



Hans Peter Hahn, Karlheinz Cless,
Jens Soentgen (eds.)

PEOPLE AT THE WELL

*Kinds, Usages and Meanings of Water
in a Global Perspective*

campus

People at the Well

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Contents

Preface	7
Introduction	
<i>Karlheinz Cless and Hans Peter Hahn</i>	9
Water as substance and meaning: Anthropological perspectives	
<i>Hans Peter Hahn</i>	23
Virtual water and water footprints: Global supply and production chains and their impacts on freshwater resources	
<i>Simon Meissner</i>	44
What is water? Some philosophical considerations	
<i>Klaus Ruthenberg</i>	65
An essay on dew	
<i>Jens Soentgen</i>	79
People at the well: Experiences around water	
<i>Karlheinz Cless</i>	98
Water magic	
<i>Richard Wilk</i>	126
Consumption and production: Changing perceptions of water in northern Ghana	
<i>Wolfram Laube</i>	145

Neglecting the opportunity? Productive water uses for small income generation <i>Irit Eguavoen</i>	170
Water makes the difference: The case of South India <i>Bettina Weiz</i>	190
Making connections: Accessing water in Mumbai's settlements <i>Nikhil Anand</i>	217
Water in Amazonia <i>Klaus Hilbert</i>	232
Water management by divine benevolence along the River Nile: Artificial water reservoirs as pastoral meeting places in the Meroitic Sudan (ca. 350 B.C. to 350 A.D.) <i>Petra Weschenfelder</i>	246
Water beliefs and changing times in Nigeria <i>Emmanuel M. Akpabio</i>	266
Guarded by the devil: The fear of pollution from wells among the Iraqw of northern Tanzania <i>Anne-Christina Achterberg-Boness</i>	281
Figure and Table Credits.	299
Notes on Contributors	303
Index of Persons and Subjects.	307
Index of Locations	315

Preface

Water plays an important role in the thoughts and actions of people. Water is a source of life and at the same time represents or is seen as a threat. What is the source for our concerns about water conflicts, about struggles over access to water and control of it? Why is the scarcity of drinkable water still one of the major problems of the contemporary world? Are we not any more able to perceive the fascination and magic of water? Is it an appropriate appreciation of water, if we dominantly discuss about water as a resource or commodity?

This book intends to contribute to a better comprehension of water and has chosen the perspective of people in different cultures and their points of view regarding water. The aim of the book is on the one hand to point out the high relevance of water. On the other hand, the contributions in this book demonstrate how the perception of water is informed and shaped by cultural and social ambivalences. There is no simple model to define water and its economic and cultural role. Instead, the book shows through a range of case studies that water is again and again seen from different perspectives. Everywhere our day-to-day life is shaped by differing often contradictory and even conflicting valuations of water. The resulting dynamic of competing understandings and definitions is the true subject of this book.

Most of the contributions to this book are based on presentations and discussions at a conference, held in September 2010 with the same title “people at the well” at the Goethe University in Frankfurt. The event was sponsored by “Verein der Freunde und Förderer der Goethe Universität Frankfurt”, “Stiftung zur Förderung internationaler Beziehungen an der Goethe Universität Frankfurt” and coorganised by the “Wissenschaftszentrum Umwelt, Universität Augsburg”. The publishing of this book and the conference results was importantly facilitated and supported by the “Speyer’sche Hochschulstiftung” and the “Wilhelm Hahn und Erben” foundation, Bad Homburg. Beate Braungart facilitated the contacts through moderation and con-

sulting. Björn Schipper and Melina Kalfelis have substantially helped in the editing process. We want to express our gratitude and sincere thanks to all donors and contributors to this publication.

The workshop wanted and the book intends to reveal some of the contradictions in the everyday dealing with water. It cannot answer all questions. It can, however, through examples and case studies, make us realize how much the usage of water is correlated to culture. And it can, finally, contribute to make clear why, without understanding of these connections many technically determined activities can be mis-directed if they are planned and executed without considerations of cultural needs and conditionalities.

Frankfurt am Main, November 2011

Hans Peter Hahn, Karlheinz Cless and Jens Soentgen

Introduction

Karlheinz Cless and Hans Peter Hahn

Water is a renewable resource, which occurs everywhere on earth, and in many places even in abundance. In its clean and humanly safe and usable form, however, it is becoming increasingly scarce. Water is not always available in sufficient quantity or quality at the right time and to all people. Dirty water and a lack of water are considered responsible for the death of millions of people, primarily children and adults in economically disadvantaged situations and regions. Concerns around the increasing pollution of drinking water, acute problems of supply and droughts threatening agriculture and sometimes leading to famine have sensitized the public around the world to the extraordinary value of this precious resource. The aim of this book is to point out the value, importance and meanings of water. At the same time it is meant as a contribution to a better understanding of valuations of water, its many uses and conflicts concerning access to this precious substance.

Questions concerning which use of water receives priority, which value is attributed to the resource and, more generally, how water is perceived will be dealt with using case studies from around the world. The common starting point for these studies is the assumption that water is subject to multiple, often contradictory valuations. Any perspective which reduces water to a problem of supply or to questions of value and price will fall short of understanding the social and cultural valuations of water. Equally problematic is the reduction of water to being just a carrier of meanings, religious convictions or symbols and rituals, which would involve an exclusively culturalistic argumentation. Water is more than either of these approaches. It always represents both the need to use water and the desire to view it as meaningful or even holy. Both contexts are connected and intertwined and can only be disclosed and discovered through detailed studies of specific cases.

There is no life without water. All life has its origin in water, and many myths dealing with the creation of the world have life come into existence from water. This is true also in a scientific perspective, as the origin of the

biosphere on planet earth can only be explained with reference to the particular attributes of water. It is therefore no surprise that the appropriate uses of water, the *right*, i.e. socially accepted dealings and its related meanings are always culturally grounded. Each culture has conflicts and processes of negotiations about legitimate uses relative to inappropriate uses. Water is not only the foundation of life. It also gives structure to societies and cultures, as well as defining, in various ways, the rhythm of everyday life and rituals.

