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Claims on the commons: Political power and natural resources in pre-colonial India[1]

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Introduction: Communities and Commons

As her diverse *oeuvre* amply indicates, Dharma Kumar's restless and energetic mind led her to pursue a wide range of scholarly interests and she warmly encouraged my early ventures into environmental history. Though the present paper was written without the benefit of her close reading and clear advice, it connects to one of Dharma Kumar's long-standing interests—the history of institutions, especially property institutions.[2] I hope that Dharma would have approved it even as she would have offered suggestions for its improvement.

As confidence in the provision of technocratic solutions to environmental problems waned through the 1980s and 1990s, debates on the way forward necessarily intensified, and the neglect of socio-political as distinct from technical aspects of the problems began to be held responsible for earlier failures and current crises. One school of thought then radically questioned the technical competence and knowledge-claims of the established experts and argued for a return to the indigenous knowledge of local communities as a basis for environmental management. This was then sought to be accommodated in mainstream developmental thought. So Maurice Strong, Secretary-General of the UN Conference on Environment

[1] Earlier versions of this paper were presented at Cornell University and the Yale University Program in Agrarian Studies. It has benefited from the comments and criticisms offered at each of these sessions. Some of these themes have also been discussed in an earlier paper, 'Economic Rents and Natural Resources: Commons and Conflicts in Premodern India', in Arun Agrawal and K. Sivaramakrishnan, eds, *Agrarian Environments: Resources, Representations and Rule in India*, Durham and London, 2000, pp. 132–46.

[2] See, for instance, Dharma Kumar 'A Note on the Term "Land Control"', and 'Private Property in Asia? The case of Medieval South India', both reprinted in Kumar, *Colonialism, Property and the State*, Delhi, 1998, pp. 119–70.

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and Development wrote that his organisation would henceforth draw on the 'traditional knowledge and resource management practices of indigenous peoples and local communities'.[3]

This in turn was the result of a considerable rethinking on environmental issues in the late twentieth century. The original Malthusian model of population growth assumed that human societies unthinkingly increased their numbers until the scarcity of resources forcibly brought population and production back into equilibrium with each other. The inadequacy of this model became increasingly evident to twentieth-century demographers, but they tended to assume that while inapplicable to modern industrial societies, it was generally adequate to explain behaviour in 'traditional' peasant societies. In the absence of strong and prescient states, these societies (they thought) were likely to destroy their own resource base, more especially if the presence of the market lifted demand constraints on resource exploitation. This destruction would result from what Hardin, in 1968, famously termed the 'tragedy of the commons'—a phenomenon which he illustrated by taking the case of herdsmen adding additional animals even though their common pasture was overgrazed as a result.[4] Strong state control and the establishment of firm and well-defined property rights were by implication, seen as necessary (if not sufficient) to prevent this outcome. The difficulties inherent in this solution were immediately pointed out by Beryl Crowe, who indicated the limits to effective action by the state, and the possibility of its misdirection by special interest groups. She therefore judged the prospects of effectively saving the commons from spoliation 'by the administrative devices in which Hardin places his hope' to be very remote.[5] Elinor Ostrom not only criticised Hardin's assumptions, but also proposed and implemented a research agenda, focussing on how 'the community of individuals using a common pool resource may be able to avoid the social cost of individual actions or obtain the social benefits of collective actions'.[6]

Research has increasingly exposed the fallacy of applying such simple universal models to all human societies, and a growing body of scholarship has sought to analyse how various societies have, in fact, spared and conserved resources for long-run use, and the conditions under which this has been achieved.[7] Such cautious and painstaking investigation was, however not to the taste of all; and sweeping endorsements of little-studied 'traditional' institutions were substituted for their

[3] Maurice F. Strong, 'Foreword' to Dharam Ghai and Jessica M. Vivian, *Grassroots Environmental Action: People's Participation in Sustainable Development*, London, 1992, p. xiv.

[4] Garrett Hardin, 'The Tragedy of the Commons', *Science*, New Series, Vol. 162, No. 3859 (13 December 1968), pp. 1243–48.

[5] Beryl L. Crowe, 'The Tragedy of the Commons Revisited', *Science*, New Series, Vol. 166, No. 3909 (28 November 1969), pp. 1103–07.

[6] Elinor Ostrom, 'Collective Action and the Tragedy of the Commons', reprint in Garret Hardin and John A. Baden, eds, *Managing the Commons*, San Francisco, 1977, pp. 176–80.

[7] Elinor Ostrom, *Governing the Commons*, Cambridge, 1990, and (with C. Dustin Becker) 'Human Ecology and Resource Sustainability: The Importance of Institutional Diversity' (in Special Section on Sustainability Issues), *Annual Review of Ecology and Systematics*, Vol. 26, 1995, pp. 113–33.

actual analysis in the work of (for example) Vandana Shiva, who writes that (in South Asia)

> [f]or centuries, vital natural resources like land, water and forests had been controlled and used collectively by village communities, thus ensuring a sustainable use of these renewable resources . . . .
>
> Colonial domination systematically transformed the common vital resources into commodities for generating profits and the growth of revenues.[8]

Comically enough, this came to be unthinkingly parroted in that ultimate bastion of technocratic top-down planning—India's Planning Commission. In 1997, the Approach Paper to the Ninth Plan announced that

