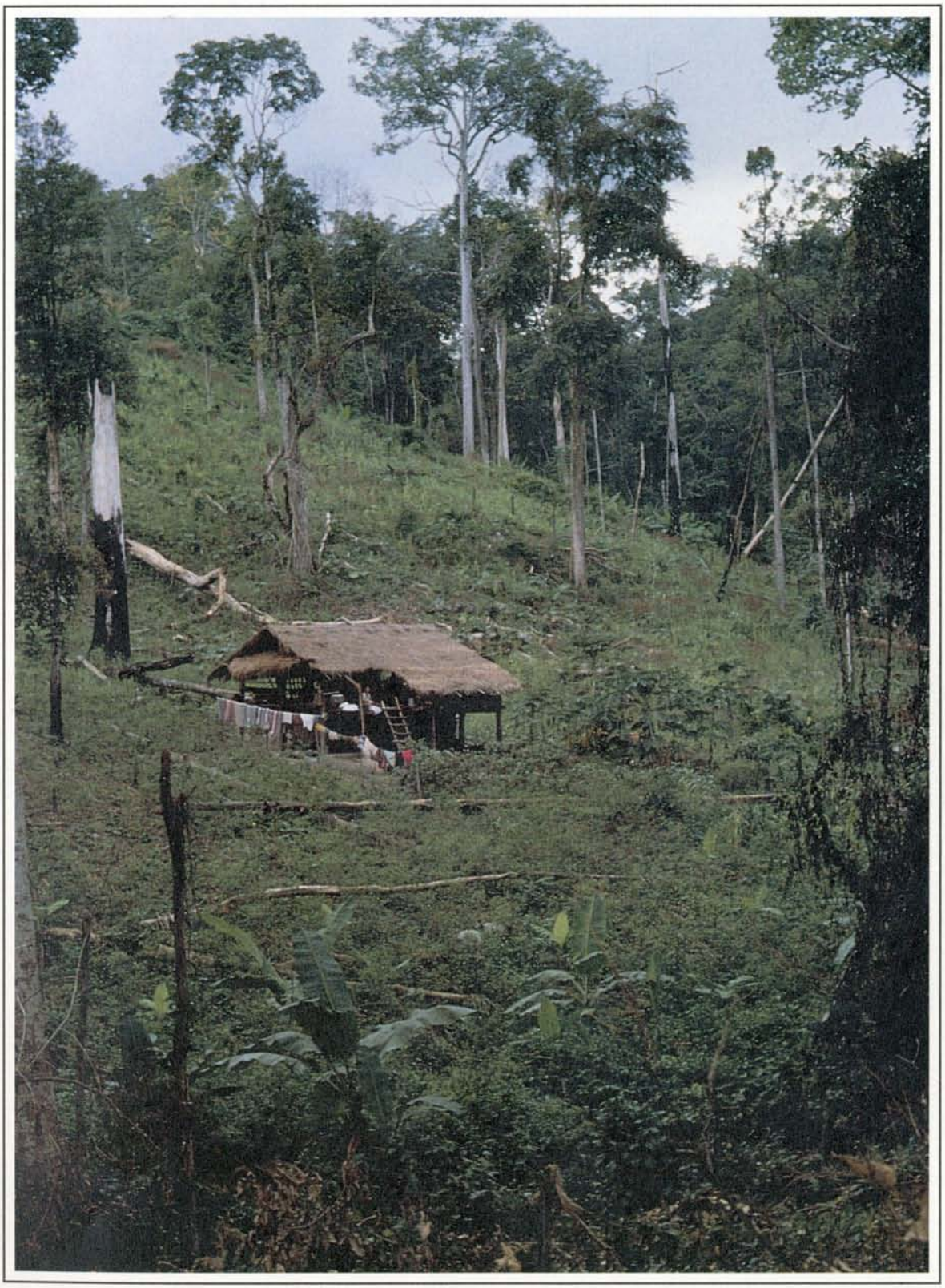
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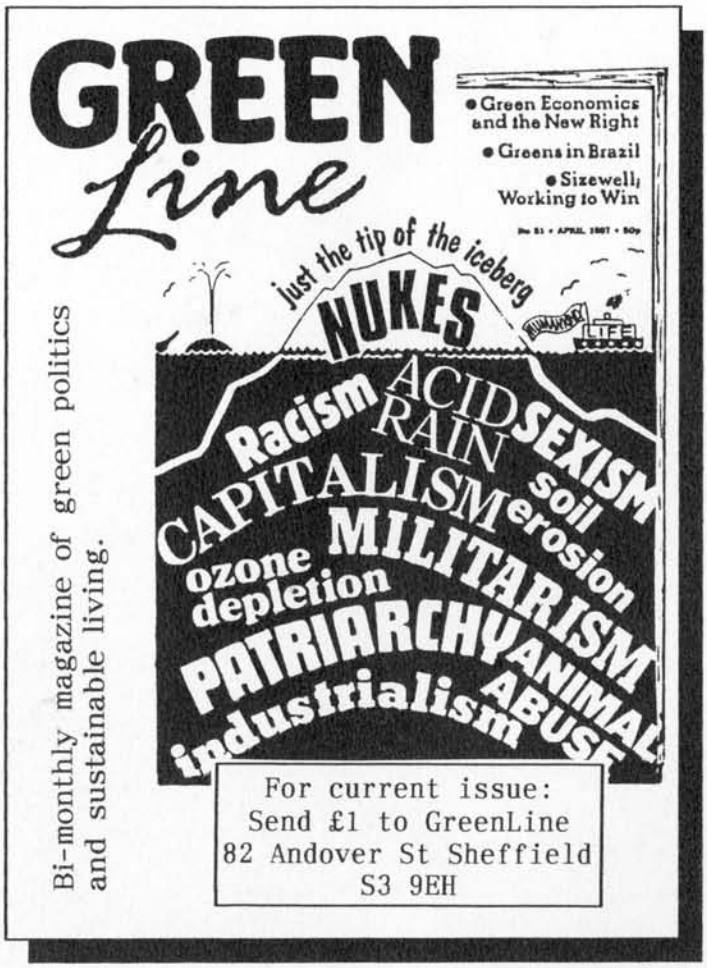
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- Patenting the Neem Tree
- Power Failure in the Philippines

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Developing the Thai Frontier

From Forest Settlement to State-Sponsored Village



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Cover: A forest settlement near Ban Mai, Thailand (Philip Hirsch).
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Green Orientalism

"Human societies . . . have rarely offered the individual anything but imperialism, racism, and ethnocentrism for dealing with 'other' cultures."

Edward Said[1]

Making up exotic stories about other societies has always been an agreeable pastime. From the yarns of ancient Chinese about the unlucky barbarians outside their borders to the fulminations of American politicians about the Evil Empire, such storytelling gives people a happy opportunity to say what they want to hear about themselves. Just as every generation rewrites history to serve its own purposes, so every group inevitably describes other groups to itself in ways which reflect its own categories and concerns.

Such stories need not always oppress. Sometimes those who are being gossiped about can confront the gossips and laugh them into shame or second thoughts. Shared and criticized among equals, the gossip may even spur surprising mutual discoveries and dialogue. Where storytellers enjoy huge power over their characters, however, their tales are likely to become an intimate part of mechanisms of domination, often overshadowing the self-descriptions of the people they are about.

Thus in the colonialist West, accounts of subject peoples' "religious fanaticism", "passivity" or "backwardness", propagated relentlessly by travellers, littérateurs, scholars and diplomats, were pointed to in order to justify the need for the benevolent influence of Western administration. Tales of Rudolph Valentino sheikhs and their harems meanwhile suggested a "licentiousness" which cried out for the guiding hand of white Christian morality — but also provided an excuse for Western men's sexual adventures in the East. Bathed by a sea of images of a mystical, unchanging, despotic Orient, even reformers and revolutionaries wound up being taken in. Marx, for example, notoriously assumed that only through first being subjected to the destructiveness of British imperialism could "Asia" throw off its chains and undertake the road to socialism, thus enabling humanity to "fulfil its destiny". Some Victorian feminists, meanwhile, used colonialist rhetoric about the oppressive patriarchy of "Oriental lands" to tar their domineering, possessive menfolk with the brush of being "sultan-like" and thus insufficiently "Western".[2]

Literary critic Edward Said uses the term "Orientalism" to describe such inventions by Westerners of the terms in which a militarily and politically weaker East is to be spoken of. The word may conjure up images of 19th-century Western professors and antiquarians deciphering texts and sifting through dusty artifacts. Yet, as Said pointed out, the phenomenon is restricted neither to Orient-Occident relations nor to the colonial age.

The whole postwar narrative of "development", for example, sets up and enforces, in fine Orientalist style, a dichotomy between hungry, expectant, tradition-shackled Southern peoples and a modern, scientific, democratic North under whose progressive leadership they will gradually be freed for better things. Real-life intrusions into this narrative — botched development projects, the North's usurpation of resources in the face of widening North-South inequalities, increasing hunger and impoverishment, international graft, strife, authoritarianism and slaughter — are often attributed not to the Northern-dominated process of development itself but to imperfect implementation of Northern plans, together with Southerners' "corruption", "maladaptive tendency to overbreed", "lack of respect for human life", and comparative sluggishness in lifting themselves from our common, muddy origins and refining themselves into more civilized societies. Ultimately the tone is little different from that of Kurtz, the ivory-plundering hero of Conrad's *Heart of Darkness*, who, years after writing a high-flown essay explaining how European rule is to bring enlightenment to darkest Africa, scrawls simply at the bottom, "Exterminate all the brutes".

Nor is Orientalism confined to the international arena. Governments and corporations everywhere like to cast local minority groups in the role of people needing their ministrations. Like international agencies, they tend to appropriate what they claim are "local traditions" as tools to push their own aims. The Sumatran firm PT Inti Indorayon Utama, for example, recently argued that Batak women's protests against its local paper pulp scheme were illegitimate since "traditional" Batak land management systems did not allow women any voice over land use.[3]

Cannibalistic Logic

We Western environmentalists may imagine ourselves immune from such crudities. We are sensitive to the need for self-determination, we tell ourselves. We listen to others and respect them for what they are. Above all, we are aware of the North's problems and its exploitation of the South. Not for us the new, unselfconscious racism of the 1990s, when a *Guardian* journalist, to take one example, can write matter-of-factly of "the Arab sickness" of "irrationality", "fantasy" and "intellectual failure" and revive the self-congratulatory Orientalist assumption that it was through colonial rule that Asian nations "achieved unity and genuine independence".[4]

Yet within environmentalism, too, power imbalances constantly create openings for what historian of science Donna Haraway calls the "cannibalistic western logic that readily constructs other cultural possibilities as resources for western needs and actions".[5] Like 19th-century feminists and Marxists, many contemporary environmentalists find it hard to avoid Orientalism even when questioning powerful currents in industrial societies.

Greens eager to avoid being dismissed by Northern mainstream institutions, for example, often take it upon themselves to downplay features of potential popular movement allies which may be unfamiliar or disturbing to their élite patrons. Thus when the late Amazonian activist Chico Mendes testified before the US Congress, references to his leftist trade union background were edited out without his consent by his translator in order not to trouble the sensibilities of the American lawmakers. Similarly, environmental economists such as David Pearce typically refuse to listen to groups who point out that their decision-making procedures cannot be captured or advanced through being reformulated in the Western academic narrative of calculating, maximizing individuals and cost-benefit analysis.[6]

But environmentalists of the more dissident hue sometimes associated with *The Ecologist* are just as capable of recasting other people's movements and practices to suit their own purposes. Seeking an impressive lineage for their views somewhere outside their own society, some Western greens treat (say) Taoism or Hinduism merely as flavourful ingredients in their own recipe for "sustainability" or "biocentrism". In the eyes of other environmentalists, an Indian movement against the building of a

nuclear test range may be transformed from a battle to secure land for high-input agriculture to "a struggle for mother earth". Even the Chipko or tree-hugging movement of the Himalaya can become, in the words of Madras sociologist Shiv Visvanathan, a "Rorschach for environmentalists who see in it everything from subaltern politics to alternative science".[7] The much-quoted 19th century "Native American" speech asking "How can you buy or sell the sky, the warmth of the land?", meanwhile, continues to be attributed to Chief Seattle years after having been revealed to have been penned largely by a screenwriter named Ted Perry for a US film shown in 1972.[8]

Some greens not only accept unquestioningly the traditional-modern boundary demarcated by development experts, but help patrol it as well. Amazonian Indians and others who dare to step outside their role as "traditional peoples" by wearing T-shirts or using video cameras may be dismissed as "not being true to their culture", using the "wrong tactics", or "not being so ecologically in tune after all". Like development experts, such environmentalists require other societies to be "what the West is not" — except that what the development experts treat as "underdeveloped aspirants to a Western lifestyle", their environmentalist colleagues are likelier to lump together as "virtuous traditional peoples in harmony with nature". Development Orientalists may sneer at Green Orientalists' "romanticism", and Green Orientalists castigate Development Orientalists' "destruction of traditional ways of life", but both tacitly assume that it is Westerners alone who have the right to decide what a culture is, what is traditional, what is romantic, what is Westernized, what must be saved, and what is politically realistic. The only way subordinate groups can build alliances with such Orientalists is to act out the parts of "environmentalists", "traditional peoples" or "development enthusiasts" to which they have been assigned, then twisting and subverting these roles to their own advantage.

The North Teaches, the South Listens

For Green Orientalists, as for their colonialist forbears, all real knowledge, consciousness and power rest with the North. In environmental matters, as in others, they assume it is up to the North not only to explain, inspire and lead the South, but also to empower it and teach it about itself.

Thus Green Orientalists often seem unable to comprehend the role of Northern activists in the South — for example, the Swiss activist Bruno Manser, who joined the struggle of Sarawak's Penan against loggers — except by picturing them as environmentalist T. E. Lawrences or Lord Jims leading the natives to liberation. For them, there is nothing extraordinary in the fact that so many seminars about managing Southern resources are run by Northerners. Presuming to understand the tactics of faraway struggles over land and water better than the participants do themselves, they are fond of offering other countries political instruction through books with titles like *The Environmental Potential of Buddhism in Asia*. Not least, they canvass support in their own countries with slogans such as: "We can stop rainforest destruction and empower indigenous peoples, if enough of us get involved!" Marx's words echo down the generations: "They cannot represent themselves; they must be represented".

Narratives of "Nature"

If human beings have their hands full contending with the myriad ways they are represented by others, what about apes, trees, dogs, newts, crops, minerals, molecules, grizzly bears and all the other things and organisms which have been the subject of tales about "nature" or "the environment"?

Green things and many-legged creatures, like everything else, tend to get defined in terms which suit the interests of the definer. Often they are seen simply as the opposite of, or a resource for, something more familiar. Rousseau's "nature", for example, as the "source by which corrupt society reformed and purified itself", took its meaning in part "from that to which it is opposed: divine kings, pre-society, corrupt society, and so forth".[9] For élites among Tai peoples of Southeast Asia, the wild forest, filled with spirits, fierce animals, illicit activities and non-Tai peoples, was until recently conceived as the menacing opposite pole to the civilized realm of the royal city or *muang*, and to be brought within it only through clearance.[10] Biology, too, unavoidably defines nature in terms of ideas which happen to be lying around at a particular time in a particular subculture: as Harvard paleontologist Stephen Jay Gould remarks, Charles Darwin derived natural selection partly by "wondering how he might transfer the *laissez-faire* principle of Adam Smith's economics into nature".[11] Other societies may prefer to tell stories about animals as younger siblings or reincarnations of humans with dubious moral records, with all the opportunities for condescension that opens up. Still others may have no need for a concept of nature as opposed to culture at all.[12]

Western Images

The story about "nature" the contemporary West best likes to tell — and it is one which again accords well with its own interests and recent experience — is of a matrix or "environment" for scientific and industrial activity. On this scheme nature is often portrayed, like a strip mine site or laboratory animal, as unfeeling raw material waiting to be plundered, tamed, and vivisected by humans who are constrained only by their own Hobbesian "nature" and the "natural laws" binding the raw material. As petri dish or Green Revolution field, nature is viewed as a passive domain in which results can be reproduced under controlled conditions, in much the way that "development" is supposed to replicate the First World in the Third.

This story also portrays nature as raw material for society — as a "basic" stratum underpinning the refinements of culture. In this guise, "nature" tends to become an audiovisual aid for the illustration of political lessons. Thus museum dioramas and book plates portraying male-led mountain gorilla groups, Primitive Man the Hunter, or lustful, thick-skulled male dinosaurs butting heads for female favours remind us of the "universal truth" that a man's gotta do what a man's gotta do, while seemingly sober gynecology texts reinforce myths of women's economic unproductivity by treating menstruation as "wastage".[13]

The flip side of the Western image of nature as industrial raw material, of course, is of nature as *non*-resource or as access-controlled wilderness preserve patrolled by properly-credentialled park rangers: roughly, the "nature" invented by some US preservationists, field biologists and deep ecologists. Here, too, nature is "what is not industrial" — with the relatively slight difference that instead of being "that which has not yet been industrially processed" it becomes "that which *should* not be industrially processed". Just as traditionalists often view selected Southern peoples as a modernity-free cultural reserve to be fenced off and kept pure for future use, many Northern preservationists view nature as an industrial-free and therefore (they assume) human-free reserve whose separateness is, paradoxically, a condition for people's being able to be "one" with it in the proper way. And just as colonial-age Orientalists such as Lawrence prided themselves on being able to speak for the Orient they had invented, Western preservationists, industrialists and economists often nominate themselves as spokespeople for "nature" without fear of contradiction. Thus one US ecologist informs us that it is he and his colleagues, as "representatives of the natural world",

who have the mandate and expertise to "determine whether the tropical agroscape is to be populated only by humans . . . or whether it will also contain some islands of the . . . nature that spawned humans, yet has been vanquished by them".[14]

Refusing Conversation

Such stories and images of "nature", when elevated through the exercise of power into supposed "universal" and "objective" truths and exempted from commentary by less powerful groups, hold much the same repressive force as colonialist tales about "the Orient" or developers' yarns about the "Third World".

Part of this force is exerted against plants and animals themselves. The latter, of course, are not in the habit of voicing verbal protests to the way they are described, and any attempt by their defenders to speak *for* them is open once again to charges of Orientalism. All the same, violence is obviously afoot when animals are categorized, as they were by Descartes and his followers, as mechanisms impervious to torture. Nor does it seem extravagant to suggest that in refusing to take into account the particularity of different landscapes and in openly describing nature as an "enemy", industrial agriculture is rejecting the sort of civil, tentative "conversation" with the land and its inhabitants which farmers from places as diverse as Northern Thailand, the Peruvian Andes and Kentucky have attempted to pursue in their different ways — and which Western ecofeminists have also urged through their insistence on seeing "the world as active subject" with an "independent sense of humour", not as "resource to be mapped and appropriated in bourgeois, Marxist or masculinist projects".[15]

But it is not only animals and plants that suffer from attempts to universalize the culturally parochial notion that nature is either resource or non-resource. The US idea that "real nature" is not to be touched by human hands, applied in the South, reinforces the view that hundreds of thousands of people living in protected areas are either "encroachers" subject to eviction or, at best, merely part of the wildlife. In countries like India, as Ramachandra Guha observes, this has led to "a direct transfer of resources from the poor to the rich" as large swaths of land come under the control of national and international conservation élites.[16] Ironically, environmental destruction is often one result. As Kenny Matampash notes, it was only after national parks and game reserves ate up the best parts of Maasai rangeland in Kenya that significant competition for food between livestock and wildlife began to emerge in the region.[17]

Green Orientalism *vs.* Green Alliance

Telling stories about other people and about nature is both unavoidable and productive. But it is also a political act. Being wary of Green Orientalism does not mean trying to give up storytelling, but rather acknowledging this politics and working to make it less oppressive by not insisting on monopoly rights to define others. "Unbiased" or "comprehensive" stories, after all, are to be found neither in science, nor in the voices of "traditional" or oppressed peoples, nor in "thinking like a mountain". Nor is it possible to take the politics out of storytelling by adopting the relativist pretence that every story is just as good as any other. That too would be a political standpoint, although one which it is impossible to take.

At stake in debates over Green Orientalism is not only democracy, but also solidarity. When people defending local land or water for their own subsistence are told by deep ecologists that they have an instrumental attitude toward nature identical with that of Texaco, or by population control enthusiasts that they must see their own lives in terms of the multiplication of bacteria in petri dishes, or by development experts that environmentalism is for those with full bellies and therefore that if they are to follow the script they should "develop" first and worry about trees later, they are bound to resist, and possibilities for alliance are bound to be smothered. When, on the other hand, environmentalists are willing to see Southern farmers or forest dwellers as something more than characters in their own stories, at the same time acknowledging that they themselves are in part characters in criticizable tales told by others, then possibilities for negotiation, inquiry and alliance multiply.

Green Orientalism both arises from and perpetuates power imbalances. In fighting these imbalances, environmentalists can benefit from the lessons of anti-racist, feminist and anti-imperialist popular movements; we can learn to seek unity less by attempting to recruit others as subcontractors to build our own utopias, or by trying to find a monolithic "truth of nature" to impose on the world, and more through solidarity with subordinate groups pursuing, on different terrains, purposes that may be related to our own. That solidarity requires that even our most cherished dichotomies be challenged by the stories other societies tell.

Larry Lohmann

References

1. *Orientalism*, Vintage, New York, 1979, p.204.
2. Zonana, J., "The Sultan and the Slave: Feminist Orientalism and the Structure of Jane Eyre", *Signs*, Vol. 18, 1993, pp.592-617. See also Apffel-Marglin, F. and Simon, S. L., "Feminist Orientalism and Development", forthcoming in *Development*.
3. Wahana Lingkungan Hidup Indonesia and Yayasan Lembaga Bantuan Hukum Indonesia (eds.), *Mistaking Plantations for Indonesia's Tropical Forest*, WALHI, Jakarta, 1992, p.50.
4. Woollacott, M. in *The Guardian*, 4 March 1991.
5. Haraway, D., *Primate Visions: Gender, Race and Nature in the World of Modern Science*, Routledge, London, 1989, p.247.
6. Pearce, D. (ed.), *Blueprint 2: Greening the World Economy*, Earthscan, London, 1991, p.5; see also The Ecologist, *Whose Common Future? Reclaiming the Commons*, Earthscan, London, 1993, pp.114-127.
7. "Reinventing Gandhi", *IUMDA Newsletter* 5, 1992.
8. Kaiser, R., "A Fifth Gospel, Almost: Chief Seattle's Speech(es): American Origins and European Reception" in Feest, C.F. (ed.), *Indians and Europe: An Interdisciplinary Collection of Essays*, Rader Verlag, Aachen, 1987, pp.505-26.
9. MacCormack, C. P. "Nature, Culture, and Gender: A Critique" in MacCormack, C. P. and Strathern, M. (eds.), *Nature, Culture and Gender*, Cambridge University Press, Cambridge, 1980, p.20.
10. Stott, P., "*Mu'ang* and *Pa*: Elite Views of Nature in a Changing Thailand" in Manas C. and Turton, A. (eds.) *Thai Constructions of Knowledge*, University of London, London, 1991, pp.142-54. See also Dove, M., "The Dialectical History of 'Jungle' in Pakistan", *Journal of Anthropological Research*, Vol. 48, 1992, pp.231-53.
11. Gould, S. J., "Reconstructing (and Deconstructing) The Past" in Gould, S. J. (ed.), *The Book of Life*, Hutchinson, London, 1993.
12. Haraway, D., op. cit. 5, pp.244-248; Strathern, M., "No Nature, No Culture: The Hagen Case," in MacCormack, C. P. and Strathern, M., op. cit. 9, pp.174-222.
13. Haraway, D., op. cit.; Martin, E., *The Woman in the Body*, Beacon Press, Boston, 1987, pp.47-8.
14. Janzen, D., "The Future of Tropical Ecology", *Annual Review of Ecology and Systematics*, vol. 17 (1986), pp.305-06.
15. Grillo Fernandez, E., "Knowledge and Assessment in the Modern West and Fostering and Symbiosis in the Andes", draft paper for WIDER Seminar on "Alternatives to the Greening of Economics", Bellagio, Italy, 1993; Berry, W., *Standing on Earth*, Golgonooza, London, 1991; Haraway, D., *Simians, Cyborgs and Women*, Free Association Books, London, 1991, p.199.
16. Guha, R., "Radical American Environmentalism and Wilderness Preservation: A Third World Critique", *Environmental Ethics*, Vol. 11 (1989), pp.71-83.
17. Matampash, K., "The Maasai of Kenya" in Davis, S.H. (ed.) *Indigenous Views of Land and The Environment*, World Bank Discussion Paper 188, Washington, 1993, p.37.

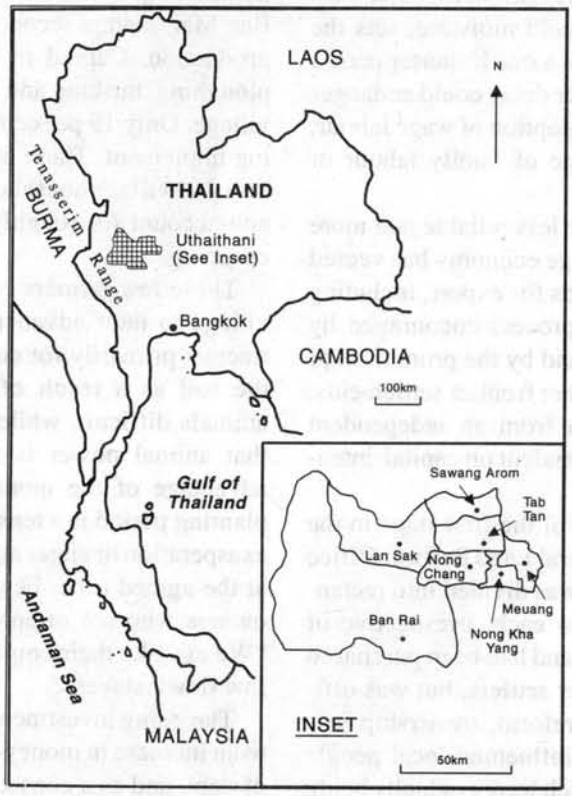
The State in the Village

The Case of Ban Mai

by
Philip Hirsch

Twenty years ago Ban Mai was a frontier settlement in western Thailand, more or less isolated from the outside world. Contact with the government was minimal and external commerce had little effect on subsistence production. Logging, however, has opened up the region, and this in turn has stimulated intensive cash-cropping and dramatically altered the political economy of the village. Power now rests increasingly with those who have access to capital and whose authority rests on the patronage of the state. As a result, the state itself has become a major force in the life of Ban Mai, eroding indigenous forms of organization and instituting new forms of bureaucratic control. Alliances between village élites and the state are now key to the dynamics of environmental degradation in the region.

