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# Adaptive significance of the Indian caste system: an ecological perspective

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Received 2 September 1982, revised 26 April 1983

**Summary.** Indian society is an agglomeration of several thousand endogamous groups or castes each with a restricted geographical range and a hereditarily determined mode of subsistence. These reproductively isolated castes may be compared to biological species, and the society thought of as a biological community with each caste having its specific ecological niche. In this paper we examine the ecological-niche relationships of castes which are directly dependent on natural resources. Evidence is presented to show that castes living together in the same region had so organized their pattern of resource use as to avoid excessive intercaste competition for limiting resources. Furthermore, territorial division of the total range of the caste regulated intra-caste competition. Hence, a particular plant or animal resource in a given locality was used almost exclusively by a given lineage within a caste generation after generation. This favoured the cultural evolution of traditions ensuring sustainable use of natural resources. This must have contributed significantly to the stability of Indian caste society over several thousand years. The collapse of the base of natural resources and increasing monetarization of the economy has, however, destroyed the earlier complementarity between the different castes and led to increasing conflicts between them in recent years.

## 1. Introduction

The Indian caste system has always fascinated students of human society. Their investigations have, however, hardly touched on the ecological implications of the system, being largely focused on the origin and development of castes, the social interrelationships amongst the various castes, and the impact of modernization on this institution (Dube 1955, Marriot 1960, Ghurye 1961, Karve 1961, Srinivas 1962, Bose 1967, Sinha 1967, Dumont 1970). In this paper we will attempt to explore the caste system from an ecological perspective drawing on our own field-work in Western Maharashtra. With its reproductive isolation and hereditary mode of subsistence, a caste population can be considered an analogue of a biological species and assigned an ecological niche (Hardesty 1972, Hardesty 1975). We will document that castes more directly dependent on natural resources had so organized their mode of subsistence as to avoid excessive overlap with other castes in their demands for various resources. Further, intracaste territoriality regulated competition among the lineages within a caste. We believe that this monopoly of lineages over particular resources in a given locality favoured the cultural evolution of social restraints on resource utilization leading to their sustainable use. This was probably an important factor contributing to the stability of the caste system over the past several thousand years. We conclude by examining the implications of the collapse of its natural resource base over the last couple of centuries for the caste system.

## 2. Material and methods

The field-work reported here pertains to the western half of the State of Maharashtra in peninsular India (figures 1 and 2). The state has an undulating