> local communities will be conferred with the right to derive the full benefit of the forest produce in their respective areas . . . .
>
> There is a symbiotic relationship between the tribal communities and the forests in which they live. The local tribal communities will be fully involved in the management of the forests.[9]

In a swift reversal of signs, Shiva and her fellow thinkers now characterised industrial society as thriftless and destructive, and all pre-modern regimes as prudent and balanced resource-users. Writers like Shiva are distinctly cavalier with evidence, and one searches in vain for any tangible historical material of how earlier communities were constituted, or how they actually managed their resources. Not all the champions of traditional institutions were as slapdash as Shiva, and a substantial body of more cautious research is embodied in the work of Ghai and Vivian. They point out the importance of the economic, social and spiritual importance of the environment to local communities; this functional dependence has led to a balance between the livelihood needs of the people and the integrity of the environment. However, they are not rigid functionalists, and do admit the possibility of failure in achieving such a balance. They go on that where successful,

> local communities have developed complex and ingenious systems of institutions and rules regulating the ownership and use of natural resources. Local knowledge, skills and technologies built up over time and handed down from one generation to another have ensured the continued functioning of these systems of resource management.

It is striking that the *capacity* of the local community to enforce this system of management is not doubted by Ghai and Vivian. This is not because they are not aware of the possible use of political power to control access to natural resources,

[8] Vandana Shiva, *Ecology and the Politics of Survival*, New Delhi, 1991, p. 14.

[9] *Approach Paper to the Ninth Five Year Plan 1997–2002*, New Delhi, 1997, pp. 65–66.

but because they see the exercise of such power as a modern phenomenon. They write

> the historical processes of foreign conquest, colonialism and settlement and associated 'modernizing forces' have undermined or modified the operation of such resource management systems in much of the world . . . . Indigenous management systems have suffered from the loss of control over resources by the local communities and the establishment of new property regimes by the central authorities.[10]

The presumption is that the extra-local exercise of power was unknown before colonial times, or, alternatively, that if it was known it did not impinge on the resource management practices of local communities.

These are by no means self-evident propositions. One could perhaps visualise them as being true in situations where population densities are low and means of communication undeveloped, so that the possibility of extra-local resource flows is constrained by economic geography. Alternatively, perhaps, density is yet lower, and local communities barely have any contact with outsiders. In both these cases, it might be argued that it is also likely that human demands on the ecosystem are likely to be so low as to be sustainable without conscious design. In effect then, local communities of the commons are defined by default, by the objective difficulty of access. Only in such circumstances would the scenario of the intrusion of power in the form of the minions of western capitalism hold. This may have been historically true in large areas of the Americas and elsewhere but would be uncommon in much of Eurasia; furthermore, institutions evolved for 'low-pressure' environments would have little to offer in today's 'high-pressure' world. At present, the question of defining and selecting the 'commoners' who are to share a local commons is central to creating any regime of management.

Ancient South Asia attained levels of population density that were elsewhere often only attained in the twentieth century. Thus Makhan Lal's study of Kanpur district in North India shows a population density around 200 C.E. of 79,000/6167 sq. km. or about 13 per sq. km.—a level reached by Mexico in 1950 and Brazil around 1975. By 1850 Kanpur district had reached about 993,000 or a twelve-fold increase to 161 per sq. km. on the same resource base; that was one of the highest densities in the subcontinent at the time. My own estimate for South Asia is a density of 15 per sq. km. in river valley areas around 100 C.E. and about 180 by the mid-nineteenth century.[11] (Present densities for the Indian Republic are approaching 300 per sq. km. over its entire claimed territory.)

[10] Ghai and Vivian, 'Introduction', in *Grassroots Environmental Action*, p. 12.

[11] See Sumit Guha, 'The Population History of South Asia from the First to the Twentieth Century: An Exploration', in Guha, *Health and Population in South Asia from the Earliest Times to the Pre-, nt*, New Delhi, 2001, pp. 25–31.

Towards an Institutional History of the Commons

What impact did this have upon the environment? What institutions might have buffered its impact? Two important scholars have directly addressed these historical issues. Madhav Gadgil and Ramachandra Guha face up to the fact that dense and growing human populations such as inhabited much of South Asia from early historic times inevitably make large demands on regional ecosystems, and they in fact postulate that scarcities were encountered by about the middle of the first millennium C.E. This led to what they term 'conservation from below'. The key institution in this was the 'caste-based village society', and more generally, a social system which 'very often ensured that a single caste group had a monopoly over the use of any specific resource from a given locale'. This in turn ensured prudent resource use, for 'small numbers of people linked together by bonds of kinship, and by a common culture, have had a monopoly over specified resources in specified localities'.[12]

Implicitly, therefore, this formulation also addresses the vital question of the checks to overexploitation, and answers that caste communities policed their boundaries against outsiders, and this would prevent them from denuding local resources. The risk of similar misconduct by members of the community was, on the other hand eliminated by a shared cultural outlook and also by a common socio-biological interest in the survival and propagation of their common genes. The system of caste endogamy (Gadgil believes) would ensure that insiders were closely related, and would have an interest in handing on an unimpaired resource to their descendants. Resources widely used by almost everyone, such as firewood, were, Gadgil states, controlled and managed by castes of village servants such as the Mahars of Maharashtra. The first generalised version of this model was presented by Gadgil and Malhotra.[13]

