent, i.e., dependent on the local ecosystem or at most on the adjacent two or three ecosystems, but not on the whole biosphere. Folk deities and saints in these regions also advocated the same principles. One of them is Brhitthari, who was also the King in the Mewat region and has written three shataks: Niti shatak; Shrangaar shatak and Bhakti shatak. He advocated natural conservation and still his place falls in the boundary of the famous Sariska Tiger Reserve. The region was called Matsya Pradesh in the ancient times. If we go into the nitty-gritty of the region, we will find its people and traditions hundred times more environmentalist than any of

¹ Shreekrishna Jha and Pravin Sheth in www.mkgandhi.org.
those international organizations and personalities who use to flank the media and the world stages. Children in the region use to mark peacocks as personal and feed them daily.

**Water in Sociology**

A widely prevalent and generally taken-for-granted idea that ‘water is a crucial element for human life’ is underlined, often, by the conception or presumption of an ‘autonomous nature’ and ‘autonomous individual’. Very often, this conception undermines and occludes water as equally a social phenomenon. The critical aspect, it then evades is that in its use, control and management etc, it hardly escapes the social networks and cultural frameworks.

This concern emerges from the conception that water ecologies are very intricately embedded within dynamic structuration of socio-economic and politico-cultural relationships. However, this study recognises the equally important idea that the ‘natural’ element of water ecology positioned outside society, can invariably influence social structures and formations. But then, these questions rather come to be seen in this work as natural processes too get socially and culturally conceptualised, articulated, and engaged as well as confronted. Thereby, the conceptions of ‘social constitution’ or ‘social making of nature’ disrupt the conceptual polarity that water ecologies exists completely either outside the society or within social imaginations.

Theorising water can be attempted at two problematic positions or propositions: ‘cultural politics of natural resources’ and ‘politics of culture around natural resources.’ From these, the next section develops a broad framework for understanding water ecologies, historically, sociologically, and critically.

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2 Various instances can be cited as to how droughts, floods, tsunamis and so on exert severe strain and influence on the social relations.

3 How the natural processes, though not all, of droughts, floods etc., for instance themselves are manipulated, accentuated, mediated through human, nay, social activities, can be important pointers, here. That is, certain natural processes themselves are socially induced. However, this can not be applied to all processes which may go beyond human or social presence or influence. It is rather just to reiterate that at least in the case of tank ecologies, certain processes involved in ecological change cannot be understood completely beyond social mediations and dynamics.
Water: Concern of the Times

The vice-president of the World Bank pronounced, ‘The wars of the next century will be about water.’ (Maude and Clarke, 2002)4 Despite the fact that the motives behind such ‘alarmist rhetoric’ needs to be critically engaged with, it though indicates a high point of its criticality. Conflicts over water between individuals, groups, regions, states, are not uncommon to find in the day-to-day lives, of the present context. Recent agrarian crisis unfolded with unprecedented number and intensity of farmers’ suicides can give a deep sense of it. Though, it may well be only one specific context among many others, and yet it offers a social context to it, as may be seen a little later.

Recent increase in farmers’ suicide cases, unending stories of distress in rural environment and burgeoning tales of water scarcity and its impact on agrarian livelihoods have brought back the debate on agrarian environment into the mainstream media5 and academic circles mostly from economists, ecologists and environmentalists, and often sociologists and anthropologists fall or conflate into either of these projects, agendas, and perspectives. Amidst numerous explanations indicating various factors, one factor invariably dominates much of the explanations. Water is one such source and resource which had been at the centre in the whole debate about agrarian tragedy. Be it perennial tales of unblessed hopes in long waitings for the drops from sky, or the endless expensive journey deep into earth for water which was quintessential for lives of the crops and its dependents, directly and indirectly. As drought-struck villages increase year after year, villages dying for drinking water multiply each year, monsoon failure has become routine daily news (in

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5 The Hindu, Frontline, NDTV 24X7, etc. have been in the forefront. Although vernacular media had been consistently addressing the issue for long, this issue attracted the attention of national level English media only in the recent times. However, it needs no over emphasis, as it becomes clear in the biases that unfold with the analysis of relative importance of various issues in the media: For instance, P. Sainath [in a public discussion] notes that during the recent agrarian crisis amidst numerous farmers’ suicides, journalists in the mainstream media who covered agrarian aspects, focussedly, numbered hardly to six or so, while to cover the event of Lakme fashion show, the number of journalists from mainstream media ranged to about 400. [In an introductory statement on serious journalism, while he chaired the public discussion on ‘War on Iraq and War within America’ (main speaker was Alexander Cockburn, an eminent American journalist) at Jawaharlal Nehru University, dated 28-03-2005].
context of this study, they have been an integral part of the society and culture of the Rajasthan, conflicts over water between villages, regions, even states has become so common, water has reached a centre-stage in both academic as well as political domains.

Besides these practical exigencies, for other reasons too water remains a matter of critical concern. Against the received notions, water offers an interesting link between ecology and livelihood, so too between nature and culture. And it also enables us to understand the mutual shaping of landscapes from long-term historic ecological and social changes. For this, water can be understood as not a mere natural resource essential for human beings, but also as a medium of various social relations, cultural constructions, exchanges, and the source of symbols, meaning systems and political structures. Water being such a significant but scarce resource obviously tends to assume a very important space in the cultural life of this society.

Before these questions are addressed, certain problematics needs to be identified which may perhaps be derived by contextualising the problem. Context gets manifested itself in multiplex of engagements. Now, the policy discourses, academic engagements, popular conceptions and articulations through journalistic reports, and narratives, civil society engagements such as environmental activists, and political maneuvers through populist rhetorics, all of them seem to be concerned about water. These will tell us how nowaday's water is taking centre-stage in our daily mundane life at various levels of engagements. It may not seem exaggerative if we say that we can not miss a day without a tale, new or old, on water.