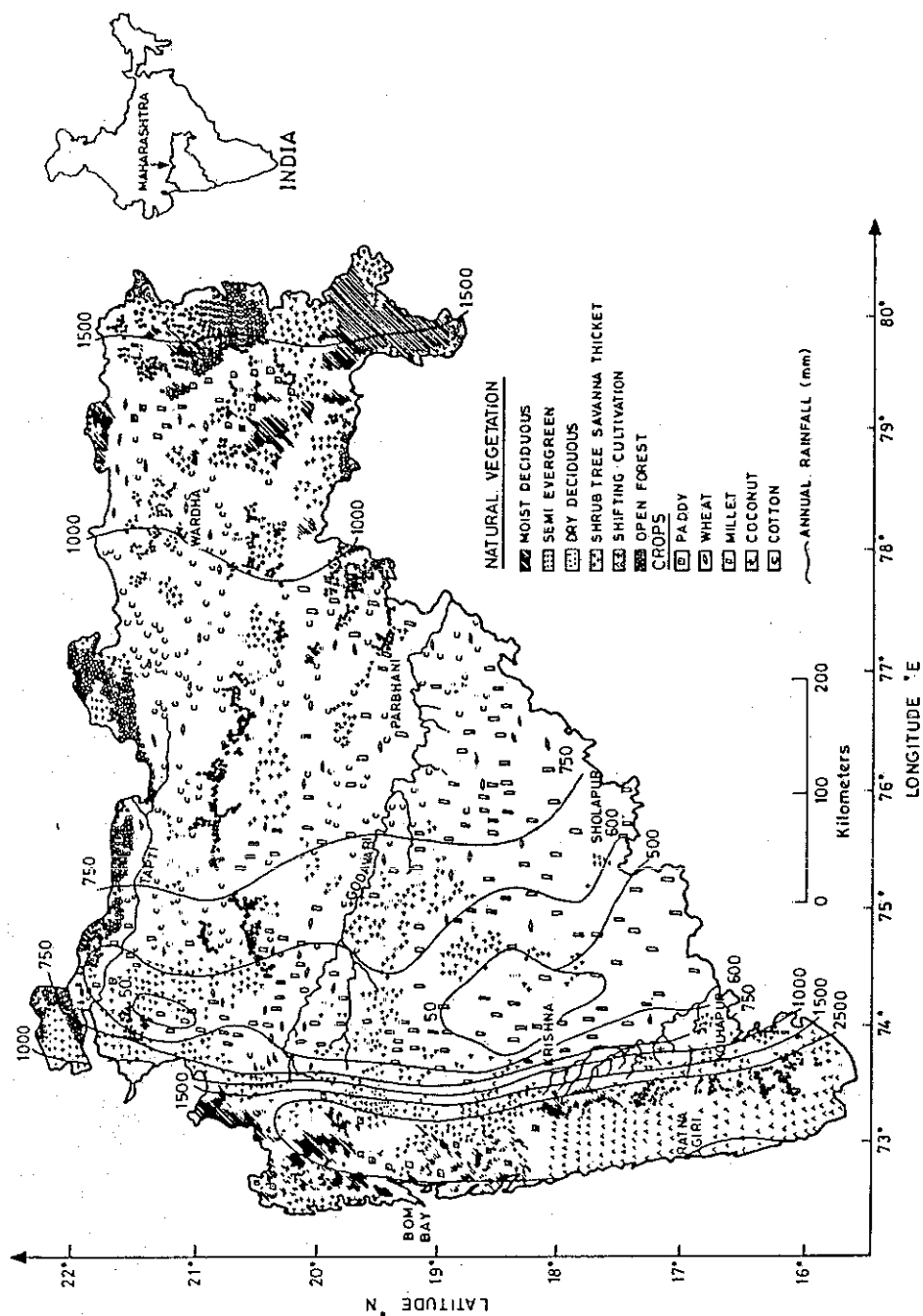


Figure 1. The distribution of rainfall, natural vegetation and cultivated crops in the state of Maharashtra

coastal strip varying from 50 to 80 km wide, flanked by the hill chain of Western Ghats which rises abruptly to an altitude of between 1000 and 1500 m. The 15-20 km wide crestline of the Ghats is a region of heavy rainfall, in excess of 3000 mm a year. The society in this tract of low but stable agricultural and pastoral productivity is simple and made up of a few sedentary castes of cultivators, pastoralists and hunter-gatherers. Two of these, Gavlis and Kunbis, will concern us further (table 1). The Western Ghats merge through a series of broken hills with the Deccan plateau at an elevation of 500 m. The annual rainfall in this tract decreases from 3000 mm at the crestline to 1500 - 1000 mm at the edge of the plateau. This