This model was built on the basis of extensive field work over nearly two decades with both peasant and itinerant communities of Western India, but is supported by relatively little historical evidence. Such efforts run the risk of identifying recent developments as vestiges of ancient institutions—in particular, the assertion of specific claims to biotic resources that might be a reaction to nineteenth and twentieth-century shortages rather than a relic of the previous millennium. We have records of the formulation of such claims. So for example, the formerly densely wooded Thana district adjoining Bombay city began to experience local shortages of wood under the impact of improved communications and government controls from the 1860s. Villagers soon became aware of their interests; this is evident from the 1885 deposition of Hira bin Dharma, the tribal (Malhar Koli) headman of the village of Dabhon in Dahanu sub-division, who stated : 'We object to outsiders using our jungle as that diminishes our supply. As to *karvi* [reed] the

[12] Madhav Gadgil and Ramachandra Guha, *This Fissured Land*, Delhi, 1992, pp. 94–95.

[13] M.M. Gadgil and K.C. Malhotra, 'Ecology of a Pastoral Caste: The Gavli Dhangar of Peninsular India', *Human Ecology*, Vol. 10, 1982, pp. 107–43.

supply is practically unlimited, so we do not mind outsiders taking them'. If the villagers went on to succeed in excluding outside claimants from the local forests, field investigators such as Gadgil a century later might well find as 'immemorial custom' that villagers had an exclusive right to wood, but that non-villagers could only take reeds. The headman's objection we should note, was to free access: outsiders paying cash were less objectionable—'removal of head-loads [of firewood] for sale reduces our fuel-supply but we must continue to sell as that supplies us with money wherewith to buy our condiments'.[14] Not only scarcity but also the fungibility of scarce resources were understood without the benefit of Marshall's *Principles*.

Nor was this an isolated instance. By the 1880s, shortages were already modifying customs: so when an official visited Belkade, a village in Kolaba district, he was told that the villagers had formerly got their wood-loppings from Dhavar 'but the people of that village objected now to their taking it'.[15] The customary right (*vahivat*) of non-residents to forest produce was itself open to dispute: so the Forest Settlement Officer described how in some parts of the district 'you find that while the residents concur that no such *vahivat* amongst non-residents exists, yet some non-residents claim such a *vahivat* for their village, and some do not'.[16] Thus custom and usage might not be as fixed as Gadgil assumes, and peasant communities far from being prisoners of their past. If this is admitted, then the presumption that modern fieldwork reveals millennial custom becomes unsustainable. (What it may sometimes reveal, ironically enough, is the remains of colonial fiats ossified into ancient custom.)

This criticism may certainly be made of the mutualism between different caste communities suggested in Gadgil and Malhotra's study of the cultivators (Kunbi) and pastoralists (Gavli) of the Sahyadri ranges in the 1970s. The authors claimed that in the past, the Gavlis cultivated a little but largely got their cereals from the Kunbis whom they supplied with dairy products. This pattern was (they believe) disrupted by dam construction and population growth from the 1920s, after which, faced with a shrinkage of available territory, the Gavlis 'began to intensify the shifting cultivation of the hill plateaus and upper hill slopes'. But this disrespect for traditional occupational boundaries seems to have been equally traditional: as early as 1820 the Raja of Satara wrote to the powerful Amatya of Bavda that dairymen (*Gauli*) supplying the king's bazaar were cultivating rice paddy in the village of Asiaj but had abandoned it on account of the vexatious demands of the Amatya.[17] Needless to say, this was well before population pressure or habitat loss can be invoked to explain the phenomenon. Such opportunistic sedentarisation continued. In the 1850s an early Conservator of Forests wrote of the need to regulate swidden because of

[14] Government of Bombay, *Report of the Bombay Forest Commission*, 1887, Vol. 2, pp. 84–85.
[15] *Ibid.*, p. 308
[16] *Ibid.*, p. 47
[17] V.G. Khobrekar and S.S. Shinde, *Konkanchya Itihasanchi Sadhanen 1692–1828*, Bombay, 1971, p. 110.

> the competition by the Gowlees, or wandering buffalo-feeders, with the more settled population in cultivating by destruction of jungle [i.e. swidden], the slopes and ridges of the ghaut hills . . . .
>
> The complaints of the villagers regarding these Gowlees were loud and frequent, not only because they interfered with the spots which they themselves had set aside for hill-cultivation [swidden], but in respect of the reckless manner in which they destroyed young trees within the village limits, and that they competed with the fixed cultivators on terms of inequality . . . .[18]

It is even likely that the government did intervene in the matter, and thus helped shape the mutualism of Kunbi and Gavli that Gadgil's informants recollected a century later. Such social engineering by the Forest Department was reported from Kanara district (now in Karnataka) in 1921: 'several families of Gowlis were brought in from Mysore. A plentiful supply of milk and ghee should help local villagers'.[19] Local villagers in turn provided conscript labour to the Forest Department, and their villages served as bases for its staff.