**Environmentalism and the Question of Water**

To start with environmentalism, 1970's in India have witnessed a number of environmental movements contesting over the control and management of resources. Parallely, or consequently, 1980s and 90s have witnessed waning of the confidence in the technocratic solutions to environmental problems. A wave of thought, which emerged from these developments ‘argued for a return to the indigenous knowledge of local communities as a basis for environmental
management' (Guha 2002: 181). These environmental narratives, though not homogeneous in theoretical or ideological principles they are grounded upon, yet unanimously challenge the modernisation project. Some of them even invoked a moral critic of the modernisation project. On the whole, these narratives strengthened the idea that local communities are the best and sustainable managers of resources like water, forests, and so on.

Centre for Science and Environment’s ‘Dying Wisdom’ represents a synthesised version of environmental standard narrative of water harvesting systems. This grand narrative provided a unifying model of the nature, management and decline of traditional systems. According to this narrative, traditional systems were based on indigenous wisdom; they were operated in autonomous village systems; by nature the village socio-economic systems were organic which dates back to timeless past, but as commonly referred, to self-contained harmonious pre-colonial village India; the reasons for their decline are shown to be the “erosion of these autonomous functioning of the village systems,” due to colonial neglect and the rise of centralized state. Further it advocates that this model is potential for replication in policy concerns to be achieved in future.

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6 For instance, Ramchandra Guha suggests that three distinct strands can be identified in Indian Environmentalism. One, ‘Crusading Gandhian’ or ‘Eco-feminists’ who were grounded on Gandhian project of challenging western notion of modernity; second, ‘Ecological Marxists’ rooted in creative blend of ‘red’ and ‘green’ movements of communism and environmentalism; and lastly, the ‘Appropriate Technology’ strand, though less ideologically based, challenge the large-scale projects of modernization. ‘Small is Beautiful’ aptly represents the last strand. See the discussion in Ramchandra Guha (1988), ‘Ideological Trends in Indian Environmentalism’ in EPW, December 3, pp.2578-81. But it is interesting to note, Sinha et. al., in their review of ecological debates in India argued that despite all these variations, ‘a complex intertextuality appears repeatedly in Indian environmental debates, contributing to a sense of shared foundational ideas.’ [See, Sinha, et. al. (1997), ‘The ‘New Traditionalist’ Discourse of Indian Environmentalism’, The Journal of Peasant Studies, Vol. 24, No.3, April, p.69].

7 Rooted well into Gandhian project of challenging Western modernity, Vandana Shiva, for instance, writes that (in South Asia) ‘[f]or centuries, vital natural resources like land, water and forests had been controlled and used collectively by village communities thus ensuring a sustainable use of these renewable resources....’ in her, Ecology and the Politics of Survival, New Delhi, 1991, p.14; cited in Sumit Guha (2002: 183).


10 Anil Agarwal and Sunita Narain, op. cit.; discussed in Mosse (2003), op. cit.
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These indigenous environmental narratives corresponded to or coincided with the developments in global developmental theories. Under the influence of post-structuralist formulations of Michael Foucault and Edward Said, some group of scholars came to represent a parallel intellectual current to the Indian environmental narratives (and perhaps well with other native narratives of various parts of the world). Under the rubric of 'post-developmentalist' thought they came to share the idea that the idea of development is dead, and is underlying by the euro-centric models that perpetuate Western dominance over Third World through various development programs and models. Alternatively, they see indigenous and local knowledge systems as more contributing to the enhanced production and sustainable development. Thereby, they criticize excessive state control, or any external (national or international) interventions in the local modes of production.\textsuperscript{11}

Changes in Global Perspectives of Water
It may be interesting to note that the precepts of Indian environmental narratives have crept and echoed later in the policy discourses too. Even more interesting is what Sumit Guha says, that India's Planning Commission, which is the 'ultimate bastion of technocratic top-down planning,' uncritically accepts it. In fact in 1997, he says, the Approach Paper to the Ninth Plan announced that,

\begin{quote}
"local communities will be conferred with the right to derive the full benefit of the forest produce in their respective areas... There is a symbiotic relationship between the tribal communities and the forests in which they live. The local tribal communities will be fully involved in the management of the forests."
\end{quote}\textsuperscript{12}


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Coincidentally these developments took place in the context of large-scale economic reforms in India and many parts of the world. It is commonly referred to the 'structural adjustment' process which in India was initiated in the early 1990s. Under the global discourse, World Bank driven model, in the mainstream international policy, advocated 'devolution of water resources management from state bureaucracies to the communities of users' (Moose 2003: 13-14).

Theorising Water as 'Commons'

And underlying the aforementioned processes and changes, certain approaches of irrigation have come to dominate in policy discourses. Both within and outside of environmental debates, certain theories have come to the fore in this context. Collective action theories, in response to the thesis of 'tragedy of commons' within environmental debates, and outside such debates, Public choice and Game theories in economic-institutional approaches emerged as dominant explanations that support the policy discourses of devolving responsibilities to local users to manage those local resources.

Now, retrospectively it may be pointed out that these both advocacy models of environmental narratives of water management and policy discourses of water management are fraught with the problems of ideological constraints and analytical limitations. Without presenting a critical treatment right away, now it would be suffice to note certain problematics which could be taken up or engaged with later in the questions concerning theorising water.