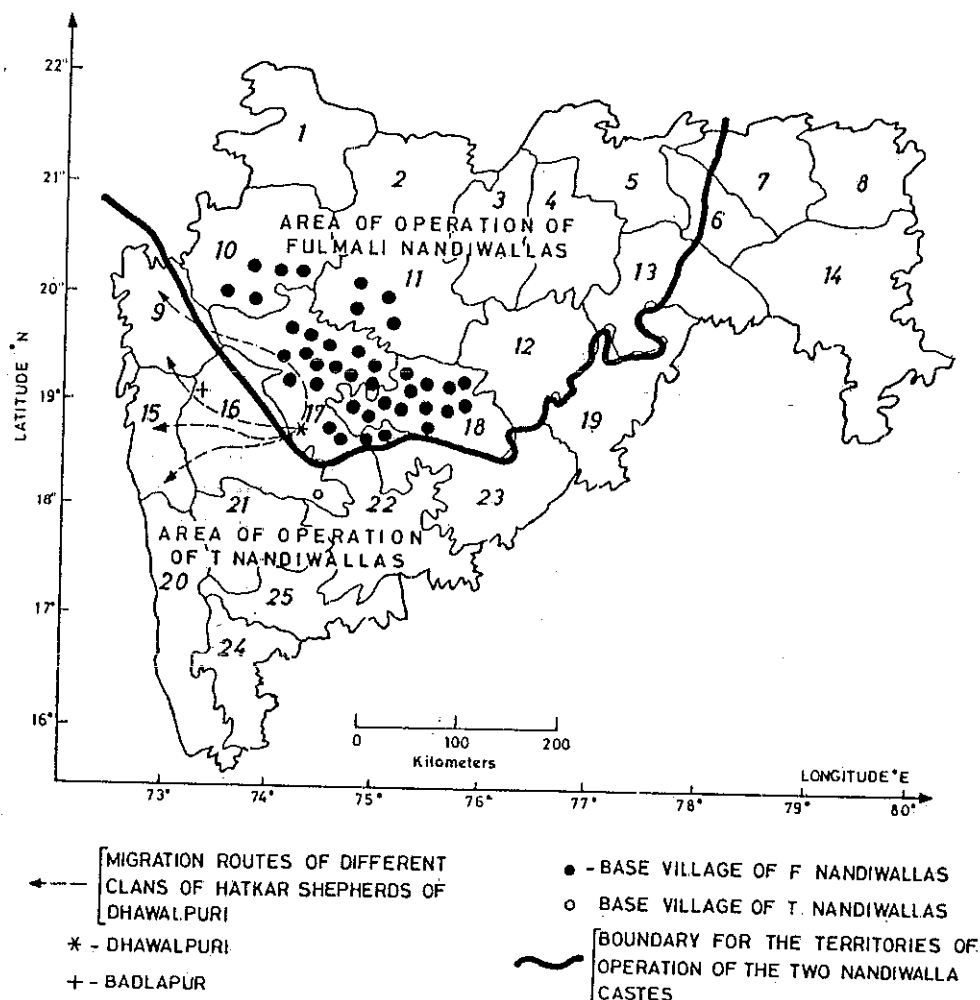


Figure 2. The administrative districts of Maharashtra and other localities referred to in the text, base villages and dry season operating ranges of the two castes of Nandiwallas and of the four shepherd bands of Dhawalpuri village.

Names of districts of Maharashtra: 1, Dhulia; 2, Jalgaon; 3, Buldhana; 4, Akola; 5, Amravati; 6, Wardha; 7, Nagpur; 8, Bhandara; 9, Thana; 10, Nasik; 11, Aurangabad; 12, Parbhani; 13, Yeotmal; 14, Chanda; 15, Kolaba; 16, Pune; 17, Ahmednagar; 18, Bhir; 19, Nanded; 20, Ratnagiri; 21, Satara; 22, Sholapur; 23, Osmanabad; 24, Kolhapur; 25, Sangli

tract provides productive agriculture with most of the land under cultivation. This region harbours a complex rural society with a number of artisan and service castes and has been the subject of two classic monographs in Marathi language (Atre 1915, Chapekar 1933). The precipitation decreases further as one proceeds eastwards on the Deccan plateau, being less than 600 mm in a semi-arid tract of 100 – 150 km width. The agriculture in this region is really productive only in the river valleys. The large tracts of uncultivated land away from the valleys support pastoralism as well as hunting-gathering. The availability of uncultivated land, as well as the favourable nature of the terrain for sedentary existence during the four months of the monsoon rains, has favoured the establishment of the base villages of a number of pastoral as well as non-pastoral nomadic castes in this semi-arid tract. These nomadic castes operate in the higher rainfall tracts, both to the east and west of this semi-arid region, in the eight dry months of the year (Malhotra 1974). Five castes of interest to us, namely Hatkars, Tirumal Nandiwallas, Fulmali Nandiwallas, Vaidus and Phasepardhis, have their base villages in this semi-arid region (table 1, figure 2).

Table 1 Population size, language and traditional occupation of the seven castes under consideration.

Caste	Estimated population	Mother tongue	Distribution in Maharashtra (districts)	Traditional primary occupation
Kunbi	500 000	Marathi	Almost all districts	Agriculture
Gavli	100 000	Marathi	Kolaba, Kolhapur, Pune, Ratnagiri, Sangli, Satara	Buffalo-keeping
Hatkar	573 000	Marathi	Ahmednagar, Akola, Amravati, Aurangabad, Bhir, Buldhana, Dhulia, Jalgaon, Kolhapur, Nasik, Nanded, Osmanabad, Parbhani, Pune, Sangli, Satara, Sholapur, Wardha, Yeotmal	Sheep-keeping
Tirumal Nandiwallas	3 000	Telugu	Pune	Bull-performance
Fulmali Nandiwallas	5 000	Telugu	Ahmednagar, Aurangabad, Bhir, Nasik	Bull-performance
Vaidus	1000 000	Telugu	Ahmednagar, Aurangabad, Pune	Indigenous medicine — men
Phasepardhis	150 000	Marathi	Ahmednagar, Aurangabad, Bhir, Kolhapur, Pune, Satara	Hunter-gatherer

The information reported below has been collected as a part of five different projects over a 12-year period from 1969 to 1980. For details, reference may be made to Malhotra (1974, 1979 a, b), Malhotra and Gadgil (1981), Gadgil and Malhotra (1982) and Khomne, Malhotra and Gadgil (1983)

