

Globalizing India

Perspectives from Below

Edited by

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SEEDS OF WRATH: AGRICULTURE, BIOTECHNOLOGY AND GLOBALIZATION

Jackie Assayag

'If the *charkha* was the symbol of the Indian Independence, the seed is the symbol for protection of this independence.'

M. D. Nanjundaswamy,

President of the Karnataka Rajya Raitha Sangha, 29 December 1993

South India

Siddeshvara village in Bidar district, Karnataka, contained about 600 households and 4,000 inhabitants in 1997. Its cramped houses, made of a mixture of straw, stones and mortar, are linked by narrow lanes which are filled with water, rubbish, excrement and cow dung during the monsoon. The Siddeshvara temple overlooks the houses. A new statue recently installed by the members of the dominant caste of Virashaiva-Lingayats marks the entrance to the village. The climate is dry, there is little or no irrigation, harvests are disappointing, the local government is inefficient, and the state apparatus appears to be indifferent.

Shivaraj Mainalle lived in Siddeshvara. He was some 40 years old and the father of five children, the youngest of whom was in the primary school in the fifth standard. He owned 1.28 hectares of land and farmed 3.6 hectares as a tenant (*lavani*). In 1995–97, he lost all his harvests because of parasitical worms and the vagaries of the weather. His debt to the local cooperative bank had risen to 24,000 rupees at the end of 1997 and he owed 80,000 rupees to a private moneylender in the village. The purchase of pesticides alone cost him more than 20,000 rupees. Notwithstanding this period of distress, his moneylender demanded his due. Shivaraj Mainalle committed suicide in December 1997. He drank a widely known variety of pesticide prohibited in

Western countries, *endosulphina*, of which the advertising slogan is: 'Friend of friends, enemy of enemies'! Between 1996 and 2000, more than 3,000 suicides of this type were reported in Andhra Pradesh and 2,000 in Karnataka.¹

Paris, Europe and the World

On the morning of 5 June 1999, 500 members of peasants' organizations gathered below the Eiffel Tower in Paris. Most of them were from the Indian states of Karnataka and Uttar Pradesh and they had come to demonstrate in the Intercontinental Caravan against genetically modified (GM) crops and a type of hybrid seed called 'terminator' because it is sterile. American imperialism, intensive agriculture, the debt of the countries of the South and the international financial system – in short, 'globalization' – were also being denounced. During this weekend in June, peasants, surrounded by activists from the host agricultural countries, led the demonstration – which now also embraced the question of patent rights – to Cologne in Germany to the meeting of the G8. The demonstration then continued to Geneva to protest against the World Trade Organization (WTO) and in front of the offices of the multinational companies Novartis and Nestlé, as well as at the headquarters of the Banque Suisse. In France, in Rennes, Montpellier, Aix-en-Provence, Lyon, Chaumont and Besançon, the rally was mainly organized by the Peasants' Confederation led by the neo-ruralist José Bové. The Intercontinental Caravan had been formed in response to the General Agreement on Tariffs and Trade (GATT), which had drawn to a close with the Uruguay Round in 1994. During this meeting, the WTO was created under the aegis of the G7. At that time, India committed itself to opening its borders to the world food market before 2003.

Often contemptuously referred to as the 'World Tyrannic Organization', the WTO is widely held to be responsible in India for the agricultural crisis. Many see the thousands of suicides committed by farmers as the 'price' of the 'mistakes' of globalization. A majority of the media, national as well as foreign, share this diagnosis. Nevertheless their assertions are contradicted by the structural character of the agrarian inequalities of caste, class, faction, region and gender in the subcontinent. And this is the case even though the opening to the world market (since 1980) and the establishment of the 'structural adjustment programme' (in 1991) have indeed entailed a restructuring designed to end the 'state-centred', 'interventionist' development imposed on the country by Jawaharlal Nehru in the 1950s.

Globalization has become the *Zeitgeist* of the epoch, a cliché, as much in South Asia as elsewhere. This notion, vague and wide-ranging, over-used and

largely metaphorical, does not however have the explanatory capacity ascribed to it. Its definition is still more inadequate because globalization is spontaneously understood as a 'total social fact'. In short, globalization gives rise to a speculative bubble, one which the anthropologist is called upon to puncture. With this in mind, research was conducted in Karnataka between 1999 and 2001. My investigation was not a thorough consideration of the agrarian question or of the peasant situation. Rather, it focused on social and biotechnological representations, as well as their diffusion through various practices, by looking at how agrochemistry is perceived, consumed, debated and fought over by a multiplicity of social actors in the subcontinent and beyond. By considering the cultural, social, politico-economic, as well as the dramatic dimensions of globalization, this approach aims to cast light on two questions: first, the nature of the turbulence affecting both the public space and civil society, and, second, the crisis of authority in the democratic nation-state. The aim of this chapter is to clarify the workings of social imagination in India.

This approach covers numerous locations and attempts to be at once descriptive, reticulated and multi-levelled.² By 'descriptive', I mean that the tools of the social sciences are applied to recent discordant events and emerging processes in contemporary India, perceived either 'from above' or 'from below'. By 'reticulated' I suggest that the dynamics of the network prevail over the logic of a culture that has for too long been assimilated to ideas of social enclosure or geographical location. Finally, 'multi-levelled', because the use of a variety of contexts of 'globalism', 'globality', and 'glocalized' for the study of 'globalization' reveals a broad spectrum of practices and discourses, as well as a range of political emotions from anxiety to fear and from desire to utopia, which appear as warring fictions, views or cosmologies.³

Agriculture in India

Agriculture is an essential component of the Indian economy for at least three reasons. First, it accounts for more than one quarter of the gross domestic product (GDP); second, nearly two-thirds of the active population – approximately 600 million people – are engaged in it; third, the widening gap between agricultural and non-agricultural incomes is a major factor, although not the only one, underlying persistent poverty.⁴

Let us sketch a portrait of the average Indian farmer. He farms between one-and-a-half and two-and-a-half hectares of land, and each half-hectare brings him roughly 5,000 rupees yearly, rising to 10,000 rupees in a good year. Even if one takes the higher figure and then doubles it, the smallest shop assistant in Mumbai, or even a beggar, earns more money (although less in real terms

because of the higher cost of living in a big city). When wealthy businessmen and political decision-makers raise the pressing need to tax agricultural revenues, one should remember that few farmers earn enough for inclusion in taxable categories. Although there are subsidies for chemical fertilizers, electricity and water for irrigation, a number of rural zones lack electrical or hydraulic resources, and nearly 40 per cent of villages are not yet linked to roads. This inventory, although brief, nevertheless gives an idea of the seriousness of the situation.