When one thus filters out possible anachronisms, the only tangible historical evidence that one finds in Gadgil then turns out to be a reference to Atre's monograph *Gaon-Gada*. Gadgil and Guha write:

> In a fascinating record of pre-British Maharashtra, Atre (1915) mentions that the Mahars also had the function of preventing any unauthorised wood-cutting in village common land. Additionally, they had to harvest and deliver all wood needed by village households . . . . [So their] interests would obviously lie in maintaining harvests from the village common lands at a sustainable level.[20]

Atre himself, however, merely lists among the Mahars' duties 'at night, patrolling the village and preserving the village forest and trees'; there is no mention of their supplying the entire village with wood. In fact, the same page states that the Mahars were obliged to furnish fodder and fuel to 'important people and officials' who camped in the village.[21] Lesser folk evidently had to fend for themselves, or perhaps purchase cowdung-cakes from the poor women who made and sold these.[22]

Now, Atre was an experienced colonial official, and much of what he wrote was based on personal experience during the decades that preceded World War I; he cites no pre-British record for the statements above, and we may take them to reflect the official view prevalent in the later nineteenth century, rather than anything earlier. Indeed, it is quite possible that the duty of guarding trees was a new

[18] Alexander Gibson, *Forest Reports of the Bombay Presidency for the years 1856–7 to 1859–60*, Bombay, 1861, Report for 1856–57, p. 4.

[19] *Report on the Forest Administration in the Bombay Presidency 1921–22*, p. 34.

[20] Gadgil and Guha, *This Fissured Land*, pp. 94–95.

[21] T.N. Atre, *Gaon Gada* (first published 1915) reprint, Pune, 1989, p. 50.

[22] This was a proverbial resource for destitute women: see A. Manwaring, *Marathi Proverbs* (1898) reprint, Delhi, 1991, Proverb No. 1071.

one, imposed as a consequence of the creation of a colonial forest administration in the second half of the nineteenth century. This hypothesis is suggested by the fact that I have not found it included in the lists of duties prepared by enquiring officials in the 1820s at the very outset of colonial rule in West Maharashtra. W.H. Sykes toured western Maharashtra between 1825 and 1829 in the capacity of Statistical Reporter to the Government of Bombay, and took particular pains to discover the Mahars' roles in villages 'where old customs may be supposed to remain unaffected by the change of government'; he noted a widespread obligation to supply wood and grass to government officials, but says nothing of other villagers. Intriguingly, he stated categorically that '[I]n no instance . . . did I find them [Mahars] performing watch and ward for the village . . .'—this was the duty of Bhil or Ramoshi watchmen. Atre however lists it as an obligation of the Mahars—it is likely therefore, that he was describing the late colonial rather than the Maratha system.[23] So it appears that the British government relieved the Mahars of certain obligations—such as those to forced labour away from home—but also imposed new ones—such as those of guarding the village and its depleted woodlands. The latter was not a traditional duty, performed through the centuries, and it follows that the mechanism for ensuring the sustainable use of the woodlands proposed by Gadgil—that the same families had the hereditary management of them—would not have worked.

What, then, was the regime of the commons, if any, in pre-modern Maharashtra? Was it indeed a locally controlled one? This question is of some importance because many authors assume that this was in fact the case in pre-modern times. Gadgil and Guha,[24] for example, also perceive a fundamental social divide between 'ecosystem people' and 'omnivores'. The former are said to depend on the natural environments of their own locality to meet most of their material needs, while the latter partake of a global market in commoditised resources—variations in their patterns of resource-use then arise from this dichotomy: localisation enforces prudence, and mobility permits extravagance.[25] But why should that ingenious and opportunist beast, *homo sapiens* submit to localisation if better opportunities existed elsewhere? Were there power structures that would enforce it?

Realm and Region

We shall address these issues through a study of eighteenth century western Maharashtra, the locale of Gadgil's studies, and a region where a substantial mass of early records has survived. The eighteenth century saw the gradual establishment of Maratha suzerainty in this region. The dynasty of Chhatrapatis—Sovereign rulers—gradually saw their authority slip away into the hands of their Chief

[23] William H. Sykes, 'On the Land Tenures of the Dekhan', *Journal of the Royal Asiatic Society of Great Britain*, Vol. II, 1835, pp. 226–28; Atre, *Gaon-Gada*, p. 50.

[24] Madhav Gadgil and Ramachandra Guha, *Ecology and Equity: The Use and Abuse of Nature in Contemporary India*, London, 1995.

[25] Gadgil and Guha, *This Fissured Land*, pp. 92, 104.

Ministers (Peshwas); so we shall refer to either Chhatrapati or Peshwa as the ruling authority. In addition there were minor chiefs and rulers who exercised considerable independent power of their own.