### 3. Organization of the Indian caste society

The Indian society is even today an agglomeration of numerous castes, tribes and religious communities. The tribal and caste groups are endogamous, reproductively isolated populations traditionally distributed over a restricted geographical range. The different caste populations, unlike tribes, have extensive geographical overlap and members of several castes generally constitute the complex village society. In

such a village society, each caste, traditionally self-regulated by a caste council, used to lead a relatively autonomous existence. Each caste tended to pursue a hereditarily prescribed occupation; this was particularly true of the artisan and service castes and the pastoral and nomadic castes. The several castes were linked to each other through a traditionally determined pattern of barter of services and produce (Ghurye 1961, Karve 1961). These caste groups retained their identity even after conversion to Islam or Christianity. Each of the caste groups was thus the unit within which cultural and perhaps genetic evolution occurred, at least for the last 1500 years when the system was fully crystallized and probably much longer. Over this period the various castes had come to exhibit striking differences in cultural traits like skills possessed, food habits, dress, language, religious observances, as well as in a number of genetic traits (Sanghvi and Khanolkar 1950, Karve and Malhotra 1968, Malhotra, Chakraborty and Chakravarthi 1977, Sanghvi 1978, Malhotra 1978, Chakraborty and Malhotra 1981).

One may then view the Indian society as being analogous to a biological community made up of a number of 'cultural species' or endogamous caste groups. These may be thought of as being organized in three trophic levels. The lowest trophic level is made up by cultivators, pastorals and hunter-gatherers directly dependent on land and its biological resources. In the second trophic level may be included artisans, entertainers and traders dependent on the populations of the first trophic level in a mutualistic fashion. In the third trophic level may be included military and priestly castes dependent on the two other trophic levels in a parasitic fashion. The trophic organization of a typical village in Western Maharashtra may be illustrated by that of Badlapur (Chapekar 1933) (figure 2). In 1931, the village had a population of 1416 persons divided among 25 caste groups with a minimum of 5, a maximum of 214 and a median of 47 individuals per caste. The 5 cultivator castes made up a third of this population, 8 artisan castes (carpenter, potter, leather-worker etc.) and 5 service castes (barber, washerman, village guard etc.) made up another third, and 2 castes of hunter-gatherers (who were largely farm labourers by 1931) and 2 castes of priests (who were largely landlords by 1931) the rest. In addition, such a village was visited by a number of nomadic castes. Atre (1915) lists 35 such castes amongst which 14 performed a religious function, 12 entertainment, 4 trade, 4 fabrication of tools etc, and 1 dispensation of medicine. Other hunter-gatherer castes, such as Phasepardhis that did not have an intimate relationship with the settled society, also used the tracts outside the village boundary.

In such a caste society, the cultivator castes may be said to occupy identical niches, but coexist through intra- and intercaste territoriality in the form of ownership of cultivated land. The artisan and service castes dependent on them had diversified their niches in terms of their occupation, so that there were members of only one caste each of carpenter, potter, barber etc in any given village. Furthermore, they regulated intracaste competition through the device of each household of artisan/service caste having the exclusive right of dealing with a specific group of cultivator and other caste households. It is, however, the pastoralists and nomads that provide the most interesting examples of niche diversification, and the rest of the paper will be largely concerned with these castes.

#### 4. Resource partitioning

The relatively simple society of the high-rainfall tracts near the crest of the Western Ghats is largely made up of small, often single-clan settlements of Kunbis

and Gavlis. Here the Kunbis lived (and still do) in the lower valleys, while the Gavlis lived (and still do) on the upper hill terraces (figure 3). The major occupation of Gavlis was keeping large herds of buffaloes and cattle. They used to curdle the milk, consuming buttermilk at home and bartering the butter for cereal grains, produced by Kunbis, and other necessities. The protein requirements of the Gavlis were met from the buttermilk and they did almost no hunting. The Gavlis also practised some shifting cultivation on the upper hill terraces. The Kunbis on the other hand practised paddy cultivation in the river valleys and shifting cultivation on the lower hill slopes. They kept only a few cattle for draught purposes which produced very little milk. To meet their protein requirements the Kunbis hunted a great deal. Thus, the cultivation of valleys and lower hill slopes was restricted to Kunbis and that of hill terraces to Gavlis; maintenance of livestock and use of fodder and grazing resources was largely with Gavlis, while Kunbis had the monopoly of hunting wild animals (Gadgil and Malhotra 1982).