Water is full of contradictions

What is water and how can we comprehend it? On an initial level this is a question of water as a natural substance. But even on the level of material description it is obvious that water is hardly ever just H_2O . Water is a complex material with unusual and sometimes extraordinary characteristics, for example, concerning its behavior at various temperatures. Therefore it requires an assessment from a phenomenological perspective, including the macroscopic level of perceptions. The history of research on water and its characteristics is central to the development of the modern natural sciences, and in particular for the history of the science of materials (*Stoffwissenschaften*) (Needham 2010; Ball 2010).

In his contribution to this book, Klaus Ruthenberg describes the *discovery* of the structure of water more in detail. He develops his argument that the characteristics of water cannot only be discovered analytically, i.e. on the atomic and molecular levels. Rather, there are numerous essential characteristics, like color, viscosity, capacity and absorption of temperature, which are only observable on the macro level. Chemical analysis as such is insufficient to understand even the most basic properties of water. Water reveals its characteristics only in a complementary perspective between micro- and macro-analyses. This reference is important for the overall objective of this book, because it refers to the necessity of connecting different approaches from a wide range of disciplines.

Water is more than a mixture of two chemical elements in a liquid aggregate state. Only as steam or distillate can water be close to pure H_2O . Otherwise it always contains other substances and ingredients, which are either beneficial or harmful. Many characteristics of water only develop through these additives, which also decide whether the water is appropriate for con-

sumption or agriculture. *Pure* water is neither appropriate for consumption nor of high value in agriculture. Therefore, it is legitimate to assume that these additives substantially contribute to the foundational role of water in many ecosystems, and that these additives facilitate an infinite field of economic activities for human beings.

Water is many different things at the same time. These differences often include contradictory evaluations. A certain kind of water with a specific meaning may achieve a particular relevance which appears to be acceptable only for certain people, but is ignored or rejected by many others. This contradictory character of water is not only valid for distant or old cultures, but also, and no less, for present-day consumer societies. This becomes obvious when looking at valuations and appreciations of certain kinds of bottled water. Although water comes free of charge or at a very low price from a tap, a fountain or a well, people spend money for water in bottles or from mineral springs or spas. There is another example of such contradictions in the daily use of water worth mentioning here: though on the rational level the importance of washing and cleaning for personal hygiene and health is well understood, in reality it is often forgotten.

Water is life and is full of meanings. But it is also a complex and contradictory substance. The collection of papers in this book refers to case studies from various disciplines in the cultural sciences. The cases studies all demonstrate the characteristics just mentioned. At the same time, they are explicitly selected in order to avoid a Eurocentric perspective, conveying rather a global perspective. They are based on philosophical reflections, findings from the natural sciences and hydrological discoveries, as well as ethnographic, archaeological and historical observations. All case studies document local knowledge and specific water-related experiences in order to acquire a better understanding of local uses and use patterns. The volume thus presents an interdisciplinary mosaic of the intriguing, amazing and wondrous world of water. In each case study, the entanglements of appreciations of water, its uses and meanings are at the center of the considerations.

Water and culture: complex entanglements

Water is an element without a beginning or an end (much like fire, air, and wind); as such it is also a symbol for life and the cosmos.¹ All creatures and plants consist primarily of water, and they cannot exist without water. Many of them consist of at least 70 percent water, so that it is possible to state that a particular form of water is bound in bodies and plants. The fact that some of the water is held inside creatures inspires some fundamental philosophical questions. Is water rather *part of the human*? Or should water be considered a resource, serving predefined purposes? Are there conflicts between the two viewpoints? Thus, water is difficult to *grasp* on a philosophical level, as it is really difficult to hold because of its fluidity and constantly changing nature. Some of the fascination of water comes from this flexibility and change. Life is and is maintained through the permanent process of the exchange, taking-in, processing and disposal of water, which, due to all these processes, never comes to an end.

From religion's point of view, the comprehension of water is a particular challenge. Confucius teaches about the fascination of water: *reflect in and about water*, and *be water*, an allusion to the many characteristics of water. It is all-inclusive, selfless, represents love and life, depth and responsibility, wisdom and understanding, courage and bravery, sensitivity, cleanliness, purity, justice, equality, decisiveness, progress and the permanent move forward. This book will deal with the need for water for life and survival, as well as with its role in religions. Its aim is to stimulate thoughts and perspectives about water and reflect culture and self in water in the all-inclusive Confucian sense. The more specific objective of this book is to show how religious meanings and secular roles are related to one another.

In all societies worldwide, involvement, exchange, argument and discourse with water constitutes self-conception, the identity of humans and the universal order. Water is used as symbol, allegory, ritual, and metaphor of life, cooperation and social co-existence. This becomes obvious in manifold examples from all religions. Judaism, Christianity, Hinduism, indeed all

1 The transition from the Aristotelian theory of the four basic elements (water, fire, air and wind) into a system of chemical substances was a pre-condition for the modern chemical sciences (Böhme and Böhme 1996). The discovery that water is a substance (and not a chemical element) played an important role in this.

myths, all religions, deal with water and use it as an expression and image for life and its course.²

To talk about the *magic of water* is by no means only a subject of distant cultures and times. In his contribution, Richard Wilk connects discoveries from his ethnography of Mayan culture in Belize with interpretations of beliefs in the healing and health-preserving power of bottled water and its marketing. Wilk relates the myths about bottled water to the myths of ancient Mayan society to point to the dynamics of particular and multiple meanings of water. The Maya collected pure, holy water in caves, built dams, canals, weirs for irrigation and covered the land with wells and cisterns. They recognized the water in its discrepancies: as a source of health, but also of danger and hazard.