The 'Green Revolution' of the 1970s, with the coordinated use of high-yielding seeds, chemical fertilizers, pesticides and irrigation, transformed India from a large importer of food grains into a country self-sufficient in cereals, and several huge regions became veritable zones of industrial agriculture (producing above all wheat and rice, or 'white gold'). Nevertheless, the paradox remains that in September 2001, for example, while 500 million persons were malnourished and an even greater number susceptible to food insecurity, 63 million tonnes of grains were stocked by the government.

Under the aegis of the International Monetary Fund (IMF) and the World Bank (WB), the Indian government initiated a policy of structural adjustment in 1991. The general objective was opening up the hitherto protectionist economy to the world market. In agriculture, there were several aims: dismantling of the system of state-controlled price-fixing; abolition of subsidies for inputs; liberalization of trade in basic products; abolition of the system of food management and diminution of the corresponding costs; and finally, making the system of public distribution of subsidized food products available only to the poor. All these measures were designed to increase trade with foreign countries, hitherto regulated by the level of customs duties.

Farmers were variably affected by changes in domestic regulations imposed by the WTO – namely the liberalization of the prices of agricultural products and inputs against the background of the increase in prices and risks – in proportion to the reduction of state support to them. Of course, the Food Corporation of India (FCI) has regularly raised the ceiling of agricultural prices. However, in recent years, with the opening of the sector to international trade, the FCI has been little motivated to purchase cereals. In short, uncertainty has increased. Little accustomed to price variations on world markets and unable to accommodate themselves well to new and unforeseen events, few farmers can extricate themselves from debt and many are unable to honour obligations accepted during good years when prices were high. For many local observers, the origin of the farming crisis is to be found in the stagnation in public investment and the emphasis placed on price mechanisms aimed at satisfying the interests of powerful agricultural lobbies. The negligence of the Indian state towards the majority of farmers is, however, a better general explanation for the permanent poverty of rural India.

The Agro-capitalist Cosmology of Seeds

Monsanto or 'My Satan'

The mobilization, both local and international, against globalization was clearly forged in reaction to the restructuring of multinational companies. In fact, a small number of them today dominate the world's agrochemical sector; between five and ten of them control global trade in grains. The leading ten seed-producing companies represent one-third of the 23 billion dollars in this trade, and control nearly 100 per cent of the market in transgenic seeds. The same companies account for more than 20 per cent of the 30 billion dollars of trade in pesticides, which is equivalent to 44 per cent of total sales. Finally, these ten leading companies retain 61 per cent of the veterinary market, which, according to figures for the year 2000, amounts to 16 billion dollars.

The giant Monsanto bought Cargill International for the sum of 1.4 billion dollars in order to develop its seed activity in Central and Latin America, Europe, Asia and Africa. Monsanto, with its subsidiary American Home Products Corporation, is one of the largest research enterprises in pharmaceutical and health products in the world. It is one of the best-placed companies and certainly the most dynamic in the production of vaccines, biotechnologies and agricultural products, but also in animal treatments. Even though it got rid of some activities in the agro-industrial sector that were seen as public relations risks, it regrouped the rest of them to become a powerful agrochemical industrial company practising its 'sciences of the living' in competition with the Swiss giant Novartis. Its annual turnover is officially estimated at 12 billion dollars.

Monsanto's publicity claims that it works to satisfy the interests of 'all farmers on all continents' thanks to its technology of genetically modified (GM) crops.⁵ Acquisitions, joint ventures and mergers aim at making it 'the world seed company', knowing that its new crops only thrive with the simultaneous use of fertilizers and pesticides bearing its logo. 'We want to consolidate the entire food chain', stated one of the company's media directors at a press conference in 2000. An advertising campaign in Europe, which cost some 1.6 million dollars, made it possible to disseminate this profession of faith:

Worrying about starving future generations won't feed them. Food technology will. The world population is growing rapidly, adding an equivalent of a China to the globe every ten years. To feed these billion more mouths, we can try extending our farming land or squeezing greater harvests out of existing crops. With the planet set to double in number around 2030, this heavy dependency on land can only become heavier. Soil erosion and mineral depletion will exhaust the ground.

Lands such as rainforests will be forced into cultivation. Fertilizers, insecticides, and herbicides use will increase globally. At Monsanto, we now believe food biotechnology is a better way forward.

Monsanto's presence in India goes back to the 1970s. The company began by producing herbicides, such as 'Machete' and 'Roundup', but after its conversion to genetic engineering and the increase in capacity of its seed production under the visionary slogan 'Food, Health, Hope', it became the most powerful actor in Indian agriculture, from growth hormones for livestock to irrigation processes. The company is now present on the Indian market with GM seeds for cotton, wheat, maize, sunflower and rice, as well as with fruits and vegetables. The sub-continent is a field of experimentation for Monsanto. Its ambitions for the region are in proportion to the population of over 1.5 billion. Apart from the purchase of a state-of-the-art centre for research in genetic engineering for 20 million dollars, the company has spent roughly 4 billion dollars to acquire several leading seed enterprises so as to improve access to the Indian market: notably the Indian company Mahyco and the American giant Cargili (already mentioned), which itself owned Rallis, one of the largest Indian providers of food grains.

Seeds of Hope or of Despair?