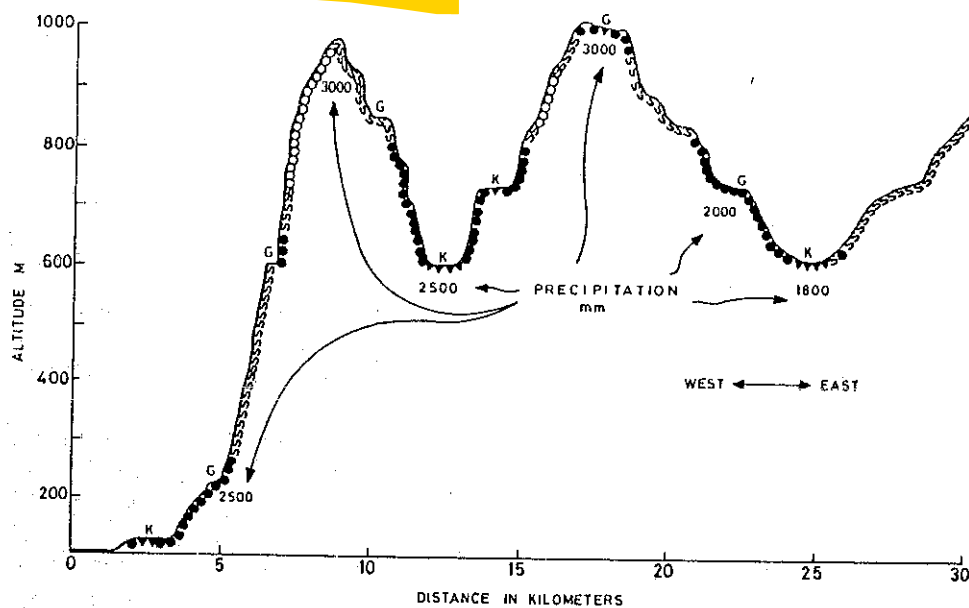


Figure 3. A schematic cross-section through the Western Ghats of Maharashtra indicating precipitation, present-day vegetation and the location of Gavli and Kunbi settlements. O, Semi-evergreen forest; ▼, paddy cultivation; S, degraded scrub; ●, shifting cultivation. Settlements: G, Gavli Dhangar; K, Kunbi.

Another efficient instance of resource partitioning is provided by the hunting practices of the ecological guild (in the sense of Root (1967)) of three non-pastoral nomadic castes of Tirumal Nandiwallas, Vaidus and Phasepardhis. Between themselves these three castes used to do most of the hunting in the uncultivated tracts away from villages in the semi-arid region of Western Maharashtra. The Phasepardhis were primarily hunter-gatherers, bartering some of the game for other goods. The Tirumal Nandiwallas and Vaidus had other primary occupations such as performance of bull play, dispensing herbal medicines, selling trinkets, midwifery etc., but hunted extensively for their own consumption.

We initiated an investigation of the hunting practices of these three castes with the presumption that they hunted much the same animals in the same tract.

Table 2. Relative dependence in terms of percentage of reported biomass consumed of the different prey species by the three nomadic castes.

	Hunted animal species	Tirumal Nandiwallas	Vaidu	Phase- pardhis
I.	Small carnivorous mammals (e.g. toddy cat, monogoose)	8.94	41.09	0.28
II.	Large carnivorous mammals (e.g. leopard cat, hyena, fox)	24.99	7.86	0.07
III.	Small herbivorous mammals (e.g. hare, porcupine)	15.53	5.14	0.01
IV.	Blackbuck	1.19	0	70.43
V.	Wild pig	29.85	4.14	14.67
VI.	Birds (e.g. doves, quails, partridges, peafowl)	2.09	3.59	14.21
VII.	Monitor lizard	1.49	12.43	0.24
VIII.	Aquatic animals (e.g. fish, crab, turtle)	15.92	25.75	0

However, our investigations showed that the three groups differed markedly in the hunting techniques used. The Tirumal Nandiwallas specialized in hunting with dogs, the average number of dogs per household being five even today. These dogs are used in locating, chasing and killing much of their prey which predominantly includes hyena, leopard cat, wild pig, hare and porcupine. The Vaidus kept a smaller number of dogs, an average of 1.5 per household today. By contrast, they specialized in catching smaller carnivores like mongoose, toddy cat and domestic cat in traps baited often with squirrels. They also specialized in catching freshwater animals such as crabs, turtles and crocodiles in the past (Avchat 1981). The Phasepardhis never used dogs, but instead used a trained cow to enter a herd of blackbuck or deer, laying snares as they moved hiding behind the cow. They also used to snare birds, particularly partridges, quails and peafowl, on a large scale.

Table 2 provides the present-day estimates of the relative importance of different prey species for the three castes (Khomne *et al* 1983). Admittedly, the exact quantitative estimates in this table are not to be taken literally, since our samples are small (2, 3 and 36 households for the three castes) and the abundance of prey has drastically declined in recent years. Nevertheless, the differences reflected in this table are very real, being based on the employment of very distinctive hunting techniques. What is striking is that while the hunting techniques employed do differ in this significant fashion, none of them are so sophisticated as to preclude their adoption by another caste. Thus the Phasepardhis could have easily added the Vaidus' baited traps to their own snares. The fact that they do not do so points to a genuine cultural adjustment to reduce competition with other castes hunting in the same region.