Contextualising the Problem

These models can be questioned at least at two levels: one, at the analytical limitations of these models and other, at the very ideology behind the state initiated reforms. Just to amplify this, first on the second aspect, it is useful to

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refer to the recent works that have analysed recent development initiatives at the discourse level. They include Arturo Escobar (1995), Ferguson (1994), Mosse (2003), David Ludden (1992), etc. who invoked the works of Michael Foucault and Edward Said to delineate the ideological content of state strategies where power operation is analysed at knowledge production. According to these studies, discourses of development have to be analysed at how these models present various representations, and upon them how state selectively includes or excludes certain representation through its validation power, for its own benefit. 14 This is essentially linked to our other concern i.e. analytical limitations of these models.

At the most fundamental level, these limitations arise especially due to the fact that premises of the very models had been relied on ethnographic data on village India which are actually part and product of colonial government’s knowledge generation or either due to the particular (nationalist) representations which played in opposition to colonial government that goes beyond free play of knowledge generation. This phenomenon is exemplified in Edward Said’s formulation in ‘Orientalism’ that (to quote Mosse, to capture the idea precisely) “historians and anthropologists have often been unreflective participants in the ideological work of domination, not least in their own endorsement of orientalist conceptions of village India” (Moose 2003: 19).

And from then the other specific analytical limitations of those models would follow, which need to be addressed systematically. First of these is with regard to all these models. They all treat state-society relation in a polarized form as in their advocacy they seek autonomy to a community organization. Secondly, these models do not rely on concrete empirical facts regarding the history of traditional systems. Due to this, they romanticize the community organization as isolated, harmonic and unchanging forms, before they were disrupted by colonial rule. Lastly, with more specific to policy model, in their assessment of management, juxtaposing state managed systems with community managed systems, these models seem to be “narrowly utilitarian and

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14 However, there are variations in emphasis among these scholars which need to be noted as they are to be seen later in this work.
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economicistic.” This is because they tend to separate resource management from other aspects of socio-cultural life (ibid: 17-18). However, more problematic is to note that despite these inadequacies and limitations, they still dominate in the policy formulations. This adequate discussion on contextualities and problematics helps further in attempts at theorising water with broad social framework as may be seen in the following section.

Theorising Water: Difficulties

Sociology of water primarily suggests sociological ways of concerning water. Received ways of understanding water presume water to have existed outside social contexts. From such a view water remains nothing more than a ‘natural’ or ‘economic’ resource, which serves crucial needs of the human beings. These standardised notions of water leave little to tell how water represents various symbolic orientations in specific local contexts. It hardly explains how, if water exists outside social contexts, the institutions, and the means or ways of using, managing or controlling water are distinct from one social context to others. They also do not explain how water entails certain ideologies of rule by serving as a means of legitimation of political and economic relations and structures.

But the understandings, underlying by the dualistic notions of ‘rational’ and ‘customary’ orientations, individual and collectivity, etc. continued to elude the complex ways in which water systems were managed and transformed by actors in the society. Recent critical perspectives in sociology and anthropology help in overcoming these problems. For instance, in outlining the theory of structuration, Anthony Giddens (1984) argues that between individual and society, mediating mechanisms can be identified in ‘institutions’, which themselves mark a sense of continuity and change over a period of time, as individuals are constantly involved in modifying them.\(^\text{15}\) On the other hand in an attempt at transgressing the dualism of ‘economism’ and ‘culturalism’

\(^{15}\) He notes that: “The basic domain of study of the social sciences, according to the theory of structuration, is neither the experience of the individual actor, nor the existence of any form of social totality, but social practices ordered across space and time. Human social activities, like some self-reproducing items in nature, are recursive. That is to say, they are not brought into being by social actors but continually recreated by them via the very means whereby they express themselves as actors. In and through their activities agents reproduce the conditions that make these activities possible.”

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involving human or social actions and interests, Pierre Bourdieu (1977) writes that:

... contrary to naively idyllic representations of 'pre-capitalist' societies, practice never ceases to conform to economic calculation even when it gives every appearance of disinterestedness by departing from the logic of interested calculation (in the narrow sense) and playing for stakes that are non-material and not easily quantified ... The only way to escape from the ethnocentric naiveties of economism, without falling into populist exaltation of the generous naivety of earlier forms of society, is to carry out in full what economism does only partly, and to extend economic calculation to all the goods, material and symbolic, without distinction, that present themselves as rare and worthy of being sought after in a particular social formation – which may be 'fair words' or smiles, handshakes or shrugs, compliments or attention, challenges or insults, honour or honours, powers or pleasures, gossip or scientific information, distinction or distinctions etc.16

Following Bourdieu, David Mosse, in order to understand the complex forms of tank resources, suggests to 'overcome the distinction between rational action and 'custom', and to reconceptualise common property resources as part of the village public as a material and symbolic domain' in south Indian villages.17

Updating with these critical perspectives of 'practice' or 'processual' approaches would be able to correct some of the previous structural-functionalist approaches in the field of social ecology. As discussed in the previous section on 'contextualities', two problematics can be retrieved here for a critical engagement. They include: tendencies of 'naturalising and economising water' and "'oriental"ising and re-'oriental"ising water." These two problems can be examined at two analytical questions, 'cultural politics of resources' and 'politics of culture', as may be seen in the following sections.


17 David Mosse, ibid. p.473, emphasis original.
Cultural Politics of Resources and Water

First generation of environmental studies under the rubric of ‘social ecology’ and ‘political ecology’ as well as ‘environmental history’ had made appreciable attempts to understand the relation between social structure and ‘ecological infrastructure,’ and between nature and culture. However next generations of environmental thought unveil underlying contradictions in those frameworks. At least, two major contradictions representing the two strands, though not exclusive or different in themselves, maybe pointed out here to understand the complex relation between water and society. One particular strand often termed as ‘social ecology’ deals with nature-culture and socio-cultural relations with regard to natural resources, rather in functionalist terms, as forming ‘symbiotic’, and non-conflictual relations. Second strand (may be seen as ‘political ecology’) rather emphasises on politics involved in the conflicts over natural resources: power relations, conflicting interests are the central themes under this framework. First we may now engage critically with the latter framework, to get at cultural dimensions and orientations involved in the conflicts over natural resources.

