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Monocultures of the Mind

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### The 'Disappeared' Knowledge Systems

In Argentina, when the dominant political system faces dissent, it responds by making the dissidents disappear. The 'desparacidos' or the disappeared dissidents share the fate of local knowledge systems throughout the world, which have been con-quered through the politics of disappearance, not the politics of debate and dialogue.

The disappearance of local knowledge through its interaction with the dominant western knowledge takes place at many levels, through many steps. First, local knowledge is made to disappear by simply not seeing it, by negating its very existence. This is very easy in the distant gaze of the globalising dominant system. The western systems of knowledge have generally been viewed as universal. However, the dominant system is also a local system, with its social basis in a particular culture, class and gender. It is not universal in an epistemological sense. It is merely the globalised version of a very local and parochial tradition. Emerging from a dominating and colonising culture, modern knowledge systems are themselves colonising.

The knowledge and power nexus is inherent in the dominant system because, as a conceptual framework, it is associated with a set of values based on power which emerged with the rise of commercial capitalism. It generates inequalities and domination by the way such knowledge is generated and structured, the way it is legitimised and alternatives are delegitimised, and by the way in which such knowledge transforms nature and society. Power is also built into the perspective which views the dominant system not as a globalised local tradition, but as a universal tradition, inherently superior to local systems. However, the dominant system is also the product of a particular culture. As Harding observes:

We can now discern the effects of these cultural markings in the discrepancies between the methods of knowing and the interpretations of the world provided by the creators of modern western culture and those characteristics of the rest of us. Western culture's favourite beliefs mirror in sometimes clear and sometimes distorting ways not the world as it is or as we might want it to be, but the social projects of their historically identifiable creators.<sup>1</sup>

The universal/local dichotomy is misplaced when applied to the western and indigenous traditions of knowledge, because the western is a local tradition which has been spread world wide through intellectual colonisation.

The universal would spread in openness. The globalising local spreads by violence and misrepresentation. The first level of violence unleashed on local systems of knowledge is to not see them as knowledge. This invisibility is the first reason why local systems collapse without trial and test when confronted with the knowledge of the dominant west. The distance itself removes local systems from perception. When local knowledge does appear in the field of the globalising vision, it is made to disappear by denying it the status of a systematic knowledge, and assigning it the adjectives 'primitive' and 'unscientific'. Correspondingly, the western system is assumed to be uniquely 'scientific' and universal. The prefix 'scientific' for the modern systems, and 'unscientific' for the traditional knowledge systems has, however, less to do with knowledge and more to do with power. The models of modern science which have encouraged these perceptions were derived less from familiarity with actual scientific practise, and more from familiarity with idealised versions of which gave science a special epistemological status. Positivism, verificationism, falsificationism were all based on the assumption that unlike traditional, local beliefs of the world, which are socially constructed, modern scientific knowledge was thought to be determined without social mediation. Scientists, in accordance with an abstract scientific method, were viewed as putting forward statements corresponding to the realities of a directly observable world. The theoretical concepts in their discourse were in principle seen as reducible to directly verifiable observational claims. New trends in the philosophy and sociology of science challenged the positivist assumptions, but did not challenge the assumed superiority of western systems. Thus, Kuhn, who has shown that science is not nearly as open as is popularly thought, and is the result of the commitment of a specialist community of scientists to presupposed metaphors and paradigms which determine the meaning of constituent terms and concepts, still holds that modern 'paradigmatic' knowledge, is superior to pre-paradigmatic knowledge which represents a kind of primitive state of knowing.<sup>2</sup>

Horton, who has argued against the dominant view of dominant knowledge, still speaks of the 'superior cognitive powers' of the modes of thought of the modern scientific culture which constitute forms of explanation, prediction and control of a power unrivalled in any time and place. This cognitive superiority in his view arises from the 'openness' of modern scientific thinking and the 'closure' of traditional knowledge. As he interprets it, 'In traditional cultures there is no developed awareness of alternatives to the established body of theoretical levels, whereas in the scientifically oriented cultures, such an awareness is highly developed.'<sup>3</sup>

However, the historical experience of non-western culture suggests that it is the western systems of knowledge which are blind to alternatives. The 'sci-

entific' label assigns a kind of sacredness or social immunity to the western system. By elevating itself above society and other knowledge systems and by simultaneously excluding other knowledge systems from the domain of reliable and systematic knowledge, the dominant system creates its exclusive monopoly. Paradoxically, it is the knowledge systems which are considered most open, that are, in reality, closed to scrutiny and evaluation. Modern western science is not to be evaluated, it is merely to be accepted. As Sandra Harding has said:

Neither God nor tradition is privileged with the same credibility as scientific rationality in modern cultures.... The project that science's sacredness makes taboo is the examination of science in just the ways any other institution or set of social practises can be examined.<sup>4</sup>

