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Comments

on

International Justice, Water and Respect for Creation (Jacques Diouf, Director-General, FAO)

by

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1. Introduction

From time to time development ministries of national governments and international aid organizations warn us of the *looming* threat people in various parts of the world face owing to water scarcity. Dr. Diouf's article is an authoritative account of one of today's most underappreciated environmental problems, namely, the acute water scarcity experienced on a routine basis by some of the *contemporary* world's poorest people. Water stress is today's problem, not just tomorrow's. There is a lot of fresh water in the world; but it is available very unequally across the globe because the sources of water are unevenly distributed. As in so many other cases, there is mutual causation between poverty and water scarcity: poverty is accentuated when water is scarce, and water is that much harder to garner when one is poor.

Alongside food, air, clothing, energy, and shelter, water is a basic human need. Without it you cannot survive. And yet water occupies a curious place in our thinking: although at the back of our minds we recognise its scarcity, we don't like to regard it as an economic commodity. Indeed, we (as does Dr. Diouf) frequently use the language of "rights" to deliberate over the criteria on the basis of which water ought to be distributed among people. In these comments I want to reflect on why Humanity harbours this tension. I shall conclude tentatively that it may even be that some of the water stress many communities face today is a result of that unresolved tension.

Water is both a consumption and a producer good. We drink water and bathe in it, but water is also an input in producing crops and rearing animals. The two aspects bring out somewhat different sets of issues, but in these comments I shall conflate them.

2. Positive and Negative Rights

In an important and interesting essay, the legal philosopher Charles Fried classified *rights* in a binary way. We are to think of *positive* rights as a claim *to* something, a share of material goods or some particular commodity, such as education when young and medical attention when in need.¹ It is to the satisfaction of such needs that we have positive rights, and Fried derived them from the primary morality of respecting the integrity of persons as free, rational, but incorporated beings. A *negative* right, on the other hand, is a right that something *not* be done to one, that some particular imposition be withheld. It is a right not to be wronged intentionally in some specified way. This too is derived from the primary morality alluded to above.

Fried observed that positive rights are asserted to scarce goods and that scarcity implies a limit to their claim. He also suggested that negative rights, for example the right not to be interfered with in forbidden ways, do not to have such natural limitations. ("If I am let alone, the commodity I obtain does not appear of its nature to be a scarce or limited one. How can we run out of people not harming each other, not lying to each other, leaving each other alone?" Fried, 1978: 110.) This is not to say that protection against unauthorized violence doesn't involve material resources. But then the claim to protection from, say, the government against such violence is a positive right, not a negative one.

Fried's distinction is important. The seeming asymmetry in resource costs may even explain the powerful hold negative rights have on our moral sensibilities. It is always feasible to honour negative rights (there are no direct resource costs, remember), but it may not be feasible to honour positive ones: the economy may simply not have sufficient resources to enable all to enjoy adequate nutrition, for example. It is then possible to entertain the idea that negative rights are inviolable, in a way that positive rights are not. For how can a right be inviolable if it is not always possible to protect it?

The asymmetry also offers an explanation for why we regard all persons to have *equal* negative rights, even while we eschew the idea of full equality in the distribution of goods to which we have positive rights. Negative rights don't have to be created, they have only to be protected. In contrast, positive rights are produced goods, and in deliberating their distribution we have to care about differences in individual talents *to* produce, we have to worry about incentives and the concomitant notion of obligations (to honour agreements, not behave opportunistically, and so forth), we have to worry about needs, as well as the related matter of deserts. The realization of positive rights involves a resource allocation problem, with all its attendant difficulties.

3. Property Rights to Water

Fried's distinction is useful for my purposes because in poor countries people regard food, clothing, energy, and shelter to be private, marketable goods, but would appear to be reluctant to place

¹ Fried, C. (1978), *Right and Wrong* (Cambridge, MA: Harvard University Press).

water in the same category. Dr. Diouf in effect says that everyone in a community has an equal right to potable water; but to insist on that is to place water in the category of negative-rights goods. For example, it isn't uncommon in poor countries for people to demand that local authorities provide tube wells so that water is freely available to users. Why? I am unable to offer anything like a historical account, but there are two broad sets of characteristics that are unique to water which may account for it. One is a biological imperative: water has no close substitute and is needed on a frequent and regular basis. Without water we die, and we die pretty quickly.² The other has to do with its geo-physical aspects. There are two types of water bodies of substance: streams and rivers, which are forever on the move (they are called "fugitive" or "migratory" resources); and ponds, lakes, and aquifers, which are at "rest". Both types are (hopefully!) recharged on an annual basis, meaning that water sources are renewable resources.³ I want to suggest that the combination of the biological and geo-physical aspects of water have had far-reaching influences on our attitude toward water and the property-rights systems communities have devised for it.

