

Nature and Personhood

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The poet Alexander Pope is as responsible as any thinker in having given rise to a contemporary intellectual sensibility, that the proper study of Mankind is man. I do not know whether Pope intended to interpret 'man' narrowly, but one strand of contemporary economics (more broadly, progressive cosmopolitanism) is built on the conceit that the human person is a blank canvas, onto which any form of personhood can be painted. Modern growth and development economics and the economics of poverty have an enormous amount to say about the human condition, but that our lives are embedded in Nature is not one of them.

Nature is our home, we are part of Nature, and She continually furnishes us with services (climate regulation, decomposition of waste, nitrogen fixation, air and water purification, soil regeneration, pollination, and so on) without which we would not exist. A characteristic of Nature of supreme importance is mobility (the wind blows, rivers flow, the oceans circulate, and birds and insects fly). Which is why and how our activities have consequences that are felt elsewhere, and in the future. Moreover, many of Nature's processes are both silent and invisible. That makes them easy to overlook, until of course they are affected so adversely that we become aware of them, as we are today of the value of biodiversity and climate regulation. We engage in many activities that have deleterious consequences but for which we are not charged (over-use of the oceans, land-use changes leading to rising biodiversity loss, and unsustainable carbon emissions are prominent examples), and over whose use we have little inner urge to exercise restraint. Economists call the unaccounted consequences for others of our actions, 'externalities.' The human presence on the Earth system is today so dominant and the magnitude of the adverse externalities accompanying our activities so large, that the demand we make on Nature's goods and services far exceed Her ability to supply them on a sustainable basis. By one reckoning the ratio of demand to supply today is 1.6, whence the metaphor that we need 1.6 Earths to satisfy our demands sustainably.

The externalities that have given rise to this enormous overshoot are most powerful in those cases where access to a resource base, which may be an entire biome, is unrestricted. Today, the most prominent among *open access resources* are the atmosphere as a sink for carbon emissions, and the oceans beyond the 200-mile exclusive economic zones (EEZ) of nations. It is customary among economists to study the production, distribution and use of goods and services in a three-way partition of institutions: *households*, *markets*, and the *state*. Which is why our overuse of open access resources is routinely interpreted as 'market failure'. However, anthropologists studying rural communities in the world's poorest regions have discovered that ecosystems with small geographical reach, such as village woodlands and forests, water sources, grazing land, threshing grounds, and coastal fisheries – I shall call them 'local ecological capital' – are usually neither private property nor state property but are instead communal property;

they are *common property resources* (or CPRs). In poor countries, especially in rural regions, markets are typically thin, they may not even exist, and the state may be alien, even predatory, which is why the *community* assumes a strong role in enabling households to navigate their lives. Of course, communities exist everywhere, it is their reach that differs enormously between advanced industrial countries and traditional agrarian economies. To use a broad-brush distinction, one may say that it is the 'rule of law' that underpins market transactions, in contrast to communitarian exchanges, which are supported by 'social norms of behaviour'. Whereas the law is enforced by an external enforcer (e.g., government), social norms are maintained by mutual enforcement. That said, social norms are more fundamental, in that they underpin the rule of law, for without mutual expectation that the rule of law will be respected by all, the law would simply hang in the air.

The contours of our emotions were etched in paleolithic times, we are small group animals. I don't have the competence to judge whether community has a fundamental value to us or whether its value is merely instrumental (e.g., that communitarian management of CPRs helps to ensure that they don't suffer from the tragedy of the commons); what I do know is that the distinction between 'fundamental value' and 'instrumental value' can be wafer thin – what appears to us to be a fundamental value may be instrumental in supporting a deeper value. So, in this lecture I won't draw a distinction between the two but simply study communities as a class of institutions that help us to manage our ecological capital sustainably. My examples are taken from studies in the poorer regions of the world.

Why CPRs?