Similar interpretations are true of the evaluation of water by those who use bottled water, and they can be made for many cultures in history and different regions. At the present time too, water has a multitude of meanings, emits a special fascination and—to speak in Wilk's words—is full of *magic*. However, this *magic* is often expressed in technical language, e.g. when, referring to bottled water, many emotional and irrational relationships are expressed in mundane and prosaic rationality. The challenge is to discover the interfaces and to explain how the often implicit *magic of water* is connected with the use of water as a resource.

Wolfram Laube demonstrates how tensions caused by different priorities of water use visualize conflicts between tradition and modernity in northern Ghana. On the one hand there are myths basically defining land use rights, and on the other hand offers from international development co-operations to support irrigation in agriculture. The conflicts refer to what Laube calls the *moral economy* of water use, which often challenge old, more loosely defined rights to water. For example, the nightly *theft* of water is often tolerated in northern Ghana as it is based on older legal ideas concerning free access. Central to these conflicts are local authorities as well as state administrations, who argue for a more restricted access to water and the full accountability of water consumers.

While Laube's contribution emphasizes the distinctive character of local water rights inherited through traditions against modern concepts of invest-

² There are at least two fundamental principles for how water may be *charged* with spiritual power: the first is through a ceremonial act by a priest, while the second is by virtue of its occurrence at a specific place. Water from holy places may subsequently be transported to any other place without being deprived of its particular power. A perfect example is the marketing worldwide of water from Lourdes (Hänel 2009).

ment and economic uses of water, Irit Eguavoen focuses on a specific aspect of water use in generating income. Water is used and needed in households for multiple purposes: cooking, brewing, pottery, construction. These micro-enterprises are gendered; some of them constitute predominantly female domains. At the same time these businesses require the mobilization of other household members in order to manage the diverse requirements of labor input. Eguavoen demonstrates the shortcomings of a one-dimensional perspective on water supply (e.g. cooking, drinking, hygiene). The observed complexity of water-related activities in and around a compound merely requires the provision of water without predefined purposes. Some of these activities, which are not obvious at first glance, are critical for income generation and livelihoods, particularly for women.

Much more dramatic is the situation in East Africa, from where Anne-Christina Achterberg-Boness reports on the case of the Iraqw ethnic group, who are faced with increasing difficulties in water supply. In many instances they depend on hand-dug wells or dug-outs in river beds for their water supply. Although Christianity is the dominant religion, water stress leads to the revival of elements from the old cosmology. Because of fear of evil spirits, these dug-outs are reserved for male use only. Women cannot use them. This results in a new gender order, which gives men control over the water supply.

In the same vein, Emanuel Akpabio reports about competing concepts of water in southeastern Nigeria. On the one hand, for the Ibo, who are the focus in this case study, water is an important symbol in the local religion and is therefore seen as a gift of god which should be free for use for everybody. On the other hand, governmental development organizations try to promote irrigated agriculture and ask farmers for financial contributions for the maintenance of the water related infrastructure. The co-existence of these two concepts leads to conflicts over access to rivers and water supply. Akpabio identifies the state's activities as a destabilizing factor. He conceives the government's water management as an element in policies that potentially threaten local cultures and values. The local population can only preserve their culture and society by insisting on their inherited principles of valuing water as a common.

Hans Peter Hahn's contribution is a plea for a broader perspective on the meanings of water. He presents a literature overview and case study from northern Togo. A dam built for improved cattle husbandry receives new me-

anings with religious connotations. Water thus proves to be blessing, though at the same time it is a danger and curse.

In sum, all six contributions (Wilk, Laube, Eguavoen, Achterberg-Boness, Akpadio and Hahn) show how women and men in different societies develop different relationships with water. In the context of its economic, magic or religious uses, water is always a substance and a carrier of meanings at the same time.

The relevance of water is obvious on the social and economic levels, but it is also visible in religious perspectives. In this respect, the cultural meaning of water is a salient example of Marcel Mauss's "*fait social total* [*total social fact*]" (Mauss 1923/1924, 179) (Karsenti 1994; Orlove and Caton 2010, 402). Like few other phenomena, water as an object of cultural manifestations has the capacity to connect different domains and aspects of society. Dealing with water fits perfectly a more recent definition of a *total social fact*: water as "an activity that has implications throughout society, in the economic, legal, political, and religious spheres" (Edgar 2002, 95). This description of a *total social fact* is fully applicable to water in the same way as cultural concepts of the body, the gift and reciprocity. Following Mauss (1923/1924), it would be unjustified to consider only a single dimension and to treat water only as an economic subject or in its religious context.

Water and history

The extraordinary importance of water is also obvious from its historical perspective. There is a repeated and by now widely accepted argument that new technologies of water use inform new societal structures. Water use is not only a question of productivity, e.g. in agriculture, but also of social organization. Karl A. Wittfogel (1956) and his concept of a *hydraulic society* enjoyed broad recognition and acceptance in the 1950s and afterwards. His thesis refers to the origin of absolute power, which is concentrated in one person and a dependent administration controlling the available quantities of water. This form of power started with the need to control water for irrigation in farming and agriculture. His argument could be summarized as follows: irrigation equals concentration of power. Evidence for this comes from many examples. In conformity with his argument, *hydraulic societies* existed in the ancient Egypt, Mesopotamia and China.

While his theory was criticized, since there are examples of the opposite tendency, Wittfogel's perspective has the advantage of demonstrating the relationship of water and political power on a particular level. Water connects places and through its materiality defines necessary conditions, restrictions and limitations. Water in ancient Egypt only came from the Nile, and the hydrological regime of Nile was therefore defined in terms of the religious calendar. Linking climate, economy and religion, this example also demonstrates that water is a *total social fact* which controls power, economy and culture.