The strength of the ‘political ecology’ perspective, Amita Baviskar (2003) says, lies in ‘its unwavering focus on issues of social equality and justice at stake in conflicts over natural resources.’ In elaborating this, she says that the rich literature under this framework ‘has examined social movements large and small that bring together diverse and distant social groups, address transnational audiences and use international and national regulatory and judicial institutions to defend threatened livelihoods against the incursions of state-led extractive development’ (ibid: 5052). It may be cited in the case of water resources, the recent work, ‘Blue Gold’\textsuperscript{18} presents the picture of marginalisation of poor and disadvantaged from their ‘legitimate’ local resources of water due to the exploitative centralising state structures and global capitalist forces.

In their singular concern over the social inequalities and injustices in sharing of water resources, they oppose corporatisation, privatisation and

\textsuperscript{18} Maude Barlow and Tony Clarke (2002), \textit{Blue Gold: The Fight to Stop the Corporate Theft of the World’s Water}, New Delhi: Left Word pub.
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commercialisation of water commons, and further demand to declare water as a ‘basic right’ rather than as merely a ‘basic need’. There is nothing to be disputed with the idea of injustice involved in unequal sharing of resources. However, the problem is that this perspective leaves out or rather conceals much than it reveals. First of all they assume that the ‘primary significance of natural resources resides in their material use value’ i.e. water becomes a contentious issue because it is a scarce resource useful and essential for human life, for agricultural production etc. and nothing else. And further they treat identities as formed or derived ‘directly from an objective set of interests based on shared locations in terms of class, gender or ethnicity that challenge nationalism and/or capital’ (ibid: 5052). That is ‘local’ and ‘indigenous’ people forge identity in sharing their objective conditions which motivate them to fight against ‘state’ or national and global capital. With this they generate binaries such as ‘local’ vs. ‘global’, civil society vs. state, ‘virtuous peasants’ vs. ‘vicious states’ and so on.

Against these ‘received’ frameworks, and in defining alternative analytic frame of ‘cultural politics’, Amita Baviskar says that while it shares political ecology’s commitment to ‘asymmetric workings of power,’ the other important issues at stake in resource politics are ‘concerns that relate the materiality of the resource to wider structures of meaning.’ That is, ‘cultural politics,’ for her, ‘embeds resource struggles within a larger symbolic economy where the ‘roles’ that resources perform are several.’ Therefore, she says, ‘cultural politics suggests that natural resources have value within a larger economy of signification which crucially shapes their modes of appropriation. [Further] they are also resources for collective representations that exceed the concern with immediate material use’ (ibid: 5052).

To illustrate this, she discusses David Mosse’s work on village water resources (tanks) in which Dalit’s mobilisation for representation in the associations [Water Users Associations (WUAs)] that control and manage these resources was not guided merely by material interests or gains from water. Rather, this representation involves symbolic capital i.e. social values of honour

19 Amita Bavisar (2003), op. cit. p.5052.
institutions involved in managing these resources. Brosius (1999: 280) notes that essentialist constructions by environmentalists are not merely 'romanticised' essentialisms, but could also be 'strategic essentialisms'. Thereby, these representations could be seen as strategically deployed to challenge dominant discursive formulations. Following this, environmentalist constructions of 'hydraulic communities' as harmonious and cooperative, enabling sustainable growth of local production,\(^{21}\) challenge the colonial and post-colonial discursive claims on water resources as being managed better through scientific and technocratic solutions under centralized bureaucratic structures. However what is problematic under these constructions is that in challenging dominant structures, they unreflectively endorse orientalist constructions such as 'autonomous' village communities. More than that, they do not realize that state and powerful actors in it themselves are part of this politics, in which they could in turn continue apace discursive transfigurations and discursive incarceration. The question here is that how do we get out of these, specific discursive dominations involving 'politics of culture' while retaining the cultural frameworks of understanding natural resources. I would rather suggest in the following that 'critical ethnohistorical' approaches would prove to be partially remedying the problem.

**Water: A Critical Ethnohistory**

The foregoing discussion revealed that much of the above has dealt with the questions of representational politics with reference to institutions managing water resources. Beyond the questions of representations, it also concerns with historical sensibility of practice oriented and processual understanding of tank irrigated landscapes in south India. Before making sense of what I proposed here as an alternative approach of 'critical ethnohistory,' or 'critical environmental history' (Sivaramakrishnan 1999) or even 'critical anthropological history' (Brian Keith Axel 2002), we need to get at what is

\(^{21}\) For instance, see Radhakamal Mukherjee's (1926) which tells that communities in the scarcity prone regions are more harmonious to face the natural hazards and to cope those situations. A recent work as a synthesized narrative of indigenous water harvesting systems, 'Dying Wisdom' suggests that local communities are harmoniously linked to the tank ecologies.
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problematic of ethnohistorical approach. Primarily ethnohistory deals with culturally constructed representations. However it represents a vicissitude of past and present: If, on the one hand, it involves 'thick description across time' i.e. ethnographic understanding of past (as tracing past from the present) (Appadurai 1987: 4-5), on the other hand, it involves historiographic understanding of past (as historical trajectory to make sense of present forms) (Dirks 1987: 406).