Ban Mai, a frontier village in western Thailand, lies in the Lak Sak district of Uthaithani province, about 60 kilometres from the provincial capital. Until about 1970, almost the entire area of Lan Sak was forested. The Karen and Lao inhabitants traded in forest products with lowland merchants to supplement their subsistence living, based on small clearings for upland rice and other staples.



The earliest Central Thai settlers were tappers of *yaang* resin (a weatherproof varnish) who had an interest in preserving the forest except for small subsistence plots that they cultivated under the canopy of the taller trees. One of the earliest settlers, Lung Pid, who came from Nong Chang district of Uthaithani, staked out a large area of forest, measured not in land but in the number of mature *yaang* trees. He became the undisputed figure of authority (*khon to*) in the area, through a combination of patronage, fear and respect. Other early settlers either staked out remaining land or bought it at negligible cost from Karens, who moved away into the mountains bordering the village. Relatives and close acquaintances were given or sold areas of forest, and patronage networks were thereby established early on. At this stage commerce was limited mainly to non-timber forest products. The area was more or less isolated from the outside: the forty-kilometre journey to the nearest market at Nong Chang took two or three days by buffalo cart in 1970, but ninety minutes in a pickup truck in 1985.

Contact with government officials was virtually non-existent. There was no formal village head: the *khon to* was the *de facto* leader. Until he led the villagers to build their own school in 1968, there was no state education. Police were hardly seen, and the law was made and enforced largely by the *khon to*, who had strict rules about gambling and other "unruly" behaviour. Registration of births, deaths and marriages, and obtaining identity cards, entailed a week's return trip to the district office, then at Ban Rai: few bothered with such formalities.

In some respects, Ban Mai until recently was a closed village. External commerce did not significantly affect subsistence production. The law was made and enforced by a process indigenous to the village. Ownership of land had no legal basis in terms of state recognition, but at the same time implied and required membership of the village, which was restricted and governed by earlier settlers.

From Deforestation to Land Reform

Two state interventions changed this — logging and land reform. In 1978, Ban Mai was scheduled for deforestation by the state-owned Thai Plywood Company. The area at once lost its value for *yaang* oil and other forest products, but was opened up for commercial upland agriculture. Furthermore, the forestry roads that were constructed for log haulage increased accessibility and lowered the cost barriers to cash-cropping.

The district is now substantially deforested, most of the cleared land being used for upland field cropping, although lower-lying areas near the Tap Salao river are planted to rice. Upland crops, such as maize and mung beans, initially require little investment after forest clearance, since the soil is still fertile and soft. But after a year or two, as weeds and pests appear and the soil hardens and loses its fertility, the costs of fertilizers,

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Ban Mai and Ban Dong

The two villages of Ban Mai and Ban Dong, though only ten kilometres apart differ in two crucial respects: first, their geographies impose very different crops and farming methods; and second, Ban Mai is a Land Reform village, while Ban Dong is not. While wealth and power in Ban Dong is linked to landownership, in Ban Mai it is more dependent upon access to capital.



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Planting paddy in Ban Dong; villagers often share labour reciprocally.

Ban Dong

Ban Dong, closer to the Tap Salao river, is a rice growing village, and this crop accounts for 66 per cent of the area planted and 80 per cent of crop production by value. Besides bringing in a better return than most other crops, rice involves less outlay than field crops and can be cultivated easily without recourse to expensive machinery — about a quarter of the households own a buffalo, used for ploughing and threshing, while another quarter own small power tillers. Rice serves as a subsistence as well as a commercial crop, and three out of five villagers have small granaries.

Ownership of land in Ban Dong, therefore, brings with it a degree of security. However, there is considerable inequity of land tenure in the village. Over 20 per cent of villagers own no land at all, while another 16 per cent have holdings that are less than a hectare.

Ban Mai

In contrast, Ban Mai is primarily an upland or field-cropping village. Wherever possible Ban Mai farmers grow rice, but opportunities are rare. The principal field crops are maize and mung beans, while sorghum, cassava and several other crops are also grown.

These crops are all sold commercially aside from small quantities kept for seed or animal feed. The cash is needed, not only to buy rice, but also to pay for the much greater outlay needed for field crops. Ploughing the hard soil requires the rent of a tractor, and maize and mung demand expensive applications of pesticides and herbicides.

Ban Mai's status as a Land Reform village has given it fairer land distribution than in Ban Dong. Officially less than three per cent of villagers have no land and less than six per cent have holdings smaller than a hectare. However, land ownership does not necessarily offer security because the capital costs of farming are so high. The level of commercial debt in Ban Mai is almost twice as high as it is in Ban Dong, and the greater part of this is to agricultural middlemen to whom debtors are obliged to sell their crops.

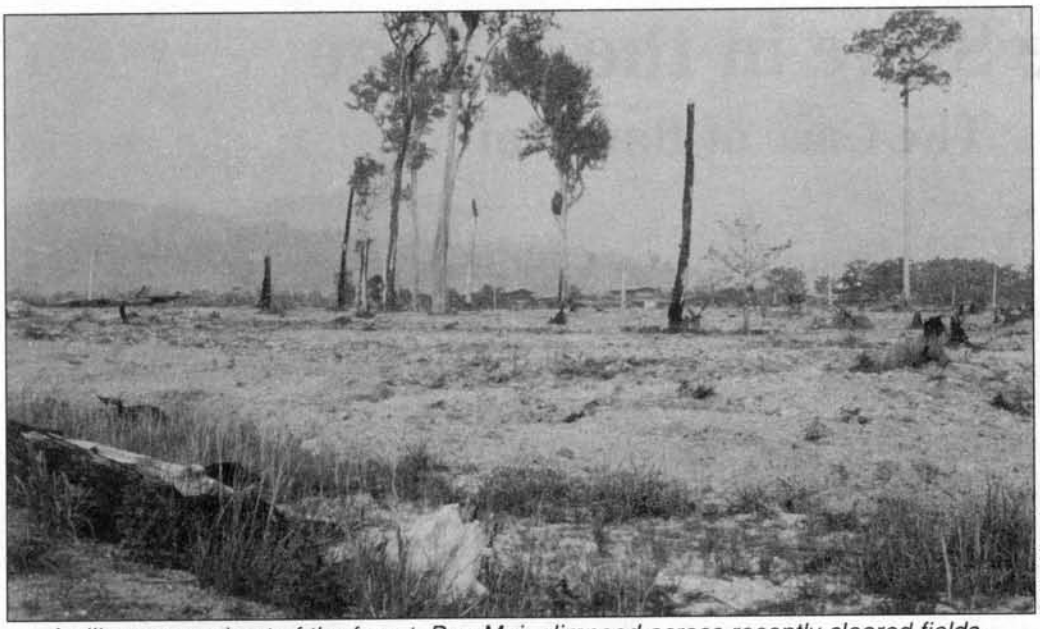
Freedom or Prosperity?

Comparison of two communities is usually an outsider's indulgence. However there has been much intermingling between these two villages, and villagers can offer their own perspectives. Many upland farmers in Ban Mai have been rice farmers in the past, and to them, field cropping seems an insecure and strenuous occupation: "If I had rice, no creditor would dare take sacks of rice from my house," says one. "Rice farmers may have to work in the rain, but we upland farmers have to work under the blazing sun" complains another.

One family returned to Ban Dong after a period in Ban Mai, because its members could not stand the pressure of Ban Mai life. They speak with bitterness of the village leaders, and of the "oppressive feeling" that there is "no freedom at all" in the village. On the other hand, some Ban Dong villagers who have visited Ban Mai admire the model village's "prosperity" due to its roads, electricity and large concrete school.

equitable "participation" in the market economy by small farmers. These loans represent one of the government's major financial commitments in its rural development programme, and are presented as a welfare measure to ease the burden of usury from the small farmer's back. There is no doubt that BAAC credit at 14 per cent per year is preferable to informal credit, whose actual or implied rates vary from 36 per cent to 250 per cent in Ban Mai.

However, the programmes that increase the involvement of small farmers in commercial agriculture also serve to disempower them. BAAC credit is given on condition that certain inputs such as fertilizer and hybrid seed are used, and is often given partly in kind. The only credit normally given to the small farmer in cash is expressly for payment of wages or hire of machinery. BAAC credit is thus designed to hasten the adoption of a form of commercial agriculture which ultimately threatens the survival of the small farmer. In practice, BAAC is in the contradictory position of apparently strengthening the small farmer's hand while acting as an agent supporting or even



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A village carved out of the forest. Ban Mai, glimpsed across recently cleared fields.

ploughing, pesticides and herbicides start to increase. Moreover, the less certain rainfall due to deforestation, together with the increasing inability of the soil to hold moisture, sets the planting of maize back from February to a much shorter period in April or May, when a few days' further delay could endanger the crop. This has resulted in the rapid adoption of wage labour, often from outside the village, in place of family labour or reciprocal labour exchange.

As subsistence cropping has become less reliable and more dependent upon capital inputs, the village economy has veered towards greater production of cash crops for export, including maize, tapioca, and sugar cane — a process encouraged by increasing levels of state intervention and by the promotion of chemical inputs. Ban Mai, like many other frontier settlements, has thus undergone a rapid evolution from an independent subsistence community to a village dependent on capital-intensive cash crop agriculture.

In 1978, Ban Mai became the focus of the first stage in the Tap Salao River project of the Agricultural Land Reform Office (ALRO). Land within the project area was divided into rectangular allotments of 24 *rai* (4 hectares) each, irrespective of previous plot boundaries. Much of the land had been purchased by early migrants from Karen or earlier settlers, but was officially government land. Before land reform, ownership was very uneven, with a small number of influential local people owning large tracts of forested land, which were gradually being sold off to late arrivals. Thus land reform was at once a form of redistributive justice by which land-short, marginalized farmers could regain control over the basic means of agricultural production, and a way for the government to gain institutional control over land of indeterminate status. Land sales under the redistribution programme have to be approved by ALRO, which sets a uniform price per *rai*. Rental of land is in principle prohibited, as is its transfer other than through direct inheritance or via ALRO.

In theory, the relatively equal distribution of land in Ban Mai is because of its status as a land reform village. In fact, ALRO's criteria are hardly ever adhered to: 37 per cent of households do not conform to ALRO rules about ownership and many more infringe on grounds of tenancy. A provision for relatives of existing landholders to be given priority led to an initial spate of "ghost" transactions, whereby land was fictively sold to kinfolk. The official price was well below the market price at which newcomers were forced to buy it under the counter. Rental is widespread, usually in the form of poorer households, dependent on wage-labour, renting cheaply to wealthier farmers. Several poorer farmers have mortgaged their land to creditors for lengthy periods in lieu of debt. Others, having rented out their land to those with sufficient capital to work it, are forced to become wage labourers, sometimes on the very land that they themselves own.

The Means of Production: Capital or Land?

Even were the land reform rules upheld in practice, formal landholding is itself no guarantee of control over production. In Ban Mai, land is secondary to capital in securing control over production. Capital in the form of tools and machinery for ploughing, husking and transport is heavily concentrated in the village. Only 19 per cent of farmers own some form of ploughing implement. There are eight tractors in Ban Mai — one for every 40 village households — but these plough most of the area and account for roughly half of all cash investments in field cropping.

These few farmers control the rhythm of production in the village to their advantage. Villagers have become reliant on tractors primarily for environmental reasons: the hardening of the soil as a result of deforestation makes use of draught animals difficult, while the shortened planting season means that animal power is too slow. Timing is critical, to take advantage of the monsoon periods, and the ploughing and planting period is a tense time of year. This tension can turn to exasperation or anger at the tractor owners if they do not plough at the agreed time. Few have any sanction against the tractor owners who are often creditors as well. Villagers complain: "We are like their employees" or even "We just become their low-down slaves".

The rising investment cost of commercial agriculture has led to an increase in money-lending. Many farmers fall into a spiral of debt, and as a consequence lose control over their means of production. This is particularly so in the case of conditional credit, where the borrower is obliged to use a creditor's tractor or to sell produce to a particular village merchant. Sometimes the lender, renter and trader will be one and the same person; in other cases, money-lenders from outside employ wealthy villagers to act as agents since they can use fear, influence and local knowledge in place of more formal collateral such as transferable land rights.

Credit and the State

Demand for traditional forms of usury has been eased by the expansion of institutional credit, particularly that given by the Bank for Agriculture and Agricultural Cooperatives (BAAC). Such a trend may seem to represent a step toward rational and

introducing new modes of surplus extraction. Although it claims to give farmers a stake in the market, it facilitates the market's stake in the village and absorbs some of the proceeds en route. In addition to interest on loans, BAAC receives about two per cent of revenues from the products it sells to the farmer.

BAAC's control over production is also a barrier to any major change in the agricultural regime. This is particularly relevant in the case of Ban Mai, where present agricultural practices are unsustainable and are contributing to rapid environmental deterioration. Inputs such as fertilizer are rising annually, while crop yields drop steadily. Economically, the cropping regime is even less sustainable, as unit costs of inputs have risen steadily relative to crop prices, contributing to ever-increasing levels of debt. This has further entrenched the monocultural cropping pattern, as labour is drawn away for off-farm employment to pay off loans. The ultimate outcome is a pattern of land, labour and capital use, leading into a vicious circle of ecological degradation and non-productive capitalization.



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Ban Mai agriculture depends heavily on purchased inputs . . .

"Convenience" — *khwaam saduak*

The other element of land reform has been to provide for, and later stipulate, the resettlement of homesteads from their scattered distribution over a wide area into a grid-plan village of approximately 400 households, each allocated one *rai* (0.16 hectare) of land. The material rationale for this resettlement is one of "convenience", *khwaam saduak*, and "prosperity", *khwaam jaroen*. Electricity, roads and future projects such as piped water are clearly cheaper on a per household basis when houses are concentrated in a nuclear community. ALRO also has plans to build a market to encourage specialization and sale of goods within the village.

Electricity has certainly been a bonus for some, though a majority of households are not yet able to afford the connection costs. The provision of roads is ALRO's most appreciated contribution, but even here there is ambivalence — in the words of one villager: "The roads meant we could sell our maize; they also brought in the money-lenders." The supposed convenience of the concentrated village is offset by the long distances many have to walk to their fields and carry their crops back to their homesteads. Many farmers have taken to spending several days at a time in their fields sleeping in huts.

"Convenience" is an apparent benefit of development and resettlement by ALRO, but the question remains, convenience for whom? It is not so much the majority of villagers who benefit — they have little occasion to leave the village for most of the year and cannot afford electricity — but the owners of transport among the village élite and the district and village administration, whose access to village and villagers is increased.

"Keeping an Eye" — *duu lae thua theung*

The resettlement project is also supposed to bring less material benefits ranging from "neighbourliness", *khwaam samakhii*, through "security", *khwaam man khong*, to "ease of administration", *kaan pokkhrong ngaai*.

At one end of this continuum, there is presumed to be a "safety in numbers", whereby the villagers look after each others interests. In practice, the effect may sometimes be the reverse: for example, the risk of theft of free range poultry is greater in the clustered village than on the isolated homestead. Villagers housed in the grid plan are now less able to choose their neighbours and their surroundings than they were when they lived in scattered homesteads; the animosities generated by village factionalism can be exacerbated by proximity, and villagers often report feeling "pestered".

At the other end, resettlement has made administrative "security" more practical. Each house now has its own painted name sign, while communications from the village head or other officials are broadcast over the school loudspeakers, which also blare out the government radio station's programmes for two hours every morning. One of the village development projects is to build a police station at the edge of the village.

ALRO resettlement is often justified by the need of the village head to "*duu lae thua theung*" meaning to "watch over", "take care of" or "keep an eye on" things. The implications of both care and surveillance in this concept indicate how the ambiguity of discourse associated with state-led changes can help to disguise the potentially repressive entry of the state into the village.

This dual aspect of resettlement, which supposedly improves the welfare of individuals and their stake in the community on the one hand and facilitates state control by ALRO and other official agencies on the other, is reflected in a wide-ranging ambivalence to the scheme which cannot be explained by any obvious class allegiances. Some local people have moved into the "model" village enthusiastically, while others have done so with more reluctance, even claiming that they have been "forced" to do so. But a significant number have voted with their feet by refusing to move into the new village, and many of these have gone to the length of buying their one *rai* plot in the new village and erecting a small house on it in order to retain their right of residence, whilst maintaining their actual homestead on their farmland. As one of these recalcitrants remarked: "Whose convenience is resettlement for — ours or theirs? For them it's

fine, they can keep control. Here [on the farmstead he has resisted leaving] we're out of sight and earshot, and that worries them. Yet here we can raise chickens and ducks, can get some work in before breakfast . . ."

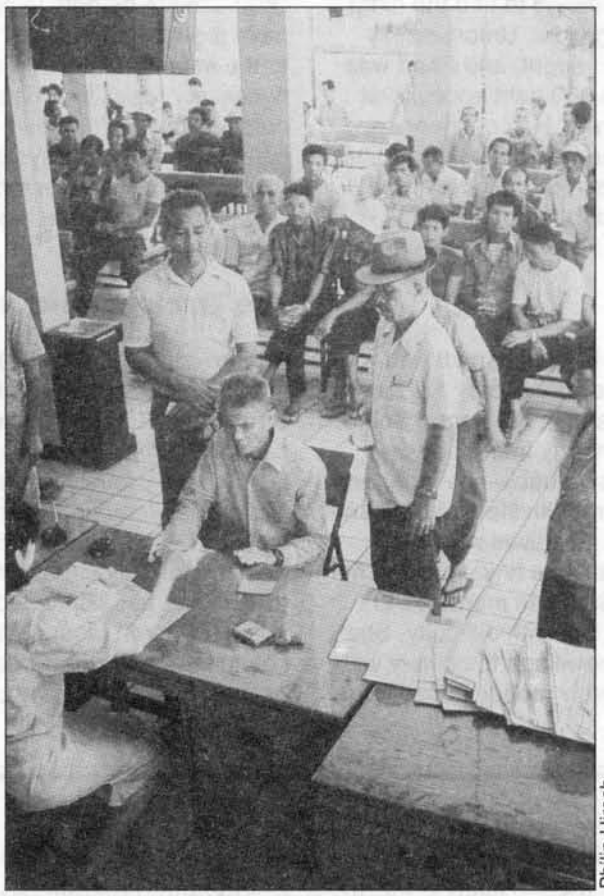
"Security" — *khwaam man khong*

The concept of "security", *khwaam man khong*, serves as a semantic link between the welfare of local people and the discourse of state survival. The proliferation of village level paramilitary groups as part of the government "security" programme raises other issues about state power. Ostensibly it is directed against a hypothetical external threat, since the region has been given "border" status; but it is potentially also internally orientated.

The paramilitary groups active in Ban Mai include the Village Scout movement, the military National Defence Volunteers and district or provincial volunteer brigades. In addition, Ban Mai became a "self-defence development village", *muu baan or phor por*, in 1986, as part of a government scheme to produce a string of vigilant strategic "front line" villages near previously politically sensitive areas. The rationale for such schemes is to enable villagers to participate in their own defence, though against what or whom is not clear.

The Village Scout movement places heavy emphasis on "unity", *khwaam saamakhii*, and the nationalist ethos of nation-religion-monarchy, *chaat-saat-kasat*; as such it is clearly an instrument of state ideology that penetrates to the village level. The function of the National Defence Volunteers, who number about 140 in Ban Mai, is to provide a reserve force "in case of trouble" from within or without. The volunteers receive training outside the village, and are entrusted with the specific duty of being the "eyes and ears" of the district and provincial administrations to seek out potential "troublemakers" in their own and neighbouring villages. The high rate of violence in Lan Sak associated with land disputes and a large illegal economy superficially indicates a non-political role for such activities. Nevertheless, a more political basis for the self-defence programme can be seen in the increased level of paramilitary organization located in the village and administered by the Village Committee. A stockpile of rifles and ammunition is situated in the village and regular activities include nightly armed patrols.

The directly authoritarian arm of the state is thus finding its way into village life to an increasing extent. An important aspect of this development is the role of the village head and other key members of village "society" in overseeing and selecting personnel for these programmes. Only members of the Village Committee are allowed to carry shotguns. Here too, the state is becoming part of the village, using its increasingly powerful internal agents as the key to entry.



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. . . while the village farmers become dependent upon loans from the agricultural bank.

"Participation" — *kaan khao maa mii suan ruam*

The new integrated model village has been sold, above all, as a means by which people can participate in development. "Participation" is referred to in official discourse as *kaan khao maa mii suan ruam*, literally to "come in and take part", and connotes a willingness of villagers to conform with projects initiated by government development agencies, an adaption to bureaucratic procedure.

The *tambon* (sub-district) council and the Village Committee are the showpieces of citizen participation in the state-led rural development programme. Through a combination of bureaucratic and superficially democratic procedures, villagers now, in principle, have a say in requesting certain projects and thereby gaining access to state development resources. The *tambon* council has a consultative role as regards the state bureaucracy. Actual decisions over the use of resources are made by the state, and the *tambon* council has no independent source of revenue. The five-year plan presented by the council is a kind of "menu" from which government departments can pick and choose, though they may even have dishes not on the menu made to order.

This menu is drawn up by the *kamnan* or sub-district leader, the village head, and the other influential villagers who make up the Council. The *kamnan* and village head are wealthy, long-standing residents who both made (and one of whom still makes) large profits through illegal timber and land sales. Both are in the pay of the local member of parliament as vote-buyers, have numerous local and external business interests, and maintain extensive local patronage networks. The village head infringes ALRO rules by renting a large number of plots from poorer villagers in lieu of interest on unpaid debts, benefits through his transport interests from new roads and is agent for the underground lottery. In effect, the two figures entrusted with modulating "participation" by the village under the new structures are representatives of state and capital in the village whose wealth and power base are founded on illegal or semi-legal activities.

The Village Committee is responsible for keeping order and peace in the village and arranging for the reception of outsiders, notably government officials. The informal *ad hoc* reunions that the *khon to* would periodically summon have been replaced by monthly village meetings, which a member of every household is obliged to attend on penalty of a 50 *baht* (two US dollars) fine. These provide a forum for contact between committee and

Land Reform and Debt: Winners and Losers in Ban Mai

The Landless Labourer

Phad moved to Ban Mai with his wife and three children in 1980, drawn by the prospect of buying land through loans provided by ALRO, the Land Reform scheme. He obtained a loan sufficient to pay the official price, but well below the market price demanded by the seller of his plot, and so rented the land, hoping to find the extra money to buy it through labouring work. Unfortunately his crop failed in 1982, owing to drought, and Phad was left with nothing to show but an 8,000 baht agricultural bank debt with accumulated interest. He continued to work as a labourer, but in 1986 he was hospitalized after suffering a reaction to rodenticide in the hand-planted maize seed, which added to his debt problems.

The Subsistence Farmer

Som was invited to Ban Mai with her husband by Ad (see below) who, afraid of being dispossed by ALRO, wanted Som to take over some land in her name. Som managed to buy 8 *rai* off her for nearly four times the ALRO price. Two *rai* of her plot is valuable rice land, and Som, whose first husband left her, cultivates her rice and mung beans by renting a buffalo. She lives with her common-law husband and children in a tiny shack on her land. By using few cash inputs, Som has managed to stay out of debt most of the time, but with difficulty. She maintains a token residence in the village to comply with ALRO regulations and had to borrow money to pay for the obligatory zinc roof.

The Dispossessed Landowner

After moving to Ban Mai with his wife and children in 1977 and buying four hectares of land at a price slightly higher than ALRO's , Porn entered into a spiral of debt. Over the first few years, the soil on his plot deteriorated and hardened, while the uncertain rainfall hampered his cropping: "You used to be able to plant maize in March; now you have to wait for May . . . " By 1984, debt had accumulated to the extent that Porn was unable to raise the capital necessary for cultivation and the land was rented out to his creditor, the village head — the rent he receives is about half the amount he pays in interest on the village head's loan. Porn has not been dispossesed in a legal sense, but *de facto* control of the land has gone to the village head.

The Tractor Owner and Trader

Ad moved to Ban Mai in 1972 with her husband, a former monk, and bought land when it was still largely forested. Upon Land Reform she sold much of this, though, as in the case of Som (see above), many of the sales were fictive. She put the profit into grain-trading, agricultural supplies and money-lending, and runs one of the larger general stores in Ban Mai. In 1985 she bought a Ford 5000 tractor, then one of only eight in the village, which she rents out, though she has continued to farm her own land, relying mainly on hired labour. She is a member of the village committee, and is regarded as one of the "village bosses" by other villagers, many of whom talk about her in somewhat bitter tones.

villagers, and are dominated by the village head, who is also committee president. A microphone is used to address the 400 or so villagers present, and the village committee sits at the front. Up to two hours is spent reading official announcements from the district administration. Occasional project proposals are presented by district officials or the village head, who demand a simple "yes" or "no" vote. Government personnel, including police and army officers, regularly use the meetings as a forum for dissemination of official policy. Any other business is then called for, in the knowledge that there is another hour and a half's roll-call before anyone can leave for what is left of the day's work, and rarely does any other business arise. There is an occasional contribution from the "floor", but too much spontaneous interjection evokes a reprimand from the village head, who insists on anyone who wants to speak raising a hand and waiting, before being given the floor, unaided by microphone.