The concept of the *hydraulic society* explains an at least double relation or meaning. On the one hand, water management is a primary need for any society. At the same time it represents social, political and religious *pressure*, which these societies exercise over their members; every individual is subjected to this through the control of access to water. Water use is the domain of absolute control.

Steven Solomon broadens this thesis by connecting technical development and innovation with the universal role of water. Following Solomon (2010), new civilizations and leading global powers often resulted from new ways to use water. This is true of the Roman Empire and its ability to supply cities with water through aqueducts. It is equally true of China and their construction of the great canal, as well as, finally, the steam engine as the basis of the industrial revolution. Further examples would be the technologies of building ships, which were crucial to long-distance trade in the fifteenth century, the discovery of other continents and more generally one of the foundations of the subsequently emerging European superpowers.

Nikhil Anand places the metaphor of water pressure in the center of his interpretation of social conflicts in Mumbai, India. Here, the city authority cannot produce sufficient pressure to supply the households in the informal settlements with water. This gives slum-dwellers reasons to increase pressure through popular campaigns and demonstrations against the city administration. The marginalized population is obliged to improvise by using different kinds of water (rain water, illegal tapping of water pipes), and demands loud and clear the improvement of supply. This model of a *hydraulic society* is different and much more complex than that in Wittfogel's arguments. It includes a counter movement, and adopts a more differentiated view of how water contributes the creation of political pressures.

Bettina Weiz's report about caste-differentiated water supply and use of reservoirs in South India is a further example of how social structures are

inscribed in water supply systems. While she observes a multitude of uses at each structure, at each of the existing water reservoirs, access is ultimately defined by the general social order. Membership and caste define access, kinds of uses, living area and specific usable reservoirs. These differentiations have grown historically, have been changed and influenced by new legislation and are no longer universally respected. Nevertheless they demonstrate impressively how caste differences are set in stone and thereby still exercise their power over each individual in South India.

Similarly, the research conducted and reported by Karl-Heinz Cless shows different roles of water depending on value systems and hierarchies in societies. He presents a comparative study, including the use of holy water at the Ganges River in India, the every-day life around boreholes in northern Ghana and water-saving mentalities in rural villages in northern China. In each case, the meaning and use of water is closely linked to specific societal practices and central cultural, religious and historical values. Water appears as a mirror of society, even in the absence of explicit control or political pressure. The examples presented in his contribution rather suggest a basic communal self-control in rural areas, where people know each other personally.

Klaus Hilbert connects thousands of years of Amazon Indian experience with water and their sensitive and sophisticated observations about different kinds of water, occurring at different seasons or in different areas. This may suggest itself given the enormous dimensions of the Amazon River system. But only a precise examination of the historically developed adaptation to life at the river shows how deeply its changing regimens influence the rhythm of life. Traffic, work, nutrition, living, housing and subsistence all are defined by water. Additionally, there are new differentiations, for example, between white, sediment-rich water, the life base of a rich fauna, and brown but actually clear water, which dominates *famine rivers* or *hunger rivers*.

Different concepts of water are also subject to long-lasting historical processes of change, as Petra Weschenfelder explains with the example of the ancient empire of Meroe. On the basis of more complex climatic conditions as compared to the lower Nile empires, water developed totally different connotations. Whereas on the lower Nile the presence of water is predictable and controllable, in Meroe water is wild and potentially threatening. Dams in the periodically dry wadis could only be maintained through strong central power and control. These dams are the expression not only of water control in the semi-desert, but also of the handling of a wild, challenging element. Compared to the regular hydrology of the lower Nile, rainfall

further south in the Sudan zone was less predictable, and its disappearance also contributed to the decline of the Kingdom of Meroe.

These case studies have in common a historical dimension; they elaborate a perspective that points to the challenge of social control over water, which obviously is much more complex than the model of the *hydraulic society*. As the last example illustrates, water scarcity can be a limiting factor and threaten the existence of a society. But many other situations are characterized by an abundance of water or by historically stable differentiations. Water as *total social fact* opens a meaningful space for activities, where these differentiations become possible and are culturally handed down. In sum, the idea of power and control over water seems less important. More important and suitable seems to be the concept of simultaneous but differentiated perspectives on water, which, within a society, are valid next to each other. However, these perspectives may compete, and there may be struggles within a society over which are the *proper* ways to perceive water.

Kinds of water

All societies worldwide differentiate between various kinds of water. Springs, rivers, sea, wells and cisterns not only provide the life-giving wetness but also represent different kinds of water, which can be defined by historical experiences or through social structures. As mentioned above, water can be fertile or wild, and particular kinds of water can be regular in appearance or unpredictable. Many of these differentiations are contradictory and seem inconsistent. Nevertheless many such categories are very influential over everyday activities and rituals. Therefore, before dealing with uses in different cultural contexts, a narrower look at *water as substance* may contribute to a deeper understanding of the social dimensions of water. Much of the complexity of social and cultural valuations of a substance can be explained by looking at water as an example (Hahn and Soentgen 2011).

As already mentioned, additives are often decisive in the valuation and appreciation of water. Minerals can make it valuable and precious, but salt makes it unpalatable, undrinkable and unusable for the irrigation and watering of plants. Water tastes different and is different, depending on its temperature, origin and mobility. Differences depending on aggregate condition,

liquid, ice and steam are obvious. But even rainwater, tap water, sea water and brackish water are fundamentally different kinds of water.

Hydrology has coined terms like *white*, *grey*, *black*, *blue* and *virtual* to describe different kinds of water and their different conditions and uses. These widely acknowledged terms represent scientifically defined differentiations of basic patterns of uses. These differentiations matter because the absolute quantity of use is less important than its quality and purposes. Industrial production consumes large quantities of *blue water* and produces similar amounts of *grey water*, which can sometimes be re-used for agriculture, but will hardly ever be suitable for human consumption. These terms and the related conditions of use are explained by Simon Meissner in his contribution. He also shows how water use for the production and transport of consumer goods can be identified with the help of concepts like *water footprint* and *virtual water*.