However, either standpoints 'fail to specify the way in which past and present are interpreted in the constitution of culture' and practice (Sivaramakrishnan 1995). Drawing on J.D.Y. Peel's (1985: 583) recent formulation, Sivaramakrishnan, elsewhere, elaborates the task of the ‘critical historical anthropology’ as one of dealing with a triangle of relations:

...first, those between ethnohistory (or history as representation) and the past it represents; second, those between this past and the social forms of the present that are its outcome; and third, those between the present social form and the representations of the past for whose production the present provides a context (Sivaramakrishnan 1999:18).

Thereby, this involves a sociological or anthropological approach with close engagement of historical production of knowledge. This then, necessarily entails an exercise in sociology of knowledge and history of ideas and discursive practices that unleash certain ideological undertones in various discourses of water

Rajasthan: Modernity and Tradition

Yogendra Singh (1972) in his famous work 'Modernisation of Indian Tradition' writes, "Modernisation in India started mainly with the Western contact, especially through establishment of the British rule. This contact had a special

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Historicity which brought about many far reaching changes in culture and social structure of the Indian society." But the advent of British did not affect the social and cultural milieu of Rajasthan to the extent it affected the rest of the country. Rajasthan was divided into many states, thikanas, jagirs and riyasats and in the series of historical developments most of them remained out of the gamut of direct British rule. Their respective traditional heads like Rajas, Zamindars, Thikanedars and Nawabs directly ruled these units. Thus they were under the British dominance and rule but not under their governance. This was a blessing in disguise which helped this society to keep its cultural and traditional ethos alive till the advent of independence and democracy in India in 1947. Thus the processes of modernisation and social change that affected the people in other parts the country did not affect the people of Rajasthan.

At the time of Independence Rajasthan comprised of four major states – Mewar (Udaipur), Marwar (Jodhpur), Bikaner and Jaipur – and about a dozen smaller states. All of these were hierarchical monarchies. Some have developed professional administrations and representative legislative councils. In other parts ruler’s word was literally law, and there was little law or administration apart from it. The state attained its present form only in 1956 after a series of consolidations and reforms that began in 1948, under strong central government pressure. In these, hereditary offices and rights were progressively abolished, large landholdings broken up and sold, and the government was converted to a parliamentary form with a predominantly socialist ideological leaning.

The processes of modernisation which changed the course and structure of society of the whole country and eventually of Rajasthan too came in direct conflict with the traditional structures at the time of independence. It is evident with the challenge the democratic and nationalistic forces faced in the form of electoral challenge to the Indian National Congress during the first general election in 1952 at the hands of erstwhile heads of the states and their conglomeration of Ram Rajya Party and Samyukt Dal. In these elections the Congress Party could not attain clear majority in Rajasthan despite its thumping and clear victory in rest of India, particularly in North India.
This modernisation in Rajasthan is a late invention that has been challenged by traditional forces time to time. But it’s not as if they have hindered the path of development always. When the Nehruvian model of development and modernisation has failed, the traditional systems have paved the way for the survival of the society, particularly in the case of scarce natural resources like water. It is evident in many studies and from the lived reality that the modern system of governance through its modern institutions and the modern society has not been able to provide sustainable solutions to the management of natural resources. If we consider only the case of water even, the taps, which have reached most parts of the urban and semi-urban areas in seventies and eighties, have not been able to provide sustainable solutions to the problem of drinking water in the state. In the late nineties and in the beginning of the twenty first century the taps have gone dry at many places and the society is suffering. Its traditional systems and sources of water have dilapidated in the meanwhile and it has again come to the sum zero from that development. More so is evident in the case of irrigation facilities and in the desert areas.

In such situation, the synthesis of modernity and tradition in many forms has emerged for the help of this society. Earlier example of Tarun Bharat Sangh (TBS) is one such successful example, though it has its own lacunae and limitations. Another such example is this case of Jal Bhagirathi Foundation (JBF) which is a perfect example of modernisation of traditional authority. Here we will be discussing the genesis, methodology, impact and limitations of the Jal Bhagirathi Foundation. This chapter is primarily divided into two parts: first, genesis and methodology of JBF and second, its impact and limitations. The JBF experiment is very recent one, started in year 2002 and one does not find any academic work on this experiment. The first part has been written mainly with the help of literature available from the sources of JBF as one, there is no earlier sociological work done on this effort, and second, the organisation has documented the genesis, structure and functioning in a scientific manner. Thus first part of this chapter has been written entirely on the basis of the publications of JBF thus resembles a lot with the available sources of information. The second part of the chapter depends on the observations and comments of the
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researcher as this is the first work of its sociological evaluation in the knowledge of the researcher.

We will begin here with a socio-cultural background of the Marwar region where JBF has been working and where the traditional authority of the Maharaja prevails. Socio-cultural background of Rajasthan has been discussed earlier also but there are so much socio-cultural differences between the region where TBS is working and the Marwar. Then it will proceed to discuss the genesis of the JBF and the methodology it follows and then finally to its sociological analysis with the impact and its limitations.

An Institutional History of Marwar - ‘The Land of Death’

On a leafy pond, tucked into a shady corner of Jodhpur’s magnificent 15th century fortress of Mehrangarh, there stands a tiny temple. Exuding serenity, it looks out over the outer walls of the fortress at the bustling old walled city of Jodhpur that part of the city washed blue by her pious Brahmins.

In 1459 this temple was raised in honour of an old hermit called Cheeria Nathji, the Lord of the Birds, by the Rathore ruler Rao Jodha. Indeed, the story of the city of Jodhpur begins with Cheeria Nathji, who had lived here in contemplative isolation when Jodha’s masons shattered his tranquility. Irate, he cursed the Rathore, “Jodha! May your kingdom always suffer a scarcity of water!” A terrible curse anywhere, but in this harsh and inhospitable land, in the eastern extremities of the Great Indian Thar Desert, a land still called Marwar - The Land of Death, it heralded doom itself. And yet for thousands of years men have fought and died to conquer this land, to possess, to tame. For, like all deserts, it is a blessed land; rich in culture, secure in religion, indomitable in spirit.