In 1998, Monsanto took over Delta and Pine Company, the largest cotton seed company in the world, for 1.8 billion dollars. With that company, and in collaboration with the United States Department of Agriculture, Monsanto developed the so-called 'terminator' technology, which makes it possible to create 'sterile seeds'. The patent rights for this type of seed are already applicable in 78 countries! The objective is to introduce this technology to all seeds produced in Indian laboratories, so that farmers will not be able to utilize seeds from the previous harvest, and will be totally dependent on seed companies that will then have a monopoly. This is already the case for all hybrid seeds. However, unlike vegetable hybrids there is no commercialized hybrid wheat in the world, and the rice hybrid is still not prevalent in India, in contrast to China.

To attain its goal, Monsanto orchestrated a vast 'information' campaign. 'Video trucks' crossed the targeted regions to organize the showing of documentary and fictional films in villages as a means of popularizing hybrid seeds among the farmers. The company simultaneously trained hundreds of locally recruited 'field assistants' (*kshetra utsav*) to provide explanations, give demonstrations and advice, and extol the comparative advantages of the new seeds, with the final aim of persuading the small farmers to sign 'loyalty contracts' with

Monsanto for the annual provision of biochemical products. In addition, statistical surveys funded by the company and conducted among a sample of 1,100 small farmers attested to the wish of the latter to use 'hybrid seeds': 92 per cent stated that they unreservedly favoured the employment of biotechnological plants.

When local activists against GM crops conducted a counter-survey, they brought to light the bias of the survey protocol because the survey had been conducted in privileged agro-ecological zones (AEZs) and only among prosperous farmers. Moreover, the expressions 'biotechnology' or 'genetically modified crops' were never translated into vernacular languages. Explanations had recourse to the metaphor of filiation (from grandparents to parents to children) to illustrate that the new basmati rice, for example, transmitted its qualities in a similar manner: flavour, fragrance, colour, reliability, and hardiness from generation to generation.

The company also sponsored sports events and religious festivals. Images of gods and saints were recycled for advertising needs among small farmers who, one should remember, are mostly illiterate. Brochures and leaflets were translated and read aloud in the diverse regional languages. In the South, the figure of the goddess, symbol of fertility and prosperity, was selected to illustrate packets of genetically modified seeds. In Punjab, the seed packages bore images of Guru Nanak, the founder of the Sikh religion. Brahma, the supreme creator, lent his name to a type of hybrid seed. When the peasant leader M. D. Nanjundaswamy launched his 'angry brigades' against Monsanto's experimental fields, he followed the precedent by baptizing his commando operation 'Shiva', after the Hindu god who destroys the world.

Farmers Against Globalization

Peasant Leaders and Unions

My first encounter with M. D. Nanjundaswamy, the charismatic president of the Karnataka State Farmers' Association (KRRS) was on 27 November 1998.⁶ It took place at his house, transformed into an office in the Vijayanagar quarter of Bangalore. Nanjundaswamy is a jurist who studied in Holland in the 1960s. In 1989 he assumed the leadership of the powerful farmers' union, which had been formed in October 1980 in the town of Shimoga. At that time, the 'professor' was a member of the regional parliament. Since then he has been involved in the defence of the peasants, the 'mothers of the nation', in his own words. The targets of his campaign are the multinational corporations responsible for the intensive agriculture that he condemns. His ideal is an agriculture which respects the environment and can be realized through 'rural self-management' and the decentralization of agricultural policies.

In the early 1990s Nanjundaswamy led a campaign to preserve biodiversity and to oppose the extension of agricultural patenting in the countries of the South. During the 1990s he organized mass rallies against the GATT (today the WTO) and against the agricultural policy of the Indian government which, according to him, had become its 'instrument'. In 1994, after a number of agricultural decisions had 'subverted democracy', he brought together 6,000 farmers to stand laughing for an entire day in front of the Karnataka parliament. The following week the state government fell. Apart from commando attacks against agro-food seed producers and international food businesses, such as Kentucky Fried Chicken, Pepsico and Pizza Hut, he distinguished himself through his opposition to holding the Miss World beauty contest in Bangalore. 'To fight against the perversion of Indian culture is my mission,' he is fond of repeating.

The International Caravan was his creation. It was formed on the occasion of a meeting of the Food and Agriculture Organization (FAO) in Rome, in 1996. The next year he co-founded, with Sergio Hernandez, the World Peoples' Action (WPA), an 'anti-globalization' network which includes the Zapatista National Liberation Front (Mexico), the Sandinista Organization (Nicaragua), the Brazilian Movement of the Landless, the militant Maori peasants of New Zealand and the ecological associations of the former Soviet Union. The WPA is also connected with the Via Campesina, a federation of more than 200 peasants' organizations established in some 60 countries which was founded in 1993. Defending the food sovereignty of all countries of the South, this network of organizations fights against the 'neo-liberal conspiracy' and the 'harmful effects of globalization in the rural zones'. Today, Nanjundaswamy campaigns against 'Western biopiracy and all forms of (re)colonization of India and the countries of the South'.

In Nanjundaswamy's view, the Western countries are animated by the spirit of capitalism (*chaitanya poorna bandavala*). They therefore preserve their own class societies by means of imperialism: exporting their technologies, invoicing their imports at elevated prices by directing to their advantage the interplay of exchanges between North and South, and, finally, imposing the Euro-American system of production and consumption, which promotes a lifestyle conforming to Western, middle-class market values.⁷ India, the victim of colonial powers, is therefore confined to a 'weak capitalism' (*badakalu bandavala*). Nanjundaswamy, a global theorist and visionary, compares the northern hemisphere to the upper castes and India to the *Dalits* (or Untouchables). He describes this relationship as a 'comprador' (*hondanki*) one, because the native political leaders sell 'Mother India' to foreigners – an old nationalist theme that is illustrated by the image of 'the India Cow' milked to exhaustion by the British in the 1880s and conceptualized as the 'economic theory of the draining of riches'.