This bureaucracy even permeates village level community projects, such as those initiated by the Community Development Department (CDD). Both CDD's housewives' and savings groups are run by a committee of three women. One is the village head's wife, the second the wife of the wealthiest villager and *kamnan*'s elder brother, and the third also very much part of village "society". The housewives' group disseminates domestic skills and nutritional information under state-run training programmes, while the savings group has about twenty members, all from better-off households. Both these groups are of marginal effectiveness largely owing to their limited social contact with poorer villagers, and the fact that they are in the hands of a village élite with access to government agencies. The CDD's pre-school day care centre, built with voluntary labour, folded after only a few months' operation because of declining attendance — mothers took their children with them to the fields during the agricultural season, when they generally stay in shelters near their fields for several nights to avoid the long daily walk from the village. The project failed to take account of the realities of village work and residence patterns.

Supplanting Village Authority

The generally admitted failures of these groups in Ban Mai indicate fundamental contradictions in evidence throughout the state-led "development" of Ban Mai. These "participatory institutions" which purportedly give the village a role in making rural development decisions are the facilitators of a paralysing bureaucratization of village procedure which has replaced the older more informal institutions. They have taken the wind out

of indigenous forms of organization, which are relegated to a dwindling number of domains of village life not subject to the state-defined concerns of rural development, for example the communal effort of women to prepare food for household feasts or ceremonies.

The *kamnan* and the village head have supplanted the authority of a respected and feared elder, the *khon to*, who was known for his own particular sense of justice enforced by a sanction of violence. The *khon to* has an aversion to contact with the outside world, in particular with government administration. His authority still persists in a small community that has maintained itself outside the grid-plan village. In contrast to the *khon to*'s initiative in mobilizing village projects, such as the village school, the new village head's apathy is a subject of private complaint as to why nothing gets done. The community focus for everyday social gathering has, ironically, been lost by the urbanization of the village layout: nowadays, it is frequently heard, that there is no real unity or community spirit, *samakhii*; it is each for him or herself, *thii khrai thii man*.

Village and State

This is not the whole story of rural development in Ban Mai or elsewhere: many of the new institutions have explicit and genuine welfare objectives that are addressed primarily at alleviating the problems of poorer sections of the community, and individual state-led programmes are often run by committed and well-intentioned staff. But these considerations do not mitigate the wider issues concerning structural aspects of state-village relations — which in turn must be viewed within the context of changes in the local ecology.

The cycle of accelerating ecological degradation and capital-intensive farming has accentuated the inequities between people in the village. The state's rural development programme, and particularly its Land Reform project, are ostensibly designed to address this situation and help the more vulnerable villagers. But in practice, these measures often have the reverse effect: the debts incurred through entry into and participation in the programme serve only to reinforce social differences.

Crucial to these changes is the concept of power and its shifting locus. The government has propagated its programme by patronizing certain influential villagers whose perspectives are coincident with that of state and capital, while attempting to win the allegiance of ordinary villagers through a range of supposed improvements in their welfare and a programme of citizen "participation". This apparent democratization of village structures has, in fact, served to reinforce village inequities and merge the supposed interests of the village with those of the state.

Under the prior village-state relationship, the power of the state was located *outside* the village, and the village was left to its indigenous institutions and forms of organization. There has now been a shift from the state-village axis to a complex of relationships revolving around the power and influence of village interest groups: geographically and institutionally, the village has ceased to exist independently of the state.

This article is drawn from Chapters 7 and 8 of *Political Economy of Environment in Thailand*, by Philip Hirsch, 1993, 168 pp., available from Journal of Contemporary Asia Publishers, PO Box 592, Manila, Philippines, price US$10. Names of individuals and villages are pseudonyms.

Bibliography

Hart, G., Turton, A. and White, B., *Agrarian Transformations: Local Processes and the State in Southeast Asia*, University of California, Berkeley, 1989. Hanks, L., *Rice and Man: Agricultural Economy in Southeast Asia*, Aldine Atherton, Chicago, 1972. Hirsch, P., *Development Dilemmas in Rural Thailand*, Oxford University Press, Singapore, 1990. Breman, J., *The Shattered Image: Construction and Deconstruction of the Village in Colonial Asia*, Comparative Asian Studies 2; and Kemp, J., *Seductive Mirage: The Search for the Village Community in Southeast Asia*, Comparative Asian Studies 3, Center for Asian Studies, Amsterdam, 1987. World Bank, *Thailand: Towards a Strategy of Full Participation*, IBRD, Washington DC, 1980; and *Thailand: Rural Growth and Employment*, IBRD, Washington DC., 1983. Turton, A., *Production, Power and Participation in Rural Thailand: Experiences of Poor Farmers' Groups*, United Nations Research Institute for Social Development (UNRISD), Geneva, 1987. Witayakom Chiangkul, *The Effects of Capitalist Penetration on the Transformation of the Agrarian Structure in the Central Region of Thailand (1960-1980)*, Institute of Social Studies, The Hague, 1982. Ingram, J., *Economic Change in Thailand 1850-1970*, Stanford University Press, Palo Alto, 1971.

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The Reproductive Hazards of Industrial Chemicals

The Politics of Protection

by

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Corporate and legislative responses to reproductive hazards in the workplace depend only partly on "scientific" assessment. They are also based on ideological assumptions about human reproduction and working women. The controversy surrounding US employers' recent practices of excluding women from work where they might come into contact with known or suspected reproductive hazards has made these misconceptions explicit. It has also clarified the direction of more constructive action.

Human exposure to industrial chemicals is now almost universal. Of the nearly 3.5 million known chemicals, 65,000 are in commercial use and over 5,000 new ones introduced each year. The plastics industry alone uses nearly 2,500 chemicals or mixtures.[1]

The effects of most of these chemicals on human health, as well as on plant and animal life, are unknown. No information is available on the toxicity of approximately 80 per cent of chemicals in commercial use in the United States, while the effects on human reproduction, based on animal or human data, have so far been estimated for just one per cent of chemicals.[2]

Although it is difficult to establish absolute "scientific" proof that a substance is a reproductive hazard, the list of *suspected* toxic substances is long and rapidly increasing. Sheila McKechnie, a British trade unionist concerned with reproductive health issues, has stated:

> "it would be nonsense to attempt to quantify the effect of occupation on reproductive health . . . This is difficult enough in respect of cancer, where there is only one end-point to look for — that is, the existence of the disease. It is much more difficult where the effects range through infertility, spontaneous abortion, stillbirths, birth abnormalities and deformities. Many factors other than occupation may be involved, and our difficulties are compounded by the lack of background rates for reproductive problems."[3]

Despite these difficulties, large differences in rates of stillbirths, miscarriage and birth defects among social classes, races, countries and occupational groups suggest that environmental factors play an important part in their causation.[4] The most common route of chemical intake is inhalation, but absorption through the skin is significant for organic solvents and pesticides; people can also be affected through their eyes. Ingestion through smoking and eating with contaminated hands is also a factor.

Depending on the timing of exposure, industrial chemicals can damage egg and sperm cells;[5] reproductive and sexual organs; the embryo (0-8 weeks) and the fetus (9-40 weeks); and the young child.



Gendered Visions

In response to a suspected reproductive hazard in the workplace, employers have three options: do nothing; restrict the worker from being exposed to the substance; or reduce or substitute the hazard. In general, they have taken one or the other of the first two options. Their justifications for doing so have depended less on the hazard than on misconceptions about human reproduction and working women. As reproduction is perceived as the domain of women and women alone, the effects of substances have usually been assessed by considering whether exposure of the mother during pregnancy increases the risk of birth defects in the child. The route of effect is taken to be through the woman alone; the critical time is taken to be the period of pregnancy alone, and birth defects are assumed to be the only relevant adverse effect to be looked for.[6]

By not regarding human reproduction as a wider continuum in which men as well as women play a part, the hazards substances pose to the reproductive health of *men* and to the fetus *through* men have been consistently overlooked.[7]

The Invisible Man

The paucity of research on paternal exposure and the absence of regulation protecting men's health does not mean that men are invulnerable to reproductive hazards.

For instance, in 1977, male workers at an Occidental Chemical pesticide factory in California manufacturing dibromo–chloropropane (DBCP), which was used to kill roundworm and mites, noticed that none of their wives had had any children since the men had started working with the chemical. Sperm tests revealed that the majority of the men at the plant had zero or severely reduced sperm counts, but no other noticeable health effects. Production of DBCP was banned shortly afterwards, but a seven year follow-up study revealed little sperm recovery among the men with zero sperm counts while children of others have had high rates of birth defects.[8]

Since the DBCP finding, over 85 chemicals have been evaluated for spermatotoxic effects (see Table). But what little research there is on paternal exposure to hazardous substances has tended to focus on effects prior to conception. Even less attention has been paid to paternal exposure, which can affect the fetus after conception through substances brought home on skin, hair and clothes, for example, lead and asbestos, or in seminal fluid.[9]

Major Known and Highly Suspected Occupational Chemical Hazards to Reproduction [18]

Metals		
Lead	Menstrual disorders, miscarriage, birth defects	Metal industry
Mercur	(same as above)	Metal industry, hospital workers
Gases		
Anaesthetic	Miscarriage, stillbirth, low birth weight, birth defects	Hospital workers
Carbon monoxide	(same as above)	Metal industry, highway operators
Vinyl chloride (PVC)	Miscarriage, stillbirth, birth defects	Plastic industry, meat wrappers
Organic solvents		
Benzene, xylene, toluene, trichloroethylene.	Menstrual disorders, miscarriage, stillbirth	Laboratory workers, textile & petrochemical industries, laundry workers, printers
Chlorinated hydrocarbons	Stillbirth, birth defects	
Pesticides		
DBCP; TOK; 2,4-D; 2,4,5-T	Miscarriage, stillbirth, birth defects	Chemical mf'g, agricultural workers

The Excluded Woman

Most chemicals that affect the reproductive system of one sex also affect that of the other. As Michael Silverstein, a doctor working at the Detroit headquarters of the United Auto Workers, has stated:

> "If scientific research reveals that a woman's reproductive health is at risk through occupational exposure to a particular substance, there is no scientific justification for concluding that a male co-worker is not similarly at risk, unless and until hard data proves otherwise."[10]

In fact, occupational hazards that affect fetuses through maternal exposure alone are rare. In addition, a substance posing a reproductive health risk usually carries other health risks as well. Chronic exposure to lead, for example, may damage blood-forming, nervous and urinary systems, possibly causing fatal kidney disease, as well as resulting in miscarriage and birth defects from male or female exposure; cadmium and vinyl chloride are carcinogens for which there is no known safe level of occupational exposure, as well as causing reproductive damage.[11]

All these hazards would suggest that any chemical suspected of causing reproductive hazards in *either* sex should be banned or severely controlled. Yet companies have resolutely resisted cleaning up, insisting instead either that there is no proof of the hazard or that the problem can be resolved by excluding women only from the workplace — leaving men's health at risk and severely infringing women's right to work in a clean environment.

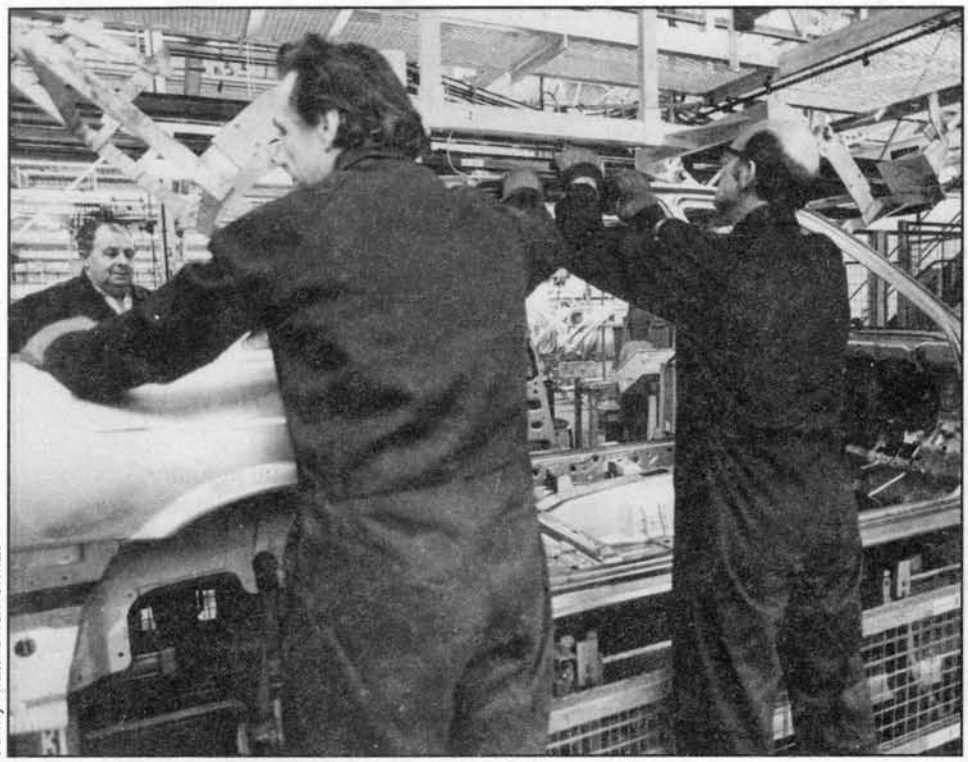
A study of 198 large chemical and electronic companies in Massachusetts found that 54 of them used glycol ethers, which even at very low doses produce toxic effects on sperm. None of these companies excluded men from exposure, but 37 of them restricted the work options of women on the basis of potential reproductive risk.[12] DuPont barred only fertile women from exposure to hexa–fluoroacetone, a substance which according to its own studies damages sperm.[13]

At least 100,000 jobs have been closed to women because of such exclusionary policies largely in the auto, chemical, steel, oil, rubber and pharmaceutical industries, and predominantly in large corporations. These include General Motors, B. F. Goodrich, St Joe's Minerals, Allied-Signal, Olin, Gulf Oil, Exxon, Firestone, Dow Chemical, Sun Oil, Goodyear, BASF, Eastman Kodak, Union Carbide and Monsanto.

Rather than cleaning up the workplace, these corporations have prevented women from working with at least 12 hazardous substances including lead, vinyl chloride, benzene, carbon tetrachloride, cadmium, coal tar, acrylamide, toluene, carbon disulfide and carbon monoxide because of their adverse effects on the fetus. When the substance permeates the entire factory, for example, lead in the General Motors battery plants, the policy prohibits its employment of women altogether, unless they can prove they cannot have children.[14]

Womb Control

Although employment policies and legislation aimed at "protecting" women's health have a 150-year history,[15] the employment policies introduced over the past two decades in the United States which are directed at pregnant women or "women of reproductive capacity" have focused on protecting the *fetus* rather than the *woman*. A DuPont medical director, for example, is explicit: "When



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Offers of "protection" for the sake of the health of future generations have restricted women from working in jobs such as vehicle manufacture where men's health is at risk . . .

we remove a woman, it's to protect her fetus".[17] The conceptual separation of a woman from the fetus has been pivotal in enabling companies to discriminate against women, regarding them as "mere vessels" rather than cleaning up the workplace.[18]

"Fetal protection policies" excluding all women assume that all women capable of having children will get pregnant and that once pregnant will carry the fetus to term. Not only do they reduce all women to their wombs; they also ignore other aspects affecting women's fertility, many of them controlled by women, for example, their contraceptive practices, sexual activity, sexual preference, marital status, the fertility of a woman's sexual partner, the number of children she ready has and her wish for children. Corporations implementing these policies effectively appoint themselves as guardians of the fetus, removing control and decision-making over fertility from women workers.

An infamous example of the consequences of a "fetal protection policy" occurred in 1978 when an American Cyanamid factory in West Virginia informed women working with lead-based pigments that they could continue to work only if they could prove that they were unable to bear children. Company officials claimed they were protecting "the most helpless member of society".[19] Five women were sterilized while two who refused the "band-aid operation" were demoted to lower-paying caretaking jobs. Several months later, the restricted departments were closed anyway.

At another American Cyanamid plant, a management memo to workers announcing the exclusion of women of "childbearing potential" concluded:

> "The company realizes that it is a very personal and private matter whether or not a woman cannot become pregnant because of surgical procedures. It must be pointed out, however, that this very personal matter will no longer be private if you are permitted, and choose, to remain in one of the [restricted] departments listed . . . above".[20]

After months of lobbying by the United Steelworkers of America union, the company abandoned the policy, announcing that none of the suspected toxic chemicals were actually used at the plant.

The Unprotected Fetus

In fact, "fetal protection policies" cannot protect the fetus because they do not protect the father. What such policies do is:

> "contribute to a false belief that men are capable of withstanding toxic chemical exposures normally and safely, and are, therefore, the biologically appropriate work force for the higher paying jobs that entail such exposure."[21]

Moreover, policies which exclude pregnant women only — rather than all women — ignore the effects of toxic exposure before a woman conceives and the effects before she knows she is pregnant. For instance, teratogenic effects are most severe (depending on the chemical) during the first eight weeks after conception, the time when most of the human organs develop.[22]

Other inconsistencies in the corporate and state approach to human reproduction belie industry's concern for the fetus. In jobs where women predominate — nursing, health services and other hospital work, dentistry, laundry and cleaning services, textile workers, leather work, food processing, electronics and clerical work involving computer terminals — similar offers of "protection" from reproductive hazards, either for women or their unborn children, have not been forthcoming, even when the chemicals they are confronted with are identical to those in the occupations from which they are barred.[23]

For example, women are excluded from jobs in chemical plants that use benzene and toluene, but not from those in the textile and clothing industries or medical laboratories where the same substances are found in high concentrations. Similarly, women X-ray technicians and other health care workers are exposed to comparable radiation hazards to workers in nuclear power plants from which they are excluded.[24] When evidence emerged in the 1970s that miscarriage and birth defects were associated with maternal exposure to anaesthetic gases during pregnancy, the option of excluding women from working in hospitals and dental surgeries was not proposed.[25] Many studies indicate that the use of computer video display units (VDUs) may be associated with miscarriages, birth defects, and other adverse reproductive effects, yet no one has suggested restricting computer use to men.[26]

This selective application of flawed "fetal protection policies" has more to do with maintaining segregation of work by gender and by race than with concern for future generations. The jobs women predominate in tend to be low-paid, low status, non-unionized jobs, occupations which are also disproportionately filled with workers from racial and ethnic

. . . but such offers have not been forthcoming in employment areas such as laundry work where women are the majority of the workforce.



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minority groups.[27] The "option" of sterilization has been "offered" when women move into non-traditional jobs; it is, in the words of one critic, a "punishment for invading male turf, a coercively imposed alternative to motherhood".[28]

More broadly, it is never suggested that women of reproductive capacity should give up their domestic work, despite the modern home being a major source of reproductive hazards (see below).[29] And despite the rhetoric of concern for "family life", both employers and the state provide little maternity and paternity leave and benefits, and few childcare arrangements.[30]

At Home and Away

As Rosalind Petchesky says, "the ideology of 'fetal rights' has brought us back to the Victorian notion that a woman's . . biology should determine where and whether she may work."[31] Exclusionary policies based on this ideology pit women's interests against those of the fetus and construct women's interests as mothers in opposition to their interests as workers. This construction helps reinforce the notion that women stay at home while men are at work, a notion which has never been a reality for women of the working-class. In the wake of industrialization's separation of paid work from household life, however, it has gained ground as a dominant middle-class white myth.

It is through tacit appeal to this myth that industry has been able to justify paying women low wages or not employing them at all, thereby keeping them at home and dependent on men and the state. For many women, however, as for many men, there is little choice today over whether to enter the paid workforce, as there was not when Charles Dickens wrote in 1869:

> "She was going back [to the lead mill] to get 'took on.' What could she do? Better be ulcerated and paralyzed for eighteen pence a day, while it lasted, than see the children starve".[32]

The decision of the women at the West Virginia American Cyanamid plant to be sterilized "was not a matter of choice, but one of economic necessity", especially when there was a shortage of well-paid jobs. One of the women said, "They don't have to hold a hammer to your head — all they have to do is tell you that it's the only way you can keep your job". Another woman supporting a disabled husband said "I did it because I was scared and I have to have the income" while another, a divorced mother of two children said, "What do you have to do to hold a normal job and support your child?"[33]

Options are fewer still for working-class and non-white women than for middle-class and white women. Today, more women than ever before have to work in the paid labour force and raise children at the same time — many of them as heads of households. The US Equal Employment Opportunity Commission has calculated that if every fertile woman were barred from every setting that might be deemed a potential hazard to the fetus, as many as 20 million US jobs would be affected.

Even were the myth true that women do not undertake paid work but "stay at home", the problem of chemical reproductive hazards would not be resolved because in industrialized societies, the home is as polluted as (if not more, in some cases) the workplace. Chemicals do not respect factory boundaries, but enter the community through air pollution, exhaust emissions and incineration of waste; contamination from the skin, hair and clothes of workers when they return home; leaching into the water supply and soil from landfills; and through consumer products such as household cleaning agents, sprays, paints, microwave ovens, pesticides and food additives.[34]

This suggests that exclusionary policies reflect wider societal attitudes and government policies aimed more at subordinating women politically than at "protecting the fetus" and are "a reaction against women's increasing sexual and economic independence from men, not against their labour force participation, per se".[35]

Johnson Controls — and Discriminates

Despite US legislation prohibiting discrimination on the basis of sex or pregnancy, the courts have usually upheld such policies when they have been challenged by labour unions.[36] In doing so, they have reaffirmed the assumption that women's roles as childbearers and home-bound childcarers supersede their role as paid workers.

In 1984, however, the United Auto Workers challenged a policy introduced two years earlier by Johnson Controls, the largest US manufacturer of lead vehicle batteries, of barring fertile women from exposure to lead. Although company officials maintained that "the issue is protecting the health of unborn children", the Supreme Court ruled in 1991 that the policy was unjustifiably discriminatory, setting a legal precedent.[37] The ruling was heralded as "the most

important sex discrimination case" since the 1964 Civil Rights Act which introduced legislation against sex discrimination.[38]

But was it a victory for women to win the right to be exposed to lead? Without a clean-up of the workplace, equal treatment damages women's health, even if workers' are given full information about the hazards. Moreover, it places the risk and blame for adverse reproductive outcome squarely on the shoulders of individual women. Indeed, as a result of the Johnson Controls decision, some companies are insisting that if women work with hazardous substances, they must accept responsibility for any damage that may result.[39]

The concept of equality upon which the Johnson Controls decision was made is severely limited as it takes no account of reproduction. Using such a legal paradigm merely allows women to have the same right as men to "choose" to poison themselves and their children.

All Men Are Equal — Women Are Different

The dispute over discrimination versus protection draws attention to dilemmas arising from the fact that in some cases a pregnant woman *is* at special risk. In trying to gain access to employment, many US women's groups lobbied for pregnancy to be considered equivalent to any condition or illness which might temporarily disable a man, so as to lessen the impact of practices which use the fact that it is women who become pregnant to women's disadvantage.

While such an approach may be useful in some cases, there are drawbacks: in the case of pregnancy, it prevents women from drawing attention to the special needs they have during pregnancy and breast–feeding and strengthens the perception that pregnancy is a disease.

More generally, it reinforces the idea that male physiology (and social behaviour) is the norm from which women deviate. Equality means being "the *same* as men" rather than encompassing and accepting *difference* without allowing difference to disadvantage and discriminate.[40] As Wendy Chavkin points out, men are never pregnant or breastfeeding:

> "a model based on the male as the norm offers an equality of form only; it does not take into account the physical and social realities of women's lives."[41]

Thus, the assumptions behind "exclusionary policies" and other "protective" legislation are also implicit in the legislation prohibiting discrimination on the grounds of sex.

"No Sex, Please: We're British"

The same societal constructions of women, work and reproduction which led to the apparent absurdities of the Johnson Controls decision lead to similar outcomes in other countries and other fields.

In Britain, the arguments for keeping "protective" legislation[42] have been put forward not by employers but by women's groups and the Trades Union Congress, which have advocated extending it to men. Industry and the Conservative government, meanwhile, have argued for repealing it. The Confederation of British Industry, for example, has differentiated between the interests and social responsibilities of different groups of women, rather than regarding them as a homogenous class, and argued that women should be able to choose whether or not they want to work.

Such proponents of removing protective legislation, however, although marshalling the rhetoric of formal legal equality, seemed less concerned with women's equal employment rights than with reducing the regulatory burden on industry and giving employers more flexibility. Just as in the United States, the issue of what type of work and work environment women and men should engage in was completely side-stepped.

With the passing of the Sex Discrimination Bill in 1986, over the opposition of unions and women's groups, protective legislation restricting the employment of women was repealed, including a ban on working at night and special regulations for factory work. The government continues to assess whether remaining health and safety legislation is a "burden to industry" under an overall policy of deregulation.

Health and Hazards

Those lobbying against the Johnson Controls policy do not accept "a dichotomy between 'equality' and 'protection' . . . but rather . . . a politics concerning reproductive or any occupational health hazards that truly protects all workers, male and female".[43]

In this respect, the practices of Scandinavian countries are a step in the right direction. Taking the issue of reproductive hazards more seriously, these countries tend to employ the precautionary principle by setting exposure limits for hazardous substances very much lower than other countries, and applying the same limits for many substances to men and women.