Differences between various *kinds* and *sorts* of water are also the focus of Jens Soentgen's contribution, referring to a quite exceptional example: the history of dew. As Soentgen stresses dew has always been considered a fundamentally different kind of water compared to water for everyday consumption. Dew is loaded with special meanings, having long played an important role in alchemy. Among other things, dew was associated with the sun. Dew was collected with the help of special tools and containers. Although from a present-day perspective such uses of water may appear exotic, they also sensitize us to the broad band and spectrum of cultural differentiation between different kinds of water.

Of course it is not possible to cover all kinds and all occurring differentiations of water in this book.³ The objective is rather to demonstrate the range of different kinds of water and to point to the processes imbued by these differentiations. Differences in kinds of water may be connected to scientific models, they can be historically induced or they can be rooted in social and cultural differences. Some differences are merely relevant in the eyes of the water users, while others are based on the experts' perspective, whether that concerns alchemy or the resources of the global ecosystem that is *earth*.

3 For decades there has been research on whether water can be loaded with information and energy, for example, through specific movements (Schauberger 2006). If this is true, then water can change its character and properties when it is pumped, pressed or swirled through pipes. According to this concept, it has to be regenerated, energized and re-vitalized in order to re-create its natural condition.

From the current state of knowledge, it is impossible to systemize these differentiations. Nevertheless it appears critical to understand the differentiation in kinds of water as a fundamental condition for its existing complexity, uses and meanings. The approach via different kinds of water makes obvious the fact that the careful use of water is not just a question of economy and price, but first and foremost a question of the precise cognition, sensation and appreciation of water-related practices and traditions. Water is lots, but is always based upon direct and immediate experiences of its use. The outline and structure of this book will do justice to the fundamental character of differentiations of *kinds of water* through a separate section containing four contributions dealing with processes of differentiations (Hahn, Meissner, Ruthenberg, Soentgen).

Open questions

Water is a substance full of contradictions. It is very often the starting point for questions which can only be answered through a deeper understanding of cultures. The book does not pretend to resolve these questions, its objective being merely to broaden the understanding of water and to sensitize us to its inherent contradictions. The contributions in this volume illuminate connections in individual historical and geographical contexts, but do not ultimately resolve the contradictions associated with water as a substance. In the following, some of these open questions will be mentioned by way of example.

Why don't people go for water? Why do we have to bring it to them? For long periods in history proximity to water was an important aspect in choosing settlement locations. People preferred to move and settle within reach of water. Early cultures started along rivers, lakes, sea and in river deltas. This is where they found subsistence, livelihood, reproduction and accumulation. Later, people moved away from water. Hunters, gatherers and herding and nomad cultures have developed their own means of water supply. With increasing distance from water, its supply is becoming more complex and elaborate. This is why 80 percent of the world's population still lives at or near water today.

Why is water not everywhere boiled as it is in China? Germs, viruses and bacteria can be completely destroyed through cooking. This makes it safe for

consumption and can eliminate a major source of water-borne diseases. The deadly effects of diarrhea can be reduced through re-hydration. Despite this knowledge, the boiling of water is not established as a standard practice in all societies. Why don't people wash their hands more thoroughly and frequently? A further 20 percent of water-borne diseases could be avoided through regular hand washing with soap and water. Despite education and *local knowledge*, this only happens infrequently, causing unnecessary contamination.

Why don't people drink water from pipes and taps, although tap water in western societies is the best controlled nutritious item? Many people have become skeptical of the quality of drinking water from a tap, having lost confidence in the mostly governmental and communal suppliers and private water distribution companies. Publications and concerns about pharmaceuticals, pesticides and nitrates in groundwater re-enforce a basic skepticism. Apparently people have more confidence in bottled water and their manufacturers than in their local, communal or federal water management.

What is the origin of our concerns about water conflicts, conflicts of power, water scarcity and the possibility of wars over water? Are they potentially the consequences of skeptical and suspicious observations about struggles over water as a *common good* or a commodity (Hardin 1968)? Do we lose the fascination, magic, appreciation, admiration, respect, fear, passion and delight of and for water because primarily we discuss it technically, as a resource, product or commodity?

The aim of this book is to sensitize us to some of these and other contradictions and hopes in order to raise awareness of other, more relevant aspects. Even though there may be more questions than answers, the examples and case studies will demonstrate how closely water use is linked and connected to the economy, history, culture and emotions. Without consciousness of the interface between consumption and culture, between needs and beliefs, many technical solutions, measures and activities can be void and ineffective because they were planned without considering the complexity of water. The value of water is not just a question of its price, but rests on appreciation, which itself is derived and originates from culturally rooted experiences. In this sense the book will contribute and point to the richness of experiences with water and emphasize often overlooked aspects of people's daily uses and dealings with it.

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Water as substance and meaning: Anthropological perspectives

Hans Peter Hahn

“Water retains universal characteristics, but human interactions with water are context dependent. The uses, sounds, visions, colours and smells of water differ from time to time, place to place, religion to religion, culture to culture and person to person” (Toussaint 2004).

Introduction

Water is everywhere. It is part of nature, and thus beyond the control of mankind, but it is also part of culture. Water is indispensable for all living creatures, it is nourishing, part of our everyday menu and—last but not least—essential for the health of the body. The ubiquitous character of water is simultaneously appealing and challenging. It is appealing because many of these aspects are intimately interwoven with everyone’s personal experiences; it is challenging because of the wide range of its associations and the possible ways of dealing with it. The exuberant character of water is tempting: water can mean anything or nothing. It seems as if water has an unlimited potential in generating meaning about the individual, social and cultural levels. But, at the same time, there is nothing to prevent people from abusing water or squandering it, nor even from expressing their disdain for it or spoiling it through pollution. This extremely wide range of contexts, evaluations and ways of dealing with water will guide the reflections and the case study presented here. In what follows, the extremely wide range is treated as both a key feature and a warning against simplifying characterizations of water.