Alongside his absorption of Marxist doctrine, this denigrator of Western values has readily made use of Hindu nationalist memories. Thus Nanjundaswamy incessantly calls for the revitalization of 'small village republics' and for popular anti-colonial mobilization. In both cases he draws inspiration from Gandhi, the hero of the nationalist movement against the British. Nanjundaswamy thus proclaims loudly and clearly the heritage of the 'insistence on truth' (*satyagraha*) and of 'rural socialism' as formulated by the Mahatma, two aspirations which have today been forgotten by all Indian political parties. Usually dressed in local cotton (*khadi*), following the example of his guru, he asserts 'I am a Gandhian terrorist', both in India and on the BBC. He estimates the adherents of his peasant movement at hundreds of thousands, with millions of sympathizers. According to him, the demonstrations by 'his' militants express 'the anger of the green brigade against globalization'. This invented tradition of ecological protest does not lack efficacy, as is shown by his brigades' destruction of the Cargill offices in 1992 and again in 1998, the burning of Monsanto's experimental fields in 1993, as well as the destruction of a KFC outlet in 1996. The KFC commando operation, a powerful symbolic action against 'Frankenstein junk food', brought him several days in jail and a good opportunity to be elevated to the status of peasant martyr!

Nanjundaswamy's detractors in India underscore the contradictions involved in representing well-off farmers, organized in a lobby for the privileged. Not content to demand subsidies from central or provincial government, the protection of borders against foreign intrusion and the strengthening of the national(ist) framework, he also enters into alliances with militant activist groups in other countries or with otherwise disparate non-governmental organizations. The nationalist rhetoric serves both to attack the neo-liberal project and to defend autochthony (*swadeshi*), despite the fact that he reaches beyond the nation-state to enter transnational coalitions. Thus, KRRS ideology presents itself as a combination of vulgar Marxism and violent Gandhism, a mixture of national populism and identity-based nativism fighting for a return to rural autarchy. The will to protect 'traditional Indian civilization' does not appear to contradict the simultaneous appeal to the internationalism of the 'agricultural *Lumpenproletariat* of the whole world'.

The Tribunal of GM Seeds

The project to introduce the biotechnology of the so-called 'terminator' gene into India thus met with strong opposition. Gandhians, Marxists, Communists, environmentalists, moderate and radical nationalists, as well as various political parties, ecological movements, local and transnational NGOs, farmers' unions and women's associations have periodically mobilized

themselves with some success. Thus, on 5 March 1999 a 'satyagraha of seeds' was organized in Delhi to the cries of 'No ownership rights on life!', and 'No bollart! No terminator!', derived partly from the name of the cotton parasite BT (*Bacillus thuringensis*). Other large towns in the country took up this campaign on the same day to celebrate the anniversary of the march undertaken by Gandhi to break the British salt monopoly in India. 'We shall grow our food ourselves. We reject the agrichemical patents,' declared Vandana Shiva, the director of the Foundation for Research on Scientific Technologies and Ecology. 'We will throw Monsanto out of the country. Free and private trade in food is a recipe for famine and suicide of the peasants,' added this former physicist who became a world inspiration for 'ecofeminism'.

In September 2000, a 'seed council' (*bija panchayat*) was organized in Bangalore. The aim of this widely publicized 'tribunal' was to 'denounce the conspiracy to take over the seed market in India (and other countries of the South) and to destroy the inalienable rights of farmers over seeds'. The next day, a rally brought together some fifty farmers' organizations (notably the Karnataka Rajya Raita Sangha, the Andhra Pradesh Raita Sangha, the Bharata Kisan Union, the All-India Kisan), including some from abroad (such as the Rural Farmers' Confederation of José Bové, who was himself present), as well as NGOs and women's movements. They protested together against the anti-agricultural policy of the central and state governments. Activists from Greenpeace, garbed in 'vegetable' costumes, joined members of the Communist Party of India (Marxist) (CPI[M]) to denounce the arrival in Bangalore of the Asian-Pacific Seed Association, which coincided with the signing of concessions given to agricultural companies by the state government. This international meeting was organized in the capital of Karnataka because this state, which already produces 50 per cent of the seeds in India, would like to become the 'seed superpower of the country'.

At the opening of the 'seed council', Vandana Shiva explained that its convocation finally made it possible to 'hear the testimonies of those who are dramatically affected by the new economy of globalization'. Allowing the victims to speak provided an opportunity to recall the exorbitant cost of 'the Green Revolution and intensive agriculture'. She also denounced in one go the suicides of peasants, weak production and low incomes, agricultural failures, artificial fertilizers, agro-chemical excesses, the debt trap and the trade in kidneys. A forum of experts and concerned groups discussed the issue of control over seeds, the reduced autonomy of research in public agriculture, the growing influence of the industrial sector on rural projects, the cost and risks of genetic engineering and the implications of intellectual property rights and seed monopolies. Their many demands were summarised in the slogan 'End biopiracy organized by foreign countries!'

Among the many poignant testimonies was the story told by Yellappa Gindakal's brother from the village of Kadappati. Having obtained a bank loan, Yellappa saw his crops destroyed by parasites for two consecutive years. In 1997 he borrowed money from a local moneylender. His cotton was once again devastated, and he furthermore harvested only 450 kilograms of peppers from 5.2 hectares (that is, half a [short] ton of peppers from nearly 13 acres). His debt was then nearly 80,000 rupees. Although family members attempted to dissuade him, he took his life by swallowing organophosphate poison.

The recommendations of the tribunal, composed of judges and experts, were voiced by V. R. Krishna Iyer, a retired Supreme Court judge. It proposed a ten-year moratorium on the commercialization of genetically engineered agricultural products. The need to develop the 'indigenous agricultural system of intellectual property' was emphasized as the only way to protect the 'seed sovereignty' of the rural farmers of the South. Krishna Iyer concluded that 'seed racketeering has become a form of genocide [sic] which condemns rural farmers to pay with their lives for the profits made by the companies.'