The curse of Cheeria Nathji still exists. Marwar with an area of one hundred and thirty five thousand square kilometers is known for its fragile eco-system characterized by limited surface water availability, depleted groundwater resource, low and erratic rainfall. Drought in the region has been a recurrent phenomenon, as is evident from the fact that 43 out of the last 50 years have been drought years affecting approximately 12.2 million human
populations. As a consequence the region is marred by extreme economic backwardness.

Popular belief has it that the Rathore rulers continue to atone for the terrible curse of the hermit. Certainly, when Maharaja Gaj Singh stepped out of the palace onto the sandy wastes of the desert on the Water Crusade of Jal Bhagirathi Foundation, he was only treading in the footsteps of his forefathers — a very fine tradition followed by generations of Rathore rulers to make their beloved Marwar, a water sufficient region.

The region is infamous for its fragile and inhospitable eco-system characterized by sandy soils low in organic matter, scarce surface water, depleted groundwater resources, sparse vegetation cover, low humidity and high transpiration. Here, the Jal Bhagirathi Foundation (JBF) has based its operations in the Marwar region, which covers the entire Jodhpur division. The JBF is active in four of the seven districts of the division — Jodhpur, Barmer, Pali and Jalore. Drought is a recurrent phenomenon in the region; 43 out of the last 50 years have been drought years. The consequence: extreme economic backwardness, which is exacerbated due to lack of contextual planning and need-based development. With 48 persons and 80 heads of livestock per square km, this region was — by the 1970s — supporting a higher density of human and livestock population than any physically similar area in the world; it continues to do so. The region boasts of some of the best breeds of livestock in the country and a great diversity in vegetation. There are 700 species of plants, out of which 107 are of grass alone.

The requirement in terms of water, food, fuel and fodder is proportionately high because of the high population density, to an extent that even an average rainfall year provides little surplus, whereas a drought year completely disrupts the fragile balance leading to starvation and mass migration of livestock and human population. As a result, a once predominantly pastoral economy has now been transformed into an area of intensive agriculture with total disregard for the soil profile and groundwater regime. The existing land use pattern is entirely dependent on exploiting groundwater, leading to further desertification.
Marwar can be divided into two distinct regions based on the rainfall pattern. The mean annual rainfall ranges from slightly below 500 mm in the east and dips to less than 100 mm in the west. In areas receiving annual rainfall above 250 mm, agriculture is the dominant activity. Most farming households also maintain livestock. In the less than 250-mm rainfall zone, there is larger uncertainty of crop harvest; animal husbandry is the main pursuit and is sustained on grazing on open access lands. Agriculture is only practiced in places where water is available or where the moisture content is high.

The overall groundwater status in the four districts where JBF is functioning is either critical or over-exploited. Critical area is one where groundwater extraction is between 85-100 per cent; areas where groundwater extraction exceeds 100 per cent are categorized as over-exploited.

The worst affected district is Jalore, where about 81 per cent of area falls under both critical and over-exploited categories. Barmer (61.21 percent) Pali (56.29 per cent) and Jodhpur (about 55 per cent) follow. The districts with more than 50 per cent of their area falling under just the over-exploited category are Jalore (75.58 per cent) and Jodhpur (53.15 per cent). Despite the precarious water scenario, the percentage of area irrigated by tube wells to the total irrigated area is above 90 per cent.

The monsoon does not lead to a substantial change in the region's groundwater profile. This could be attributed to insufficient systems for retaining rainwater and using it to recharge groundwater reserves. The presence of high levels of fluoride in groundwater is another problem. The percentage area affected by fluoride varies between 40 per cent in Jodhpur to 80 per cent in Pali and Jalore.

Common property resources like community pasturelands, sacred groves, gravelly lands and cultivable wastelands are inseparable parts of the cultural heritage of the desert, and have played an important role in supporting livestock and preserving local bio-diversity. But due to degrading bio-diversity reserves leading to livelihood insecurity, the rural economy has been severely threatened.
Despite the inhospitable environment, the desert society has evolved a sustainable way of life. This has been possible because of a strong tradition of belief in the sanctity and value of water. Local inhabitants have evolved indigenous technologies of water management to judiciously use the resource and ensure balanced supplies to the human and livestock population. An assortment of such techniques exists — talab, nadi, johad, tanka and bawari.

Traditional Perceptions of Water Management in Rajasthan

We have discussed theoretical underpinnings of water as natural resource in social theories. Rajasthan, as a society which has survived through hundreds of years of water scarcity has developed its own understanding and perspectives about its usage, control and management. We will be discussing the evolution of cultural and social practices which have underlined the survival of this society and their coherence with the theoretical perspectives of sociological traditions.

Paul Robbins (1998) writes, “Rule systems, social and cultural norms, and legal frameworks are increasingly used as sites for intervention and platforms for action in cases ranging from fish and tree stocks to carbon and chlorofluorocarbon emissions. The environmental implications of variations in institutional form and structures of authority remain somewhat under examined, however.” Communities in Rajasthan have evolved such rule systems and social and cultural norms in last centuries but they have been out of the realm of theory. For them the answers strike directly to the heart of daily practice. Here, the degree to which institutions – the rules and authority that regulate land use – are enforced, respected, resisted, or subverted is a commonly understood local explanation for the deterioration of pastures and forests (and of common water resources) (ibid).