The realm that we shall be discussing, extended in a long belt down the western side of the Indian peninsula, from the shores of the Arabian Sea through the high Sahyadri mountains that rise out of the coastal lowlands, and onto the Deccan plateau dissected into broadening valleys by its (mainly) east-flowing river systems. In local terminology these zones are, respectively, the Konkan, the Mavals and the Desh. Physiography deeply influences the rainfall regime of the area, so we have heavy rainfall on the coast and mountains which intercept the monsoon clouds, and a semi-arid regime in the plains east of the Sahyadri ranges. As V.P. Subrahmanyam has remarked, therefore, the monsoon rainfall pattern is physiographically controlled to yield climates ranging from the perhumid to the semi-arid in a small geographical distance.[26] As early as the eighteenth century this rainfall regime, combined with the activity of a fairly dense human population, had led to the creation of a landscape of open savanna and cultivated plains in the east, fairly dense forest on the mountains and in their narrower valleys, and a mixture of swidden field, secondary and primary woodland, rough grazing and rice paddy-fields interspersed with coconut groves in the Konkan. Major urban centres like Satara, capital of the Chhatrapati Shahu, and Pune, the seat of the Peshwas, were located in the transitional zone between the wide, dry plains to the east and the narrow moist valleys to the west.

How were Biotic Resources Used?

Indian agriculture, and indeed, Indian society, has long depended on the local domesticate *bos indicus*. In the eighteenth century this species was the major source of power for agriculture and transport, and agrarian life would have been difficult to sustain without it. Oxen were used for soil preparation, sowing, weeding and even threshing the grain. Bovines also recycled cellulose indigestible by man into animal power, plant food and human fuel. Finally, the major burden of transporting goods was borne by them since road conditions usually precluded wheeled vehicles: such goods as did not move by water were carried overland by droves of bullocks. While the dairy yield of the village cattle was small, professional herdsmen reared both cows and buffaloes for milk and its durable products like clarified butter. The fodder and grazing needs all these beasts made (as we shall see) significant demands on the environment, and led to active contests over its control.

Other domesticates were also numerous. Sheep and goats yielded fibre, meat, leather, a little milk, and valuable fertiliser. They were kept locally, as well as herded over considerable distances to take advantage of seasonal pastures. But if

[26] V.P. Subrahmanyam, 'Water Balances in the Tropical Monsoon Climates of the Indian Region', in V.S. Datye, J. Diddee, S.R. Jog and C. Patil, eds, *Explorations in the Tropics*, Pune, n.d., pp. 26–38

the bullock was the central animal economically, his political equivalent was the horse. The Maratha armies were centrally constituted of light cavalry, and their strength depended on their numbers and mobility. The care and feeding of horses were important matters of state and much attention is devoted them in the administrative records of the time.

There is evidence that the demands of livestock were straining the limits of the sustainable output of the intensively settled lands of the western Deccan in the eighteenth century when population density in the tract may be estimated at perhaps 80 to the sq. mile or 32 to the sq. km.—assuming it to be about the same as at Sykes's census in 1826–28.[27] To put in another way, the total density was already about one-third of the rural population density as determined by the Census of 1961.

There were several effects of these shortages in an economy so profoundly dependent on animal power. One of these was the rise of an active market in fodder. This was not a novel development. In 1228 C.E. the potentate Kholesvara endowed the temple of Sakalesvara in Bid district of east-central Maharashtra with certain revenue sources: one of these was the right to levy 'one bundle on the sale of dry grass and fodder'.[28] It must be evident that there was already an active market in this resource, implying that the regime of scarcity was already in place. Such sales continued to occur, and the buyers included peasant farmers. For example, in the month of Kartik, Shaka year 1709 (September 1787 C.E.) we find nine landholding peasants of the village of Pimple, Chakan subdivision borrowing a total of 10,000 bundles of millet stalks (*kadba*) valued at Rs 250 from Balaji Shankar Sonavani of Pune with the undertaking to repay in kind within Mrugshirsha i.e., within two months. They were required to deliver good quality *kadba*, not less than one and a half cubits (70 cms.?) long to the lender's store in Pune city. If this was the village of Pimple Saudagar on the Chakan road, then this involved cartage over about fourteen kilometres. But then as the acute Thomas Coats observed a few years later, 'As the riches of the cultivator, nay his existence, depend on his cattle, he always nurses them with great care'. But he also noted that towards the end of the dry season 'grass is always scarce, and if the rains are late in falling, as seldom any provision is made for this, the cattle become extremely thin and weak, and a murrain not infrequently gets among them at this time, and destroys many; which reduces the cultivators to beggary'.[29] When he wrote (in 1819) bajri straw sold at prices ranging from Rs 2.5 to Rs 5 'per thousand bundles of three handfuls each'; while jowari straw at harvest time was Rs 1.5 a bundle of three handfuls but rose to four or five rupees 'when the green forage is late'. So valuable was it that Coats commented jowari 'near the city is cultivated more than bajaree, in consequence of the high price its straw bears as a forage'.[30]

[27] W.H. Sykes, 'Special Report', p. 254.

[28] Ajay M. Shastri, *Yadava Insriptions from Ambe Jogai*, Hoshiarpur, 1972, p. 10.

[29] Thomas Coats, 'Account of the Present State of the Township of Lony', in *Transactions of the Literary Society of Bombay*, Vol. III, 1823, pp. 237–38.

[30] *Ibid.*, p. 243.

The market could thus alter cropping choices at the margin and redistribute supplies during scarcity, but it apparently could not stimulate the direct production of fodder crops. Coats remarks that 'as grasses where there is no demand for animal food would not yield a profit sufficient to pay the land-tax, they are never cultivated on arable lands'. All the uncultivated land of the village was used as a common pasture; this was clearly land unfit for tillage, for Coats noted that nowhere in the common land was the soil more than a few inches deep.[31] How do we explain the incapacity of the market to stimulate investment in the production of fodder, given the scarcity of it?