The Vernacular Cosmology of Seeds

So great have been the transformations in the agricultural world that farmers characterize the period in which they are living as the 'hybrid era' (*hibred kala*). The sense of rupture is so strong that they habitually describe themselves as 'hybrid people' (*hibred people*).⁸ Of course, no rural farmer is unaware that the local (*desi*) seeds produce less than half of what is produced by the hybrid seeds, which therefore afford greater profits for landowners unless ill-fortune strikes.⁹ However, they tend to view this quantitative performance negatively and refer to it as the sign or cause of a qualitative decline affecting the nature of the crop, as well as Nature in the broader sense. The association of hybrid seeds with the actual human condition is almost always expressed by pejorative epithets such as 'weak' and 'frail' (*sukshme*). People today are said to be more dependent and more often victims of pain and illness than in the past. Rural folk recall with nostalgia the 'robustness' and the 'health' that formerly prevailed. A strictly 'local' culture that once blossomed and bore fruit is described as 'organic' (*javan*), 'strong' (*thakat*) and 'autonomous' (*swantha*), and regarded as belonging to an epoch blessed with a native, hence 'authentic', (agri)culture.

The memory and repeated representations of this cultural past enable one to grasp the magnitude of the cosmological change taking place. This past separates the worldview of poor farmers from the ideology of out-and-out

globalization introduced by executives of companies such as Monsanto. The latter support the 'progressive' Indian entrepreneurs, as well as the large landowners who became wealthy during the 'Green Revolution', all of whom are advocates of intensive agriculture.

The rural farmers have for a very long time selected the best seeds for resowing, for the spring (*rabi*) and autumn crops (*kharif*). This system, based on inherited lore, has to a great extent regulated the social reproduction of the daily life of the people. Based on the principles and (supposed) precepts adapted to regional ecological specificities, this is precisely the knowledge on which the harvests depend. It is also a disposition, both cognitive and emotional, that is the expression of accumulated experiences and of the collective incorporation of a cosmology in which humans, the land, fauna, flora and seeds, and indeed certain gods, are intimately linked to each other.

In Karnataka, for example, the new seeds are nearly always objects of ceremonial 'adoration' (*puja*) before being sown or used. The rural farmers also pay homage to the harvest before it is consumed, and they give thanks to the fields and their alliance with the environment (despite causing damage to the latter, for ecological respect is not a *habitus* of the rural folk's world). The rituals addressed to agricultural implements similarly testify to the gratitude felt towards the fertility of the earth. Briefly, during each phase of agricultural operation, from germination to harvest, homage is paid, rituals are performed and ceremonies are shared.

One often hears that 'The field is the mother of the farmer.' This assertion of affiliation and close bonding is exemplarily expressed during the auspicious season for marriage ceremonies, when mothers pass on selected seeds to their daughters who are about to become wives. The reproductive act itself is conceived of in terms of the male seed germinating in the female field.¹⁰ A number of customs and proverbs closely link women, seeds, soil and fertility. Seeds and fields are recurrent symbols in rituals, including those which have no direct relationship to marriage. During the *Dasara* festival at the beginning of the dry season, the women germinate five kinds of seeds in their houses: lentils (*senegalu*), barley (*yavalu*), sorghum (*jonnalu*), sunflower (*kusumalu*) and wheat (*godamalu*). When the seeds have sprouted, they are transplanted into the family field. The farmer's wife then utters a prayer to the seeds: 'May your life-force be undying!'

Conserving, selecting, using and sharing grain plays an essential function corresponding to the importance of exchange within the family or among farmers. These practices are based on the ideas of cooperation, of gift-giving and reciprocity; a giver will receive in return an equal quantity of seeds. The use of numerous seeds and the practice of crop diversification make it possible for women to satisfy food needs by varying menus as much as possible.

Owing to their expert management of the stocks of food grains, they acquire a recognized status and, consequently, an authority within the household and community (even though the asymmetry of sexes, according to which men are in command, is still determinant for property ownership).

Rural ethnography thus illustrates the powerful significance of seeds for several hundred million individuals as material and symbolic supports of continuity and of assured revival: the essence of life itself. According to estimates, nearly 60 per cent of Indian seeds, the best from each crop, are thus collected and resown. This is indeed the fundamental practice in the 'moral economy' of the Indian rural farming world which has been imperilled for more than two decades by the increasing use of hybrid seeds. Paradoxically, the introduction of genetically modified products, as well as the practices of intensive agriculture and commercialization, have increased the importance given to seeds in rural farming cosmology.¹¹ The comparison of incomparables has, in fact, become commonplace in rural discourse, as is shown by this song from the 1990s:

Pesticides were the milk-rice of the peasantry –

hybrid sorghum is here.

Ills and destruction are more, whereas duties and traditions have been repressed.

Hybrid sorghum is here,

and the pleasant ways of working have gone.

Hybrid sorghum is here.

The quality of local lands and environment is thus measured in terms of seeds, defining both fertility and biodiversity, of human beings as well as the land. For the poor rural farmer, this is because the new seeds mean the coming of a corrupting world and metaphorically represent the transformation of the substantial identity of the group and its environment, that of a rural culture soon to be engulfed by its ethics, its ways of life and all its values. The adulteration of seeds is interpreted as yet another risk to rural farmers' vulnerability – worse, it is seen as a peril overhanging the very existence of farmers. In short, the agrarian community knows the worth of its seeds as much today as in the past.

With the introduction from the outside world of agrochemical products unfamiliar to farmers and over which they have no control, seeds have come generally to characterize either the farmers' autonomy or their dependency. Seeds thus acquire more or less political connotations, above all in relation to what a number of small rural farmers experience as 'giving oneself up to the protective force' of the state, traditionally called 'mother/father' (*maabap*). The farmer's complaint is passed on to their spokespersons, elected or not, who undertake to translate this diffuse nostalgia into political demands. In this way, they give it both

voice and credibility in the public space, but also in the media and national and transnational organizations. While unionists see this attachment to the past as the 'silence and shortcomings of those in (central or regional) power' towards farmers, ecological or radical activists prefer to blame 'globalization' as the ultimate cause of the misfortune of the voiceless rural folk.