Water has so many meanings and so many usages that it is hardly possible to generalize or to say anything about what it might be or should be. Thus, the actual presence of water is very often of only secondary relevance for the assignment of meanings and usages. Water is sometimes good to think about, regardless of whether it is actually present; it may lead to some of the most

provocative thoughts, regardless of its actual occurrence.¹ Perhaps it is just these moments that are most inspiring for the assignment of meaning, as when water is scarce or absent at places where people expect it, or when there is an excess of water in the form of rain or a flood. Whenever this substance is out of place, becoming a particular threat to people, then the concern about water is articulated more intensely than in other circumstances.² It may not be astonishing that most religions worldwide refer to myths and tales about *water* being out of place, as a destructive power, as a medium conveying meaning or as a substance with healing power. The myths about water and the role of water in magic and religion bring to the surface a concern that permanently embraces people and is never far from everyday experiences, in modern times no less than in the past.

The journalist John Grimond (2010), author of a special issue on water in the *Economist*, recommended reading the newspapers in order to acquire a proper impression of the current role of water in society. He is perfectly right in giving this advice: water is a permanent topic in the headlines, whether these are about a drought leading to famine, or a flood with the potential to kill many people or destroy their homesteads.³ Water is relevant not only as something useful, but also as a threat to people. Media coverage of catastrophic experiences with water confirms what has just been stated about myth and religion: water becomes a dominant topic when it is out of place, whether in the contexts of an excess or a lack of water.

Being dependent on water but not being able to control its presence or absence is not only a dilemma of the past, it is also the nucleus of fears about the future. Thus, there is the warning, repeatedly and colorfully depicted in the last 20 years, that if human-induced climate change (HICC) passes a certain threshold, the ice at the poles will melt and many people in coastal areas or in flat countries like the Netherlands will lose their homes. Although it currently seems that the Netherlands will be well prepared against such

1 Hartmut Böhme (1988, 13) points to the fact that water is ubiquitous in imaginations, from cosmologies to fine art. But, in the following, in contrast to Böhme's approach, water in literature and painting will not be given equal relevance compared to its role in everyday necessities.

2 This notion is based on Mary Douglas's remarks regarding "matter out of place" (Douglas 1966, 36), which, as a rule, becomes an annoyance. Her book "Purity and danger: An analysis of concepts of pollution and taboo" (ibid.) provides the anthropological basis for the notion of dangerous or threatening substances, and waste. When it is out of place, water is a perfect example for this.

3 Böhme (2007) highlights the emotional relevance of current water-related catastrophes.

threats and Amsterdam will not be flooded in the near future, this fear is being replaced by another urgent concern, which has accompanied reports about the effects of global warming more recently: anxiety about those areas of the world where precipitations might diminish due to HICC, probably leaving people with a lack of water, in particular in the tropics. In some areas, like northern India or south-western Africa, the cumulative effects of decreasing precipitations and the increasing need for water in agriculture might lead to new catastrophes or even *water wars*.⁴ As a matter of fact water out of place is harmful, but nobody yet knows how it will influence people's lives. How is it possible to make sense of this conundrum of water-related problems, fears and expectations and of the ubiquity of water stories in the media?

These introductory remarks point to questions concerning how water is perceived and why people care so much about it in some situations and do not care about it at all in many others. These questions have a genuinely anthropological perspective, focusing on the various ways men and woman regard water, deal with it and make an evaluation on the basis of their own experiences of and with it. Therefore, the starting point of this contribution is the assumption that water may appear differently, depending on the experiences people have made with it. Water as a substance is more complex and dynamic than it would appear to be in terms of its purely physical description.⁵ Given the wide range and sometimes contradictory character of these culturally embedded perceptions and experiences, considerations of water as a substance require combining all these perspectives.

The following sections of this chapter will present a review of some of the anthropological literature on water. The final section relates to a case study arising from the author's experience in northern Togo. It will contribute to our understanding of the sometimes astonishing changes in the perceptions and meanings of water.

4 Petra Dobner (2010, 84) correctly states how several factors might contribute to such catastrophic scenarios. Her plea is for a global water authority that should have sufficient power in order to prevent such conflicts. See also: Brandt (2011, 283.). For a map indicating the most threatened areas see Gerten (2011).

5 More generally speaking, the culturally conditioned perspective may contribute to a more differentiated understanding of substances (Hahn and Soentgen 2011).

Categories and cosmologies

The history of cultural anthropology in Germany is linked in a quite particular way to water. Adolf Bastian (1869), commonly recognized as one of the founding fathers of the discipline and the founder and first editor of the *Zeitschrift für Ethnologie*, wrote an article on water in the journal's first issue, published in 1869 (cf. Fiedermutz-Laun 1970, 10). Bastian started his professional career as a physicist, travelling as a ship's doctor around the world. His interests in anthropology, however, were closely linked to humanism and the universal history of mankind, depicting the universals of man's desires and fears (Mühlmann 1968, 88).

Water is far from being an extraordinary topic against this intellectual background, as it associates a cultural element that is present in all cultures with the body's necessities for survival.