What is needed, however, is not just this sort of practice and more research into the effects of potential reproductive hazards. Nor is it just enforcement of regulation on hazardous substances. An informed debate is also required on whether we *need* the products whose manufacture involves hazardous substances. Without such a debate, it is not sufficient to state that "we are all totally dependent on chemicals," nor to decide that "there is no turning back to man-made [sic] chemical-free existence."[44]

Neither is it sufficient for industry to state that reduction or substitution is technically impossible or too expensive. Greenpeace are now arguing that whole classes of chemicals, such as organo–chlorines, should be phased out rather than trying to identify what causes what. As occupational health worker Carolyn Bell pointed out, "If scientists can speak of developing colonies for living in outer space . . . there is no such excuse as 'technically infeasible'".[45]

An EEC-funded campaign, Subsprint, has shown that organic solvents used in printing can be substituted with vegetable oil-based products.[46] Digital Equipment Corporation eliminated ethylene glycol ethers, solvents commonly used to make micro-chips, from its semiconductor manufacturing processes by early 1990 because women working with these solvents appear to have increased rates of miscarriage. But other companies, such as IBM, are still reviewing the hazards while warning their workers of them.

"Scientists and health officials should address existing hazards and their impact on human health, including reproduction, with the same zeal and fervour as is seen in creating new and better things. Employment will not be curtailed — just channelled in new directions."[47]

Third World Exports

Such an approach is critical if industry is not simply to pack up in the North and relocate to the countries of the South or

Eastern Europe in response to environmental awareness and public pressure in the North. As demand in the North for chlorine products, such as CFCs, chlorinated solvents, pesticides and pulp bleaching, slackens or is restricted, factories are being set up in Asia, the Pacific Rim and Latin America.[48]

In the *maquiladoras*, just across the border from the United States, where most of the Mexican workers are young women, a silent compact between US corporations and the Mexican government "amounts to a waiver of responsibility for the safe use of toxics in the workplace". Reproductive health hazards are expected to worsen as electronics is predicted to be the fastest-growing *maquiladora* industry, along with companies involved in chemical production and finishing products which require cleaning, priming and painting.[49]

In the former Eastern Germany, where 63 per cent of women are unemployed, women are being sterilized to be eligible for jobs where employers stipulate that they must guarantee not to become pregnant.[50]

"The exlcusionary approach will not be abandonded as long as employers continue to view all reproductive issues as strictly 'female' problems that the workplace need not accomodate, or until they are forced to pay out large damage awards for deformities suffered by children whose fathers, rather than mothers, have been exposed to hazardous substances."

Reclaiming Work and Home

In addition to recasting reproductive hazards as a problem of substances rather than workers, the gendered segregation of work and childraising need to be examined as well. Before the process of industrial development divided work and home, production was integrated with home and family life for women *and* for men. Women's work, particularly in agriculture, textiles and health, was indispensable to the household economy — and regarded as such. For both mothers and fathers, for young and old, the demands of work and childcare could be adjusted to reduce conflict of choice. Reclaiming the freedom of the household economy — the *oikos* of "economics" and "ecology" — requires addressing issues not only of how we work, but where we work and who controls that work. As Rosalind Petchesky points out:

> "Sexuality, childbearing and motherhood have always existed in a complex, interactive relationship with the sexual division of labour in production. Different aspects of this relationship, however, change historically and affect women differently with the development of divisions based on class, race and sexual orientation".[51]

These changes are reflected in the use of the English language: "To 'father' a child suggests . . . to provide the sperm which fertilizes the ovum. To 'mother' a child implies a continuing presence, lasting at least for nine months, more often for years."[52] Usage is changing still further with the advent of new reproductive technologies, particularly *in vitro* fertilization (IVF) as the biological and genetic aspects of both words take precedence over the social aspects of either.

Genetic Controls

Indeed, some of the consequences of the extensive use of hazardous chemicals provide a convenient excuse for IVF. Since the birth of the first "test-tube" baby in 1978, the technology has been promoted as a solution to infertility for women and, increasingly, for men. (Sperm dysfunction is the largest cause of couple infertility.[53]) With the worldwide overall success rate of IVF — measured in "take home babies" — at around 10 per cent, the technology does not "solve" infertility for some 90 per cent of women or couples accepted for treatment.

While the medical establishment has assisted some individual women (and men) to have their "own" children, IVF deflects attention from the chemical- and drug-induced causes of infertility.[54] IVF in fact circumvents infertility with a "technical fix" rather than treating it, allowing control over human reproduction to pass still further away from women and enabling genetic experimentation and engineering.

Exclusionary policies themselves also have genetic implications; the principle they set, that health and safety can be dealt with by removing workers rather than the hazard, can be applied to other "classes of workers" besides women. Genetic screening, particularly of ethnic minorities, on the grounds that some people may be especially susceptible to the effects of substances, is a prime example of employment discrimination.

In the early 1980s, Dow Chemical and DuPont were reported to have tested thousands of US workers to determine if any of their genes made them vulnerable to certain chemicals in the workplace. Companies have questioned the "genetic acceptability" of hiring blacks, who may have the sickle-cell anaemia trait, as well as of employing Mediterranean and Middle Eastern people, Chinese, Filipinos and East Indians in which similar genetically-related blood disorders occur.[55]

As with the exclusion of women, the exclusion of workers supposedly at high risk genetically supports the false belief that those who are not excluded are safe.

No Children of Men

P. D. James's thriller *The Children of Men* is set in the year 2021 when there is apparent universal male infertility: "The last human being to be born on earth [was born] in a Buenos Aires hospital at two minutes past three Western time on 19 October 1995."[56] The narrator states that "Western science and Western medicine haven't prepared us for the magnitude and humiliation of this ultimate failure."

The failure he refers to is not infertility itself but the inability to discover its cause. Science alone is unlikely ever to be able to find the cause of such disorders since, as Elaine Draper says:

> "corporate and government decisions about which [employment and 'protection'] policies are chosen and how they are carried out will depend only in part on scientific evidence of risks. They will also be shaped by the social and political terrain on which employment and medical decisions are made . . . The control of reproductive hazards in the workplace is not simply a question of policy. It is largely a question of power."[57]

This, rather than the question of how acceptable reproductive health risks are, is the question that needs to be addressed.

Notes and References

1. Draper, E., "Fetal Exclusion Policies and Gendered Constructions of Suitable Work", *Social Problems*, Vol. 40, No. 1, February 1993, p.91.
2. Chivian, E., McCally, M., Hu, H. and Haines, A., *Critical Condition: Human Health and the Environment*, The MIT Press, Massachusetts, October 1993, p.83; Paul, M. and Kurtz, S., *Reproductive Hazards in the Workplace: Syllabus for clinicians*, Occupational and Environmental Reproductive Hazards Center at the University of Massachusetts Medical Center, April 1990, p.1.
3. McKechnie, S., "A Trade Union View of Reproductive Health," in Chamberlain, G. (ed.), *Pregnant Women at Work*, The Royal Society of Medicine and The Macmillan Press Ltd, London 1984, p.193. Another difficulty is actually detecting adverse effects, as they may go unnoticed, for example, early miscarriages. In addition, some adverse effects caused by chemicals are not unusual; an average 10 to 20 per cent of recognized pregnancies and three times as many unrecognized pregnancies end in miscarriage, while two to three per cent of newborns have major congenital abnormalities. Multiple exposure to chemicals and to other biological and physical reproductive hazards mean that a simple correspondence between a single exposure and a particular effect has seldom been identified. This contrasts with the drugs thalidomide and diethylstilbestrol (DES), the effects of which — truncated limbs and vaginal cancer in offspring respectively — are rare other than through exposure to these drugs.
4. Fletcher, A. C., *Reproductive Hazards of Work*, Equal Opportunities Commission, Manchester, 1985, sponsored by the Association of Scientific, Technical and Managerial Staffs (ASTMS), p.iv.
5. As sperm cells are produced continuously in the adult man — initial cell division in the testes to the formation of mature sperm cells lasts about 74 days — interference with sperm cell development can reduce their number and lead to deformed, genetically abnormal or slower sperm. A woman, however, is born with all her "egg" cells which are formed during the fetal stage.
6. Hatch, M., "Mother, Father, Worker: Men and Women and the Reproductive Risks of Work" in Chavkin, W., *Double Exposure: Women's Health Hazards on the Job and at Home*, Monthly Review Press, New York, 1984, pp.161-179.
7. Johnson, M., "Did I begin?", *New Scientist*, 9 December, 1989, pp.39-42.
8. Draper, E., op. cit.1, p.93.
9. Hatch, M., op.cit.6; Fletcher, A.C., op.cit.4, pp.7-8.
10. Scott, J.A., "Keeping Women in Their Place: Exclusionary Policies and Reproduction" in Chavkin, W., op. cit. 6, p.183.
11. DuPont, however, instituted a policy barring only women of childbearing capacity from exposure to ethylenethiourea, even though company officials acknowledged it can cause thyroid cancer in men and women. Draper, E., op. cit.1, p.93.
12. Paul, M., Daniels, C. and Rosofsky, R., "Corporate Response to Reproductive Hazards in the Workplace", *Am. Journal of Ind. Medicine*, 16, 1989, pp.267-290.
13. Draper, E., op. cit.1, p.93.
14. Draper, E., op. cit.1, p.92; Scott, J.A., op. cit. 10, p.180.
15. See Kenney, S. J., "The Historical Context for Exclusionary Policies", *For Whose Protection? Reproductive Hazards and Exclusionary Policies in the United States and Britain*, University of Michigan Press, Ann Arbor, 1992, pp.11-58.
16. Extracted from Draper, E., op. cit.1. For more information, see Barlow, S.M. and Sullivan, F.M., *Reproductive Hazards of Industrial Chemicals*, Academic Press, London 1982; Kenen, R. H., *Reproductive Hazards in the Workplace: Mending Jobs, Managing Pregnancies*, Harrington Park Press (The Haworth Press, Inc), 10 Alice Street, Binghamton, New York 13904-1580; and Paul, M. and Kurtz, S., op. cit.2.
17. Draper, E., op. cit.1, p.96.
18. Draper, E., op. cit.1, p.96. Sally Kenney points out that once women are mere vessels, they can be considered as separate from the fetus and capable of behaving in ways that endanger it. "We can only have this icon or symbol of a disembodied fetus . . . if we are thinking of pregnant women as empty space." Kenney, S. J., op. cit. 15.
19. Draper, E., op. cit.1, p.96
20. Scott, J.A., op. cit. 10, p.185.
21. Draper, E., op. cit.1, p.101.
22. After the eighth week, fetal development is mainly growth, and development of the central nervous system, (which can be severely affected by lead)
23. Petchesky, R., "Workers, Reproductive Hazards, and the Politics of Protection: An Introduction", *Feminist Studies*, Volume 5, No. 2, Summer 1979, p.239; Draper, E., op. cit.1, p.94.
24. Draper, E., op. cit.1, pp.94-5.
25. Fletcher, A.C., op.cit. 4, p.vi; Murray, R., "The Hazards of Work in Pregnancy", in Chamberlain, G. (ed.), op. cit.3, pp.31-2; McKechnie, S., op. cit. 3, pp.198-9.
26. London Hazards Centre, VDU Work and the Hazards to Health, London Hazards Centre Trust Limited, London, August 1993.
27. Petchesky, R., op. cit. 23, p.234. See also Bullard, R.D. (ed.), *Confronting Environmental Racism: Voices from the Grassroots*, South End Press, Boston, 1993.
28. Petchesky, R., op. cit. 23, p.237. Sterilization has frequently, however, been forced on black women and women of ethnic minorities when they come into contact with the health services.
29. For more information on the arbitrary divide between workplace and home as far as human reproduction is concerned, see Chavkin, W., op. cit. 6 and Kenen, R. H., op. cit. 18.
30. Chavkin, W., "Walking a Tightrope: Pregnancy, Parenting, and Work" in Chavkin, W., op. cit. 6, pp.196-213..
31. Petchesky, R., op. cit. 23, p.239.
32. Hunt, V. R., "A Brief History of Women Workers and Hazards in the Workplace," *Feminist Studies*, Volume 5, No. 2, Summer 1979, p.274.
33. Scott, J.A., op. cit. 10, p.180.
34. Draper, E., op. cit.1, p.91; Chavkin, W., "On the Homefront: Women at Home, and in the Community", in Chavkin, W., op. cit. 6, p.215.
35. Petchesky, R., op. cit. 23, p.236.
36. Although in general "protective" legislation and practices violate Title VII of the 1964 Civil Rights Act and the 1978 Pregnancy Discrimination Act, many areas of employment rights pertaining to pregnancy and reproductive hazards are still ill-defined. Draper, E., op. cit.1, 98 and Kenney, S. J., op. cit. 15.
37. For more information on the Johnson Controls case, see Kenney, S. J., op. cit. 15.
38. Bertin, J. E., "People Protection, Not 'Fetal Protection'", *New Solutions*, Vol. 2, No. 1, Summer 1991, pp.5-9.
39. Fear of compensation is an additional corporate motive behind "fetal protection policies". US industry is wary of the risk of compensation if birth deformities can be traced to occupational exposure, seeing ominous trend in the right of a child to sue third parties for prenatal injuries. Lawsuits have been brought for reproductive damage arising from men's exposure to DBCP, Agent Orange and atomic weapons testing. Wendy Chavkin points out, however, that the "corporate push to maximize profits intersects neatly with ideological sexism".
40. Kenney, S. J., op. cit. 15.
41. Chavkin, W., op. cit.30, p.203.
42. The issue of reproductive hazards has largely been marginal and exceptional in Britain, in part because of a lesser propensity to litigation, but also because of the decisions made by the government, industry and the judiciary. See Wilson, G. K., *The Politics of Safety and Health: Occupational Safety and Health in the United States and Britain*, Clarendon, Oxford, 1985 and Kenney, S. J., op. cit. 15.
43. Petchesky, R., op. cit. 23, p.239.
44. Richardson, M., "Toxicology: The Essentials for Mankind's Survival", address given at International Environment '93, organized by Labmate Ltd, 12 Alban Park, Hatfield Rd, St Albans, Herts AL4 0JJ, UK.
45. Bell, C., "Implementing Safety and Health Regulations," *Feminist Studies*, op. cit.32, p.299.
46. *The Greening of the UK Print Industry*, September 1993, School of Applied Science, University of the South Bank 103 Borough Road, London SE1 0AA, UK.
47. Abdul-Karim, R.W., "Women Workers at Higher Risk of Reproductive Hazards," in Chamberlain, G. (ed.), op. cit.3, p.43.
48. Bruno, K. and Greer, J., "Chlorine industry expansion: The new threat from the North", *Third World Resurgence*, No. 34, June 1993.
49. Kochan, L., "The Maquiladoras and Toxics: The Hidden Costs of Production South of the Border", manuscript, Oregon Dept. of Environmental Quality.
50. Murray, I., "Employers encourage women to be sterilised," *The Times*, 22 May, 1992.
51. Petchesky, R., op. cit. 23, p.233.
52. Rich, A., *Of Woman Born: Motherhood as Experience and Institution*, Virago, London 1977. p.12.
53. Mason, M. C., "Infertility: The Problem with Sperm", *Everywoman*, February 1993; see also Mason, M. C., *Male Infertility: Men Talking*, Routledge, 1993.
54. Hynes, P. H., *The Recurring Silent Spring*, Pergamon Press, Oxford, 1989. p.211.
55. Scott, J.A., op. cit. 10, p.183; See also Hubbard, R. and Wald, E., *Exploding the Gene Myth*, Beacon Press, Boston, 1993.
56. James, P. D., *The Children of Men*, Faber and Faber, London, 1992.
57. Draper, E., op. cit.1, p.101.

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An anti-GATT banner at a demonstration outside grain merchant Cargill's offices in London, October 1993.

Cakes and Caviar?

The Dunkel Draft and Third World Agriculture

by
The Editors

Trade liberalization has been promoted as a "win/win situation" for both North and South. Yet a series of reports by the World Bank and the OECD make it clear that it will be rich, industrialized countries that gain at the expense of the poor. GATT's clauses on agriculture illustrate how trade liberalization is being used to restructure the global economy to the further advantage of the North.

"Food security is not grain in go-downs. It is dollars in the pocket . . . If farm exports earn us enough money, then like Marie Antoinette, I can provide not only bread but cake and caviar."
Indian Agriculture Secretary, M.S.Gill

"Very few people in sub-Saharan Africa have heard of the Uruguay Round, yet it will sound the death knell for Africa. It is good to go along to see how you are being prepared for sacrifice."
Thomas Ogada, Kenyan Representative to the UN at Geneva

Established in 1948 out of post-War attempts to reconstruct the world economy, the General Agreement on Tariffs and Trade — GATT — is the main forum for laying down the rules and standards of international trade.[1] GATT's rules — and its scope — are set through periodic multilateral negotiations, the latest being the Uruguay Round which was launched in September 1986 at Punta del Este, with 105 countries participating.

The seven previous "rounds" of GATT negotiations have had as their main objective "the substantial reduction of tariffs and other barriers to trade". The Uruguay Round, however, is more ambitious, aiming to liberalize four areas of economic activity previously considered the exclusive domain of national legislation: trade in services, intellectual property rights, international investment flows, and agriculture. A package of proposals — known as the Draft Final Act (DFA) or "Dunkel Draft" after its chief negotiator, Arthur Dunkel — is now on the table and a deadline of 15 December, 1993 has been set for parties to agree on the text. No single element of the DFA can be considered as settled until the total package is agreed.

The latest round of GATT is being promoted by mainstream economists in both North and South as a way to increase wealth in both industrialized and developing countries: by stripping away national "protectionist" measures and opening up markets to North and South alike, it is claimed, the resulting boost to world trade will increase "global income" by $213 billion every

year from 2002 onwards — an increase which economists blithely assume will automatically translate into benefits for all. That assumption rests in part on the belief that by concentrating resources within each country into the most productive and competitive sectors, free trade will enable countries to maximize their "competitive advantage"; in part on the belief that increased trade must in itself be "good" — "people will not buy or sell unless they perceive it to be in their own interests",[2] *ergo* the more people trade, the better off they will be.

Neither belief, however, holds true. Firstly, the nature of "comparative advantage" in the modern world has more to do with *absolute price advantage* than, say, the differences in climate often cited in economics textbooks: those who can keep wages lowest and minimize intrusive social and environmental regulations will reap the highest profit and gain the greatest market share for their goods. In a world where markets have been prised open to all-comers, such cut-and-thrust business practices benefit those who own successful companies, but leave workers and the environment ill-protected. Secondly, on the global market, it is not individual buyers and sellers who set the national and international rules that determine *who* benefits from trade: that role has passed to the most economically powerful governments and their political allies, notably the transnational companies that control 80 per cent of world trade.

"Indonesia, Africa and the Mediterranean countries will lose some $7 billion a year in earnings."

It is not surprising then, that the Dunkel Draft reflects these interests. Indeed, throughout the negotiations for the Uruguay Round, concerns raised by Third World countries — the issues of debt and declining terms of trade, for example — have been declared "off limits" or relegated to the status of side show.[3] Meanwhile, the industrial countries, led by the US, have imposed an agenda tailored to their strategic needs, using the Uruguay Round "to restructure the rules of world trade around the interests of powerful transnational corporations, [forcing] developing countries to open up key economic sectors . . . and to surrender a large degree of their sovereignty in economic policy to foreign companies and international institutions."[4]

The result is a trading regime that, whilst protectionist of corporate interests, will pauperize millions in the South, increase environmental degradation and strip away the rights of national governments to act to protect their citizens' interests. The chief beneficiaries will be the Northern industrialized countries: indeed, as a joint report by the World Bank and the OECD recently pointed out, two-thirds of the expected increase in "global income" attributable to GATT will accrue to the OECD countries where just one-third of the world's people live.[5] In Indonesia, sub-Saharan Africa, North Africa and the Mediterranean countries, on the other hand, real incomes are expected to decline — together they will lose some $7 billion a year in earnings. The GDP of African countries is expected to decline by between 0.2 and 0.5 per cent.

Such losses are due in large part to GATT's clauses on agricultural liberalization — currently the focus of opposition by peasant movements in many parts of the world. These clauses — particularly those covering reductions in domestic support for farmers and access to markets — are illustrative of the New World Order that GATT seeks to impose.

Reducing Domestic Support

The Dunkel Draft's claim that it will eliminate unfair protective practices is based on two sets of measures: a reduction of domestic support and a reduction of export subsidies. It requires developing countries to reduce their domestic support for farmers by 13.3 per cent in the next 10 years and industrialized countries to reduce theirs by 20 per cent in the next six years. This covers subsidized prices for producers and subsidies for inputs such as seed, fertilizer and credit. In addition, Northern countries will be required to make 36 per cent cuts in direct export subsidies, while developing countries will be required to make 24 per cent cuts. This, GATT claims, will put an end to the dumping of subsidized food on the world market.

At first sight, both these measures might appear to favour Third World farmers, but there is a catch: the ruling on domestic support does not apply to "delinked" payments — payments which are not directly connected to the farmer's level of agricultural output. Consequently, it covers neither the income support payments made to EC farmers nor the "deficiency" payments made to US farmers, which compensate for the low price paid for their grain by multinational trading companies.[6]

In the US, the floor prices for most commodities are set by the government and reflect the prices that the big grain corporations advise are competitive: generally, they are well below the cost of production. The government then pays farmers a "deficiency payment" to make up the difference between the low price paid them and their costs of production. In effect, these subsidies are export subsidies under another name, which enable the grain companies "to buy cheap" and thus to undercut competitors in foreign markets. The chief beneficiaries of such delinked payments are not the farmers who receive them but the six large grain companies that control global trade in grain — Cargill, Continental Grain, Louis Dreyfus, Bunge, Andre and Co., and Mitsui/Cook. The US system of "delinked" payments has been described as "a money-laundering scheme . . . engineered by and for the grain trade, enabling traders to increase their profits by cutting returns to producers."[7]

The OECD estimates that such payments allow the EC, the USA and Canada to subsidize their agriculture to the tune of 49 per cent, 30 per cent and 41 per cent respectively.[8] These permitted kinds of income support systems are too expensive for many Third World governments to be able to afford. The fact that they are exempted from the Dunkel Draft strictures makes a mockery of the claims that industrial countries will no longer be able to dump cheap grain on the Third World.

Multinationals also benefit from other exemptions on domestic subsidies in the Dunkel Draft. Developing countries, though forced to cut direct export subsidies, will be permitted to subsidize "marketing and promotion services" and the capital costs of such infrastructure programmes as "electricity reticulation, roads and other means of transport, market and port facilities, water supply facilities, dams and drainage schemes, and infrastructural works associated with environmental programmes."[9] As the Third World Network notes in a briefing document on the Dunkel Draft:

> "It is not the case that subsidies are being removed. They are instead being redirected from the poor and needy producers and consumers towards the economically powerful corporations and their rich consumers. The Dunkel Draft quite clearly shifts subsidies from those who need them — farmers — to the corporate sector — to private

storage facilities, food processors like Pepsi, and transporters and shipping agents like Cargill."[10]

Government-sponsored research is also exempted: again, it is likely that the beneficiaries will be the corporate sector. In India, for example, the thrust of government research in agriculture is towards encouraging research into export crops and food processing technologies of benefit to the export trade.[11]

A Minimum Volume of Imports

In addition to cuts in subsidies, the Dunkel Draft decrees that developing countries — all except the very poorest — must open their markets to a minimum level of two per cent of total domestic food consumption, rising to 3.3 per cent over a period of 10 years. Industrial countries must do the same, but to a minimum of three per cent, rising to five per cent.

Again, this might seem advantageous for the developing countries, which are permitted, percentage-wise, a greater measure of protection for their home markets. But the figures are deceptive. Firstly, the Third World represents a far larger market for staple foods than the North: two per cent of Third World consumption represents a wider market than three per cent of Northern markets. Secondly, agriculture represents a far larger share of the Third World's total budget than it does of the developing world's. Agriculture represents 18 per cent of Tanzania's GNP, but only 0.5 per cent of the USA's[12] — a two per cent penetration of Tanzania' agricultural market is a far greater slice of the country's total economy than a three per cent penetration of the USA's agricultural market. Thirdly, the foods exported by the North are essential foods — principally grains — and will therefore compete directly with staple foods in the South: the foodstuffs exported by the South, however, are generally luxury items and, by and large, do not affect the price of staple commodities.

Furthermore, even though the world price of many agricultural commodities is expected to rise, the food exports from the North will still have a price advantage due to the hidden export subsidies in the form of "delinked" farm support. Such exports will therefore continue to undermine the price of locally-produced food staples in the South and threaten the livelihoods of millions of farmers, leaving them even poorer and more vulnerable to famine and malnutrition.[13] For those living in cities, too, food import dependency also poses "grave food security risks, since it exposes urban populations to volatile world food markets."[14]

In addition, increased importation of food can only exacerbate the balance of payment pressures experienced by many Third World countries. As a representative of the Indonesian Ministry of Agriculture comments:

> "To open up our internal market by three per cent for rice means importing 1.5 million tons each year. At a time when debt servicing takes up 34 per cent of our export earnings, to devote extra foreign exchange to importing rice would weigh heavily on our balance of payments."[15]

Indeed, behind GATT's insistence on opening up domestic food markets, many see the hand of US foreign policy — fearing that the US is using the Uruguay Round "to reinforce food import dependence."[16] Since the 1960s, US politicians have openly stated that food is a political weapon; Vice-President Hubert Humphrey once declared:

> "If you are looking for a way to get people to lean on you and be dependent on you, in terms of their co-operation with you, it seems to me that food dependence would be terrific."



The Irish famine of 1847-48. "The face of the country is covered with ripe corn while the people dread starvation," wrote a contemporary official. "The grain will go out of the country." Throughout history, over-reliance on exports has been a recipe for food insecurity and famine.

Today, the language is more muted, but the message is the same. As John Block, then US Agriculture Secretary, put it at the outset of the Uruguay Round:

> "The idea that developing countries should feed themselves is an anachronism from a bygone era. They could better ensure their food security by relying on US agricultural products, which are available, in most cases at a lower cost."[17]

Politicians in such "newly-industrialized" countries as South Korea, which now threaten the US economically, may come to rue the day that they opted for "food security through trade" — "dollars in the pocket" rather than "grain in go-downs". In Korea, food imports so undermined food production that the level of self-sufficiency in wheat dropped from 27 per cent in 1965 to six per cent in 1983, while in beans it dropped from 100 per cent to 25.7 per cent. Korea is now the third highest importer of agricultural products from the US, and has thus placed itself in a highly vulnerable bargaining position.[18]

The Export Myth

The popular message that a policy of liberalization and increased trade will benefit the poor of the Third World, rather than its élites, is a myth. The extent to which a country benefits from trading is regulated not so much by the volume of its trading as by the terms under which it trades. Over the last

fifteen years, the terms of trade for Third World countries have declined drastically, in conjunction with the enforcement of increasingly intensive Structural Adjustment Programmes which apply unilaterally more or less the same measures that GATT would apply globally — and enshrine in international law.