## The Cracks of Fragmentation

Over and above rendering local knowledge invisible by declaring it non-existent or illegitimate, the dominant system also makes alternatives disappear by erasing and destroying the reality which they attempt to represent. The fragmented linearity of the dominant knowledge disrupts the integrations between systems. Local knowledge slips through the cracks of fragmentation. It is eclipsed along with the world to which it relates. Dominant scientific knowledge thus breeds a monoculture of the mind by making space for local alternatives disappear, very much like monocultures of introduced plant varieties leading to the displacement and destruction of local diversity. Dominant knowledge also destroys the very conditions for alternatives to exist, very much like the introduction of monocultures destroying the very conditions for diverse species to exist.<sup>5</sup>

As metaphor, the monoculture of the mind is best illustrated in the knowledge and practise of forestry and agriculture. 'Scientific' forestry and 'scientific' agriculture, split the plant artificially into separate, non-overlapping domains, on the basis of separate commodity markets to which they supply raw materials and resources. In local knowledge systems, the plant world is not artificially separated between a forest supplying commercial wood and agricultural land supplying food commodities. The forest and the field are in ecological continuum, and activities in the forest contribute to the food needs of the local community, while agriculture itself is modelled on the ecology of the tropical forest. Some forest dwellers gather food directly from the forest, while many communities practise agriculture outside the forest, but depend on the fertility of the forest for the fertility of agricultural land.

In the 'scientific' system which splits forestry from agriculture and reduces forestry to timber and wood supply, food is no longer a category related to forestry. The cognitive space that relates forestry to food production, either directly, or through fertility links, is therefore erased with the split. Knowledge

systems which have emerged from the food giving capacities of the forest are therefore eclipsed and finally destroyed, both through neglect and aggression.

Most local knowledge systems have been based on the life-support capacities of tropical forests, not on their commercial timber value. These systems fall in the blind spot of a forestry perspective that is based exclusively on the commercial exploitation of forests. If some of the local uses can be commercialised, they are given the status of 'minor products'; with timber and wood being treated as the 'major products' in forestry. The creation of fragmented categories thus blinkers out the entire spaces in which local knowledge exists, knowledge which is far closer to the life of the forest and more representative of its integrity and diversity. Dominant forestry science has no place for the knowledge of the Hanunoo in the Philippines who divide plants into 1,600 categories, of which trained botanists can distinguish only 1,200.<sup>6</sup> The knowledge base of the cropping systems based on 160 crops of the Lua tribe in Thailand is not counted as knowledge, either by dominant forestry, which sees only commercial wood, or by dominant agriculture, which sees only chemically intensive agriculture. Food systems based on the forest, either directly, or indirectly are therefore non-existent in the field of vision of a reductionist forestry and a reductionist agriculture even though they have been and still are the sustenance base for many communities of the world. For example, the rainforests of South East Asia supply all the food needs of the Kavan, Kenyah, the Punan Bah, the Penan who gather food from the forest and practise swidden agriculture. The Tiruray people depend on the wild flora of the forests as a major source of food and other necessities.<sup>7</sup> The plant supplies are gathered mostly from the surrounding forest, and some 223 basic plant types are regularly exploited. The most important food items are mushrooms (kulat), ferns (paku) and the hearts of various plants (ubot) which include bamboo shoots, wild palms, and wild bananas. Twenty-five different varieties of fungi are eaten by the Kenyah and 43 varieties are eaten by the Iban.<sup>8</sup> Sago, the staple of the Penan of Borneo, is the starch contained from the pith of a palm tree called the *Eugeissona utilis*. On New Guinea as a whole, (Irian Jaya and Papua New Guinea together) 100,000 sago eaters produce 115,000 metric tons of sago each year.<sup>9</sup> Ethnobotanical work among India's many diverse tribes is also uncovering the deep, systematic knowledge of forests among them. The diversity of forest foods used in India emerges from this knowledge. In South India, a study conducted among the Soliga in the Belirangan hills of Karnataka shows that they use 27 different varieties of leafy vegetables at different times of the year, and a variety of tubers, leaves, fruits and roots are used for their medicinal properties by the tribes. A young illiterate Irula boy from a settlement near Kotagiri identified 37 different varieties of plants, gave their Irula names and their different uses.<sup>10</sup>