The precise title of this noteworthy essay is "*Die Vorstellungen von Wasser und Feuer* [Ideas about water and fire]" (Bastian 1869). Two addenda to it were published in the following issues of the journal. Reporting numerous myths and tales about water from different cultures from around the world, it is a kind of *wild text*. Although the text claims to be scientific in character and constitutes a prototypical example of the *universal archive of humanity*—repeatedly announced by Bastian as the objective of his work (Fischer et al. 2007)—it has an aura of the pre-scientific approach to anthropology. It is hardly possible to detect any organizing structure, and present-day readers might miss a conclusion. There is, however, a message, assuming that there is no society without an idea of water. Bastian's style of writing is breathless. He hurries from one example to the next and jumps from present-day cultures somewhere else to ancient times in Europe; from history to ethnography, presenting numerous examples from different periods and continents.⁶

Although setting a paradigm for a science in the moment of its coming into being, there is something unconventional in the way how Bastian presents his examples. There is a particular wealth in the text, which makes its reading enriching and reveals a particular sensitivity, which is not present in later compilations in a similar style. Bastian reports about myths and meanings of water in a specific manner, such that water is never dissociated

6 This is not as astonishing as it might seem from a methodological point of view. Criticisms of such merely illustrative use of case studies have been repeatedly articulated (cf. Evans-Pritchard 1965). However, some recent texts on water still operate within a framework of collecting as many examples as possible, e.g. Barié (1997) and Selbmann (1996).

from its perception. People see water; they taste it. People can hear water, its noise, according to Bastian, is linked to particular features of the myths and stories. Water, in the perception of the people, can be clear and transparent or opaque and murky. These properties are perceived as a *dressing up* of water. But water can also be misused as cover for evil spirits or as a hiding place. Simultaneously, water symbolizes the origin of mankind, or the threat of an apocalypse. Water as a symbol is not something static, but confirms its meaningful character through its situated perceptions.⁷

Bastian (1869, 377f.) presents categories his examples might fit in. Although the results of this categorization are questionable, there is no reason to criticize the categories themselves. Doubtlessly, they are comprehensive and contribute to a systematic approach to the meanings of water. According to Bastian, in myths, tales and cosmologies water may have the meanings of:

1. Angst and maliciousness
2. Purification, healing and blessing
3. Transgression of boundaries, and subsequently power over society
4. Oracle

However, it is necessary to ask how these notions can be related to current water issues. Imagine these ideas in the context of a drought or a flood, when people are struggling for their lives. What is the value of these notions when the urgent needs of water consumers are the concern? How can these myths and symbolic meanings be evaluated against the global market for bottled water? Are those people at the well, seeking a reliable source of water of sufficient quality, concerned about myths and tales? The same question can be put the other way round: Is Bastian's compilation for those who are involved in development relevant to their work? The challenge here is to combine different perspectives which both have their justifications.⁸ The apparent gap

⁷ Probably the most closely related approach has been presented by Gaston Bachelard (1942). In the framework of a larger study of the basic substances, he assigns to *water* the special role of having an effect through its *appearance*. For Bachelard, water is a *material symbol*, because it is meaningful in the moment of the tactile experience.

⁸ The literature on water and development is huge, and the improvement of water provision is a major concern for global agencies in this field. Providing drinking water is in particular a gender-sensitive task, as women suffer more from the distance between their homes and the well than men. Without entering into this debate, two references can be cited here concerning the complexity and struggle for adequate access to water in developing countries: Bliss (2011) and Weisshaupt (2002).

between the merely technical concerns about water in development initiatives and the deliberate limitation of Bastian's approach indicates the necessity of a balance in approaching water. Both perspectives, water supply and water symbolism, have an anthropological dimension in so far as they give priority to the people concerned. The challenge is to find the social and cultural contexts in which the two ways of dealing with water interact and become mutually relevant.

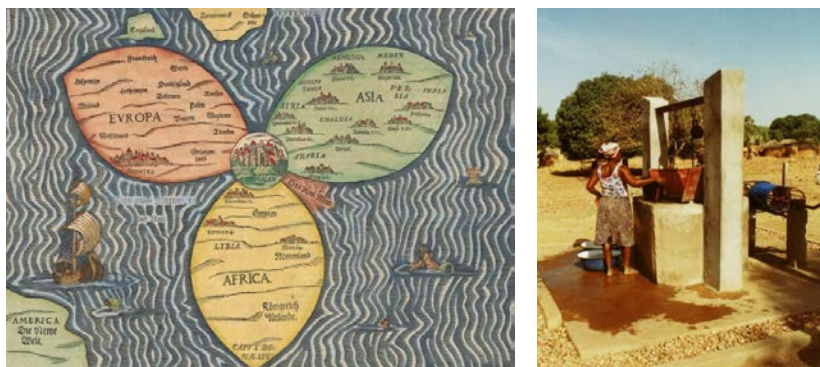


Fig. 1 a and b: Medieval cosmology provides a paradigm for the inclusive character of water, as the world was imagined as being surrounded by water (left). How is it possible to link the symbolic relevance to current day concerns about access to clean water? How does the symbolism of water relate to the struggle of people, who use a well for their provision with water (right)?

A proper study of water should consider both the urgent need for clean water and its evaluation on the levels of religion, mythology or cosmology. Water as a substance has been placed in the center of this presentation in order to make it clear that these dimensions are bound together through the everyday activities of the people in question.

The questions of how people think about water, and in particular why people in some contexts think more about it than others, has been aptly addressed by Ivan Illich (1985) in his essay on the “Waters of forgetfulness”. Compared to Bastian his approach is much more differentiated, in so far as he recognizes the problem of the simultaneous plurality of meanings of water in many societies. He starts with the statement that water—more than anything else—is a metaphor, and he consequently adopts a semiotic perspective. Water can be meaningful, but this is not the case in all societies. How-

ever, following Illich, it should be so, as there is no other symbol worldwide that is more powerful.