Often the decline in terms of trade is directly linked to these programmes. In Ghana, the main thrust of structural adjustment was towards reducing imports and increasing exports, particularly of cocoa. Unsurprisingly, several other countries throughout the world were applying much the same policies, with the result that the cocoa price fell by 48 per cent between 1986 and 1989, leaving Ghana's terms of trade in 1990 only 75 per cent as favourable as they were in 1987.[19]

An export-driven decline in the terms of trade for the South implies a corresponding improvement in those of Northern countries, whose cartel of powerful grain companies manipulate agricultural prices in a manner not altogether dissimilar to OPEC's control over oil prices in the 1970s. Meanwhile, within the Third World, the benefits are unlikely to reach those who actually grow the food that will be exported. It is multinationals rather than peasant farmers who dominate the export economy — in Brazil, for example, they own more land than all the country's peasants put together. As the export economy grows, so farmers will have little option but to tie themselves to multinational interests in order to survive, growing crops by contract for companies with the facilities to market them abroad. Already in India, the richer farmers in Karnataka are taking up contracts to grow maize and sunflower for Cargill, whilst those in the Punjab are growing tomatoes and potatoes for Pepsi. The Indian administration may have more dollars in its pocket, but it will find itself, in its turn, in the pocket of Northern multinational companies.

An increase in exports will also involve less production for domestic consumption. A 1990 report, published jointly by the World Bank and the OECD, calculated the effects of India's export-oriented structural adjustment policy and forecast that by the year 2000, the amount of agricultural produce consumed by humans would decrease by 26.2 per cent; that more calories and protein would be produced but less consumed per capita; and that the number of hungry would be 5.6 per cent higher than would have been the case without liberalization.[20]

Recognition of these likely effects has not prevented the formulators of the Dunkel Draft from forbidding countries to impose bans upon the export of food, even in years of domestic shortage. This is potentially nothing short of a sentence of mass execution. It is common knowledge that famines are caused less by natural dearth than by inefficient and inequitable distribution of food. Thousands died in Ireland in the 1840s while Irish grain continued to be exported to England, just as thousands died in Ethiopia in the 1970s and 1980s, while Ethiopian lentils, coffee, cotton and beef continued to be exported to Europe.

Nobody ought to be more aware of this than M.S. Gill, Agriculture Secretary of India, a country that has had more than its share of famine. The Bengal famine of 1942 killed over two million people; it occurred at a time, before Independence, when India's market was highly liberalized, producing cash crops such as cotton, tobacco, tea, coffee, jute, indigo and opium; and it was in the areas devoted to cash crops that the famine was felt worst.

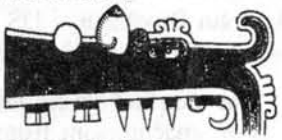
Unfortunately, Mr. Gill's knowledge of history is hazy. Comparing himself to Marie Antoinette, he promises the people of India "cakes and caviar". He would do well to recollect that ill-fated monarch could not even provide bread — which was what the people demanded — let alone cake.

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References

1. Coote, B., *The Trade Trap: Poverty and the Global Commodity Markets*, Oxfam Publications, Oxford, 1992, p. 105.
2. Huhne, C., "Not Everyone Stands to Get Fat on GATT", *The Independent on Sunday (Business Section)*, 3 October 1993, p.10.
3. Watkins, K., *Fixing the Rules: North-South Issues in International Trade and the GATT Uruguay Round*, Catholic Institute for International Relations, London, 1992, p.2.
4. Ibid.
5. Goldin, I., Knudsen, O. and van der Mensbrugghe, D., *Trade Liberalisation: Global Economic Implications*, OECD/World Bank, Paris, 1993.
6. Watson, R., "The GATT Negotiations on Agriculture: What are the Implications for Developing Countries?", *CAP Tales*, Farmer's Link, Norwich, September 1993, p.3.
7. Ahlberg, B., "Cargill: The Invisible Giant", *Multinational Monitor*, July-August 1988. For further discussion, see Ritchie, M., "Free Trade versus Sustainable Agriculture", *The Ecologist*, Vol. 22 No. 5, p.221.
8. OECD, *Trade Liberalisation: What's at Stake*, Paris, 1990, p.33.
9. Draft Final Act, Section L: Annex 2, "Domestic Support — The Basis for Exemption from the Reduction Commitments", paragraphs 2 (vi) and (vii), p.L14.
10. Third World Network, *Agriculture in Dunkel's Draft of GATT: A Critical Analysis*, TWN, New Delhi, 1993, p. 21.
11. Ibid.
12. World Bank, *World Development Report*, Oxford, 1992, pp. 218-219 and 224-225.
13. Watkins, K., op. cit. 3, p.63.
14. Ibid., p.63.
15. Watson, R., op. cit. 6.
16. Watkins, K., op. cit. 3, p.70.
17. Watkins, K., op. cit. 3, p.70.
18. Third World Network, op. cit. 10, p. 25.
19. Ibid., p. 22.
20. Frohberg, K., Fischer, G. and Parikh, K.S., "Would Developing Countries Benefit from Agricultural Trade Liberalization in OECD Countries?", in Goldin, I. and Knudsen, O. (eds.), *Agricultural Trade Liberations: Implications for Developing Countries*, OECD and World Bank, Paris, 1990.

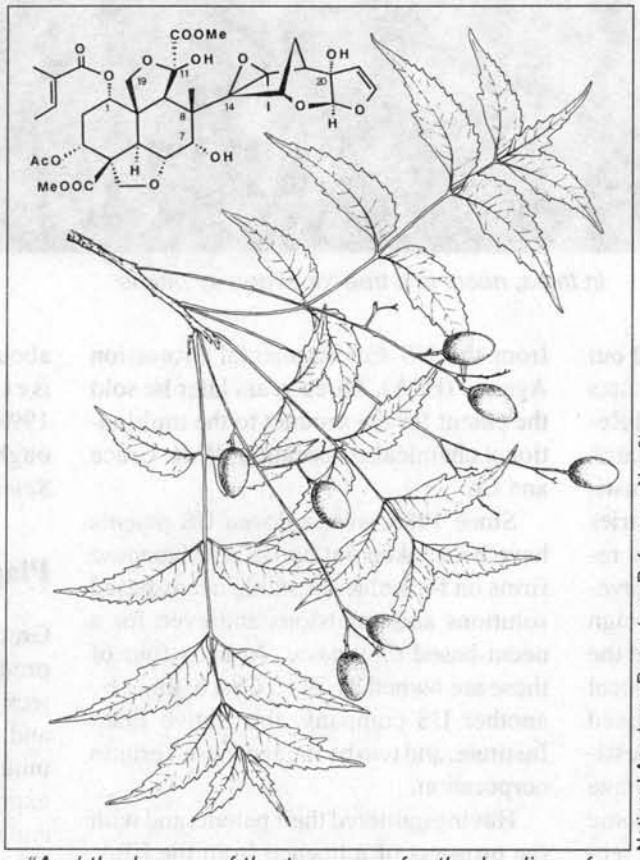
Intellectual Piracy and the Neem Tree

by
Vandana Shiva and Radha Holla-Bhar

Although the neem tree has been used for centuries by Indian farmers and doctors, its chemical properties have never been patented in India. Recently , however, patents to exploit neem oil products have been taken out in the United States by multinationals. Recognizing the threat that such patents pose to local independence — particularly under the proposed GATT agreement which requires all signatory nations to introduce a US-style regime of "intellectual property rights" — farmers and scientists in India have mounted a vigorous campaign to prevent indigenous knowledge from being pirated by multinationals.

Over the last year Indian farmers have staged one mass demonstration after another against the proposed GATT Uruguay Round agreement. In March about 200,000 gathered in Delhi demanding, among other things, that the draft treaty — known colloquially as "the Dunkel draft" after chief negotiator, Arthur Dunkel — should be translated into all Indian languages. On 2 October, about half a million converged upon Bangalore to voice their fears about the impending legislation, aware of the threat that GATT poses to their livelihoods, by allowing multinational organizations to enter Third World Markets at their expense.

In particular, many of them have begun to question the Dunkel Draft's call for an international harmonization of property rights legislation. On recent demonstrations, protesters carried twigs or branches of neem, a tree found throughout the drier areas of India. Several extracts of neem have recently been patented by US companies, and many farmers are incensed at what they regard as intellectual piracy. The village neem tree has become a symbol of Indian indigenous knowledge, and of resistance against companies who would expropriate this knowledge for their own profit.



National Academy Press (see Reference No. 3)

"And the leaves of the tree were for the healing of the nations." Was the prophet referring to neem . . . or its chemical constituent, Azadirachtin?

A Tree For All Seasons

Of all the plants that have proved useful to humanity, a few are distinguished by astonishing versatility. The coconut palm is one, bamboo another. In the more arid areas of India, this distinction is held by a hardy, fast-growing evergreen of up to 20 metres in height — *Azadirachta indica*, commonly known as the neem tree.

The neem's many virtues are to a large degree attributable to its chemical constituency. From its roots to its spreading crown, the tree contains a number of potent compounds, notably a chemical found in its seeds named azadirachtin. It is this astringency that makes it useful in so many fields:

- **Medicine**

Neem is mentioned in many ancient texts and traditional Indian medical authorities place it at the pinnacle of their pharmacopeia. The bark, leaves, flowers, seeds and fruit pulp are used to treat a wide range of diseases and complaints ranging from leprosy and diabetes to ulcers, skin disorders and constipation.

- **Toiletries**

Neem twigs are used by millions of Indians as an antiseptic tooth brush. Its oil is used in the preparation of toothpaste and soap.

- **Contraception**

Neem oil is known to be a potent spermicide and is considered to be 100 per cent effective when applied intravaginally before intercourse. Intriguingly, it is also taken internally by ascetics who wish to abate their sexual desire.[1]

- **Timber**

Besides being hard and fast growing, its chemical resistance to termites makes neem a useful construction material.

- **Fuel**

Neem oil is used as lamp oil, while the fruit pulp is useful in the manufacture of methane.

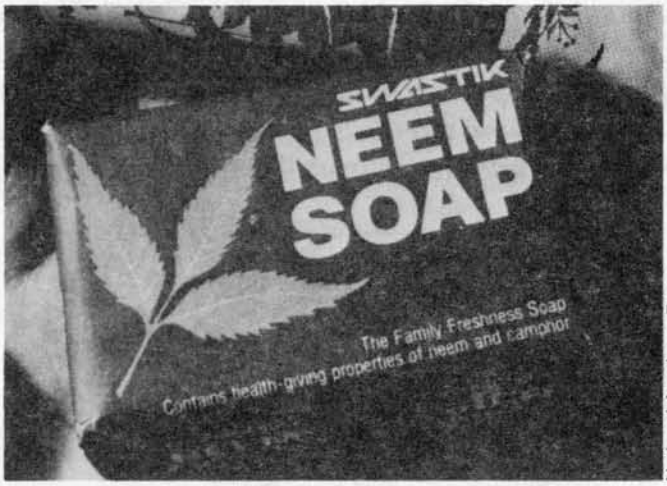
- **Agriculture**

The *Upavanavinod*, an ancient Sanskrit treatise dealing with forestry and agriculture, cites neem as a cure for ailing soils,

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plants and livestock. Neem cake, the residue from the seeds after oil extraction, is fed to livestock and poultry, while its leaves increase soil fertility. Most importantly, neem is a potent insecticide, effective against about 200 insects, including locusts, brown plant-hoppers, nematodes, mosquito larvae, Colorado beetles and boll weevils.

These properties, and others, known to Indians for millennia, have led to the tree's being called in Sanskrit *Sarva Roga Nivarini*, "the curer of all ailments", or in the Muslim tradition, *Shajar-e-Mubarak*, "the blessed tree". Access to its various products has been free or cheap: there are some 14 million neem trees in India and the age-old village techniques for extracting the seed oil and pesticidal emulsions do not require expensive equipment. A large number of different medicinal compounds based upon neem are commonly available.



National Academy Press

In India, neem is a tree for everyday needs . . .

In the last seventy years, there has been considerable research upon the properties of neem carried out by over 20 Indian scientific institutes ranging from the Indian Agricultural Research Institute and the Malaria Research Centre to the Tata Energy Research Institute and the Khadi and Village Industries Commission (KVIC). Much of this research was fostered by Gandhian movements, such as the Boycott of Foreign Goods movement, which encouraged the development and manufacture of local Indian products. A number of neem-based commercial products, including pesticides, medicines and cosmetics, have come on the market in recent years, some of them produced in the small-scale sector under the banner of the KVIC, others by medium-sized laboratories. However, there has been no attempt to acquire proprietary ownership of formulae, since, under Indian law, agricultural and medicinal products are not patentable.

Patent Appeal

For centuries the Western world ignored the neem tree and its properties: the practices of Indian peasants and doctors were not deemed worthy of attention by the majority of British, French and Portuguese colonists. However, in the last few years, growing opposition to chemical products in the West, in particular to pesticides, has led to a sudden enthusiasm for the pharmaceutical properties of neem.

In 1971, US timber importer Robert Larson observed the tree's usefulness in India and began importing neem seed to his company headquarters in Wisconsin. Over the next decade he conducted safety and performance tests upon a pesticidal neem extract called Margosan-O and in 1985 received clearance for the product from the US Environmental Protection Agency (EPA). Three years later he sold the patent for the product to the multinational chemical corporation, W.R. Grace and Co.

Since 1985, over a dozen US patents have been taken out by US and Japanese firms on formulae for stable neem-based solutions and emulsions and even for a neem-based toothpaste. At least four of these are owned by W.R. Grace, three by another US company, the Native Plant Institute, and two by the Japanese Terumo corporation.

Having garnered their patents and with the prospect of a licence from the EPA, Grace have set about manufacturing and commercializing their product by establishing a base in India. The company approached several Indian manufacturers with proposals to buy up their technology or to convince them to stop producing value-added products and instead supply the company with raw material.

In many cases, Grace met a rebuff. M.N. Sukhatme, Director of Herringer Bright Chemicals Pvt. Ltd, which manufactures the neem-based insecticide Indiara, was put under pressure by Grace to sell the technology for a storage-stable neem extract which does not require heating or any chemical change. Sukhatme refused their offers, stating: "I am not interested to commercialize the product."[2]

But Grace eventually managed to arrange a joint venture with a firm called P.J. Margo Pvt. Ltd. They are now setting up a plant in India which will process neem seed for export to the US. Initially, the plant will process 20 tons of seed a day. They are also setting up a network of neem seed suppliers, to ensure a constant supply of the seeds and a reliable price.

Grace is likely to be followed by other patent-holding companies. In 1992, the US National Research Council published a report[3] designed to "open up the Western world's corporate eyes to the seemingly endless variety of products the tree might offer". According to one of the members of the NRC panel, "In this day and age, when we're not very happy about synthetic pesticides, [neem] has great appeal."[4]

This appeal is blatantly commercial. The US pesticides market is worth about $2 billion. At the moment biopesticides, such as pyrethrum, together with their synthetic mimics, constitute about $450 million of this, but that figure is expected to rise to over $800 million by 1998.[5] "Squeezing bucks out of the neem ought to be relatively easy," observes *Science* magazine.[6]

Plagiarism or Innovation?

Grace's aggressive interest in Indian neem production has provoked a chorus of objections from Indian scientists, farmers and political activists, who assert that multinational companies have no right to expropriate the fruit of centuries of indigenous experimentation and several decades of Indian scientific research. This has stimulated a bitter transcontinental debate about the ethics of intellectual property and patent rights.

In April 1993, a Congressional Research Service (CRS) report to US Congress set out some of the arguments used to justify patenting:

> "Azadirachtin itself is a natural product found in the seeds of the neem tree and it is the significant active component. There is no patent on it, perhaps because everyone recognizes it as a product of nature. But . . . a synthetic form of a naturally occurring compound may be patentable, because the synthetic form is not technically a product of nature, and the

process by which the compound is synthesized may be patentable."[7]

However, neither azadirachtin, a relatively complex chemical, nor any of the other active principles have yet been synthesized in laboratories. The existing patents apply only to methods of extracting the natural chemical in the form of a stable emulsion or solution, methods which are simply an extension of the traditional processes used for millennia for making neem-based products. The biologically active polar chemicals can be extracted using technology already available to villages in developing countries, says Eugene Schulz, chair of the NRC panel. "Villagers smash'em [the seeds] up, soak [them] in cold water overnight , scoop the emulsion off the top and throw it on the crops."[8]

W.R. Grace's justification for patents therefore pivots on the claim that these modernized extraction processes constitute a genuine innovation:

> "Although traditional knowledge inspired the research and development that led to these patented compositions and processes, they were considered sufficiently novel and different from the original product of nature and the traditional method of use to be patentable."[9]

> "Azadirachtin which was being destroyed during conventional processing of Neem Oil/Neem Cake is being additionally extracted in the form of Water Soluble Neem Extract and hence it is an add-on rather than a substitute to the current neem industry in India."[10]

In short, the processes are supposedly novel and an advance on Indian techniques. However, this novelty exists mainly in the context of the ignorance of the West. Over the 2,000 years that neem-based biopesticides and medicines have been used in India, many complex processes were developed to make them available for specific use, though the active ingredients were not given Latinized scientific names. Common knowledge and common use of neem was one of the primary reasons given by the Indian Central Insecticide Board for not registering neem products under the Insecticides Act, 1968. The Board argued that neem materials had been in extensive use in India for various purposes since time immemorial, without any known deleterious effects. The US EPA, on the other hand, does not accept the validity of traditional knowledge and has imposed a full series of safety tests upon Margosan-O.

The allegation that azadirachtin was being destroyed during traditional processing is inaccurate. The extracts were subject to degradation, but this was not a problem since farmers made such extracts to use as and when they needed them. The problem of stabilization only arose when it needed to be packaged for a long time to be marketed commercially.



National Academy Press

. . . in the United States, it is "A Tree for Solving Global Problems".

Moreover, stabilization and other advances attributable to modern laboratory technology had already been developed by Indian scientists in the 1960s and 1970s, well before US and Japanese companies expressed an interest. Dr. R.P. Singh of the Indian Agricultural Research Institute asserts:

> "Margosan-O is a simple ethanolic extract of neem seed kernel. In the late sixties we discovered the potency of not only ethanolic extract but also other extracts of neem . . . Work on the neem as pesticide originated from this division as early as 1962. Extraction techniques were also developed by a couple of years. The azadirachtin-rich dust was developed by me."[11]

The reluctance of Indian scientists to patent their inventions, thus leaving their work vulnerable to piracy, may in part derive from a recognition that the bulk of the work had already been accomplished by generations of anonymous experimenters. This debt has yet to be acknowledged by the US patentors and their apologists. The CRS report claims that "the method of scattering ground neem seeds as a pesticide would not be a patentable process, because this process . . . would be deemed obvious"[12] — a statement that betrays either lamentable misjudgement or a racist dismissal of indigenous knowledge. The discovery of neem's pesticidal properties and of how to process it was by no means "obvious" but evolved through extended systematic knowledge development in non-Western cultures. In comparison to this first non-obvious leap of knowledge, it is the subsequent minor derivatives that are "obvious".

From Waste to Wealth?

W.R. Grace and P.J. Margo also claim that their project benefits the Indian economy. It does so, they say, by:

> "providing employment opportunities at the local level and higher remuneration to the farmers as the price of Neem Seeds has gone up in the recent times because value is being added to it during its process. Over the last 20 years the price of neem seed has gone up from Rs.300 a ton to current levels of Rs.3000-4000 a ton."[13]

In fact, the price has risen considerably more than this: in 1992 Grace was facing prices of up to $300 (over 8,000 rupees) per ton.[14]

This increase in the price of neem seeds has turned an often free resource into an exorbitantly priced one, with the local user now competing for the seed with an industry supplying consumers in the North. As the local farmer cannot afford the price that industry can, the diversion of the seed as raw material from the community to industry will ultimately establish a regime in which a handful of companies holding patents will control all access to neem as raw material and all production processes.

P.J. Margo claims that this is "a classic case of converting waste to wealth and beneficial to the Indian farmer and its economy".[15] This statement is in turn a classic example of the assumption that local use of a product does not create wealth but waste; and that wealth is created only when corporations commercialize the resources used by local communities.

There is a growing awareness throughout India that the commoditization of neem will result in its expropriation by multinational companies. On 15 August, Indian Independence Day, farmers in the state of Karnataka rallied outside the offices of the District Collector in each

Global Gene-Misers and High-Tech Bodysnatchers

Neem is by no means the only living organism that has become subject to a patent. Scientists, often in the pay of large companies, are sifting soils and scraping tissue from all over the globe to secure prior rights on potentially patentable organisms.

Another plant that, like neem, has been at the centre of attention is the African soapberry or endod (*Phytolacca dodecandra*). Its properties as an insecticidal soap, a fish intoxicant and a spermicidal contraceptive have long been known to Africans, but in 1964, the Ethiopian Dr Aklilu Lemma reported to the Tropical Products Institute in Britain that it killed the water-snails that are the only vector of the disease, bilharzia. He was subsequently alarmed to find that in his absence the Institute patented an extraction process without consulting or crediting him. Dr Lemma responded by taking out another patent with scientists at Stanford University.

Northern companies are not interested in endod as a preventative for bilharzia in the Third World (which is the province of Baylucide, an expensive and mutagenic German chemical molluscicide), but for use in toxically-sensitive situations in the North — in particular, to kill zebra mussels which clog North American water pipes and disrupt US fisheries. Patenting endod means that the people of Ethiopia and other African countries will receive no royalties, and may eventually be deprived of the free use of the plant, as it will be needed for the commercial production of the molluscicide for the US.

Cottonopoly

Patents on life forms can be very wide-ranging. A subsidiary of W.R. Grace, Agracetus Inc., has taken out US patents which cover all genetically engineered cotton varieties until 2008, and has the patent pending in Europe, Brazil, China and India. The patents cover methods of inserting genes into cotton using both bacteria and "gene gun" technology. Agracetus' vice-president of finance, Russel Smestad, claims: "All transgenic cotton products, regardless of which engineering technique is used, will have to be commercially licensed through us before they can enter the market place."

The patent has provoked a chorus of objections from scientists and breeders. Dr Jerry Quisenberry of the US Department of Agriculture commented: "Public research on cotton, at least at the molecular level, will have to come to a screeching halt . . . What's to say the same thing won't happen for other commodities?"

The US Library of Human Parts

US multinationals such as Pfizer, Bristol Myers and Merck now hold several hundred patents on life-forms, many housed in the American Type Culture Collection (ATCC) in Rockville Maryland where there are some 60,000 patented or potentially patentable organisms. The collection holds potentially commercial micro-organisms such as yeasts, algae, bacteria and viruses — for example, US Patent No. 4,925, 663, owned by the University of Florida, is a Brazilian fungus known to be fatal to fire ants, which cause billions of dollars in damage to US crops.

Many of the samples stored in ATCC involve tissue or cell lines scraped from living humans or exhumed bodies. These include World Patent No.WO 9208784, or "human t-lymphotropic virus type 2 from Guaymi Indians in Panama". This patent is claimed by Ron Brown, the US Secretary of Commerce and joint US negotiator at GATT, where he is demanding global acquiescence to the patenting of life-forms.

Source: RAFI, Suite 504-71, Bank St., Ottawa, Canada.

district, to challenge the claims of those multinational companies such as W.R. Grace demanding "intellectual property rights". The farmers carried neem branches as a symbol of collective indigenous knowledge.

Their campaign has been supported by many noted Indian scientists. Dr R.P. Singh expressed to the authors his "whole [hearted] support [for the] campaign against the globalization of the neem." Dr B.N. Dhawan, Emeritus Scientist at the Central Drug Research Institute, maintains: "It is really unfortunate that the benefits of all this work should go to an individual or to a company. I sincerely hope that . . . the neem will continue to remain available for use by people all over the world without paying a high price to a company."

Dr V.P. Sharma, Director of the Malaria Research Institute, agrees:

> "We have discovered the repellent action of the neem oil . . . There is no question of anybody else in India or outside taking a priority or patent on this aspect of neem oil. I would like this discovery to be used as widely as possible to prevent nuisance from insect pests of public health importance and in the prevention of disease transmitted by them."

Global TRIPS

The movement that has crystallized around the issue of neem patents represents a direct challenge to the attempt, in the Uruguay Round of GATT, to impose upon Third World countries the patent and intellectual property regime, known as TRIPs (Trade-Related Intellectual Property), that already obtains in the North.

At the moment, under the terms of the 1883 Paris Convention and the 1886 Berne Convention (updated in 1948), it is accepted that different countries have different needs and priorities; each country is allowed to formulate its own patent laws, and the patents granted by or registered in the country are applicable only there. However, developed nations, particularly the US, accuse countries of the Third World as engaging in "unfair trading practice" if they fail to adopt stringent patent laws and claim that they have lost millions of dollars due to "piracy" by the Third World.

Under the new GATT agreement, all this will change. Universalization of the TRIPS regime under GATT means that national laws which protect domestic innovation and manufacture will have to be altered to conform with the more stringent patent laws of developed countries, where the maximization of profits is the cornerstone of culture.

Article 27.5.3.(b) of the Dunkel Draft states that signatory nations "shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof. This provision shall be reviewed four years after the entry into force of the Agreement."



GATT out of India! M.D. Nanjundaswamy addressing 500,000 farmers at an anti-GATT demonstration in Bangalore in October 1993.