In Madhya Pradesh, although rice (*Oryza sativa*), and lesser millets (*Panicum miliaceum*, *Eleusine coracana* and *Paspalum scrobiculatum*) form the staple diet of the tribes, almost all of them supplement it with seeds, grains, roots, rhizomes, leaves and fruits of numerous wild plants which abound in the forest-

s. Grigson noted that famine has never been a problem in Bastar as the tribes have always been able to draw half of their food from the innumerable edible forest products. Tiwari prepared a detailed list of wild plants species eaten by the tribes in Madhya Pradesh. He has listed 165 trees, shrubs and climbers. Of these, the first category contains a list of 31 plants whose seeds are roasted and eaten. There are 19 plants whose roots and tubers are eaten after baking, boiling or processing; there are 17, whose juice is taken fresh or after fermenting; 25, whose leaves are eaten as vegetables, and 10, whose petals are cooked as vegetables. There are 63 plants whose fruits are eaten raw, ripe, roasted or pickled; there are five species of Ficus which provide figs for the forest-dwellers. The fruits of the thorny shrub, ( *Pithecellobium dulce* (*Inga dulcis* ) , also called jungle jalebi, are favourites with the tribes. The sepals of mohwa are greedily eaten and also fermented for liquor. *Morus alba*, the mulberry, provides fruit for both man and birds. Besides, the ber ( *Zizyphus mauritiana* and *Zoeno-plia* ) provides delicious fruits, and has been eaten by jungle dwellers from the Mesolithic period onwards.<sup>11</sup>

In non-tribal areas, too, forests provide food and livelihood through critical inputs to agriculture, through soil and water conservation, and through inputs of fodder and organic fertiliser. Indigenous silvicultural practises are based on sustainable and renewable maximisation of all the diverse forms and functions of forests and trees. This common silvicultural knowledge is passed on from generation to generation, through participation in the processes of forest renewal and of drawing sustenance from the forest ecosystems.

In countries like India, the forest has been the source of fertility renewal of agriculture. The forest as a source of fodder and fertiliser has been a significant part of the agricultural ecosystem. In the Himalaya, the oak forests have been central to sustainability of agriculture. In the western Ghats the 'betta' lands have been central to the sustainability of the ancient spice gardens of pepper, cardamom, and areca nuts. Estimates show that over 50

The diverse knowledge systems which have evolved with the diverse uses of the forest for food and agriculture were eclipsed with the introduction of 'scientific' forestry, which treated the forest only as a source of industrial and commercial timber. The linkages between forests and agriculture, were broken and the function of the forest as a source of food was no longer perceived.

When the West colonised Asia, it colonised her forests. It brought with it the ideas of nature and culture as derived from the model of the industrial factory. The forest was no longer viewed as having a value itself, in all its diversity. Its value was reduced to the value of commercially exploitable industrial timber. Having depleted their forests at home, European countries started the destruction of Asia's forests. England searched in the colonies for timber for its navy because the oak forests in England were depleted.

The military needs for Indian teak led to the immediate proclamation that

wrested the right in the teak trees from the local government and vested it in the East India Company. It was only after more than half a century of uncontrolled destruction of forests by British commercial interests that an attempt was made to control exploitation. In 1865, the first Indian Forest Act (VII of 1865) was passed by the supreme Legislative Council, which authorised the Government to appropriate forests from the local people and manage them as reserved forests.

The introduction of this legislation marks the beginning of what the state and industrial interests have called ‘scientific’ management. However, for the indigenous people, it amounted to the beginning of the destruction of forests and erosion of peoples’ rights to use of the forests. The forest, however, is not merely a timber mine, it is also the source of food for local communities; and with the use of the forest for food and for agriculture, are related diverse knowledge systems about the forest. The separation of forestry from agriculture, and the exclusive focus on wood production as the objective of forestry led to the creation of a one-dimensional forestry paradigm, and the destruction of the multidimensional knowledge systems of forest dwellers and forest users.

‘Scientific forestry’ was the false universalization of a local tradition of forestry which emerged from the narrow commercial interests which viewed the forest only in terms of commercially valuable wood. It first reduced the value of diversity of life in the forest to the value of a few commercially valuable species, and further reduced the value of these species to the value of their dead product - wood. The reductionism of the scientific forestry paradigm created by commercial industrial interests violates both the integrity of the forests and the integrity of forest cultures who need the forests in its diversity to satisfy their needs for food, fibre and shelter.

The existing principles of scientific forest management leads to the destruction of the tropical forest ecosystem because it is based on the objective of modelling the diversity of the living forest on the uniformity of the assembly line. Instead of society being modelled on the forest as is the case for forest cultures, the forest is modelled on the factory. The system of ‘scientific management’, as has been practised over a century is thus a system of tropical deforestation, which transforms the forest from a renewable to a non-renewable resource. Tropical timber exploitation thus becomes like mining, and tropical forests become a timber mine. According to a FAO estimate, at current rates of exploitation, the forests of tropical Asia will be totally exhausted by the turn of the century.