Komal Kothari explains the philosophy of life or the theoretical understanding of the people of Rajasthan with the following example. In Rustom Bharucha (2003) Rajasthan: An Oral History, which is his oral account of Rajasthan, penned down by Rustom Bharucha, he cites the following:
I will give you one example of what I learned. On getting to know some singers of devotional music from the Bavari tribe, I asked one of the musicians: 'What is akash (the sky)? How do you explain it?' And he said, 'Have you ever seen a ghara (earthen pot)? Move your hand inside it, but don't touch its periphery. That is akash.' A space with no boundaries.

Such is the understanding of the nature and philosophy of the people of this land. What people would understand after reading theoretical treatise is understood by every day life world experiences by the people of this land and they have survived successfully for centuries in this region. Understanding the way of life and the realities of everyday experience of this region and its people is not possible with a seminar, conference or a research project. It requires the patience, simplicity and kindness of people like Anupam Mishra, the author of Aaj Bhi Khare Hain Talab and Radiant Raindrops of Rajasthan. He actually has lived the experiences of the people of the region and then written it in simple language for common people. Anyone claiming of 'long and intense participatory research' cannot complete such a work. He has inspired numerous people to work on water in Rajasthan. There is virtually no one in the country working on water related issues, not being inspired by Anupamji’s authentic work, simplicity and his devotion to the cause.

Coming back again to theory of water and commons in Rajasthan, we would have to acknowledge the fact that there has not been much work done in this area. There have been several excellent works on pastures, fields and forests of colonial and contemporary Rajasthan. But except for passing references in studies of agrarian production, and revenue, few have examined the dynamics of water Management in Rajasthan. (Gold and Gujjar 2002; Jodha 2001)

In defining and explaining “The Great Transformation” of the earth’s surface processes, Kates et al. (1990) recognised normative and legal regulators of behaviour as a driving force in environmental change, but they do not address how these institutions function or how they modify landscapes. This is exactly the problem of theory for Rajasthan. The normative social behaviour in form of
cultural practices and social sanctions and the authority of the village councils and religious, semi-religious institutions are very difficult to bracket into any generalized framework. They change from one region to another and in many cases from one village to another.

Conversely, political and legal geography (Bloomley 1994; Clark, 1990) embrace a critical perspective on law, state, and community, but leave open the question of how social and political struggles affect natural landscapes. For geographers trying to explain institutional and ecological linkages, it is necessary to synthesize a wider field of research and to read from bodies of theory that contribute separate lessons for the study of authority, power and environment: rational common property theory, political ecology, and interpretative anthropology. (Robbins 1998)

Common property theory grows from empirical and theoretical responses to Hardin’s, ‘tragedy of the commons’ (Hardin 1968; Scott 1955) and posits a rational explanation for the evolution and survival of collective resource-management systems around the world. Robbins has established in his work that sustainable resource use under shared management is not only possible, but often necessary for resources ranging from water and land to air and information. (Ostrom 1992, 1990; Berks 1989; Bromley 1992; Mc Cay and Acheson 1987; Hanna et al. 1996) Its conclusions warn against the dismantling of locally adapted rule systems. Jal Bhagirathi Foundation, Tarun Bharat Sangh and Amrutam Jalam Abhiyan establish that use of common resource (in this case water), their management and conservation has to be shared by the community regardless of the state support. It has become compulsory for the community to look after its resources in contemporary situation where they are victims of the apathy of the modern state.

This approach is a powerful one that valorizes the complex ‘social capital’ and indigenous knowledge of producer’s communities by providing a social and ecological explanation for the fate of fishers, herders and farmers. Beginning from an individuated model of human social life, common property theory denies the simplicity of the tragedy of the commons and other economic models by establishing that self interested agents can act to mutual self benefit
through coordination. For rational common-property theorists, institutions are “the harmony of interests” leading to “collective action in control of individual action”. The claim of self interested agents in the common property theory has proved somewhat correct in this research. In case of Tarun Bharat Sangh, the success lies in the increasing numbers of the private water harvesting structures as they have helped individual farmers to harvest more water for their crops and for other purposes also. In case of Jal Bhagirathi Foundation, hope for water in their own village in water scarce region village has helped the JBF and the people to work towards the common water resources of the village.

Robbins further writes that it would be a mistake to romanticize the internal harmony of these early codes. The hegemony of elites was likely to be realized through these local institutions and there is no reason to believe that these institutions functioned as homeostatic systems (Inden 1990). In this study, in case of JBF this could be seen to some extent. The traditional authority of the Maharaja of Jodhpur has been in a way being reinstated. The Maharaja on the one hand is at the board of trustees of this ISO: 9000 certified organisation and on the other he receives nazrana from his earstwhile zamindras and thaikanedars on his birthday. This dual role is difficult to explain in any theoretical framework. By making available drinking water to his praja, he is also establishing that he still cares for his people, which is to an extent true. In case of TBS, Rajendra Singh does not belong to the region, but many of his team members or karyakartas are of the dominant castes of the region. Though there is no case for establishing hegemony, but relation with a prominent organisation of the region and their role in creating new structures of self-reliance, gives them an edge in deliberations and day-to-day affairs, which could not be quantified or described but could be observed very clearly in their interactions with fellow villagers.

By the time of the arrival of Muslim conquerors villages’ community lands were well established and protected by flexible rule systems. Flexible rule systems were built into village based systems of authority. During this period, land law was codified, tax systems were explicated, and the legal rights of landlords were stipulated, (Moreland 1929; Sharma 1977). This change from a
loosely articulated legal code to a more specifically written and enforced one required the development of concepts designed to unified village law. Mughal rule, with its emphasis on records and spatial organisation of lands served to formalize the loose structure of earlier land and to transfer the control of grazing lands, forests, and water sources form community to central authority, simultaneously cementing the power of local elites (Sharma 1977).