The phrase *sui generis*, meaning "of their own devising", gives the impression that each country is free to set up its own Intellectual Property system. However, a lot of weight bears on the qualification "effective". This word was inserted both into the TRIPS agreement and into the UNCED Biodiversity by the US, which is particularly fond of it. The first sentence of the Draft refers to the need to "promote effective and adequate protection of intellectual property rights" and this same phrase is found in Section 301 of the 1988 US Trade and Competitiveness Act, which has been used to retaliate against countries whose intellectual property laws do not conform to US standards.

But what does "effective" mean? Or rather, who is to decide what it means? Like the word "reasonable" when used in legal phrases such as "reasonable force" and "reasonable suspicion", the interpretation of the word "effective" is largely subjective, and hence at the discretion of those in power. In this case judge and jury are GATT and the US-based commercial interests that control it. If patent holders or traders feel that a country's patent system is "ineffective", their country may try to use the "counter-retaliation" clause of GATT, and block trade in other products with the offending country.

The same paragraph in the TRIPS text refers specifically to the patenting of life:

> "Parties may exclude from patentability plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes."

A similar exclusion already exists in US law but it has not prevented the US from allowing patents for plants and animals. The phrase "plants and animals other than micro-organisms" does not cover *parts* of animals and plants, nor does it cover alterations to them, and so any biological organism that has in some (possibly quite insignificant) way been adapted may be subject to a patent. Micro-organisms are not excluded from patentability at all, which in practice makes their patenting inevitable. Although this text appears at first sight to exclude living organisms from patentability, it will in fact send every country down the slippery slope of patenting life forms.

Collective Patents

The patenting of life is morally and religiously repulsive to many individuals and cultures throughout the globe. India does not allow the patenting of life-forms and many Indians would regard this absence of patents in itself as a perfectly effective "*sui generis*" system. However the unfortunate logic of patenting is that if you can't beat patentors, you have to join them. India's absence of property rights on biological organisms and medicinal and agricultural products offers no protection against unscrupulous outsiders who, like W.R. Grace, put an international patent upon them. Particularly vulnerable are farmers whose seed-stock, animal breeding-stock and natural pesticides may gradually become the intellectual property of national or multinational companies; they will lose their independence and be forced to pay high prices for products that they could formerly provide for themselves.

For this reason an alliance of farmers and scientists have embarked upon the formulation of an alternative form of intellectual property, the *Samuhik Gyan Sanad* or Collective Intellectual Property Rights (CIPRs) — in other words, collective patents. These invest the right to benefit commercially from traditional knowledge in the community that developed it. Knowledge is recognized to be a social product, subject to local common rights, rather than drifting in a limbo of free global access until the first commercial venture snatches it up. Any company purloining local knowledge and local resources is engaging in intellectual piracy, and the farmer's organizations see it as their right to punish such violators. Hence, farmers are demanding that disputes between multinational companies and Third World farmers be settled through village organizations and not in GATT panels.

To many observers in the North, long alienated from their environment, the debate about intellectual property rights may seem somewhat ethereal and detached from the mechanics of everyday life. To farmers in India, however, it represents an expropriation of their immediate surroundings and an attack on their way of life. W.R.Grace's US patents have brought home to Indian peasants the issue of TRIPs, by targeting the village neem tree. In so doing, they have made the "blessed tree" and "curer of all ailments" a standard of resistance to the creeping power of global capital.

References

1. K. Simha et al., "Neem Oil as a Vaginal Contraceptive", *Indian J. Med. Res.*, 79, pp.131-136.
2. Personal communication to Dr. Vandana Shiva.
3. National Research Council, *Neem: A Tree for Solving Global Problems*, National Academy press, Washington DC, 1992.
4. "The Wonders of the Neem Tree", *Science*, 17 January 1992, p275.
5. Stone, R., "A Biocidal Tree Begins to Blossom", *Science*, 28 February 1992.
6. *Science*, op.cit. 3.
7. Congressional Research Service, *Biotechnology, Indigenous Peoples, and Intellectual Property Rights*, CRS, Library of Congress, April 16, 1993.
8. *Science*, op.cit. 3.
9. Letter to Professor Nanjundaswamy, convenor of the Karnataka Rajya Raitha Sangha farmer's organization.
10. Ibid.
11. Personal communication to Dr. Vandana Shiva.
12. Congressional Research Service, op. cit. 6.
13. Letter, op. cit. 8.
14. Stone, R., op.cit. 4.
15. Letter, op. cit. 13.



Kinaiyahan

The Philippine Energy Crisis

by
Paul Mincher

The chronic shortage of electricity in the Philippines, which has been causing regular power cuts throughout the country, is particularly severe in the largest island, Mindanao, where over 90 per cent of the supply comes from hydroelectric dams. Because of a decline in rainfall and water levels due to deforestation, these dams have been unable to meet the demands of Mindanao's rapid industrialization. Local and indigenous groups are calling for a change of energy policy towards the construction of smaller installations, the conservation of energy and the placing of the needs of people before those of industry; but the state is proceeding with controversial schemes for more large-scale dams and a geo-thermal power station in the Mount Apo National Park.

There is a "power crisis" in the Philippines. For several hours every day in major cities around the country, there are cuts in the electricity supply, called "brown-outs". Households find brown-outs menacing, computer dependent institutions face a major quandary, and industry is severely affected. Foreign investors and aid agencies are pushing for the government to take immediate steps to remedy the problem, while every day Philippine newspapers discuss "stop-gap measures", "fast-tracking energy development" and "quick fixes" to the crisis. Less is heard about the roots of the crisis, or about long-term solutions.

Mindanao, the large southern island in the Philippine archipelago, has been particularly severely hit by the energy crisis. The programme of industrial development, involving some of the country's most controversial electric power plants, has been so rapid that the island is now highly vulnerable to electricity shortages.

The Land of Promise

After World War II, Mindanao was christened the "Land of Promise". Government programmes, such as the National Resettlement and Rehabilitation Administration under President Magsaysay in the 1950s, encouraged mass migration of landless peasants from the islands of Luzon and Visayas to less populated Mindanao, with offers of free or cheap land, (transmigration was, for the government, an attractive alternative to land reform in the more heavily populated islands).[1]

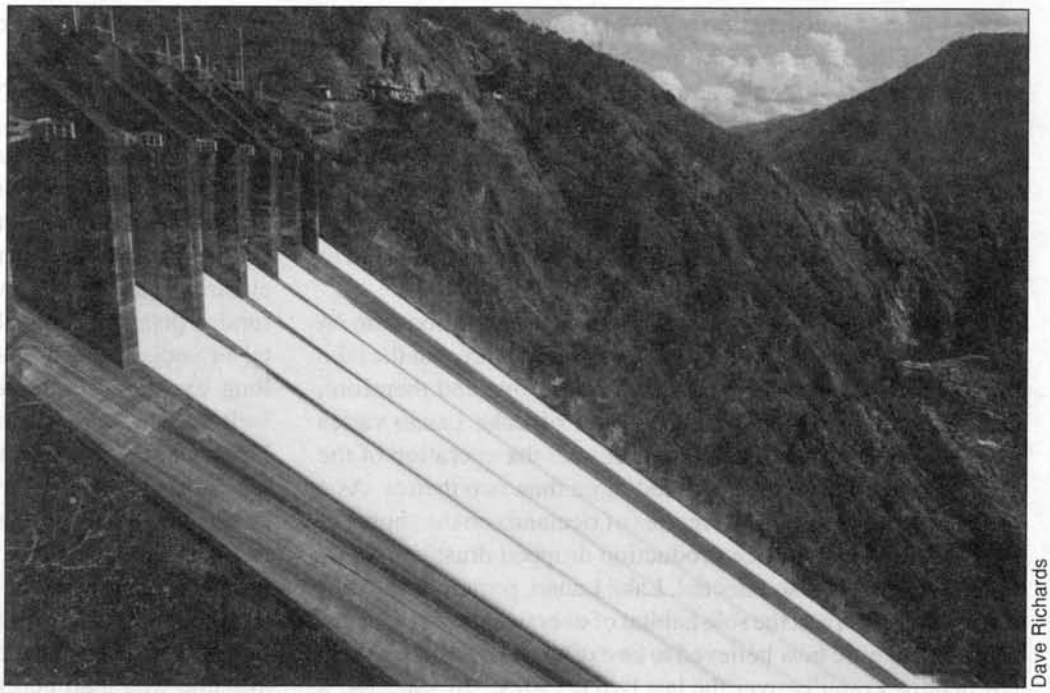
During the same post-war period, Mindanao was identified by the Philippine Government as suitable for heavy industrial development.[2] Land, labour, natural resources and hydroelectricity were all cheap and abundant. Construction of several hydroelectric plants on the Agus River near Iligan City began as early as 1955. Funded by foreign financial institutions, such as the Asian Development Bank (ADB) and the US Agency for International Development (USAID), these plants spurred industrial expansion on the island, especially in areas around Iligan City and Cagayan de Oro City.

The industrial development led to an additional influx of migrants into the area, especially Iligan City, part of the homeland of the Maranao, a lake-dwelling branch of the Moro people. Prosperity for the new settlers did not necessarily bring prosperity for the local population. The Maranao lost many of their ancestral lands but were not given jobs in the new industries. A 1984 study showed that out of 6,000 workers in twelve industrial firms in Iligan City, only twelve were Moro.[3] The development policies were such a threat to the standard of living and culture of the Moro people that an armed Moro rebellion began in the 1970s, which is still festering today.

The government's economic strategy, which has gained momentum in recent years, emphasizes export-oriented industrialization in the form of export processing zones and agro-industrial complexes, and is highly dependent on foreign capital. As such developments require large amounts of cheap electricity, the provision of electricity has been orientated towards the industrial sector rather than the basic electricity needs of communities.[4] In 1987, only 58 per cent of villages in the Philippines had access to electricity produced by the state[5]

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and only 24 per cent of energy was consumed domestically whereas nearly 55 per cent was consumed by industry and commerce. The Kawasaki Steel Sintering Plant, near Cagayan de Oro City, is a glaring example of this lop-sided energy use. It consumes some 40 megawatts of electricity annually, roughly equivalent to the combined consumption of all other electricity users in the city.[6]



Dave Richards

The largest dam in Asia, Ambuklao on Luzon island.

Hydroelectric Dependency

Although the number of industrial installations with high energy requirements is still expanding, at the same time there has been a drop in electricity generation on the island, resulting in widespread and prolonged power cuts. The origins of this crisis are twofold. Firstly the state became too dependent upon hydroelectricity — 93 per cent of electricity is generated by water-power, mainly from large dams on the Agus and Pulangui Rivers. Secondly, hydroelectricity is only a renewable source of energy if the ecology of the watershed is maintained — and this the government has failed to do.

The supply of water to these dams has seriously declined because of the deforestation that resulted from the island's development. Commercial logging operations in government-leased timber concessions, many of them owned by politicians, cleared vast areas of forest. Meanwhile, land-grabbers and agribusiness plantations in the fertile lowlands forced the original inhabitants — Moro and Lumad tribespeople — up along the logging roads to settle in the hills. The process has been exacerbated by the Philippines land tenure system, whereby all land and natural resources belong to the state unless covered by official ownership certificates.[7] Since the indigenous Moro and Lumad cultures have never used land titles — and since, under the Revised Forestry Code, land of 18 per cent slope or greater cannot be privately owned — the very people with traditional forestry skills and experience have been disenfranchised.

As a result in less than forty years, Mindanao's forested area has declined by over 50 per cent.[8] This deforestation has lead to a decrease in rainfall and to more droughts. With inadequate plant cover on slopes, run-off levels become erratic: in heavy rains there is serious soil erosion and siltation of natural water systems, while in dry periods, rivers are often reduced to a trickle. Under these conditions, the hydroelectric installations can cease to be viable.

Thus droughts in Mindanao in 1991 and 1992 resulted in a large reduction in the hydroelectricity supply. In July 1992, total hydroelectric production was a mere 43 per cent of capacity, more than 500 megawatts (MW) below expected output.[9] At one point the 255 MW Pulangui IV plant, draining heavily-deforested areas in north-central Mindanao, was producing less than 10 MW.[10] The few oil-powered plants in Mindanao are old, expensive to run, and poorly maintained. Designed primarily to supply electricity during peak demand, they have not been able to take up this shortfall in energy production.

The National Power Corporation (NPC) — the primary government entity responsible for energy planning, production and distribution — responded to the drought affecting the Agus river plants by drawing water from Lake Lanao at an unsustainable rate throughout 1991. The subsequent rainy period was insufficient to refill the lake to an adequate level.

More of the Same

The NPC has responded to the crisis by drawing up plans for more "fast track" power projects for Mindanao, to fuel the industrialization that stimulates economic growth. These plans coincide with those of the US AID-funded Mindanao Development Project, which will establish Regional Industrial Centres all over Mindanao, particularly in key urban areas such as Zamboanga City, Davao City, General Santos City and Cagayan de Oro City.

The NPC plans acknowledge the increasing instability of hydroelectric sources by including other energy sources. There is a coal-fired plant under construction, the Hopewell power station at Pag Bilao, funded by the International Finance Corporation (the commercial arm of the World Bank), together with the Commonwealth Development Corporation; this will be dependent on coal imports from countries such as Australia and Indonesia. Another less conventional alternative is the geothermal plant at Mount Apo. But the NPC has by no means abandoned hydroelectricity and there are plans for an 80 MW Agus I hydroelectric plant near Marawi City. However, both Mount Apo and Agus I are facing major opposition from affected Moro and Lumad communities and have become two of the most controversial issues in the island's recent history.

The Agus I Hydroelectric Plant

A series of six hydroelectric plants have already been built on the Agus River, which flows north from Lake Lanao in north-western Mindanao. This is the second largest lake in the Philippines, covering some 360 square kilometres, and is the

centre of the Maranao nation.[11] The Maranao (literally meaning "People of the Lake") are Moros with a sophisticated culture and economy traditionally associated with the stable lake ecosystem. All six of these dams have been controversial: the first, Agus VI, completed in 1955, diverted water from the spectacular Maria Cristina waterfalls,[12] and caused considerable resentment because of its violation of Maranao land rights, inappropriate relocation programmes and inadequate compensation to relocated communities.

In 1979, the NPC opened the Lake Lanao regulation dam on the mouth of the Agus River which enabled the level of the lake to be controlled to produce a stable river flow, and therefore, stable electricity production. The level of Lake Lanao varies naturally by less than one metre, but with the operation of the regulation dam, lake levels varied more than two metres. As a result, some 130 square kilometres of ricelands on the shores of the lake dried up and rice production dropped drastically.[13]

Fisheries were also affected. Lake Lanao, prior to its disruption by the NPC, was the sole habitat of over twenty fish species. Most of these are now believed to be extinct. The fisheries yield has declined rapidly over the last two decades. "In 1963-64, it was estimated that the area yielded an estimated 1.7 million kilogrammes of fin fishes of which 56.7 per cent were native cyprinids, and only 27 per cent were introduced species . . . A further 50,000 kilogrammes of shrimps and 200,000 of molluscs were estimated to have been caught."[14] The present yield is thought to be a fraction of this. According to local fisherfolk: "We can still catch tilapia, aroan and bongkaong but only in scarce quantities. It now takes years for us to see bongkaong in the open water. This means most of our native fish have disappeared."[15]



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The cultural impact of the dam project is also very significant. Before prayer, the Maranao cleanse themselves with the clear lake water. The NPC's manipulation of the lake level caused mosques built along the lake shore to be periodically isolated from the lake water. It was this affront to their religious beliefs and practices that solidified Maranao opposition to the development plans of the NPC.

In 1980, the NPC started construction of the Agus I Hydroelectric Plant in Marawi City. Under Marcos, the Austrian-funded plant was not subjected to any significant environmental or social impact study, even though Maranao people had long expressed extreme concern regarding the plans — the well-known Maranao biologist, Professor Rabor, in a 1970 Philippine Senate committee hearing described them as "ecologically frightening". The plant depends on a newly-constructed outlet from the lake that diverts water to the Agus I turbines and later to the proposed Agus III, which are together projected to produce a maximum of 80MW. In addition, the Agus I dam is able to regulate lake levels as much as ten metres below the natural lake level. This would be disastrous for the 100,000 Maranao people who inhabit the lowland rice areas around the lake, particularly for the many fishers and farmers likely to lose their livelihoods.

The government has not satisfactorily consulted residents or investigated the peoples' claims. An NPC Environmental Impact Assessment of the plant published in 1989 did not discuss any possible negative ecological or social effects of the dam's operation on the lake and the surrounding communities. According to the then Executive Secretary to the President, Oscar Orbos, "the environmental issue [of Agus I] raised by local opposition is a valid concern, but we have to make difficult choices under very tough circumstances."

After a 1991 Senate investigation detailed the Maranao's claims, the NPC finally agreed to limit the reduction in water-level to three metres by building a smaller dam overflow in front of the main dam . In January 1992, the Department of Environment and Natural Resources released the Environmental Compliance Certificate for the plant under direct pressure from President Aquino; and three months later, Agus I began partial operation, despite widespread opposition from the Maranao, involving the largest street demonstrations in the Philippines since the EDSA revolution. When the Agus I plant comes into full operation, there may be a more violent response from local communities, whose rights to a healthy and productive environment have been completely ignored.

Mount Apo Geothermal Plant

Mount Apo is the highest mountain in the Philippines and a national park containing the largest remaining primary rainforest in Southern Mindanao. It is also the ancestral domain of 100,000 indigenous people from several Lumad tribes (Manobo, Bagobo, Ubo, Ata, K'lagan and Kaulos) and home to their supreme god, Apo Sandawa.[16] Upon this mountain the Philippine National Oil Company (PNOC), a wholly-owned government corporation, are constructing a 110 MW geothermal plant costing about US$600 million .

Geothermal energy uses the heat of hot rocks and water deep underground. Hot water is forced up through pipes to the surface, where the lower pressure causes it to turn into steam, which is then passed through a turbine connected to a genera-

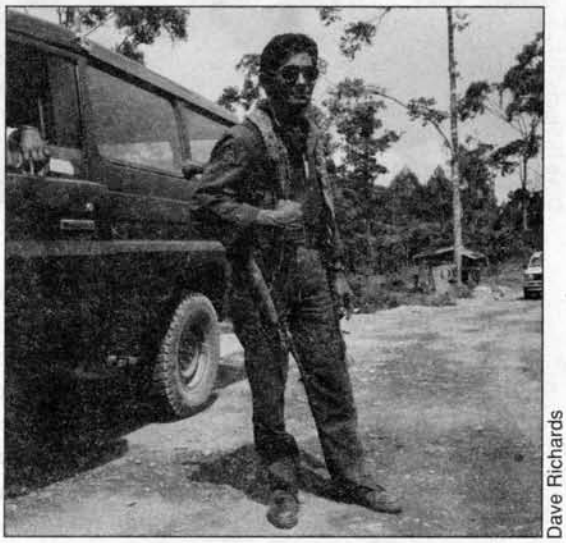
tor.[17] Geothermal energy decreases the need for imported fuels, but it is nonetheless capital-intensive and carries environmental and social costs similar to those of other forms of large-scale energy generation.

The NPC is trying to convince the public that geothermal energy is sustainable and environmentally friendly. However, recent experience at the world's largest geothermal power field near Clear Lake, California bring the sustainability of the technology into question. Clear Lake has lost 20 per cent of its generating capacity since the start of its operation, and it may lose a total of 50 per cent by the year 2000, owing to reduced geothermal steam pressure.[18] Nor is geothermal energy free of environmental costs. In Hawaii, for example, one plant is threatening the destruction of one of the last remaining primary rainforests in Hawaii and reportedly causing health problems among the local residents.[19]



Dave Richards

Power for the People? Left: two children from the village of Ginatilan, in the shadow of Mount Apo, where villagers have started developing skin diseases and the water levels are getting lower. Right: a member of the 35th Infantry Battalion, Armed Forces of the People, who guard the Mount Apo site from the incursions of the New People's Army.



Dave Richards

PNOC first requested permission from the government to allow geothermal exploration on Mount Apo in 1983. The request was denied on the grounds of Mount Apo's status as a national park, but in 1985, PNOC obtained a temporary permit. In 1987, the Department of Natural Resources (DENR) ordered the PNOC to suspend its operations, and in 1988, the DENR Secretary declared the PNOC's activity to be "patently illegal". Even then, PNOC proceeded with its operations, drilling two exploratory wells.

On 13 April, 1989, 1,500 Lumad people from nine tribes performed the *D'yandi* rite — a blood pact — in which the participants agreed to defend Apo Sandawa, "to the last drop of their blood".[20] Further opposition to PNOC's plans spread rapidly. Tribal groups organized new alliances, and Task Force Apo Sandawa — a coalition of tribal, church-based and supportive non-governmental groups — formed and activated chapters in Kidapawan, Davao and Manila. The Roman Catholic Diocese of Kidapawan threw its support behind the tribal people's campaign.

An Environmental Impact Assessment (EIA) was required by the DENR before construction on Mount Apo could proceed. The first EIA submitted by PNOC was rejected by the DENR as substandard and a second, ten volumes in length, was given a public hearing in April 1991. Groups opposing the Mt Apo project contend that the EIA failed to respond adequately to their primary concerns, namely:

- that the plant will be constructed in a national park and on indigenous peoples' ancestral lands, which constitute one of the last remaining primary rainforests in Mindanao;
- that the directly affected local tribal communities are largely opposed to the construction and operation of the plant;
- that the local communities will be displaced and receive no tangible benefits;
- that the construction of roads to the site will bring an influx of settlers which will lead to further loss of tribal lands and destruction of the rainforest;
- that drilling wastes will pollute nearby lakes and rivers;
- that air pollution will affect the rainforest;
- that no alternative energy options were presented and no cost-benefit analysis was performed.

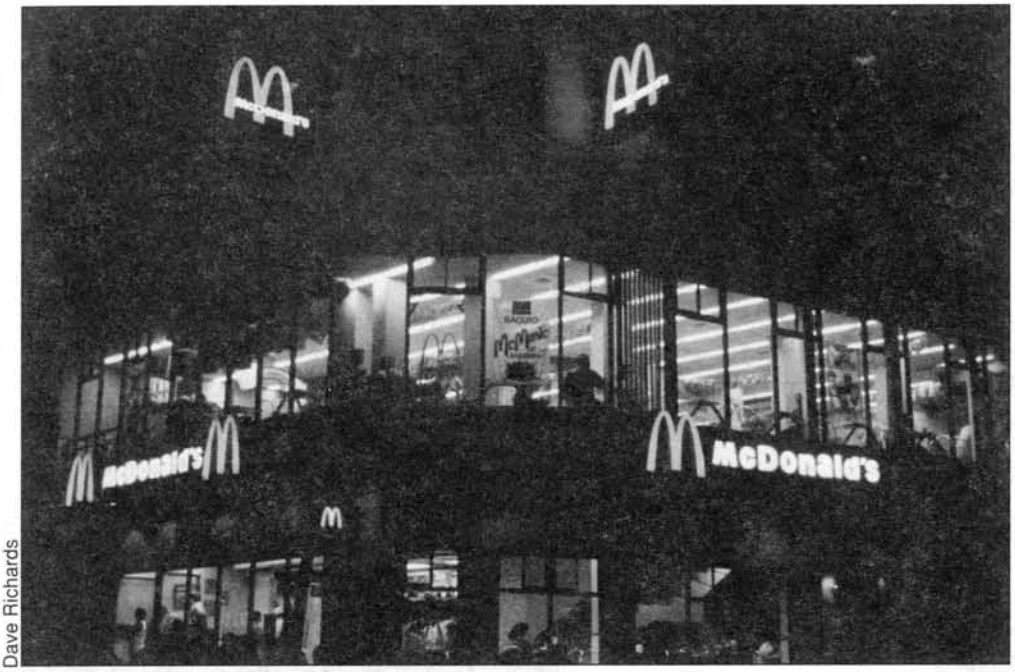
Despite the mass local opposition and strong technical and social arguments against the project, the EIA was accepted by the DENR. PNOC was given permission to proceed with its plans in early 1992. The opposition groups petitioned the Supreme Court to block the PNOC project, but the Court dismissed the case on technical grounds and blocked a subsequent appeal.

Meanwhile, the PNOC has moved quickly to construct the plant. Six sites in the forest have been cleared for the drilling of wells and an access road has been built to Kidapawan, the nearest town. Two local rivers have reportedly already been polluted by PNOC drilling wastes, resulting in skin diseases of local residents and threatening the major clean water source for a sizable portion of eastern Mindanao.

A massive build-up of armed forces in the area has paralleled progress on the project. Several Armed Forces of the Philippines battalions have moved into the vicinity and five companies of army troopers are providing security for the site, in addition to PNOC's private security guards. The army claims its presence is justified by the threat from the New People's Army, which opposes the geothermal plant, and has attacked the plant on two occasions already, resulting in the death of several PNOC personnel.

But the military presence is also used to intimidate and harass citizen's groups resisting the plant's construction. Local tribal leaders have been harassed and detained for questioning by government military forces. Two Manobo leaders were recently killed by the military, allegedly because of their efforts to demand promised compensation and benefits from PNOC for their displaced communities. Many local residents have fled their homes due to fear of further conflicts and violence.