This region had an ecological guild of four castes each concerned with displaying some domesticated animal to the villagers for entertainment or religious purposes, and an overlapping guild of two castes weaving and selling baskets. It is notable that they all used different species for these purposes. Thus, of the four castes displaying



animals, the Darweshis used the tiger or the sloth bear, Nandiwallas the bull, Garodis the cobra and other species of snakes, and Makadwallas the bonnet macaque (Atre 1915). The Makadwallas also weaved baskets, employing exclusively leaves of the Palmyra palm, while another basketweaving community, the Kaikadis, exclusively utilized the bamboos (Mane 1981).

### 5. Competitive exclusion

We therefore have a number of instances of sympatric castes, i.e. castes which overlap in their geographical distribution diversifying their niches by specializing on different resources. The cultivator castes which otherwise occupy identical niches and have a broad geographical overlap managed to coexist by competitively excluding each other from particular pieces of land through land ownership. However, pastoral and nomadic castes which do not own land are not expected to tolerate geographical overlap with another caste identical in its ways of subsistence. An equivalent of Gause's principle of competitive exclusion, namely, that no two castes occupying identical ecological niches can coexist in a sympatric fashion, appears to hold (Hardin 1960).

The operation of this principle is nicely illustrated by two castes of Nandiwallas which had and largely continue to have an identical mode of subsistence. These two castes, Tirumal Nandiwallas and Fulmali Nandiwallas, are both non-pastoral nomads, making a living by the display of the sacred bull, by selling trinkets and by hunting. They both originated from a common ancestral stock in Andhra Pradesh. The Tirumal Nandiwallas migrated into Maharashtra about 800 years ago, while the Fulmali Nandiwallas did so only 300 years ago. While they have developed complete reproductive isolation, their way of making a living and their culture has remained essentially identical (Malhotra, 1974, Malhotra and Khomne 1978). They thus exemplify castes with completely identical ecological niches.

It is, therefore, notable that Tirumal Nandiwallas and Fulmali Nandiwallas show no geographical overlap whatsoever, i.e. they are completely *allopatric*. The base village of Tirumal Nandiwallas is Wadapuri in Pune district, while the 39 base villages of Fulmali Nandiwallas are distributed over the districts of Ahmednagar, Bhil, Aurangabad and Nasik (Malhotra, Hulbe, Khomne and Kolte 1983). Both these Nandiwalla castes used to and still largely do spend the rainy season in their base camps and then spread out over a dry-season territory to visit villages to display the bull and sell trinkets. There was and even today is a complete absence of overlap in the dry season migratory range of the two Nandiwalla castes (figure 2).

### 6. Intracaste territoriality

Different caste populations traditionally moderated or largely removed intercaste competition for limiting resources through diversification in resource use or territorial exclusion. It was noted above that sedentary artisan or service castes further moderated competition within the caste by assigning to individual households exclusive rights of dealing with specific households of other castes, while the cultivator castes did so by land ownership. The nomadic-pastoral as well as non-pastoral castes achieved this moderation of intracaste competition by assigning exclusive rights to move over certain territory to individual households.

Our first illustration of intracaste territoriality pertains to non-pastoral nomads. Every family of Tirumal Nandiwallas had and even today has exclusive rights to visit certain villages, respected by all other families of their caste, with heavy punishment

levied by the caste council for any transgression of this convention. The rights are heritable and may be sold, but only to another family of the same clan within the caste (Malhotra 1974). The Fulmali Nandiwallas have a similar, if less well defined system.

Another instance of this phenomenon is provided by the pastoral-nomadic caste of Hatkars. About 18% of the half-a-million total population of this caste still practises nomadic sheep-keeping, although the rest have taken to cultivation over the last few centuries (Malhotra 1982). These shepherds spend the rainy season in their base villages in the semi-arid tract and move over a wide territory during the eight months of the dry season to graze their flocks. The total caste population is divided into a number of groups of families, each of which has the exclusive privilege of grazing over a certain defined territory. This pattern is illustrated for the village of Dhawalpuri in Ahmednagar district in figure 2. This village comprises four different settlements within a kilometre of each other. While setting out on the migration after the rains, each settlement leaves as a single band moving in a traditionally pre-determined direction. As the band moves, it continues to split along kinship lines into progressively smaller groups each moving in its own specific direction, till the group of families constituting the ultimate unit of the flock reaches its own territory. This composite territory of the small group of families is hereditarily handed down from generation to generation and may be encroached upon only with special permission in times of serious distress by other shepherd families.