As a proportion of total assets, CPRs range widely across ecological zones. In India, for example, they are most prominent in arid regions, mountain regions, and unirrigated areas; they are least prominent in humid regions and river valleys. There is a rationale behind this, based on the need to pool risks. Woodlands, for example, are spatially inhomogeneous ecosystems. In some years one group of plants bears fruit in one part of a woodland, in other years some other group in some other part is fecund. Relative to average output, fluctuations could be presumed to be larger in arid regions, mountain regions, and unirrigated areas. If a woodland were to be divided into private parcels, each household would face greater risks than it would under communal ownership and self-regulation. The reduction in individual household risks may be small, but as average incomes are very low in Indian villages, household benefits from communal ownership could be expected to be large.

A further reason for maintaining local ecological capital as CPRs is that the processes governing ecosystems are non-linear, meaning that the productivity of an ecosystem is larger than the sum of the productivities of its parts. Carving up the local forest by creating barriers would play havoc with its ability to maintain biodiversity.

Where users are symmetrically placed, distributions would be expected to be symmetric, a subtle matter to devise if the resource is heterogeneous. Rotation of access to the best site is an example of how this can be achieved. It is often practised in coastal fisheries, fuel reserves in forest land, and fodder sites in the grasslands. Rotation enables users to get a fair shake.

Of course, it would be possible in principle for the community to parcel out the resource as private property and let households establish a mutual insurance scheme.

There are two problems with that. First, the interdependencies of ecosystem parts would mean the risks are correlated, which dulls the ability of mutual insurance schemes to smooth risk. Second, the move would jeopardize cooperation in other activities. For at least two reasons. (i) cooperation appears to be habit forming; so, dispensing with cooperation in any one activity could lead to a weakening of cooperation in other activities; (ii) cooperation is more robust when sanctions for opportunism in any one venture include exclusions not only from that venture, but also from other collective ventures. Abandoning cooperation in one field of activity thus reduces the robustness of cooperation in other fields of activity. This helps to explain why relationships are so frequently tied to one another in rural communities.

Agricultural land, especially in densely populated areas, is a different matter. Both labour and capital are critical inputs in production. Investment can increase land's productivity enormously. Agricultural land as CPRs would be subject to serious management problems, including those due to the temptations to free ride on investment costs. The lack of incentives to invest and innovate would lead to stagnation, even decay. The fate of collective farms in what was previously the Soviet Union testifies to that. Those regions of sub-Saharan Africa where land is, or was until recently, held by the kinship were exceptions, but only because land was plentiful in the past and because poor soil quality meant that land had to be kept fallow for extended periods. Of course, it may be that agricultural productivity remained low there *because* land was held by the kinship, not by individuals. As elsewhere in the social sciences, causation typically works in both directions.

The Importance of CPRs

Are CPRs important to rural people? In a pioneering study, the late Narpat Jodha reported evidence from dry rural districts in India that the proportion of income among poor families that is based directly on CPRs is 15-25%. Such evidence doesn't of course prove that CPRs are well managed, but it does show that rural households have strong incentives to devise arrangements whereby they *are* managed.

CPRs not only supply households with a regular flow of ecosystem services and tangible goods (water, fuelwood, fibres, building material, fruit, honey, fish), they also offer protection against agricultural risks. It has been found in Nepal, for example, that households make more trips into the forest for non-timber products when times are hard. CPRs are sometimes the only assets to which the otherwise disenfranchised have access.

The Good News about CPRs

Most often CPRs aren't open to outsiders, but only to those having historical rights through kinship ties and community membership. Communal management of local resources makes connection with *social capital*, viewed as a complex of interpersonal networks, and hints at the basis upon which cooperation has traditionally been built. As CPRs have been seats of non-market relationships, transactions involving them are often not mediated by market prices. So, their fate is frequently unreported in national economic accounts.

Communitarian institutions come in a wide variety of forms, for they have evolved in different circumstances across regions, and they would be expected to respond to the local ecology. The political economist Robert Wade reported findings from his study of

community-based allocation rules over water and the use of grazing land in South Indian villages. He noted that downstream villages had an elaborate set of rules for regulating the use of water from irrigation canals. Fines were imposed on those who violated the rules. Most villages had similar arrangements for the use of grazing land.