The Mount Apo controversy is intricately intertwined with



Dave Richards

It could be anywhere, but this is in Bangui, the Philippines' summer capital. "The current growth in demand for electricity [in the Philippines] is primarily correlated with the expansion of industries and urbanization . . . Take a look around Cagayan de Oro, Ozamis City or Davao City and a trend is clearly observable: glitzy air-conditioned supermarkets or fast-food outlets are springing up producing much the same type of food as in the public market with at least several times the energy cost (for refrigeration, lighting, storage and man-power) and the food is more expensive. This is the type of society that is being promoted by rapid industrialization, and it does not come cheaply." (Thomas Cruz)

indigenous land rights. The geothermal issue has created inter- and intra-tribal conflict with local communities split in their response to the prospect of "development" on their land. This split was seriously exacerbated when the PNOC held a "Pamaas" ritual on Mt Apo on 9 March, 1992. During the ceremony, tribal people who have sided with the company dismissed the 1989 *D'yandi* blood pact and formally gave the land in question over to the government. A Special Civilian Auxiliary Army of 500 Lumads in the area has been recruited, trained and partially armed by the Philippine Army.[21]

Construction and operation of the Mt Apo geothermal plant will require extensive international financial and technical support. Three Japanese companies (Fuki, Mitsui, and Marubeni), two American companies (Ormat and Magam) and one New Zealand firm (Design Power) have expressed interest in project construction. PNOC is also reportedly negotiating with the Export-Import Bank of the United States and Toshiba of Japan for funding. The World Bank, however, has taken an ambiguous stance: it is reluctant to fund the project because of what it regards as an unsatisfactory Environmental Impact Assessment process; yet at the same time it supports the Integrated Project Area Scheme, a so-called conservation programme that accepts development of the plant.[22]

Future Prospects

The NPC, recognizing that opposition to the Agus and Mt Apo plants may limit their potential expansion, is now opening up the industry to the private-sector — a policy for developing countries that has received the sanction of the World Bank.[23] The government has invited private corporations to build a 200MW oil-powered station in northern Mindanao under the Build-Operate-Transfer scheme whereby the private sector can participate in large-scale power production. The scheme is expected to lead to an increase in foreign involvement in the direct production of energy supply. Until recently, foreign participation was largely restricted to funding, technical assistance and machinery supply to the industry.

This private sector approach may prove to be more effective in terms of management and maintenance. But negative environmental and social impacts in Mindanao will continue unabated, given the fixation with large-scale power generation and the lack of participation by local people. As one community advocate described it, "a power plant is typically sprung on a local community in the manner of an ambush: long study and preparation culminate in a surprise attack that is meant to overrun the victim as soon as possible."

Accountability is a major issue in the construction of power facilities. The Environmental Impact System introduced under the Aquino administration is meant to ensure proper accounting of the environmental and social aspects of plant construction and the participation of the affected local populations in the planning and decision-making process. But the signs are that President Ramos' new administration will attempt to side-step such regulations. Business interests, eager for a reduction in bureaucratic "red tape" in order to solve the energy crisis as quickly as possible, pressured congress to give Ramos the "Emergency Powers" he was seeking. On 5 April, 1993 Ramos signed into law the Electric Power Crisis Act, which grants him "special powers" to solve the worsening energy crisis. The law allows the president, among other things, to enter into contracts for the construction and repair of power plants without public bidding, and to raise energy prices so as to meet World Bank conditions for further loans, despite a Philippine Supreme Court ruling to the contrary.

People's Response

The future may be bright for companies hoping to profit from rapid power plant construction without environmental safety constraints, but it is less so for local communities. The "power crisis" in Mindanao has been the result of decades of mismanagement, poor engineering, unsustainable commercial forestry and government social policies. The trend towards more centralized and authoritarian energy planning may succeed in increasing the construction of fast-track power projects, but it is unlikely to result in a sustainable and effective power delivery system for the majority of the population.

Grassroots protests have, however, had some impact upon the process. In the Mount Apo case, tireless advocacy work has forced the NPC to redesign the plant to ensure re-injection of the geothermal wastes into the deep well, which reduces the risk of pollution. The protests against the Agus I plant have led to some (minor) operational changes and a delay in construction. These and other victories are small, but they have succeeded in slowing the pace of energy development in Mindanao and throughout the Philippines.

Moreover, environmental awareness among the general public is on the rise: people in both urban and rural communities are raising a clamour about the destruction of the forests, and many are also asking more fundamental questions about past and present government development policies. As one commentator put it:

> "Whom are we building power plants for? Are we building them for multinational corporations? Are we building them so that export-oriented industries may enjoy cheap power? Are we building them so that the local élite may realize and enjoy the expensive profligate and wasteful lifestyles we see on the television shows and films from the West, and in the process buying the kind of electrical appliances and equipment the advanced countries are exporting to us?"

People's organizations and NGOs are starting to propose viable alternatives for the energy sector — in particular, small-scale community controlled power units such as micro-hydroelectric facilities; and they are looking beyond that to a more equitable and sustainable strategy for the country, which places priority on poor communities, respects ancestral domains, and protects forests from destructive logging — an economic policy which promotes real improvements in people's welfare without relying on huge amounts of cheap electricity. In the words of campaigner, Thomas Cruz, "Power must be for the people, designed by the people and controlled by the people".[24]

This is an edited version of an article published in July 1993 by the Philippine International Forum, PO Box 512, Cebu City 6000, Philippines.

Time-frame	Plan



Short-term (1992-1996)

- Massive education campaign on electricity, ecology and effeciency
- Alter electricity costing to penalize inefficient and non-essential use
- Reduce/remove import tariffs on technology that produces sustainable power i.e. microhydroelectricity, solar, wind turbines and biogas units
- Separate Mindanao from NPC National under a newly created Department of Energy Affairs to allow local planning and stop electricity grid to Visayas, controlled by local government, elected officials, electric cooperatives and NGOs.
- Total Log Ban to provide legal basis to prevent further deforestation
- Implement Agrarian Reform Laws and breakup government land to give to landless poor families.
- Return 'Public Lands' within ancestral domain to indigenous communities (Moro and Tribal)
- Open access to grid for supply *from* small producers



Medium-term (1994-2000)

- Shift to small-scale power production
- Identify communities with expressed need to run
- Introduce Least-Cost Energy Planning
- Conform to international climate conventions on greenhouse emissions
- Develop local small industry to sustain power units, maintenance and construction
- Financial incentives for community organizations to set-up power projects
- Promote/provide incentives for more efficient cookers, lights, refrigerators, motors and air-conditioning units



Long-term (2000-)

- Power consumption reduction
- Removal of unsustainable plants from grid particularly oil-powered
- Hybrid power production with reduced central control
- Price electricity at real cost (economic, social and environmental)

An outline for an alternative energy policy, in Kinaiyahan *(PO Box 175, 8000 Davao City).*

References

1. Department of Agrarian Reform, *Ang Roepomang Pansakahan at Ako*, Manila, date unknown.
2. Salgado, G.S., "Foreign Loans, Infrastructure development projects and Philippines Countryside Underdevelopment", *Moro Kurier*, July-September 1989, Moro people's Center, Inc., Iligan City.
3. Ibid.
4. Ibid.
5. Asian Development bank, *Electric Utilities Data Book for the Asian and Pacific Region*, Manila, 1987.
6. Kitazawa, Y., "The Japanese Economy and South-East Asia: The Examples of the Asahan Aluminium and Kawasaki Steel Works Projects", in Ghee, L.T. and Valencia, M.J., (eds.), *Conflict over Natural Resources in South-East Asia and the Pacific*, Ateneo de Manila University Press, 1990, p.85.
7. La Vinia, A.G.M., "Democratizing Access to Forest Resources: A Legal Critique of National Forest Policy", *Philippine Natural Resources Law Journal* 3 (1 and 2), Legal Rights and Natural Resources Center Inc., Quezon City, 1990.
8. Kummer, D., *Deforestation in the Postwar Philippines*, Ateneo de Manila University Press, Quezon City, 1992 p.57.
9. Viray, F.L., *The Dimensions of the Power Crisis*, paper delivered at the Legal Rights and Natural Resources Center, Kasama sa Kalikasan Workshop on Integrated Resource Planning and Demand Management for the Philippines, PSSG Building, Diliman, Quezon City, 24-25 August, 1992, p.16.
10. Cruz, T., *Power, the Powerful and the Powerless*, Kinaiyahan Bulletin, No. 11., March 1992, p.7.
11. Kinaiyahan Foundation, *Save Lake Lanao*, Kinaiyahan Foundation, Davao City, 1991.
12. Ibid.
13. Kinaiyahan Foundation, *Developments Around Lake Lanao and the Effects on the Local Communities*, paper delivered at the DENR/AWB Workshop on the Protection and Sustainable Use of Wetland Resources in the Philippines, Institute of Forest Conservation, University of the Philippines, Los Baños, 30 September-2 October, 1992, p.1.
14. Ibid.
15. Kinaiyahan Foundation, op. cit. 11, p.14.
16. Kinaiyahan Foundation, *The Assault on Apo Sandawa*, Davao City, p.12.
17. Ibid.
18. Schwehr, N.D., *Ethanol for the Philippines*, Stanford University, USA. 1991.
19. Rainforest Action Network, *The Tropical Rainforest Brief*, RAN, San Francisco, CA, USA, 1990.
20. Kinaiyahan Foundation, op. cit. 16.
21. Legal Rights and Natural Resources Center-Kasama Sa Kalikasan, *The Long Struggle for Mount Apo and its Peoples*, Bantay Bangko Urgent Action No. 1, December 1992, p.2.
22. Ibid. and Legal Rights and Natural Resources Center-Kasama Sa Kalikasan, *The Mount Apo Petition*, Summary of Legal Developments as of April 9, 1992, Legal Rights and Natural Resources Center Inc., Quezon City, 1992, p.11.
23 World Bank, World Development report, Oxford, 1992, p. 117.
24. Cruz, T., op. cit. 10, p.15.



Books

The Europeans

CULTURAL CHANGE AND THE NEW EUROPE: Perspectives on the European Community, edited by Thomas M. Wilson and M. Estellie Smith, Westview Press, Boulder, CO and Oxford, UK, 1993, £29.95/$44 (hb) 240pp. ISBN 0-8133-8517-2.

All the countries of Europe are undergoing the greatest political upheavals since the end of the Second World War, although the peoples of East and West are experiencing them in very different ways.

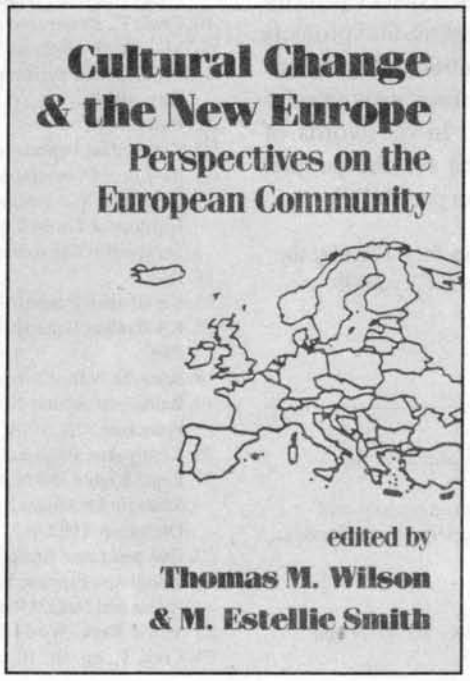
In the East, the changes have been dramatic and sudden; no individual has been untouched by them. People are adapting to new ideas and circumstances daily. Much that was forbidden is now compulsory, such as the free market, and what was once unsayable is now commonplace, political criticism, for example.

In the West, the changes are a creeping metamorphosis, almost unnoticed by many people. Even now "European Union", as outlined in the Maastricht Treaty, is widely regarded either as an organizational absurdity, invented by careerist politicians and overpaid civil servants, or as an agreement that affects businesses and banks only. Yet European Union is almost imperceptibly altering fundamental aspects of "Europeanness", which will affect the identity and culture of the citizens as well as the economies of its member states.

These essays on the European Community (EC) written by eleven (mainly US) anthropologists promise an interesting angle on the cultural aspects of unification, a subject insufficiently explored by social scientists and largely ignored by policy makers. Despite the book's title, however, there is no definition of "the New Europe", nor recognition that the countries of the EC are only part of an historic and cultural network spanning a whole continent — nor that economic union (*pace* Maastricht) will divide the peoples of Europe as surely as the Iron Curtain did.

The authors seem to have accepted the Western thesis that the EC *is* Europe, a concept left over from the Cold War when Central and East European countries were closed and alien and social innovation was associated with Western Europe. Since the fall of the Communist regimes in the late 1980s, the societies of these countries are absorbing Western ways at breakneck speed, while clumsily trying to discover their lost identities which have been submerged by enforced socialist "internationalism". They have much to teach Western Europe, not only about interdependence and cooperation through decades of trading mainly with each other, but also about loss of heritage and selfhood.

Although this is not explored, the book does provide stimulating studies into some of the new alliances brought about by economic integration. As a result of European Union, the cities of the EC can now step outside the nation state to join forces with cities in other states to lobby the EC for their common interests. Other essays identify the return in importance of regionalist or local identity, for example in Corsica and Scotland, as simultaneously destructive and empowering. They conclude that the EC leaders' exhortation to greater harmonization and assimilation is resulting in a still more determined drive by citizens to reclaim what is distinct and unique within their country or region.



Concepts of identity, integration and immigration feature strongly in the essays which consider the extent to which a sense of place creates societies. Since the earliest tribes settled in Europe, people have moved over the continent as invading hordes, refugees, imperial occupiers or indigenous slaves. This mix of ethnicities has contributed to Europe's global impact, particularly through their values and learning — and their rivalries, greed and arrogance. Today the "invading hordes" are still with us — as tourists or as guest–workers; both are a form of migrant, who bring new values and ideas, leaving their mark on both their home and host societies.

Conflict is often the result: a case study of racism in Spain indicates that a strong local identity goes hand-in-hand with xenophobia. Other essays lend strength to the view that small-scale constructs are better vehicles for a healthy sense of self than large ones. A conclusion, that there will never be a European identity, might be drawn from either case.

Connected to these views is the notion that where there is no border, people will often create one, a theme explored in Thomas M. Wilson's essay "Frontiers go but Boundaries Remain: The Irish Border as a Cultural Divide". Either side of a line drawn on a map between north and south are two cultures and mind-sets so distinct that Wilson argues that the two communities take their identities from it. If the EC succeeds in removing this barrier, along with all barriers, far from uniting communities, it may destroy their fragile détente.

This idea contrasts provocatively with the persistent Cold War perception about the border between East and West Europe, now being fortified by the EC against the refugees, immigrants and produce of the East (and the South). Change is never without danger, but I believe peace hangs on Europeans' ability to create some sort of framework — post-Berlin wall — that will help us all to live together on our continent. As long as the richer, more dominant half of Europe ignores, exploits or simply fails to understand the other half, the prospects for peace are not good.

Niki Kortvelyessy

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500 — and Counting

YEAR 501: The Conquest Continues, by Noam Chomsky, Southend Press, USA, 1992/Verso, London, 1993 £11.95/ $16.00 (pb) 331 pp. ISBN 0-86091-680-4.

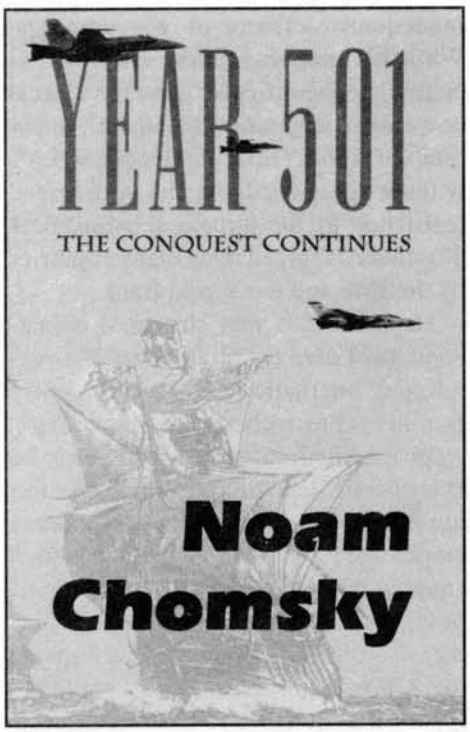
Year 501 analyses the foreign policy, politics and history of the United States of America, which last year celebrated the quincentenary of its "discovery" by Columbus. Its focus on US foreign policy, however, does not limit the book's content, as US hegemony (or "backyard" as the country's patriots prefer to call it) has been steadily expanding over these five centuries.

Chomsky recognizes that the massacre of indigenous Native Americans was the first in a series of bloody and often genocidal American conquests. "While modalities have changed, the fundamental themes of the conquest" remain unaltered.

One of the "modalities" of conquest that has changed, particularly with the advent of mass communication, is the justification offered to the domestic public for US foreign policy. Chomsky argues the importance of propaganda as a means of clothing dominant institutions with a veneer of respectability, and of mobilizing domestic support for belligerent overseas policies. He covers its evolution from the turn of the century — when intervention in Haiti was justified on the grounds that the Haitians were "a horde of naked niggers" in need of "energetic Anglo-Saxon influence" — to the complex, efficient machinery of contemporary pro-state propaganda.

Rejecting the conventional interpretation of superpower antagonism, Chomsky contends that the aggressive rantings of US and Soviet Cold War politicians veiled a symbiotic relationship. The "evil empire" never threatened the United States; "rapacious capitalism" never threatened the Soviet Union. But these fabrications enabled each superpower to subjugate countries and peoples within their "spheres of influence". The collapse of the Soviet bloc has forced the US to fabricate new pretexts: international terrorism, fundamental Muslims, and drug barons.

Chomsky argues convincingly that US interventionist foreign policy in the Third World is based on securing profits for corporate America, and funnelling



taxpayers' money into the military establishment. The subjugation of the Third World secures cheap labour, raw materials and sites for dumping industrial waste — whilst stifling any democracy, independence or meaningful development in those countries.

Chomsky points to Brazil, a country which has long followed the "neo-liberal" economic policies recommended by the IMF and World Bank, including restricted spending on public services, encouragement of foreign investment and production for export, and, at one time, the indefinite imposition of wage controls. The results: in 1986 "although boasting the eighth largest economy in the Western world, Brazil fell into the same category as the less developed African or Asian countries when it came to social welfare indices". This is coupled with one of the most lopsided income distributions and concentrated land ownership of any country in the world.

Whereas Chomsky's previous books have covered single topics such as Vietnam, Israel, US ruling élites and the mass media, *Year 501* is a comprehensive synthesis of his political thought. It presents a realistic — and hence bleak — assessment of the problems to be overcome before meaningful change can be achieved in our "primitive social and cultural structures that are driven by short-term material gain, and that regard human beings as mere instruments, not ends."

Over the last 25 years Chomsky has been a consistent and tenacious critic of US society and foreign policy. However, his radical, libertarian leanings have ensured that his scholarly contributions to political philosophy and history have been ignored by academia, while he himself has buried many of his important points in a confusing mass of footnotes. He has rectified these tendencies in *Year 501*, avoiding generalizations, supporting his points with clear examples and a comprehensive bibliography. *Year 501* confirms Noam Chomsky as one of the most independent and enlightening of contemporary political commentators.

Judas Skelton-Robinson

Judas Skelton-Robinson has a medical degree and is widely-read in the works of Noam Chomsky.

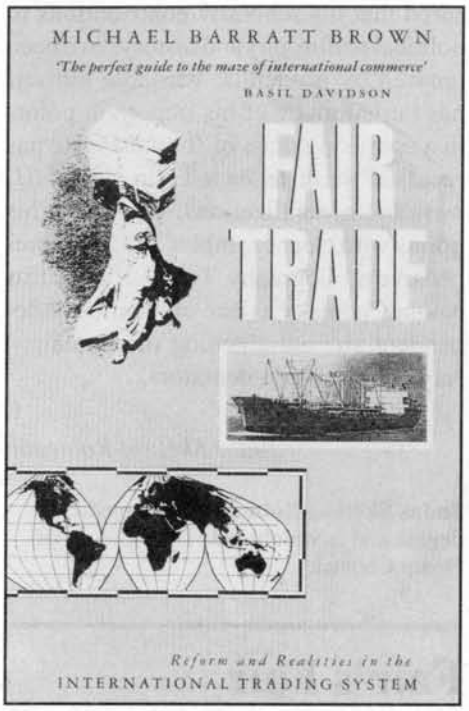
Fair's Fair

FAIR TRADE: Reform and Realities in the International Trading System, by Michael Barratt Brown, Zed Books, London and New Jersey, 1993, £10.95/ $17.50 (pb) 226 pp. ISBN 1-85649-074-2

"One of the unfairest things in the world is the system of trade" writes Michael Barratt Brown in *Fair Trade*, a book devoted to explaining this assertion. It is convincing. He thoroughly criticizes the way that world trade is conducted and explains the policies that established these patterns clearly enough for anyone to understand what is usually dismissed as too complex for the lay person.

Barratt Brown carefully traces the historical spread of capitalism, the division of world resources between rich and poor, and portrays how unequal bargaining power exacerbates unequal exchange. He explains very simply the basic institutions of contemporary economic life — the ups and downs of the so-called "normal business cycle"; the mechanisms of the European Common Agriculture Policy, the World Bank and International Monetary Fund (IMF), commodity agreements and barter trade; and tax evasion schemes based on the under-invoicing of goods traded between subsidiaries of a single corporation.

Scrupulously avoiding the theoretical constructs presented in economics classes, Barratt Brown describes how markets work in the real world. He explains trade in "futures," for example, as a calculated but high risk gamble. "Like casino addicts," he says, most commodity traders



develop "systems constructed on past and current movements of prices extrapolated into the future. These are built into computer programmes and, as new information is fed in, the computer signals whether and when to buy or sell a particular commodity".

Many traders are themselves producers, and in many markets two or three giant producers dominate, manipulating prices to ensure large profits by witholding supplies or flooding the market. But small producers suffer from sudden booms and slumps. They can no more increase the volume of produce to be offered during a boom than they can afford to withold their products during a slump.

Fair trade, according to Barratt Brown, must benefit small producers — and his focus is on the small producers of the Third World. He concludes that alternatives to the international commodity markets must be found to ensure fair markets for them.

The second half of *Fair Trade* is devoted to "making trade fairer". But the focus on Alternative Trade Organizations (ATOs) to promote small Third World producers misses 99.99 per cent of what Barratt Brown himself has identified as unfair trade: ATOs account for only "a few hundred millions" of dollars in a $5 trillion world market.

Unfortunately, the chapters on market regulation, international aid, and centrally planned trade fail to specify alternatives to what he ably describes as flawed. In "Regulating the Market", for example, Barratt Brown contrasts the success of giant companies in managing supplies and markets with the "quite pathetically inadequate" efforts of governments. While his analysis of these efforts is excellent, he identifies a "need for what is now called 'structural adjustment', sometimes of whole Third World economies", without acknowledging the widespread resistance to the structural adjustment programmes forced upon many countries by the IMF and the World Bank.

He then adds that structural adjustment must also entail an "overall structuring of international trade exchanges". But this is precisely the question: how?

In the final chapter, "What Can Be Done Now?" he limits himself to promoting ATOs. In so doing, he unfortunately emphasizes the role of industrialized country markets, diminishing the purpose of the ATO to one of charity. Furthermore, he fails to apply his critique to the ATOs themselves. For example, he ignores a disquieting trend in which larger ATOs narrow the opportunity for smaller disenfranchised producers — just as in the corporate marketplace.

A discussion of alternatives beyond ATOs would consider small producers in the industrialized world as well as in the Third World. It would recognize Canada's supply management programme, which successfully supports its small farmers by pricing domestic produce fairly and regulating imports. It would emphasize the need to enforce GATT Article VI, which prohibits exports at prices below the cost of production, and GATT Article XI, which allows import restrictions for supply managed products — and would criticize the way in which powerful companies and countries have captured the GATT negotiating process.

A broader discussion would also examine the emerging body of international environmental law and institutions. Much innovative work has been done in the name of the global environment to regulate trade in accordance with principles of fairness. Indeed, the rallying cry of "sustainable development" goes far beyond ecology ; it has generated proposals for the kind of "overall restructuring" that goes begging in *Fair Trade*.

Readers interested in understanding unfair trade should certainly start with this excellent book. Those interested in understanding fair trade, however, should then look a little further.

Kristin Dawkins

Kristin Dawkins is Director of Research for the Minneapolis-based Institute for Agriculture and Trade Policy.

Common Comforts

COMMONERS: Common Right, Enclosure and Social Change in England, 1700-1820 by J.M. Neeson, CUP, Cambridge, 1993, £35 (hb), 382 pp. ISBN 0-521-44054-8.

In 1807, a Herefordshire land agent who was a fervent supporter of enclosure wrote: "The farmers in this county are often at a loss for labourers: the inclosure of wastes would increase the number of hands for labour by removing the means of subsisting in idleness."

There is a contradiction among such arguments used by 18th and 19th century advocates of enclosure of the English commons for "agricultural improvement". While some regarded commoners as an "idle, useless, disorderly set of people" who only needed to work four days a week, others insisted that the commons were inferior, badly-managed lands and the life of a commoner was wretched and impoverished, "worse even than that of a day labourer".

These arguments were a consequence of the enclosers' reluctance to concede that commoners might simply have "enough" for their needs and be enjoying a satisfactory measure of comfort, security and independence. As one 18th century defender of the commons remarked, an encloser must "bring himself to believe an absurdity before he can induce himself to do a cruelty". These arguments have found their way into current orthodoxy which portrays the commons as a "thin and squalid curtain" hanging between the poor and even greater poverty.

J. M. Neeson sets out to prove the enclosers and their latter-day apologists wrong. She employs a wealth of evidence, drawn mainly from archival sources in Northamptonshire, to show that a vibrant and healthy peasantry were working and managing the commons well into the 19th century. In doing so, she builds up a picture of a highly-structured working arrangement that was treasured by its beneficiaries — who accounted for well over half the population in Northamptonshire at the time.

Neeson shows that the commons provided a bewildering array of products including food, grazing, construction materials, bedding, matting, clothing, fuel, toys and nick-nacks, the value of which was by no means negligible. The milk

from a single poor cow turned onto the commons would bring in the equivalent of six months wages. The yield from an acre of gorse was valued at 45 shillings, when wages were about a shilling a day. A few days gathering harvest leftovers could bring in corn to last a family anything from two to five months. Small wonder that commoners were disinclined to seek outside employment.