Water is at the beginning of an endless process of semiosis. Water is a sign, and it produces meaning. Meanings of water generate new meanings. Furthermore, water is a device to overcome the Euclidian restrictions of space, in so far as understanding the presence or absence of water requires a concept of space linked to a substance. Space is organized through the uneven spatial distribution of this substance. Water may come too close (in small quantities in the act of washing, or in large quantities, as in a flood), but in other cases it may be too distant.⁹ The latter situation already forced the Romans to build aqueducts.¹⁰ Immediate closeness of water is required for the transformation of bodies and of humans in general, as we all know through the washing of babies and dead corpses. This rule also applies in religious contexts through the ritual of baptizing. In religion, the same concept applies: water transgresses boundaries and shows its relevance at unexpected places. If the title of this contribution refers to water as a substance, it does so in the sense of Illich's perspective. It is the material character of water that makes it possible to understand how the power of water symbolism (in baptism as well as in the perception of a flood, or in cosmologies) is rooted in the notion of water as a substance. Water may be addressed as an interface between different contexts and in particular moments of transformation.

Illich's approach brings together the micro-level of the individual with the level of social organization; and, on a more general level this is important for understanding water. Water is perceived and experienced individually, but this perception is strongly influenced by social, cultural and global norms. Other scholars independently developed a similar notion of linkage between micro- and macro-level; the term of *scaling* denotes the relevant interface between levels.¹¹ The different norms of how to use water and the

9 Lorelies Ortner (2008, 38) is more explicit with regard to the relationship between water and space. She argues that it is possible to construct a topology of water-related spaces, including the different modes of experiencing space in water-related activities.

10 The history of human civilizations is also a history of managing water. People learned how to keep it at a distance or to channel it towards certain centers. Steven Solomon (2010, 24) suggests that the success of the Roman Empire was linked to the Romans' ability to build large aqueducts, provisioning Rome and other ancient cities with water.

11 The effects of scaling are to be observed in many cultural and economic domains. They refer to the fact that particular phenomena are relevant on the individual or local level, and have also immediate effects on the global level. This interdependence of different levels works in both directions, from the local to the global and from the global to the local (Swyngedouw 2004).

perceived dangers of too much or too little water are perfect examples of *scaling*, as their relevance is effective on all levels, from the local to the global.

However, Illich's essay has more to say about water. His central argument refers to the mutual transformation that is engendered by the presence of water. Water transforms the social and physical status of humans, but people also transform water. One example of this is *holy water*, produced by a Catholic priest for use in baptism or healing.¹² Another example, much more relevant for many people in everyday life, is the production of *drinking water* through purification, including the desalination of seawater or other technical procedures. At first glance the latter seems to be something different, but, with regard to the concurrent transformation of meanings, it is not that different at all. Water as a substance, once it has gone through such a process, becomes a pure substance, devoid of any properties beyond the defined criteria. With regard to drinking water, Illich describes the outcome of such procedures as *technical water*, a substance that has no history or origin anymore and consequently has lost its character. Thus, water can be regarded as the memory of society, but it can also serve to obliterate memories. Referring once again to the notion of *scaling*, the different evaluations of water at the different levels are quite fascinating. Whereas on the individual level, in the practices of washing and cleaning, as well as of healing, there seems to be no disdain or rejection of meanings of water, the social level, including the organization of drinking water and the application of techniques of purification and providing water, is considered much more problematic, if not ambivalent. Looking at water as substance points to the relationship between these domains, which appear to be disconnected in the everyday world.

Illich's thoughts are thoroughly anthropological in character in so far as they refer to the ways groups and individuals look at water. He includes the different levels of the individual, the local community, the culture and the global dimension, thus combining different perspectives, from the closest to the most remote. Illich refers to the inhabitants of slums lining up at a water point, he stresses the relevance of water for rituals and religions, and he emphasizes the consequences of transforming water through technical procedures. His approach is an outstanding contribution towards creating a broader and more reflexive perspective on water as a culturally defined substance. However, recalling the questions already asked in the critique of Bastian's approach, it is still not obvious that the perspective of the consumer and the

12 The longstanding history of different forms of sacred water indicates the relevance of water in religion (Bord and Bord 1985).

problem of limited availability of water are being taken sufficiently into consideration.

Furthermore, with regard to the historical dimension, Illich's concept contains some contradictions. His assumption about the decrease of consciousness in the West involves a notion of cultural decline: the more people rely on a standardized provisioning of water, the less they care about it. He presents the idea of an irreversible and threatening change of water contexts: the more people consume water (which inevitably is *technically produced* water), the more they forget about the many meanings of water. Whatever had been relevant about the origin of the water, about the taste of particular sources, is ignored as soon as water comes from the tap. The loss of memory is facilitated by technical purification that eliminates properties of water like color, smell and other sensitive indicators of a particular origin.

This is a somewhat linear approach, which implies the vanishing of the meaning of water as a common good and a tendency towards its commodification. Recalling Garret Hardin's "Tragedy of the commons" (Hardin 1968), water is seen as one of the key indicators of the loss of social cohesion that is a supposed feature of so-called *pre-modern* societies, where free access to water appeared to be guaranteed for all members. Historical evidence, however, does not support this view. The history of water shows that access to clean water has always been unequal, and there was little interest in making the best water available to everyone.¹³ For those who had it, it was expensive in terms of social involvement and economic costs. Water was an issue of negotiations and very often restricted, or, if it was available, maintaining the necessary infrastructure was a topic of debate.¹⁴

The idea of a linear process irreversibly leading to the end of a consciousness about water and thus to the practice of carelessly dealing with this substance is also in contradiction with the current boom in bottled water. As Richard Wilk (2006) has recently made clear, there is increasing inequality between the growing numbers of consumers of this *prestige commodity* and the millions of people without any access to drinking water. The imaginary

13 Thomas Kluge and Engelbert Schramm (1986) have sketched the history of the introduction of centralized water provisioning in Europe, which was not at all a linear process, as people thought that equal access to clean water for all might not be possible or too expensive for the communities.

14 There are many reports about unequal access and restrictions of access to good water in so-called *pre-modern* societies, among others: Pomeranz (2009), Weiz (2005), Worster (2006). It was never just a question of availability, but always of prerogatives, that is, of who in a society had access to water.