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## ENVIRONMENT

# Water, water everywhere...

Margaret Catley-Carlson wonders why humanity places so little value on its most basic resource.

As supplies around the world come under pressure, is it all over for water? In this comprehensive, entertaining and torrential flow of a book, journalist Charles Fishman answers with a definitive no. But “the golden age of abundant, cheap and safe water” is quickly disappearing. We needn’t panic, he says, but it isn’t going to be like it was. We must treat water differently. And many of us are in for a rude shock.

*The Big Thirst* is a key read for people who wonder how water became so scarce that in

2007–08 the cities of Atlanta, Georgia, and Barcelona, Spain, almost ran out, and why in some countries around the world two out of five women still walk long distances each day to collect water. Informative and wide-ranging, it covers how water molecules were formed in interstellar clouds and came to Earth after the Big Bang; how ultra-pure water used in micro-chip manufacture is so clean that it is toxic to

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human touch; and the probable existence of several oceans’ worth of water sequestered in rocks hundreds of kilometres below ground.

Discussions of global water management often drown readers with mega numbers. Fishman asks instead: what do billions of gallons or cubic metres, or trillions of investment deficits in water infrastructure, look like or signify? He makes

lively comparisons: every day, the United States flushes more water down its toilets than either Canada or the United Kingdom consumes in total; and one shipload of water delivered to drought-stricken Barcelona in 2008 supplied the city for just 32 minutes.

Newcomers to the water issue are usually relieved to find out that there remains enough water on the planet to supply the needs of humans and the ecological system; the question is how to manage it. But answering that question is not simple. Fishman places the responsibility for difficulties in water management firmly where it belongs — on the witch’s brew of sociology, economics, suspicion, electoral politics, history and mythology that makes decision-making sometimes difficult, and often nearly impossible.

The number-one problem is that water is not valued. In our lives, businesses and habits we abuse and overuse this multipurpose solvent, precious elixir and indispensable substance. Transportation and energy projects, fresh agricultural developments, new suburbs and shopping malls are embarked on without thought about their effects on local water. Will it be polluted? Is ground water running out? Who is downstream and what will be the impact on them?

The second problem is that because we don’t value water, we are reluctant to pay for it, or for the reservoirs, pipes, energy, chemicals, staff, fencing and monitoring needed to get clean water to the point of use. So municipal pipes leak, and many cities across the world lose from one-quarter to one-half of the water in their plumbing systems. Most irrigation systems are less than 50% efficient.

These issues combine to create a political ‘no-go’ zone. Politicians will lose elections if they vow to charge more for water, and those who favour new development routinely win. Fishman paints dramatic pictures of the results. In some Indian cities, water is available for only two hours every two days, so each household must set up its own water-storage facilities. Residents of Atlanta continued their wasteful water-use habits as the reservoirs



**The Big Thirst: The Secret Life and Turbulent Future of Water**

CHARLES FISHMAN  
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dropped and elected officials prayed for rain. But even when the rains come, the problem is not fixed; and drought is sure to recur.

Fishman enjoys naming and shaming the villains. But he takes greater joy in celebrating the heroes: the laundries in Las Vegas, Nevada, and the citizens of Australia's Gold Coast who now recycle urban water. Fishman explores at length the paradox that whereas companies such as Coca-Cola — headquartered in Atlanta — and Campbell Soup, of Camden, New Jersey, have set themselves elaborate water strategies and water-saving measures, most cities, including Atlanta, have not.

He both praises and damns the private sector. The market can drive efficiency savings, he says, but it also creates solutions for problems that don't exist by, for example, "foisting bottled water on a too-gullible world", and fails to fix the real problems. He sees little future for a trade in water, because water cannot be transported easily over long distances. It's costly, politically and practically. Yet 'virtual' water — used in the production of coffee, T-shirts, cars and everything else we make — is traded with little heed for its economic or ecological value.

Technological advancement is and will be important, and Fishman covers it nicely. Given that the agricultural sector uses more than 70% of the global water supplies, surely everyone would be cheered by the idea of a high-yielding new crop variety that can mature using only 40% of the water? But if those crops are genetically engineered, more than one continent will recoil. Farmers who get water free or for little cost have no incentive to reduce their usage with water-saving devices. Nor are many of the new technologies taken up, even though someone invents a water purifier nearly every week that 'for only pennies per day will provide a family with clean drinking water'. The dispiriting truth is that few are bought.

*The Big Thirst* is a delight to read — full of salient and fascinating examples, well-researched and laced with wry humour. It would be wonderful if Fishman's rant against bottled water converted every reader. It would be even better if it promoted a serious reflection on how little we value that on which our life depends. ■

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A blogger (left) for an Internet radio station in Egypt that fights intolerance towards divorced women.

## TECHNOLOGY

## Together, bit by bit

A historian's insights into digital culture fascinate  
**George Rousseau.**

Respected intellectual historian Milad Doueihi describes himself as an "accidental digitician" — by his own admission more a user of information technology than a creator of it. Such people, he argues in *Digital Cultures*, are forging a new global culture. The impact of computers on our minds, bodies and societies is already far-reaching. Whether we like it or not, digital culture is permanently entrenched.

Doueihi, an expert on literacy, points out that the voices of historians have largely been missing from discussions of the Internet. By showing how modes of communication and human relationships have changed since its rise, he makes a persuasive case that digital culture has broken free from print culture, which extends from the Gutenberg Bible of the 1450s to the present. Instant response, brevity, minimal spelling and grammar, novel syntax and different modes of composition have created new forms of literacy.

As a consequence, the way we view our identity, citizenship and political selfhood has changed. Doueihi sees blogging as "one of the greatest success stories". With the rise of online forums, everyone can communicate freely without publishers' intervention. As a result, we are more dedicated to the Internet than to any other civic cause, or even to our everyday work. As well as rich and poor, there is now another great social divide: between those with and without access to these web conversations.

In our online interactions, a new civility has emerged, along with the uncivilized behaviour — 'trollism' — that results from online anonymity. Urban dwellers blog more than those outside cities, and have created parallel cities in the blogosphere. And podcasts have reinvigorated the voice.

Doueihi's argument for a culture shift rests on three components of the online world. One is its creation of an anthology. The digital culture, rather than creating long, sustained narratives, assembles fragments of material — but not into logical wholes. We invest everything in e-mail responses rather than saving up our thoughts for long letters or books. All these snippets can then be assembled by different readers in different ways.

Doueihi also briefly cites religion as a central aspect of any new culture, although he never explains what he means by the word 'religion'. He passes quickly on to the third component — group identity, arguing that we seem to have a greater craving for belonging than previous generations.

Digital group identity, says Doueihi, differs from previous print-based concepts in several



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