In studies of natural experiments in central Himalayan forests, ecological economists have found that biodiversity is greater in areas managed by village councils than in areas that were declared state property. Leaving aside incentives, people who live in an ecosystem have greater knowledge of their landscape than those who are outsiders.

Of course, cooperation doesn't appear in vacuum. In the contemporary world of new forms of social strain, there is a potential role of government and non-government organizations (NGOs) in helping to build or rebuild local institutions through which communities could get to realize the advantages of collective action. Such help would involve, among other things, devising clearly defined rules concerning the allocation of burdens and benefits, rules whose compliance can be observed (hopefully, verified also) by the others involved. It has been found in studies in North-West India, that distress migration out of villages where NGOs had been at work to create institutions for managing water and pastureland on a communitarian basis was lower than in villages where there had been little attempt to create such institutions. Significantly, it has also been found that the probability of participation in communal pastureland was higher among villagers who were participating in communal water management schemes than among villagers who were not. Which suggests once again that cooperation begets cooperation.

How is cooperation maintained? Universally, studies have found that collective sanctions are imposed on those who misbehave. And of course, there are also rewards for good behaviour, in the form of reputation, prestige, and so forth. Sanctions range from the punitive and unforgiving (near-permanent exclusion following a single misdemeanour) to the forgiving (as in graduated sanctions). The theory of repeated games has shown how beliefs that sanctions will be imposed on one for a mis-demeaner can be sustained by their own bootstraps. The theory shows also why mutual trust is a fragile commodity. If it is broken in some part of the community, an awful lot comes tumbling down. Maintaining trust requires constant investment.

The Bad News about CPRs

So far, the good report on CPRs. There are, however, two pieces of bad news. The first involves the allocation of benefits and burdens in communitarian institutions. Entitlements from CPRs are frequently based on private holdings: richer households enjoy a greater proportion of the benefits. Studies in India show, for example, that access to CPRs is often restricted to the elite (e.g., caste Hindus). In absolute terms richer households have been found to take more from CPRs than poor households. However, the relative exploitation of CPRs by the poor and the not-so-poor isn't uniform across the world. Large scale studies of household data in India and Nepal, respectively, have found that wood-fuel consumption decreases with wealth in India, but increases with wealth in Nepal. The finding suggests that the availability of cheap substitutes matters. In India, where rural markets are more developed than in Nepal, relatively wealthy households save on labour costs by buying fuel in the marketplace.

That women are sometimes excluded from CPRs has been recorded in communal forestry. It is even possible that the elite *exploit* others, in the strong sense that the latter

are worse off when the CPR is regulated than they would have been if the CPR was unregulated. But because cooperation in one activity is usually tied to cooperation in other activities, it is hard to establish empirically that one group of CPR users is exploiting another group of users.

The second piece of bad news is that CPRs have deteriorated in recent years in many parts of the poor world. Why should that have happened in those places where they had been managed in a sustainable manner previously? There are several reasons:

One stems from deteriorating external circumstances, under which both the private and communitarian profitability of investment in the resource base decline. Political instability is a general cause. It is, of course, a visible cause of resource degradation, as civil disturbance all too frequently expresses itself by a destruction of physical capital. But increased uncertainty in communal property rights is a frequent, often hidden cause. People could worry that the state or warlords will assume authority over the CPRs. If the security of a CPR is uncertain, the returns expected from collective action are low. The influence would run the other way too, with growing resource scarcity contributing to political instability, as rival groups battle over resources. The feedback could be 'positive', exacerbating the problem for a time, thus reducing expected returns yet further.

The second reason CPRs have deteriorated in many places is rapid population growth. The latter triggers environmental degradation if institutional practices are unable to adapt to the increased pressure on resources. Studies have found growth in rural population to be accompanied by land use change (e.g., increased deforestation and reduced fallows).