Moneylenders, Brokers, Sellers

The main cause of rural farming poverty is financial weakness exacerbated by debt. The incomes of a majority of the farmers are low and almost always inadequate. In 1994 a study by the National Council for Applied Economic Research showed that 59 per cent of rural households in India had a net annual income of less than 20,000 rupees. This sum makes it impossible to surmount any crisis. Should the monsoon be weak or a draught animal need to be replaced, should an illness befall the family or a parasitic worm proliferate, recourse to the moneylender becomes necessary.

Apart from these misfortunes, a number of local (or pan-Indian) practices periodically give rise to debt. Money borrowed to provide a girl's dowry or to satisfy customary and indispensable distribution practices on the occasion of religious ceremonies is the most frequent reason for the loan, and the debtor cannot extricate himself from his social obligations without the risk of exclusion. The dowry is, moreover, not only a tradition or obligation; it is a sign of wealth, status and privilege, an opportunity for upward mobility. Further, it is the cause of 'renewed bidding' between families at the cost of those whose daughters are being given. At least in this case, debt affords pride.

The unregulated ad hoc introduction of new technologies has added its share of problems. After the 'Green Revolution', farmers converted to hybrid seeds in their striving for greater profits. But this type of seed is more costly and requires inputs, not only for fertilizers and pesticides but also for irrigation. These crops are also more vulnerable to attacks from pests, whence the bitter reflection of the farmer Yellappa: 'This is a vicious circle because you invest more in the hope that by doing so you will really make more.'

Specialization in certain crops can also lead to debt while increasing at the same time the economic and social exploitation of the rural farmer. The cotton crop is in this respect a textbook example, particularly concerning the purchase of the agrochemical inputs which cotton-growing demands. Devotion to this crop, especially in small areas, necessitates borrowing, mostly in the informal sector. Explains Yadamma:

We prefer the local moneylender because the amounts offered by the bank do not cover the cost of seeds or fertilizers – not even the work

invested. The local moneylender lends us all we need. In addition, he tells us what must be done.

One characteristic of the cotton crop is the instability of market prices from one year to the next. For this reason, the government of India has established an 'intervention price' which guarantees a buying price for merchants. However, many marginal farmers prefer to sell to merchants at lower prices.

It costs more to transport the cotton to the Cotton Corporation of India. In addition, you must queue up there for several days at a time. Finally, the interest on loans has to be paid in good time. Cheques from the Corporation take weeks to arrive.

This combination of factors is an obstacle to the improvement of incomes, especially if the farmer depends on informal credit. The rates vary between 36 per cent and 60 per cent per year, but can be as high as 120 per cent! In short, even a small sum may never be paid back. The last resort is to mortgage land or a house, which can be used to pay the increased interest on the loan, despite the fact that in this area (unlike other regions of India) this type of usury is loathed. Custom dictates instead that family members – usually the women and children – work for the creditor without remuneration. With this last form of dependency and exploitation, the cycle of privation is complete. Not only does the capitalist organization of agriculture assimilate the rural farmers into a wider regional market, it also includes them in an even wider system of exploitation.

Who are the moneylenders? In northern Karnataka the majority of them are called *dalal* or *dalali*, which means 'broker'. Generally in Karnataka the moneylenders are not *Kannadigas*, unlike in Mysore, the southern part of the state, where the local merchants called *mandis* are dominant (the term *mandi* meaning 'market'). It sometimes happens, however, that the *dalal* assume control over the *mandi*, including their craft workshops. The loans are most often made far in advance of the harvest, after which the sum must be paid back. The proliferation of private intermediaries reflects the farmers' difficulties in accessing institutional credit because of the burdensome formalities characteristic of banks, particularly for the numerous illiterate rural inhabitants. What is more, the paperwork takes time, which means that by the time the fertilizer can finally be bought the rains have passed. The proliferation is also due to the corruption which afflicts this type of administration at the cost of its clients, as well as to the 'hardening' of loan conditions since the reforms in 1991. The success of the informal moneylending sector can also be

explained by the rural farmers' fear of being unable to find a lender who is both 'generous' and accessible, often leading them to underestimate the risks of debt.

The pressure exerted on the debtor varies according to the occupation of the lender, who may be a professional or a farmer. A farmer, unlike a professional moneylender, is generally a native and a powerful agent in the village economy. He can be a landowner who leases (part of) his land to a clientele of farmers, or a local merchant who lets out land in exchange for jewellery from the wife's dowry or for unremunerated work. Distillers and other dealers in alcohol profit from the dependency on drink of the rural folk in the area. Sometimes local landowners convert a financial surplus into capital in the form of a portfolio of loans made in the vicinity. The seed merchant in the village has become a major figure in the theatre of usury. This is because he combines usury with opinions and advice, which the farmers in fact seek, regarding seeds, fertilizers, pesticides and other biotechnologies. The large number of shops selling pesticides in small towns is indicative of the growth of this economic role.

Another factor in this growth is the repeated purchase of fertilizers and pesticides, when the seeds sold on credit are unsuitable or of poor quality, in an attempt to save at least part of the harvest. Persistent rumours suggest that diluted pesticides are in circulation. 'The pesticide merchants drink our blood,' declares Mudavath Jumanī from the village of Gairanda. Another rural farmer explains:

The whole village has debts to a single merchant. We grow cotton on two hectares, and we see what the other farmers do. But he repeatedly tells us that we must use more and more pesticides. Now the harvest is completely destroyed, and we owe him nearly 30,000 rupees.

For his part, the accused merchant attributes this failure to the farmers' inadequate management of agrochemical products. The excessive consumption of pesticides reached its peak in 2002, with the death by poisoning of some 500 rural farmers in South India. Following irresponsible advice, they mixed different corrosive products in order to increase their effectiveness.