## **7. Prudent predators**

We have thus documented that castes within Indian society, particularly the pastoralists and nomads which directly depended on natural plant and animal resources developed specific ways of utilizing these resources and which, coupled with territoriality, ensured that a particular limiting resource in a particular geographical region was more or less exclusively utilized by a particular lineage. The lineage would be aware that the resource had supported it for generations past and will have to continue to support it for generations to come. While we hope to return at a later date to the fascinating question of how these cultural practices must have evolved in the light of modern ecological theories as well as theories of cultural evolution (Roughgarden 1978, Wilson 1980, Cavalli-Sforza and Feldman 1981, Lumsden and Wilson 1981), we would like to explore one significant consequence of these practices now.

The result of these practices would be to promote the evolution of cultural traditions of prudent exploitation of the natural resources. While exercising such prudence, any human lineage would be sacrificing some immediate use of the resource. It can be expected to do so only if it is assured of even greater benefit from the higher resource levels at a later date. For the system to operate the following conditions need be met:

- (a) Some other lineage should not usurp the resource when it becomes available at a higher level at a later time.
- (b) The resource should continue to be of value to the lineage adopting prudence.

Thus, a lineage should not shift to the use of some entirely different set of resources within a geographical region, or to some entirely different geographical region when the resource becomes available at a higher level at a later date.

The mode of resource utilization evolved by the Indian society clearly fulfils

these conditions. We, therefore, expect the evolution of a number of cultural practices resulting in a sustainable use of natural resources by the caste groups which constitute not only the genetic but also the cultural units of the Indian society. Many such instances have been recorded, and we came across further evidences of these during the course of our own investigations. Thus the Phasepardhis reported that traditionally they did not kill a pregnant doe or a fawn caught in their snares, but let it loose. The same Phasepardhi lineage would of course be hunting the same blackbuck populations at a later time and would benefit from such prudence.

India, even today, abounds in examples of such traditions of prudence. In the Yamuna valley just upstream from Mussoorie the villagers poison the river with a drug derived from a herb just once a year at the time of a festival. All the fish killed by poisoning are then consumed in a communal feast to the accompaniment of barley wine. The fish may be caught at other times of the year but only with nets; anybody poisoning the river at any other time is socially outcast. The Dheevār caste of Bhandara district of Maharashtra never catch fish going upstream on spawning migration, although they are exhausted and easy to catch. There are entire sacred groves and ponds in which no plant or animal is damaged. Some species of plants and animals survive today only in such protected localities. Monkeys, peafowl, the banyan and other fig trees, and a variety of other plants and animals are regarded as sacred and protected widely over India. A detailed review of such practices is given in Gadgil (1983).

We therefore suggest that this organization of Indian society must have promoted prudent and sustainable use of natural resources, at least by the castes directly dependent on these resources. The consequent expected stability of the resource base, and the attendant moderation of competition amongst the different caste groups which were linked in a complementary fashion must have been a significant factor contributing to the stability of the Indian caste society and its resistance to change over the past several thousand years.

#### **8. Impact of modernization**

The advent of British rule heralded the disorganization of this system. The British imposed much higher levels of demands on natural resources of the country to furnish the raw material for their economy. To avoid having to pay for the exploitation of these resources they took over as Government property vast resources which, until then, were owned communally. These resources were then rapidly depleted through commercial exploitation, a trend that has accelerated over the last three decades since independence. This had led to considerable impoverishment, and often complete collapse of the natural resource base sustaining many components of the Indian society.

Along with this collapse of the resource base, the replacement of old systems of barter by money economy has destroyed the traditional relationships amongst the various castes in the Indian society. The result of these two has not been a collapse of the caste system itself. Far from this being the case, restriction of marriages and limitation of the recognition of social responsibility within the caste group continues unchanged throughout rural India which makes up nearly 80% of our population (Srinivas 1962). The persistence of the caste, with a loss of its traditional complementarity has, therefore, led to an increasing level of conflicts amongst different castes. We will end this paper with two illustrations of this phenomenon for the castes discussed above.

Traditionally, the Gavlis were pastoralists practising little shifting cultivation on the upper hill terraces, while the Kunbis were cultivators maintaining very few animals in the valleys. The deforestation and consequent soil erosion in recent years have destroyed the fodder base of Gavli animals who have been forced to reduce their animal holdings and take increasingly to cultivation of more and more hill slopes. Many Kunbis too have lost their fertile paddy fields to river-valley projects and have been pushed up the hills. Their prey has also dwindled with deforestation. At the same time, urban milk schemes have created a market for milk. Consequently, the Kunbis have also taken to keeping milch animals, and are no longer willing to let Gavli animals graze in their fields after harvest. All of this has led to serious conflicts between Kunbis and Gavlis, often forcing the numerically weaker Gavlis to abandon their traditional occupation and locality and migrate to city slums; some 10 000 Gavlis have migrated to Bombay and are working as unskilled workers, and some 8000 have moved to cities like Kolhapur, Satara and Pune (Malhotra and Gadgil 1982).