I suggest that the reason behind the absence of fodder production on arable land was the difficulty of preventing the rights of free pasturage and princely purveyance from being exercised in it. This argument is supported by the fact that grass and hay was conserved in the eighteenth century, but not by the peasants. This use of land was the preserve of powerful families, whose reserved lands were termed *kuran*. Ruling houses also held such lands and many were subsequently taken over by the colonial regime and came to form the core of Forest Department lands on the arid plateau of western India.[32] We may illustrate the expedients that might culminate in the formation of such permanent reserves.

Great armies were gathering all over India in 1801–02, preparatory to the Anglo-Maratha war of 1803–06. Their animals had to be fed. So, in 1802, the Mahars attending on an English officer, Dipton (?) demanded two thousand bundles of fodder from a village near Burhanpur. Fodder was difficult to find, and took time to procure; so the local official Parasrambhat was tied up and flogged. Other commanders of the time were more provident if not less peremptory. Ibrahim Khan had charge of a unit of the Peshwa's cavalry: anticipating shortages, he issued an order to all village headmen in the tract east of Pune, demanding that all meadow lands should be reserved for his needs.[33] Nor were such demands very novel: in 1758 a Maratha officer posted at Ranthambor in Rajasthan was advised that another unit was joining him, and he should have an additional forty to fifty thousand bundles of grass cut and stored for their use; in addition he should have an ample supply of firewood. These supplies would presumably have been extracted from village pastures and woodlands, probably by forced labour.[34] Cavalry units would obviously claim priority over local requirements: in another news-report of that period, we learn that men from a nearby military camp simply came and cut down all the standing crops, both rain-fed and irrigated, in the village of Karathi in Khandesh. The villagers then thought of abandoning the village and settling elsewhere.[35]

[31] *Ibid.*, p. 234.

[32] When Dabadghao and Shankarnarayan wanted to assess the productivity of managed grasslands in India, many of the meadows they found managed by the Forest Department were such old *kurans*. They also form the basis of several wildlife preserves of the present day. P.M. Dabadghao and K.A. Shankarnarayan, *The Grass Cover of India*, New Delhi, 1973.

[33] Vishvanath K. Rajvade, comp. and ed., *Marathyanchya Itihasanchi Sadhane—Khand Dahava*, Pune, 1909, pp. 449, 473.

[34] Dattatreya Vishnu Apte, *Chandrachud Daftar*, Pune, 1920, Part 1, p. 55.

[35] Rajvade, *Sadhane—Khand Dahava*, pp. 453–54.

In less disturbed times, less destructive, though equally arbitrary, arrangements might emerge. A glimpse of how they took shape is afforded by a letter from the administrator of the township of Kadus to the Peshwa, written in March 1736.

> The honourable Rajshri Senapati's camp-followers go daily from the main camp to Talegaon. They turn elephants and camels into the fields, and they get into the irrigated lands and steal. The Lord (Peshwa) may command on this matter. Rajshri Mahadji Govind has been granted the village of Turakdi. He has just reserved its grazing lands; he beat (our) cowherds; to the north Rajshri Mahadji Govind has reserved the grazing, and that of Sayegaon is reserved by Rajshri Tryambakrao Mama. Where will the people of Kadus take their cattle to graze, from which forest will they fetch their wood? It is not possible to carry on the life of the settlement without touching the border tracts of the adjoining villages. The Lord is able to command.[36]

This was not an unusual occurrence; thus in 1778 the headman of Kaloli, a village near Saswad, complained that a powerful noble, Jiuba Chitnis had similarly closed some land in the adjoining village of Naloli. The rains had failed the previous year, and the only available water for the local cattle was in a ravine in the reserved lands. Chitnis's officer had beaten and threatened the local villagers when they took their animals there. The situation was aggravated by the arrival of the Peshwa's officer, Avji Kavde, with a large train, whose cattle also went to drink there. If this continued, the headman reported that the peasants would be severely distressed (and might emigrate?).[37]

These documents bring out how inequalities of power affected the control of biotic resources: the small needs of local villagers and townspeople could be met under a regime of free commons, but closure was necessary when the gentry appeared on the scene. Such closures might be temporary, or they might become permanent: in that case these lands would become the private or government meadows (*kuran*) that we have already mentioned. Many of these formed the core of Forest Reserves in the nineteenth century.[38] The creation of one such reserve was ordered by the Peshwa Bajirao in 1758. The order noted that the court often marched through the district of Karde-Ranjangaon and needed wood and fodder. So the local officer should find a village (preferably a partly-cultivated one) assessed at four or five hundred rupees in tax, knock down most of it, allow a little cultivation to remain, and convert the remaining lands into a *kuran*.[39] In other cases disputed lands were taken over. So, for instance the villages of Kale

[36] Govind Sakharam Sardesai, ed., *Selections from the Peshwa Daftar*, 46 vols, Bombay, 1931–35, Vol. 30, p. 129.

[37] R.V. Oturkar, *Peshvekalin Samajik va Arthik Patravyavahara*, Pune, 1950, p. 7.