Politicians are concerned to avoid paying the financial compensation claimed by the families of victims or union organizations, and they ignore the problem. After the death of her son Sivaiah, Chandramma received 10,000 rupees from the government of Karnataka through the revenue office of the district. She deposited 5,000 rupees in a bank account in her granddaughter's name and took the rest home. The next day, the pawnbroker knocked at her door and claimed 3,500 rupees from Chandramma, whose situation remains

desperate. What is worse, the trouble of being in debt and shame of having a relative who committed suicide covers her family with opprobrium, isolating them still more and making things more difficult after the wilful death of the head of the family, which was already a sign of social disintegration – ‘anomic suicide’ in Durkheim’s sociological typology.

Body, Transplantation and Conspiracy

In recent years, no fewer than 100 seriously indebted farmers have sold their kidneys to doctors practising in Delhi, although rumours have spread that their numbers are more like several thousand.¹² The pivotal place for this trafficking is a village in Guntur district in Andhra Pradesh. In Rentachintala, Khambhampadu and Machela villages, farmers who admitted to having sold their kidneys made the front pages of the regional, national and occasionally international press. The brokers in this organ trade, the market for which is the Delhi middle classes, preceded them in the promotional race by opening a website with the address *saleof@kidney.com!*

All those who have submitted to this removal are farmers working on leased lands (*ryots*). They are pressured by the landowners to cultivate cotton (not genetically modified) and pepper, the prices of which have not fallen in the market in recent years. More than 75 per cent of them live in subsistence conditions. Venkat Reddy, who cultivates one hectare of land, tells of having accumulated a debt of 50,000 rupees as a consequence of sterile crops from bogus seeds. ‘It was an enormous sum for a poor man like me,’ he says, ‘and I did not know how to pay back my moneylender, who knocked at my door every day.’ Finally, ‘I met an intermediary who bought kidneys, passing through villages and promising money. Along with two other farmers, we went with him to Delhi. There we authorized the doctor to remove our kidneys illegally.’ Venkat Reddy does not even remember the name of the hospital or that of the surgeon who performed the operation. He sold his kidney for 40,000 rupees, which enabled him to pay off his debts. ‘I don’t regret anything, because it was the best thing I could do as there was no one to help me.’ There then came, however, the cruel discovery: ‘My health has deteriorated and I can no longer really work. I now depend on the income from my wife, who works in my place as a farm labourer.’

More than a dozen farmers from this village have had similar experiences for the same reasons, explains Venkat Reddy:

We didn’t want to commit suicide like the other farmers who were unable to pay back their debts and survive harvest losses. We thought it was better to live and take care of our families, which would have been

orphaned [sic] if we had chosen death. I am proud of myself. I didn't commit suicide like the others. I sold a part of my body. I didn't beg, borrow or steal because of my debts. By selling a part of my body, I gave new hope in life to my family.

He also received 40,000 rupees.

This is no isolated case; trafficking in kidneys on a more or less large scale has also been discovered in Karnataka and in Tamil Nadu. The rapid spreading of the news of organ trafficking in the rural communities where a large number of the poor live is often accompanied by wild rumours or mass panic, particularly when obligingly relayed by the media. Names circulate, connections are made, concrete examples are given, the suspicion of conspiracy takes hold. The simple facts as well as their amplified narrations are equivalent to an alarm system. The bodies and lives of the villagers, and those of their children and grandchildren, are endangered. The accounts foster a chronic state of fear and the sense that their earthly survival is threatened.

Of course, the rumour of trafficking is perhaps a fantasy aimed at publicising the real dangers which threaten the bodies of marginalized populations, as if contemporary speech, bringing new life to archaic mythologies, were to follow paths of the social imagination in order to denounce the state of misery and abandonment which is the lot of the poor. But faced with dramatic circumstances, members of vulnerable communities debate and fight with their only available resources: hearsay, eyewitness accounts, gossip, rumours, accusations, beliefs, magic, folklore, cosmologies. All these means of expression, as well as the customs of daily life, give shape to the day-to-day uncertainty and precariousness of their situation, a kind of 'shield of the poor'. These accounts express the aroused subjectivity of subaltern populations forced to live in 'negative zones of existence' where lives and bodies are experienced in a survival or crisis situation, sometimes at their limits or 'facing extremes'. This is so not only because of hunger, disease, misfortune and exploitation, which all exacerbate indebtedness, but also because of the lack of security and hope, too many children or excess mortality, or the threat of disappearing without a trace. The chronic state of fear and urgency in which the poor survive bears witness to the 'structural violence' or 'low-intensity war' characterizing their condition.

Stories are ceaselessly repeated and circulate without any certainty about whether they are fact or fiction, but who would doubt that they are expressions of a tragic situation, both social and existential? In the villages or towns in the underprivileged South, regulated by unequal exchange, the encounter with numerous forms of violence is direct, if not routine. Violence also haunts people's imaginations to the point that social relations are often experienced

in a destructive manner; hence the confounding of image and reality, the reality of suffering bodies that are anaemic, broken or bruised, and sometimes mutilated. Such a perspective on life is plainly seen as an emblematic 'massacre of the innocents'.

Trafficking in organs, as well as the international business of child adoption or marriage by e-mail, is experienced by the victims as predation. They recognize in all this a 'new colonization', 'the imperialism of modern times', as their politicised leaders tell them. The rich and powerful drain the villages, 'the nation or Indian civilization', and denounce the radical ideologues, while 'foreigners' appropriate the bodies of others who are poor and powerless. The North, through indigenous representatives, sucks the blood of bodies in the South.

In fact, the flow of transplants follows the routes of capital and mirrors social stratification: from the Third World to the (post-)industrial countries, from blacks to mixed races to whites, from the poor to the rich (and sometimes from women to men). Between 1983 and 1988, the press counted 131 wealthy citizens from the United Arab Emirates or Oman who had come to Bombay to receive transplants of Indian kidneys. Chosen by local intermediaries, the donors were recruited from among poverty-stricken peasants. Each had received the equivalent of 2,000 or 3,000 US dollars. The business caused a sensation and rumours increased. The cases of reported transplants are, however, only ripples on the surface. 'Charter-loads of Muslims from the Gulf countries come to pillage the bodies and organs of Hindus,' proclaim nationalist militants. The well-known British medical journal *The Lancet* has spoken more sombrely of the matter. It published an article analysing the high percentage of mortality among the Arabs who had undergone this transplantation.