Villagers were insistent about the value of the commons and their right to manage them: "If we do dig it up to our own hurt, we hurt only ourselves. We do not desire anybody to interfere. The common is our own." Local by-laws ensured that the commons were not overstocked, measures were taken to prevent disease and inbreeding, and incentives offered for commoners to sow new crops such as clover. These regulations varied widely from village to village, according to topography and social structure, and changed continuously.

The second half of *Commoners* describes the consequences of the parliamentary Acts of Enclosure, passed between 1770 and 1830 — the dispossession of the commons, the resulting consolidation of land ownership, and the considerable resistance shown by Northamptonshire commoners who petitioned against the Acts, rioted and burnt fences. Within half a century, the structure of the English rural economy had been changed and the peasantry was destroyed.

So was the integrity of the village. A wide range of women and men held an interest in the commons, from landless labourers and craftspeople to wealthy landowners — a common interest which provided important social cement. Once the commons had gone, the village was more severely divided into landowners and wage workers whose interests diverged or even conflicted.

J. M. Neeson clearly cares deeply about the English rural scene; her book is as passionate as it is scholarly. It provides a vivid picture of the 18th century rural Midlands, and gives us a wealth of clues to explain the sorry present state of the English countryside: why there are no fruit trees in our hedgerows, why we have so much barbed wire and no shepherds, why our villages have become commuter dormitories, and why lay-bys are cluttered with the vans and buses of the itinerant unemployed. The apologists of enclosure have a lot to answer for, and this book helps bring them to task.

Simon Fairlie

BOOKS DIGEST

- GLOBAL ECOLOGY: *A New Arena of Political Conflict*, edited by Wolfgang Sachs, Zed Books, London and New Jersey, 1993, £14.95/ $25.00 (pb), 262pp. ISBN 1-85649-164-1.

Leading environmental thinkers examine confusions and contradictions in "sustainable development", outline further problems of environmental management on a global scale, and offer multiple examples of "ecology from below". A germinal book following the editor's earlier *Development Dictionary*.

- THIS FISSURED LAND: *An Ecological History of India*, by Madhav Gadgil and Ramachandra Guha, Oxford University Press, Delhi, 1992, £12.95/Rs 290 (hb), 274pp. ISBN 019-563027-0.

The authors, an ecologist and a social historian, look at the cultural and ecological mosaic of pre-modern India and put forward an ecological interpretation of the caste system. This leads into a socio-ecological analysis of patterns of resource use introduced by the British, which continue to bring social conflict as well as ecological change.

- DESIGN FOR SOCIETY, by Nigel Whiteley, Reaktion Books, 1-5 Midford Place, Tottenham Court Road, London W1P 9HH, 1993, £16.95 (hb), 182pp. ISBN 0-948462-47-7.

Nigel Whiteley takes up themes first elaborated in Victor Papanek's *Design for the Real World*. His green and feminist critiques of consumerism, although not as far-reaching as they could be, blow a welcome breath of fresh air into the design profession.

- TROPICAL DEFORESTATION: *Small Farmers and Land Clearing in the Ecuadorian Amazon,* by Thomas K. Rudel with Bruce Horowitz, Columbia University Press, New York, 1993, $28.00 (pb), 234pp. ISBN 0-231-08045-X.

In the course of a careful study of a province in southeastern Ecuador, this book challenges many common assumptions about tropical forest colonization: that it is due to population pressure and the dispossession of the poorest of the poor, that it proceeds inexorably, and that migrants on the frontier constantly move deeper into the forest. The authors aresensitive not only to the complex interactions among road-building, investment and patronage, but also to the mind-set of the migrant farmers themselves.

- BOUNDARIES OF HOME: *Mapping for Local Empowerment*, edited by Doug Aberley, New Society Publishers, Gabriola Island, BC and Philadelphia PA, (Jon Carpenter Publishing, Oxford), 1993, $9.95/£7.99 (pb), 138 pp. ISBN 1-55092-207-6.

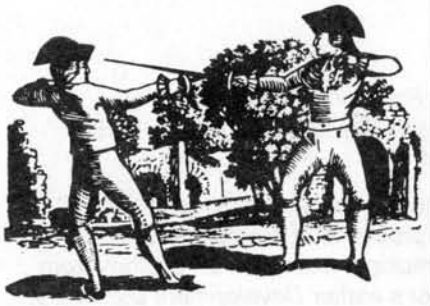
Bio-regional mapping offers an inhabitant's eye view of a locality rather than an aerial surveyor's, emphasizing ecological and cultural boundaries rather than political onces. This stimulating manual is an excellent tool for anyone wanting to empower their community.

- FISH, CURRY AND RICE: *A Citizens' Report on the State of the Goan Environment*, by Claude Alvares, ECOFORUM, 1993, £7.99/S12 (pb), 398pp. Available from SGC, 143d Offord Road, London N1, UK.

Since the Portugese colonialists left Goa in 1961, rapid industrialization, particularly iron and manganese mining, and tourism, has threatened the local ecosystems. A wide-ranging and detailed report from Goa's network of environment groups encompasses Goans' resistance to development.

- THE CORRUPTED SCIENCES: *Challenging the Myths of Modern Science*, by Arnold Arnold, Paladin (Harper Collins), London, 1993, £7.99 (pb), 398pp. ISBN 0-586-08891-1.

Current Western scientific method is severely flawed, contends Arnold, because it concentrates on "how" while ignoring "why". In demolishing concepts such as artificial intelligence and theories such as The Big Bang, Arnold defines the sea-change in modern scientific thought required for it to work with humanity and the earth.



Letters

Foreign Funders' Agenda

The strategy of foreign donor agencies in giving funds to voluntary agencies seems to be to make communities dependent on these agencies, not only for funds but also for ideas, methods and approaches. Alien models of development which are against the culture of the people come with funds: foreign experts who have no knowledge of the working environment are thrust on countries that do not need them but are forced to accommodate them because otherwise funds are not sanctioned. Should these funds dry up, more than 90 per cent of the 5,000 identified voluntary groups in India would have to fold.

Foreign donor agencies are wary of sharing their agendas with village groups, making a one-sided, unequal relationship, although they want to appear open and democratic in their way of functioning. More often than not, the bigger the organization, the less likely it is to be open to pressure or influence from below. Easy access to money, with little or no accountability, has resulted in the proliferation of groups with no roots and little sympathy or understanding of the real problems of the poor. By using smooth jargon, many fraudulent groups have managed to persuade donor agencies abroad to donate substantial sums of money.

When foreign funds are misused or embezzled, every effort is made to hide the information. As failures are not openly discussed, there are hundreds of such totally corrupt groups in India.

It is not uncommon to find family concerns starting up voluntary agencies or pretending to do activist work. Unemployable sons and daughters with influential parents start lobbying, advocacy or participatory research groups. Eventually, they become self-styled spokespersons for village groups.

Because it is easier for urban-based groups to speak the language of the North, many of them have conveyed a distorted impression of the importance of the voluntary sector in the South. Far from being a powerful independent sector or even a 'Third Force', the sector is small, vulnerable to pressure and is no match for the influence and reach of government.

Urban-based groups, with the help of foreign funds, have started a strong counter-debate against the adoption of a code of ethics. Any move to bring in financial discipline and public accountability in funding has been sabotaged by these groups because they stand to lose the most.

Foreign funds have destroyed the potential for indigenous initiatives to grow. Many indigenous models and institutions have been rejected or destroyed because they do not fit into the objectives of some of the donor agencies abroad.

What do indigenous groups need to do to see that foreign donor agencies are not allowed to undermine the self respect of communities in such a blatant, high-handed way?

- Look for resources — human, technical and financial — from within. The sooner groups start reducing their dependency on foreign sources, the better. Self-respect should be the most powerful motivation.
- Put pressure on their own governments to see that more national funds are earmarked for the provision of basic minimum needs. It is demeaning to have to beg for funds from outside when it is primarily the responsibility of governments to meet the basic needs of the poorest of the poor.
- Persuade foreign donor agencies to adopt a code of conduct concerning how they should behave and what is expected of them.

Grassroot groups with community acceptance must receive the attention and respect they deserve, even if foreign donor agencies cannot communicate with them or understand what valuable work they are doing.

The presence of foreign expertise should be minimized drastically. It is ludicrous to see foreigners receiving criminally large salaries to tell Indians how to make pit latrines and repair hand pumps. They need to be told politely to go home and let the job be done by Indians at a quarter of the cost. Posting glorified clerks in the name of experts is, to say the least, an insult.

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Cultural Survival

Stephen Corry's article, "The Rainforest Harvest: Who Reaps the Benefit?" (*The Ecologist*, July/August 1993) opens a debate on rainforest marketing and its relationship to indigenous people which Cultural Survival welcomes. The issues raised are too important for local people with whom we work to be adequately addressed in a short letter, and we hope *The Ecologist* will provide further opportunities for airing this dialogue. We hope that a fuller analysis will not only bring the complexity of these efforts to public attention, but will also help forge closer ties between green marketing and critical campaigns for indigenous rights, and help shape this experiment to make the market work for local people.

In his article, Stephen Corry questions whether the marketing of rainforest products is an effective tool to benefit local people and to marshall international support for indigenous rights. Indeed, he fears that marketing efforts "deflect attention from the critical question of land tenure" and even mislead the public. He is also quite legitimately concerned about possible negative impacts on indigenous people of opening markets and their traditions.

We share these concerns. However, we see green marketing appropriately used as a very powerful tool to help transform the balance of power for indigenous people. We also strongly believe that green marketing is only one tool in a coherent strategy that includes strong actions which will effectively support indigenous claims world-wide. In this arena, Cultural Survival has spent more than twenty years bringing respect for indigenous rights to international attention, and supporting such claims locally.

A brief review of our award-winning magazine, *Cultural Survival Quarterly*, will quickly inform readers of the many issues with which Cultural Survival, including its marketing programme, Cultural Survival Enterprises (CSE) is involved. Cultural Survival directly supports land demarcation and titling of indigenous territories; we focus our efforts on empowering indigenous organizations to be advocates of the issues affecting them; and we work with indigenous organizations to help them maintain control over their territories once they have been officially recognised.

Just a few examples will demonstrate our long-standing — and continuing — commitment to these ideals. For nearly 15 years we have provided direct support to

land demarcation in over nine countries in Latin America with projects such as the Ecuador Land Demarcation Project. For over ten years, Cultural Survival has also highlighted the explicit link between empowering indigenous organizations and obtaining territorial rights. We have given core support to many of the organizations that now spearhead the fight for indigenous rights in the Amazon. And we continue to publicize these claims through publications such as our recently released *State of the Peoples* Report.

Cultural Survival, and the indigenous organizations we support, have long recognized that legal rights, important as they are, do not protect indigenous peoples from a multitude of threats to their territories. Showing that they use their lands is a powerful legal tool for indigenous peoples to prevent incursions by companies or colonists. But in the past, local people have often been forced to adopt destructive models of resource exploitation in order to keep others from usurping these same resources.

This is also why Cultural Survival now works in partnership with indigenous people's efforts to develop economically viable models for forest use that build on traditional land use systems. Our efforts range from projects in South America, such as the PUMAREN Project which helps the local Indian federation to develop management plans that incorporate traditional land use with sustainable plans for forest use in their member communities; to work with NATRIPAL (United Tribes of Palawan), an association of indigenous communities from the island of Palawan, Philippines, providing practical support to sustainable and equitable economic development.

In his specific criticisms of CSE, Stephen Corry accuses Cultural Survival of bringing the market to peoples living in the forest as if these groups have never engaged in an economic transaction involving money or the trade of goods. Actually the opposite is the case. CSE only works with local producer groups who already participate in the market economy, but want a better deal. Cultural Survival views marketing as a means of supporting community efforts towards equitable land tenure, effective social organisation, and wise management of natural resources.

For example, the rubber tappers of the Brazilian Amazon have harvested non-timber products including rubber and brazil nuts for over a century. Before Cultural Survival began working with the Xapuri Rubber Tappers Cooperative (CAEX), rubber tappers sold their Brazil nuts for three cents per pound to middlemen who then exported the nuts at exorbitant profits. In turn, the middlemen sold goods from the city to the rubber tappers at 1,000 per cent mark-ups. Now the rubber tappers working with Cultural Survival earn ten cents per pound and are buying manufactured goods at lower prices as a cooperative.

Stephen Corry gives the impression that Cultural Survival is misleading the public about from whom we buy Brazil nuts. Cultural Survival is proud of its association with CAEX, and our information materials are clear about who exactly harvests the nuts. The fact that we purchase Brazil nuts from rubber tappers should not come as a surprise to anyone familiar with Cultural Survival's mission: to defend the rights of indigenous peoples, ethnic minorities, and small-scale societies. Rubber tappers have lived in the Amazon for over a century, and have developed skills for living in the forest. Stabilization of the economy and political power of the rubber tappers enables them to defend the rainforest against those seeking to destroy it.

Perhaps most surprising to Cultural Survival is the way in which Stephen Corry has evaluated the activities of CSE separately from Cultural Survival's twenty-one years of work in support of indigenous self-determination. CSE's work is just one thread woven together with Cultural Survival's other efforts to strengthen the cloth of defending indigenous rights and control over their traditional territories.

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Indigenous Land Rights

I am a supporter of the view that sustainable harvesting of renewable forest products is a viable strategy, both for conserving biodiversity and protecting indigenous peoples. I would like to counter the narrow, biased and misleading statements made by Stephen Corry (*The Ecologist*, July/August 1993), although he did raise some very important issues that need attention.

Stephen Corry was correct in identifying land rights as a critical issue, but I do not agree that "rainforest harvesting", as he terms it, diverts attention away from this issue. The main point is that indigenous people need a strong argument — more than the moral one — that their ancestral lands should be legally turned over to them. Governments commonly argue that the greater national good must take precedence over the needs of a small group of people. It is a strong argument. If, however, the small group can demonstrate that it is contributing to the greater good by earning the debt-strapped nation foreign exchange through exports, that it is managing well a national natural resource, and that it is raising the economic productivity of an area of land, the government's argument is weakened considerably and the indigenous people are strengthened.

He compares the harvesting strategy with the colonial period over exploitation of resources in order to discredit it. It would be more accurate to compare it with extensive pre-colonial trading systems that the colonial experience broke up. Some of these ancient trading systems still exist in degraded form.

A principal bias of the piece is the exaggeration of the importance of Cultural Survival and the Body Shop in forest product trade. In fact, Stephen Corry seems more concerned about attacking these two organizations than in assessing

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objectively the strategy of rainforest harvesting. The minute amount of products purchased by these two entities compared to that which is traded globally does not warrant their being made the norm of forest product trade. There are myriads of other products being marketed in many different types of systems by normal traders.

Cultural Survival and The Body Shop are far outside the norm, and I would agree with the author that a lot of inaccurate hype surrounds their marketing activities. This should not discredit other types of marketing that exist or could exist. This relates to the issue of the hype diverting attention from land rights. Get rid of the hype, not trade.

The problem of exploitative middlemen is a real one, but it has existed for centuries. It goes on in most of the forager trading systems I have studied in Kenya, India, the Philippines and elsewhere. The answer is not to ban support for trade, it is to help the people organize themselves against exploitation. If Cultural Survival was serious about empowering indigenous groups, this is what they would have done. Setting up a trading empire will only strengthen Cultural Survival, not indigenous peoples.

Indigenous groups could be helped by outsiders such as Survival International to organize in such a way that they trade a multiplicity of products and with several different companies to avoid the problems of commodity price fluctuations and company extortion.

Stephen Corry resorts to the Big Lie technique when he compares Cultural Survival's 10 per cent loans to indigenous groups with "debt-bondage" and the patron system of chaining people to the big "boss". It is absurd and shows again strong bias. And the fact that Cultural Survival deals mainly with non-indigenous groups is their problem, it is misleading and has nothing to do with the general issue of forest product trading.

He uses the Big Lie again when he claims that the harvesting ideology underneath is one that really supports what he calls the "integrationist" philosophy, that is, that indigenous peoples should be integrated into the larger society and thus disappear. I honestly can't even follow his reasoning here. He seems to think that people trading for profit is something new and evil and is being introduced by insidious outsiders. Most people in forest areas — moist and dry — have been trading forest products for profit for centuries. They weren't "integrated" by this activity before, why should it happen now? In fact, many anthropologists believe that foraging groups only exist today because of trade, not in spite of it. Ironically, stopping trade might result in the disappearance of these indigenous groups because they would lose their livelihoods.

Stephen Corry's weakest argument is that indigenous peoples and forests are going to be saved by a worldwide outcry that their land shouldn't be stolen. This is very naive as a strategy, to say the least. There are enormous and growing pressures for land and economic development to raise peoples' living standards all over the world. For weak and relatively powerless indigenous peoples to hang on to some of their traditional land will take a tremendous fight, and the strongest arguments possible will have to be used. One of them can be the moral one advocated by Corry, it will reach some people. But ultimately in this realistic world, an economic one will carry more weight.

We need to avoid at all costs the Cultural Survival top-down approach. Outside organizations and individuals can help most by working with indigenous peoples to assist them in conceptualizing their problems and the solutions to them. It is up to the local communities themselves to decide how and what they are going to trade, but they can be helped to organize themselves in such a way that they are not exploited, that they can formulate natural resource management plans, and that they can face up to national governments with legal demands for their land.

Daniel Stiles
Consultant
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Green Marketing

The letter of Gordon Roddick, Chairman of The Body Shop, in response to my article on the so-called "rainforest harvest" (*The Ecologist*, September/October 1993) did not actually deal with a single one of the criticisms of the "harvest" but was restricted to a long, sustained and violent attack on me personally. This is in spite of the fact that, as The Body Shop knows very well, I am acting as a spokesperson for Survival International's corporate and considered policy, a policy which is supported by many indigenous people.

This attack is one of several launched by The Body Shop against Survival International. This concerted and orchestrated assault on Survival is clearly intended to inflicat as much damage as possible on our organization and its work for the rights of threatened tribal peoples.

Survival International has opened up a very serious debate about the ethics and effects of the "rainforest harvest" and shown that to encourage yet more consumption of tropical forests in the guise of helping is, at best, very dangerous and, at worst, very harmful. We have pointed out that this ideology ultimately seeks the integration of tribal peoples into "national society", and we all should know by now that what that really means is the death of cultures and societies. We have also shown that the specific projects being applied by The Body Shop and by Cultural Survival are ethically very dubious.

None of this should be surprising. Hype aside, The Body Shop's objective is to promote consumption and so make a profit for its owners and shareholders. Survival International has incurred its wrath because we have touched on a raw nerve (the one running from mouth to wallet).

On 18 September this year, Gordon Roddick told the Kayapó that his firm could no longer increase its imports from the tribe and that he would not be able to continue visiting them. He also lectured them at length on how they would have to change their ways if they wanted to attract more "foreign investment" and suggested they sold other aspects of their culture (such as T-shirt designs). The Indians asked him repeatedly for the names of companies which would buy these things off them — but he had no answers.

So The Body Shop are now phasing down their relationship with the Kayapó who are presumably judged to be no longer the source of good press and promotional copy.

The image of tribal peoples, when projected by profit-making firms for their own ends, is clearly a subject of ongoing concern to the campaign for tribal peoples. These peoples are not commodities to be used as promotional and advertising copy and then spat out once the fad has changed.

Survival International will, of course, continue its work for threatened tribal peoples irrespective of the attempts by governments, companies and "development" banks to silence us, or damage our work or our staff.

Stephen Corry
Survival International
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DIARY DATES

December 3, 1993: Public discussion **THE AFTERMATH OF CHERNOBYL** at the Royal Society, 6 Carlton House Terrace, London SW1, covering radiological consequences, developments in Russia, Ukraine and Belarus, the damage of low dose radiation, and the international thyroid project. For more details, contact: Tom Milne, Pugwash, Flat A, 63a Great Russell St. London WC1B 3BJ, UK. Tel: 071-405 6661, Fax: 071-831 5651.

CALL FOR PAPERS

The European Union for Coastal Conservation (EUCC) and the Worldwide Fund for Nature (Baltic Programme) are holding a conference on **Coastal Conservation and Management in the Baltic Region** from 2-7 May, 1994, including field trips to Gdansk, Kaliningrad, Klaipeda and Riga. Papers are requested on various aspects of conservation and management of coastal lagoons, wetlands, habitats and estuarine environments. For further information, contact EUCC Baltic Office, Kareiviniu gt. 4-7, LT-5800 Klaipeda, LITHUANIA. Tel: +370 61 96 593, Fax: +370 61 17 106/61 56 526.

The 10th Anniversary Cellucon Conference and industrial exhibition, **The Chemistry and Processing of Wood and Plant Fibrous Materials** will be held 19-23 September, 1994 at the University College of North Wales, Bangor, Wales, UK. Papers are requested for the following topics: the wood resource; non-wood plant fibre resources; crop fractionation; chemical processing of fibre; chemical processing of non-fibrous products; physical/chemical fibre processing. For further information, Tel: 0244 831531, Fax: 0244 814305.

Second International Conference on **Air Pollution**, 27-29 September, 1994 in Barcelona, Spain. Organized by Wessex Institute of Technology, Southampton, UK. Abstracts by 30 November 1993 on the following subjects: Modelling, Monitoring and Laboratory Studies, Data Analysis and Observation, Pollution Management, Pollution Engineering, Interaction of Modelling with Experiments, Urban Case Studies, Emission Inventoring, Regulatory Bodies. Enquiries to: Liz Johnstone, Conference Secretariat, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO4 2AA, UK. Tel: 0703 293223, Fax: 0703 292853.

Fifth International Conference **ENVIROSOFT 94**. Development and Application of Computer Techniques to Environmental Studies 16-18 November, 1994, San Francisco, USA. Organized by the Wessex Institute of Technology, University of Portsmouth, UK. Papers wanted on recent advances in environmental software, organization of theories into structural algorithms, mathematical models, software optimization, scope and application of computer programmes, etc. For details, write to Sue Owen, Conference Secretariat, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO4 2AA, UK. Tel: 0703 293223, Fax: 0703 292853.

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Capel Manor Horticultural and Environmental Centre offers short courses in Countryside Training, including qualifications such as City and Guilds Certificate, Certificate in Ecology and Conservations (in conjunction with London University), BTEC National Diploma, and one day introductory courses. For advice on all activities and courses, contact Pat Webb, Capel Manor, Bullsmoor Lane, Enfield, Middlesex EN1 4RQ, UK. Tel: 0992 763849.

Statistics Workshops and Short Courses in Biology: Introductory Statistical Methods with Applications in Biology, 15-19 November, 1993 in Cheyenne, WY; Computer Intensive Methods in Biology, 10-14 January 1994, Los Alamos, NM; Statistics for Field Ecology and Studies of Resource Selection, 17-21 January 1994 in Los Alamos, NM. For further information, contact WEST Inc, 1402 S. Greeley Hwy, Cheyenne, WY 82007, USA. Tel: (307) 634-1437, Fax: (307) 637-6981.

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Marcus Colchester and Larry Lohmann (eds.), *The Struggle for Land and the Fate of the Forests*. Based on six countries, the book illustrates the complexity of the problem with a large section discussing future options to avoid total destruction of the ecosystems. 389pp, paperback, 1993, £9.

Third World Network, *Modern Science in Crisis: A Third World Response*. This book provides a scathing and comprehensive critique of modern science as well as essential ideas for a reconstruction of a holistic alternative science that respects life. 81pp, paperback, 1988, £4.

Bharat Dogra, *Living for Others: Vimla and Sunderlal Bahuguna*. A charming and inspiring story about the couple who led the Chipko movement and are continuing to dedicate their lives in the struggle to protect the environment. With black and white photos. 64pp, paperback, 1993, £3.

Lester R. Brown et al, *State of the World. 1993*. The latest Worldwatch Institute Report on progress towards a sustainable society. 268pp, paperback, 1993, £6.50.

Jack Frazier, *The Great American Hemp Industry*. Fast-growing hemp is a sustainable way of producing paper, fibre, food and fuel, paperback, 1991, £4.50

Peter Bunyard (ed.), *New Responsibilities: The Indigenous Peoples of the Colombian Amazon*. This report provides an insight into new government policies concerning indigenous land rights and conservation. 160pp. with maps, graphs and b&w photos, 1993, £18.00

Evelyne Hong, *Natives of Sarawak*, 265pp, paperback, 1987, £5; World Rainforest Movement, *The Battle for Sarawak's Forests*, (new edition), 303pp, paperback, 1990, £8.50. Essential reading for those interested in Sarawak and its natives, the tropical forests and the rights of indigenous peoples in the Third World.

For postage and packing, please add 15% of the price per book for orders within the UK, 20% for overseas surface mail. Please send your order and payment to Wadebridge Ecological Centre, WEC Book Service, Worthyvale Manor, Camelford, Cornwall PL32 9TT, UK. Tel: 0840 212711, Fax: 0840 212808. Credit card orders accepted.

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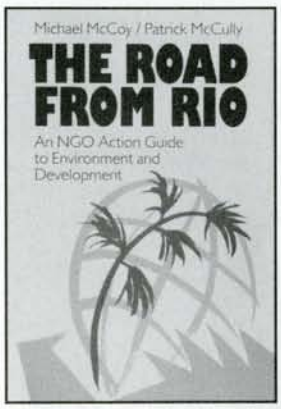
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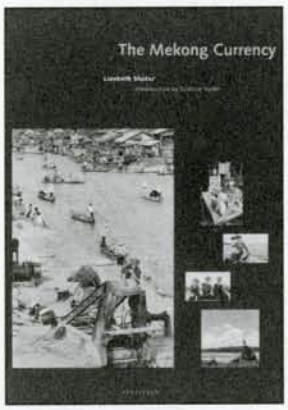
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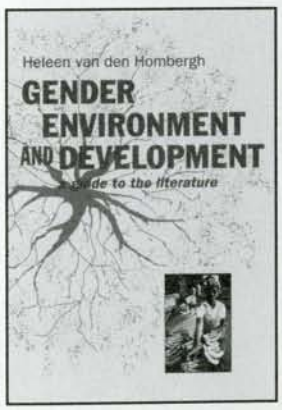
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