By the time the Mughal Empire collapsed in the beginning of the eighteenth century, the British East India Company was more than a hundred years old. Without directly administering most of Rajasthan, the Company, and later the Government of Great Britain, indirectly ruled all of the princely states, including Marwar (Jain 1993; Spear 1986). While Mughal reforms had been in the interest of consolidating political control, British reforms were designed to assure monopoly over resources and trade (Bhattacharya 1972). This would lead to a very different strategy in reform, as the British sought to implement normalized legal system with “modern” ideas of ownership, evidence, and public offence. While colonial officials argued from the moral imperative of legal reform, much of the institutional change was driven by the demands of British bankers and traders who had difficulty recovering money or receiving contractually obligated goods or services (Jain 1992). Through their efforts, central courts were established, and local officials were pressed to circumvent traditional legal authorities. In villages, the enforcement of this new legal code did a great deal to undermine the power and authority of village panchayats. Dispute settlement continued to be managed by local bodies to this day, however, and the power of traditional law was likely not destroyed entirely during the reform period (Gallanter 1989)

What is important to be noted here is that it took Rajendra Singh almost a decade and a half and recognition in form of Magsaysay award, which mobilised popular support behind him. In case of JBF it did not take even an year to mobilise large number of people in a region which is larger and more sparse than the region where TBS works. This is mainly because of the fact that JBF’s work is work of the former Maharaja, popularly called Baapji. He is still revered in the region and his erstwhile praja and thikanedars assembled in large
numbers on his one call. This could be explained in the above reasoning of the transformation of laws and authority form the times of Mughals through the times of the Raj to present day modern democratic institutions presented in the much cited work of Robbins (1998). Rajasthan has been untouched by the processes of modernisation till independence of the country. Mughals or the Muslims also did not touch the local communities and their socio-cultural systems as the hinterlands of Rajasthan were not very productive. It is evident from the famous quote of a Sher Shah Suri where he was about to loose the war with Rao Maldeo at Jalore. He said, “mutthi bhar bajre ke liye main Hindustan ki saltanat kho deta.” Though they had control over the region, but indirect through the Rajas and Maharajas. Same was the case with the British. The region has been strategically important but not economically advantageous. They also ruled it through the same Rajas and Maharajas. Thus the local traditions and systems were intact, which is the reason why the people still have the reverence for traditions and culture which has prevailed in the region over a long period.

Mayank Kumar (2007) argues that the linkages between environment, social structure, statecraft and cultural values need to be examined to establish the necessity of state intervention in the appropriation and management of water. In pre-colonial period people of this region on their own initiative, and / or through community efforts, and / or by state support had developed several mechanisms of water appropriation and management to overcome the natural scarcity.

In last six decades the modern institutions like the irrigation and forests department, new democratic institutions like that of panchayati raj institutions and the department of land development have been made responsible for the maintenance and control of commons. But their roots have remained in the British rulebooks which have made them anti-people and they have been contested and protested by the communities many a times in recent times.

Mayank Kumar further argues that it is necessary to point out that the delineation of various water appropriation systems should be examined with respect to the larger question of the necessity of state’s intervention to
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*bhomias* and *bohra*) who owed their status partly to hereditary superior proprietary rights in land and partly to their position in the apparatus of the revenue administration (Gupta 1986: 134 - 43; Singh 1990: 42-50). Moneylenders known as *mahajans* and *bohras* were the source of capital for the ordinary peasantry. The rulers offered a certain amount of patronage and protection to *mahajans*, as the state recognized their importance (Singh 1974). The paucity of natural resources necessitated greater ties of interdependence among the ruling class and peasantry.

Lyla Mehta (2000) furthers above statement by stating that in recent years community management has become a buzzword in the water sector. There is a growing consensus that water scarcity often arises due to bad water management practices that can be overcome with alternative forms of management. Within policy circles, participatory decentralized farmer-managed irrigation systems, indigenous techniques of water management and local water user committees are being promoted as the best alternatives to the failed top-down centralized water management systems of the past. The vision documents also highlight these institutional approaches (e.g. Water Vision 2000: 2; Vision 21:21)

Mayank Kumar also supports this argument. He says that in recent times traditional systems of water management systems have been extensively examined in terms of their ecological relevance but wider issues of socio-political dimensions have been neglected. The availability of water in any region had been an important consideration in any pre-colonial political formation (Wahi 1997: 267 - 84) and it was more of a concern in Rajasthan due to peculiar environmental conditions. Contemporary records have suggested that the peasantry managed most of their water requirement both for the agricultural operations and potable purposes. Generally, the peasantry took care of the water needs by adapting various indigenous methods of water management, which evolved in response to the given environmental conditions. Better management of water along with drought resistance agricultural production has been a characteristic of pre-colonial Rajasthan. It is important to note that a tendency towards cultivation of water – intensive cash crops became
background has been questioned. It is suggested that the relationship between ruling elite and the ruled are necessarily to be mediated through the local environmental conditions, especially in any study of pre-colonial admission (Scott 1998).

This study is situated in the above theoretical discourse on the role of traditional social and cultural institutions in managing the water resources in this water-scarce region. Further it has analysed the adaptations these institutions has acquired in contemporary socio-political milieu. The changes which are occurring in these institutions and the new forms they are acquiring in the context of their larger roles in present socio-political discourses have been a point of departure for discussion about their impact on the day-to-day life. These institutions have acquired new definitions and roles, retaining their older ones which have made them difficult to fit into one theoretical paradigm. Rather multiple strands of theoretical discourse are required due to the way they are evolving in present times.
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