In fact water has a third characteristic, although it isn't unique to water. It is a natural resource, but having access to it can involve fixed costs that are huge in comparison to a community's financial reach. Irrigation channels, bore holes, and wells don't exactly come cheap.

The biological imperative makes water resemble a negative-rights good: deny a person water and you are condemning her to an almost immediate death. (There is, to be sure, a difference between "omission" and "commission", much discussed in the philosophical literature, but I ignore it here.) The large fixed costs in water "production" means people have to engage in collective action: the community needs to work together to install the infrastructure, or in the modern economy the government is given charge to guarantee its installment. And the geo-physical make-up of water resources raises serious incentive problems: to monitor who is taking how much water is costly.⁴

In what follows I focus on the geo-physical implications.

Consider a group of farmers who draw water from an underground basin. While farmers may have titles to the land they cultivate, it isn't possible to give them titles to the water below, for water is migratory underground. In view of this, communities have often instituted the doctrine under which farmers have the right to extract as much water as they wish without regard to the effect of their withdrawals on others.

² This may be why "freedom from thirst", is not a catch-phrase in the West, even though "freedom from hunger" is. We see hungry people on the screen because humans are able to adapt to hunger by remaining stunted and becoming wasted.

³ There are important exceptions to this of course: the aquifer could be in an impervious rock formation, in which case the basin is an exhaustible natural resource.

⁴ I have discussed these questions in greater detail in *An Inquiry Into Well-Being and Destitution* (Oxford: Clarendon Press, 1993) and *Economics: A Very Short Introduction* (Oxford: Oxford University Press, 2007).

The problem with the doctrine is that it provides no protection to a well-owner from the lowering of the water table under his land caused by his neighbour's action. In the absence of some form of collective action (say, a charge on water or a quota on the amount one can draw each year), the doctrine encourages farmers to extract at too fast a rate relative to the rate at which the source is recharged. Admittedly, if the farms are small, no single farmer can affect the water table significantly. But if there are many farmers, the aggregate effect can be substantial. In extreme cases, over-extraction ruins the basin, because, for example, of salt water intrusion. Examples of this phenomenon abound today.

Even though an aquifer is a natural resource, it is useful to think of potable water in the home that is drawn from the aquifer as a produced good. Extraction, transportation, and treatment can be thought of as "production". Leaks in pipes transporting water can be thought of as depreciation during the production process. The real price of a unit of water in the home is composed of two elements: its value underground and its production cost. Economists refer to the former as "rent". Farmers in our example extract at too fast a rate because they don't have to pay that rent. That's the sense in which water in the aquifer is a free good. A good water policy would be either to charge farmers that rent or to impose quotas on extraction rates on individual farmers. In the former case the rents are collected by the agency imposing the charge; while in the latter case the farmers enjoy the rent implicitly. A third, and better, alternative would be to set a quota on the aggregate rate of extraction, issue farmers with licenses to extract (where the total number of licenses equals the aggregate quota) and allow them to trade licenses among one another if they so wish. Like the case of individualised quotas, water rents are enjoyed by the farming community when the fixed set of licenses are transferable. In short, water charges, on the one hand, an quotas and transferable licenses, on the other, have different income distributional consequences. But the idea behind each of these policy instruments is to ensure that the rents aren't dissipated as they are under free access to water.

If the water table in the aquifer is both high and deep, the rent component would be expected to be small relative to production costs; meaning that its stock is unlimited. Which may be why water has traditionally been viewed as a negative-rights good. The correct measure of "water scarcity" is its social rent. It would be interesting if international organizations, such as the FAO, were to try to estimate the time trend of water rents in regions that are now facing water stress. Until water is seen as an economic good, its procurement and use will continue to be inefficient and, ultimately, unjust.