[38] 'Forest Report of the Bombay Presidency 1863–4', p. 102, printed in *Forest Reports of the Bombay Presidency 1860–61 to 1867–8*, Bombay, 1869.

[39] G.C. Vad et. al., eds, *Selections from the Satara Raja and Peshwa's Diaries*, 9 Parts, Pune, 1903–11 (henceforth *SSRPD*), Pt. III, Vol. 1, p. 282.

and Nandgaon quarreled over a piece of land, so it lay untilled for some forty or fifty years. Thereupon the Peshwa simply turned it into state property and appointed a manager, warning the headmen of both villages not to trespass into the government *kuran*.[40] Both the Peshwa's government and leading gentry families possessed numbers of meadows of this type, all probably created by excluding local villagers in the way described above.[41] Apart from supplying grass, wood and bamboo, such areas sometimes served as hunting reserves or parks (*ramna*).[42]

Villagers in the vicinity of such reserves would be called up for compulsory labour in them—so, for example, the peasants of several districts were required, in 1763–64, to cut and supply 484,000 bundles of grass; those in other districts were exempted from their obligation to provide 1,247,500 bundles, but required to pay Rs 4 per 1,000 bundles in lieu of the service.[43] Sometimes these reserves were made available to the peasants as well—as for example, after the Nizam of Hyderabad's army had burned many villages in the Junnar area, the peasants were allowed to take 100,000 bundles of grass as well as wood and bamboo from the Randhervadi *kuran* in order to rebuild their homes.[44] These reserves had presumably earlier been selected for closure because of their productivity, but the fact that they contained resources unavailable from the village commons also clearly indicates that restricted access did increase production, by contrast to the more usual regime of free commons.

Costs and Benefits

What would the yield be like? This issue is important because it might be suggested that the reason why commercial reserves were not created was the negligible difference in yield between a regime of free commons and a reserved grassland. We have a modern study of the region that enables us to get an idea of the benefits of closure. Dabadghao cites an area of 10 hectares on the Deccan side of the Sahyadri near Pune with a rainfall of 1,250 mm—a meadow therefore typical of those reserved in the eighteenth century.

> In the first year of protection the cut yield was 4,500 kg which, therefore, represented what the animals might have obtained by grazing (minus 40 per cent loss due to trampling) in the last grazing year. In the second year of protection the cut yield was 10,000 kg, and in the third year 27,000 kg.[45]

This is presumably air-dry weight; elsewhere the study reports that protected and therefore highly productive stands of *Sehima-Dichantium* grasses yielded an average

[40] *Ibid.*, pp. 298–99.

[41] For a listing of such holdings among the gentry of Kolhapur kingdom, see the inventories in Khanderav Gaikwad, ed., *Karvir Sardarchya Kaifiyati*, Kolhapur, 1971, pp. 84, 96, and *passim*.

[42] Rajvade, *Sadhane—Khand Dahava*, p. 458.

[43] *SSRPD*, Pt. VII, Vol. 2, pp. 317–18.

[44] *Ibid.*, Pt. III, Vol. 1, p. 251.

[45] *Grass Cover of India*, p. 187.

of 4,800 kg/ha. while an average hay production of 3,300 kg/ha. could be expected from a good *Dichantium* stand.[46] A working bullock, according to data collected by Sykes in the 1820s received five bundles of jowar stalks daily. If we convert this at five pounds (2.25 kg) per bundle, the weight given by Mann,[47] and assume that the nutritive value of hay and jowar fodder was the same, then the loss from failure to protect one hectare of meadow was 2,400 kg, equal to the fodder needs of 213 bullocks for one day. Or, to put it in another way, the 10 hectare meadow could support 240/365, or 0.66 bullocks in a year under free grazing, but 6.6 under closure and cutting. The cattle employed by the upper classes were perhaps bigger and better-fed than those of the peasants visited by Sykes. In the Pune archives we find a standard ration of six bundles of fodder being issued to oxen and ponies, eight to full-grown horses and 12 to camels. Elephants received 125 bundles of fodder as well as four loads of sugarcane.[48] Thus, if reserved, the 10-hectare meadow would support four horses for a year. We may thus gauge the demands that even an army of a few thousand horse would make on the fodder of a region like Pune. It will also explain why the peasants visited by Sykes in the 1820s consistently assumed that the staple food of working bullocks consisted of millet stalks—the free grazing was probably just enough to keep them alive for the few months of the year when not at work. The untilled land of the village of Loni, for instance amounted to about 700 ha., much eroded, with hillocks showing the bare rock 'and the whole . . . more or less thickly strewed with stones, from the weight of a few ounces to as many hundred weights'.[49] If the whole of it had been of the quality of the 10 hectare meadow discussed above, and the yield evenly distributed through the year, under a regime of free grazing, this would have fed about a hundred head of cattle; but the village possessed 430 head, not counting horses, asses etc. It is obvious that such overused and degraded pasture would yield little, and the village's fodder supply was clearly inadequate. Indeed Coats found that about a quarter of the inhabitants in 1819 had borrowed grain and straw 'to support themselves and cattle till the next harvest . . .', repayable in kind with an increment of 50 or 75 per cent. The cattle then clearly shared in the produce from cultivated land and did not live mainly off the grazing.[50]

Nor of course could the village community exclude powerful claimants from its lands, and this may well have been a factor in their degradation. Thus we find the village of Karaje in the Nira valley complaining to the king's governor that several bands of shepherds with 20,000 sheep had descended on their village. The animals (the plaint continued) were ravaging the crops and if they were not restrained by a royal order then the village would be obliterated. The shepherds had been rebuked but paid no heed; if the governor did not listen then death

[46] *Ibid.*, p. 111.