The second example relates to Phasepardhis. This hunting-gathering tribe generally stayed aloof from the settled villages, but were sometimes employed by farmers to snare the black buck, deer and other mammals raiding their fields. Even earlier, the Phasepardhis probably used to steal opportunistically. Recent decades have witnessed mass destruction of their main prey, the blackbuck, and declaration of all hunting by Phasepardhis as illegal. With this loss of subsistence, they have taken increasingly to stealing. In consequence, they now live in a very tense relationship with the settled community.

The recent destruction of the ecological resource base has, therefore, rendered the once possibly highly adaptive organization of the caste society largely maladaptive. In fact, it has now become an impediment in coming to terms with new modes of resource utilization to which our society must adapt. But nurtured as it is by a long history of what we believe to have been a successful ecological adaptation, it is a very difficult task indeed to break out of the hold of this now maladaptive system.

#### Acknowledgements

This research was supported by grants from the University Grants Commission, New Delhi, the Centre for Studies in Rural Development, Ahmednagar, the Indian Statistical Institute, Calcutta, the Maharashtra Association for the Cultivation of Science, Pune, and the Indian Institute of Science, Bangalore.

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Zusammenfassung. Die indische Gesellschaft ist eine Agglomeration mehrerer tausend endogamer Gruppen oder Kasten, jede mit einer begrenzten geographischen Verbreitung und einer durch Erbschaft bedingten Subsistenzweise. Diese reproduktiv isolierten Kasten können mit biologischen Arten verglichen werden, und die Gesellschaft kann gedacht werden als eine biologische Gemeinschaft, in der jede Kaste

ihre spezifische ökologische Nische einnimmt. In dieser Arbeit prüfen wir die Verwandtschaft der ökologischen Nischen bei Kasten, die direkt von natürlichen Ressourcen abhängen. Befunde werden vorgestellt, die zeigen, daß Kasten, die in derselben Region zusammenleben, ihr Muster der Ressourcennutzung so organisiert haben, daß sie übermäßige Zwischenkasten-Konkurrenz bei Beschränkten Ressourcen vermeiden. Weiterhin regulierte die territoriale Einteilung der Gesamtverbreitung einer Kaste die Konkurrenz innerhalb der Kaste. Daher wurde eine bestimmte Pflanzen- oder Tierressource an einem gegebenen Ort fast ausschließlich Generation nach Generation von einer bestimmten Herkunftsgruppe innerhalb einer Kaste genutzt. Dies begünstigte die kulturelle Evolution von Traditionen, die die durchgehende Nutzung natürlicher Ressourcen ermöglichten. Dies muß signifikant zur Stabilität der indischen Kastengesellschaft über mehrere tausend Jahre beigetragen haben. Der Zusammenbruch der Grundlage natürlicher Ressourcen und eine zunehmende Monetarisierung der Wirtschaft hat jedoch die frühere Komplementarität zwischen den verschiedenen Kasten zerstört und in den letzten Jahren zur Zunahme von Konflikten zwischen ihnen geführt.

**Résumé.** La société indienne est un agglomérat de plusieurs milliers de groupes endogames ou castes dont chacune a un territoire géographique restreint et un mode de subsistance déterminé de façon héréditaire. Ces castes isolées reproductivement peuvent être comparées à des espèces biologiques, et la société conçue comme une communauté biologique où chaque caste a sa niche écologique spécifique. Dans cet article nous examinons les relations de niche écologique de castes qui dépendent directement des ressources naturelles. L'information est présentée qui montre que les castes vivant ensemble dans la même région avaient organisé leur mode d'utilisation des ressources de façon à éviter une compétition excessive entre castes pour les ressources limitantes. De plus, la division territoriale de l'étendue totale de la caste opérait un réglage de la compétition intracaste. Ainsi, une ressource particulière végétale ou animale dans une localité donnée était utilisée presque exclusivement par un lignage donné à l'intérieur d'une caste génération après génération. Ceci favorisait l'évolution culturelle de traditions assurant l'usage continu des ressources naturelles. Ceci doit avoir contribué significativement à la stabilité de la société indienne à castes au long de plusieurs millénaires. L'effondrement de la base des ressources naturelles et la monétarisation croissante de l'économie ont cependant détruit la complémentarité antérieure des différentes castes et conduit à des conflits croissants entre elles dans les temps récents.