A country's population size and age distribution are as much a factor affecting the demand for Nature's goods and services as is its average income and the distribution of income. To focus on the latter and bypassing discussions on the former is not only wrong but unconscionable. Barring at best half dozen countries, economic development in Africa has been akin to a crowd of people struggling up an escalator that is travelling down at the same speed. Little reference is made in official circles about the phenomenally high fertility rates that prevail in sub-Saharan Africa (even today it is above 4.7) despite dramatic declines in mortality rates. In oil rich Nigeria the fertility rate today is 5.4. South Korea and Taiwan showed what could be done to bring fertility rates down even when they were poor economies. But it is Bangladesh that has demonstrated to contemporary development ministries what can be achieved by invoking the aid of NGOs and local communities in bringing family planning and reproductive health services to the household doorstep. The fertility rate has declined in Bangladesh to 2 (which is below the replacement rate) and the country has moved up in the World Bank's ranking of nations, from low-income category to the low-middle income category.

Population size in sub-Saharan Africa today is approximately 1 billion. Every population projection I have seen, including of course the UN Population Division's, estimates the numbers to increase to 2 billion by 2050. The lower bound of the United Nations Population Division's projection at their 95% confidence interval for year 2100 is 3.8 billion. We are therefore looking at a near three-fold increase in numbers to be added to today's number in 80 years' time in a sub-continent that is deeply poor, in that average income there today is about a quarter of the global mean.

More than 220 million women in poor countries have expressed an unmet need for modern family planning facilities and services. It is all well and good for both donor

countries and the elite in recipient countries to trumpet the empowerment of women, but it all sounds hollow when foreign aid that directly invests in measures that enable the world's poorest women to gain some sort of control over their own bodies (to wit, family planning and reproductive health services) is slashed to near zero with seeming approval from the elite of aid receiving countries.

The third reason CPRs have deteriorated in some places is that communal rights were overturned by central fiat. In order to establish its political authority, a number of states in the Sahel, for example, imposed rules that destroyed communal management practices in the forests. Villages ceased to have the authority to enforce sanctions on those who broke communitarian rules. But state officials didn't have the expertise to manage the commons, often they were corrupt. Knowledge of the local ecology is held by those who work on the commons. Local participatory democracy offers a mechanism by which that knowledge can inform public policy. There is strong evidence that participation by beneficiaries is positively correlated with the performance of investment projects. Economic anthropologists have identified the many ways by which the exercise of state authority damages local institutions and turn CPRs into open-access resources: devolution leads to better resource management, other things being equal.

The fourth reason CPRs have deteriorated in many places is that cooperation is fragile, dependent as it is on many factors that have to work simultaneously in its favour. For example, in the face of growing opportunities for private investment in substitute resources, households are more likely to break agreements that involve reciprocity. But when traditional systems of management collapse and aren't replaced by adequate institutions, CPRs suffer from neglect.

And fifthly, an erosion of CPRs can come in the wake of shifting populations accompanying the development process itself. As economic opportunities outside the village improve, those with lesser ties (e.g., young men) are more likely to take advantage of them and make a break with customary obligations. Those with greater attachments would perceive this and thereby discount at a higher rate the future benefits that could be expected from complying with agreements. Either way, norms of reciprocity could be expected to break down, making certain groups of people (women, children, the aged) worse off.

History tells us that CPRs can be expected to decline in importance as economies develop. Cheaper transportation and widening markets make private ownership of land more profitable. That there are winners in the process of economic development is a truism. Much the harder task is to identify the likely losers and have policies in place that act as safety nets for them. Neglect of communitarian institutions in the search for economic development in the post War era has come at a heavy price. It has contributed deeply to the erosion of ecological capital.

The Poverty of Growth and Development Economics and the Economics of Poverty

I began this lecture by quoting a directive of Alexander Pope, that the proper study of Mankind is man. That the economic policies a government chooses should be based on evidence is an incontrovertible requirement, but it is of no use if the evidence is obtained from a misleading model of the human condition; for faulty models produce spurious evidence. Systems of thought that do not acknowledge humanity's embeddedness in and reliance upon Nature when used to project the present and future possibilities open to us

mislead. The received economics of poverty and development remains impoverished on that count. It reads as an elaborate exercise in collective solipsism.