[47] H.H. Mann, *Land and Labour in a Deccan Village—I*, Bombay, 1917, p. 83.

[48] Maharashtra Government Archives, Pune (henceforth Pune Archives), Chitnisi rumal 57, Pudke 3, docs. 30122 and 30169.

[49] Coats, 'Lony', p. 172.

[50] *Ibid.*, p. 213.

(*moksha*) was the villagers' lot.[51] It is likely that these were shepherds licenced by the State, or in charge of the flocks that supplied meat for the tables of the gentry. This is suggested by documents in the archives such as this order issued in 1752–53:

> Letter to Sivaji Salokhe—Baji Govere, Ravalji Manka and Yesaji Manka are in charge of the King's shepherds in Miraj province. They are permitted to graze everywhere; do not molest them. Issue stern injunctions to the Mangs and Bedars of the province to see to their safety.[52]

Thus protected the graziers could grab a share of the limited resources of the villages. Sheep and goats did however yield a return to the villagers in the form of the urine and dung that enriched the fields where they lay at night, and they were often welcomed for this reason. (However, Coats in Loni heard grumbles that this resource was monopolised by the headmen free of charge while other farmers had to pay.) But more egregious violations were known. Thus we find a letter of the Chhatrapati written in 1752–53, reproving one Yesaji of the village of Dudhi for sending his servants into the villages of Sarambe, Yeksala, and Nagdi where they cut and carried away the grass growing on the field embankments—grass presumably conserved for the village cattle.[53]

In this milieu, even the powerful had to exercise a constant vigilance to ensure the conservation of their often arbitrarily demarcated reserves. For example, a meadow had been reserved for the State elephants near the village of Vade, Vandan subdivision. The bold headman of that village, Sakhoji Navlage, not only turned his cattle into the meadow but assaulted its keeper when he protested. Sakhoji was summoned to the court. Another village headman was found to have ploughed up meadowland allocated to the (State ?) herdsmen, and had to be warned to desist.[54] Again the game preserve near the village of Khopsi was tended by the villagers. However, the garrison of Kalyangad disputed their control and refused to recognise it. The court ordered them to desist from interfering in the lands below the hill-crest.[55] Thus stealth and force were deployed to constantly threaten the valuable biotic resources preserved by king and commoner alike. The constant vigilance needed for successful preservation would be costly in time, money and occasionally blood, and all too often, therefore, free commons might end up being the default option.

[51] Pune Archives, Chitnisi Rumal 36, Pudke 1, doc. 18870.

[52] *Ibid.*, Shahu Daftar Rumal 8, Pudke 4, doc. 8996; another example is Rumal 8, Pudke 5, doc. 9724.

[53] *Ibid.*, Pudke 4, doc. 8945.

[54] *Ibid.*, Pudke 4, doc. 8909; Pudke 5, doc. 9739.

[55] *Ibid.*, Pudke 4, doc. 8845.

Protection and Productivity: Conclusion

The extent to which this affected productivity may be seen from a document prepared in 1773–74. This year saw major factionalism within the Maratha political system, with the consequent assemblage of huge armies around the capital. Probably in order to preclude the destruction of the tax base through depredations on the peasants, the Pune government ordered Balaji Krishna to take charge of all meadow-lands, government and private, within 15 or 20 *kos* of the city, to arrange for the cutting of 300,000 bundles of grass, and to store half of this supply and send the rest to the city. In addition to this he was to supply 1,600 khandis of wood fuel and 150 khandis of charcoal. The scheme recognised that influential owners might be able to secure some access; nonetheless, if they took more than their domestic consumption they were to be charged market rates for it. Biotic resources were therefore eminently seen as quasi-property, open to arbitrary seizure and use. It seems that the supply within this radius was estimated equal to 50,000 bullock rations or 37,500 horse rations, giving us some idea of the limited extent of meadowland protected and available. Three lakh bundles would be 675 tons of grass. If we follow Sykes in estimating the *kos* at two English miles, or 3.2 kms, a radius of 15 *kos* would include an area of over 7,000 sq. kms. of which less than half could possibly have been under cultivation. Yet the surplus grass available was equal to the total yield of perhaps 2.5 sq. km. (250 ha.) of good meadowland. Even this limited yield was to be achieved only by hiring 175 guards for a year to control these lands.[56]

If therefore, we come to consider the ultimate productivity resulting from the system as it operated, it cannot but be characterised as an unsuccessful one. The contests over the spontaneous produce of the land—contests in which the superior force of kingly authority was met with the weapons of the weak—stealth, evasion and cunning, resulted ultimately in the production falling far below the levels that well-managed lands could have produced. Indigenous peoples and local communities have previously encountered many of the problems we face today and were frequently unable to provide optimal solutions to them.

[56] *SSRPD*, Pt. VI. Vol. 2, pp. 256–58.