The tropical forests, when modelled on the factory and used as a timber mine, become a non-renewable resource. Tropical peoples also become a dispensable and historical waste. In place of cultural and biological pluralism, the factory produces non-sustainable monocultures in nature and society. There is no place for the small, no value for the insignificant. Organic diversity gives way to fragmented atomism and uniformity. The diversity must be weeded out, and the uniform monocultures - of plants and people - must now be externally managed because they are no longer self-regulated and self-governed. Those that do not

fit into the uniformity must be declared unfit. Symbiosis must give way to competition, domination and dispensability. There is no survival possible for the forest or its people when they become feedstock for industry. The survival of the tropical forests depends on the survival of human societies modelled on the principles of the forest. These lessons for survival do not come from a text of 'scientific forestry'. They lie hidden in the lives and beliefs of the forest peoples of the world.

There are in Asia today two paradigms of forestry - one life-enhancing, the other life-destroying. The life-enhancing paradigm emerges from the forest and the forest communities - the life-destroying from the market. The life-enhancing paradigm creates a sustainable, renewable forest system, supporting and renewing food and water systems. The maintenance of conditions for renewability is the primary management objective of the former. The maximising of profits through commercial extraction is the primary management objective of the latter. Since maximizing profits is consequent upon destruction of conditions of renewability, the two paradigms are cognitively and ecologically incommensurate. Today, in the forests of Asia the two paradigms are struggling against each other. This struggle is very clear in the two slogans on the utility of the Himalayan forests, one emanating from the ecological concepts of Garhwali women, the other from the sectoral concepts of those associated with trade in forest products. When Chipko became an ecological movement in 1977 in Adwani, the spirit of local science was captured in the slogan:

What do the forests bear?

Soil, water and pure air.

This was the response to the commonly accepted slogan of the dominant science:

What do the forests bear?

Profit on resin and timber.

The insight in these slogans represented a cognitive shift in the evolution of Chipko. The movement was transformed qualitatively from being based merely on conflicts over resources to involving conflicts over scientific perceptions and philosophical approaches to nature. This transformation also created that element of scientific knowledge which has allowed Chipko to reproduce itself in different ecological and cultural contexts. The slogan has become the scientific and philosophical message of the movement, and has laid the foundations of an alternative forestry science, oriented to the public interest and ecological in

nature. The commercial interest has the primary objective of maximising exchange value through the extraction of commercially valuable species. Forest ecosystems are therefore reduced to the timber of commercially valuable species.

‘Scientific forestry’ in its present form is a reductionist system of knowledge which ignores the complex relationships within the forest community and between plant life and other resources like soil and water. Its pattern of resource utilisation is based on increasing ‘productivity’ on these reductionist foundations. By ignoring the system’s linkages within the forest ecosystem, this pattern of resource use generates instabilities in the ecosystem and leads to a counter-productive use of natural resources at the ecosystem level. The destruction of the forest ecosystem and the multiple functions of forest resources in turn hurts the economic interests of those sections of society which depend on the diverse resource functions of the forests for their survival. These include soil and water stabilisation and the provision of food, fodder, fuel, fertiliser, etc.

Forest movements like Chipko are simultaneously a critique of reductionist ‘scientific’ forestry and an articulation of a framework for an alternative forestry science which is ecological and can safeguard the public interest. In this alternative forestry science, forest resources are not viewed as isolated from other resources of the ecosystem. Nor is the economic value of a forest reduced to the commercial value of timber.

‘Productivity’, ‘yield’, and ‘economic value’ are defined for the integrated ecosystem and for multi-purpose utilisation. Their meaning and measure is therefore entirely different from the meaning and measure employed in reductionist forestry. Just as in the shift from Newtonian to Einsteinian physics, the meaning of ‘mass’ changed from a velocity-independent to a velocity-dependent term, in a shift from reductionist forestry to ecological forestry, all scientific terms are changed from ecosystem-independent to ecosystem-dependent ones. Thus, while for tribes and other forest communities a complex ecosystem is productive in terms of herbs, tubers, fibre and genepool, etc., for the forester, these components of the forest ecosystem are useless, unproductive, dispensable.

The Chipko and Appiko Movements are movements of agricultural communities against the destruction of the forests that support agriculture. The timber blockades of the Penan and other tribes of Sarawak are struggles of forest peoples against systems of forest management which destroy the forest and its people. According to the tribes:

This is the land of our forefathers, and their forefathers before them. If we don’t do something now to protect the little that is left, there will be nothing for our children. Our forests are mowed down, the hills are levelled, the sacred graves of our ancestors have been desecrated, our waters and our streams are contaminated, our plant life is destroyed, and the forest animals are killed or have run away. What else can we do now but to make our protests heard, so that something can be done to help us?

AVEK MAT AI AME MANEU MAPAT ( until we die we will block this road ).15

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