Today, the trade in organs (but also in blood, tissues and children) has spread well beyond the South and the Gulf states, to Turkey, Iraq, Israel, Singapore and Korea, to Brazil and Argentina, and after the collapse of the Soviet Union, to Russia, Romania, Bulgaria, Estonia and Croatia. Recently it was even introduced to some hospitals in the United States, and the practice was officially justified in the name of 'donors for dollars'.¹³ Such a complex of ideas and transnational behaviour, based on criminal medical practices that authorize unequal sharing between North and South, attests to a greater danger. Worse, it fosters the fear of conspiracy, the possibility that everything could be tied together, connected in the so-called 'new world order' – another take on globalization. This is of course the most immediate way of explaining that the victims are dogged by hard luck. 'Why me? Why now? And why me again?', questioned anthropologist Edward Evans-Pritchard regarding sorcery among the Azande in the 1930s. Every original social situation is known to require new forms of magic.

Globalization, History and Causality

The multiplication of distress scenarios among farmers in India is the symptom of a major crisis. This crisis is at the same time economic, social, institutional and ecological, and all these factors combine to increase the vulnerability of heavily indebted rural farmers with little or no land. It is presently fashionable in the subcontinent to assign responsibility to such diabolical figures as international organizations of world (de)regulation, in particular the WTO, with which the Indian central government has signed an agreement entailing a series of measures authorizing the mass entry of foreign products. Deflationary economic policies combined with (partial) removal of national trade barriers form the core of the policy agenda of finance capital.¹⁴

India imports today small quantities of rice, wheat and sugar. Horticultural products from Australia, New Zealand and the United States are now sold in large shops in the metropolises, and Chinese silk effectively inundates the market. However, figures support the observation that the terms of exchange have neither suddenly nor completely changed in recent years.¹⁵ The persistence in maintaining a measure of autonomy and the rejection of an abrupt opening to the world market, which were characterized as 'archaic' ten years ago, are today seen more favourably in the subcontinent than in other countries. As far as economic changes are concerned, India likes – not without good reasons – to compare itself to an elephant which is today walking to the rhythm of a new *Zeitgeist*.

History shows that it would be illusory to explain the rural farmers' distress and despair only as the impact of recent globalization, although a crisis of such magnitude has not been seen since the run-up to the Great Depression. There was a cotton crisis in Karnataka and Andhra Pradesh from 1860 to 1870 following the American Civil War, when exports of this raw material to industries in continental Europe and then Japan gave rise to murderous riots against moneylenders by indebted peasants.¹⁶ Later, an agricultural debacle was triggered in the 1960s, when the 'interventionist' state decided to buy up harvests and stock them in order to stabilize prices and so guarantee costs and outlets. Never challenged, this decision made India a country which retains 60 million tonnes of food reserves (in 2001), while the majority is still undernourished – in short, a country able to manage neither poverty nor abundance. Furthermore, the promotion of commercial agriculture – based on the use of hybrid seeds and the intensive use of chemical fertilizers and pesticides in arid and inadequately irrigated regions – only further destabilizes human communities already weakened by great inequalities in land, income, jobs and status, which were exacerbated by nineteenth-century colonial land policy and the later absence of agricultural reforms.

To blame globalization alone for India's tribulations, as is done by a number of militants and populist leaders, makes an economic axiom or historical necessity out of a complex, fragmented and contingent process, the dynamics of which lead in various directions. This alleged explanation for the poverty and misfortune of the peasantry passes over the long history of an extremely segmented social structure (divided by classes, castes, regions, agricultural systems, modes of domination, gender) whose past attests to crises, droughts, famines, and violent conflicts and clashes. To recognize that every phenomenon has a cause does not imply that a determined effect can only be produced in one way. The (Leibnizian) principle of *maxima minimis*, to explain the most by the least, proves here an oversimplification. The establishment of a causal chain leading from globalization to agricultural crisis is as much a cliché as 'butterfly wings' or 'Cleopatra's nose', even though the repetition *ad nauseam* of the word gives it credibility.

Except for confirming reified abstractions, globalization, for better or worse, has only a very indirect impact on the situation of the rural farmers. International flows and world forces are only seen through a set of polychromatic filters, the brightly coloured effects of which are sometimes highly contrasted. Only the mediations, the succession of which can be compared to the outcomes of a game of dominoes, bring about the presence of globalization at different points and with an apparently random tendency, but conforming to the rules of the game. The mediations further accentuate or reduce certain features so that the (supposed) effects of globalization assume new meanings, inasmuch as social agents recode the meanings and behaviours according to contexts, situations and moments. Just as there are several ways to arrange the twenty-eight dominoes, more than one story can be told of this chain of effects, which gives rise to conflicting interpretations of struggles that are more or less violent. In fact, only a close examination of situations in terms of networks, connections and causal chains makes a 'glocal' situation intelligible by showing us the multiple ways social actors have to produce their worlds here and now, knowing that they can change them according to the beliefs that they hold about themselves.

To understand the origins and development of the agricultural crisis in India (and everywhere) thus requires an analysis of the entangled complexity of local factors and the specific milieux in which so-called 'world' phenomena are experienced. A list of these factors summarises a process of disintegration conditioned by globalization: a reduction of the area assigned to food crops; the replacement of local crops by intensive monocultures; the alteration or disappearance of local seed varieties, replaced by non-native seed varieties; a hiatus between the practice of intensive and commercial agriculture and regional ecological specificity; an increase in the use of inputs entailing depletion of the soils, as well as massive recourse to (informal) credit to

provide supplies (a tendency favouring richer landowners); the disappearance of an institutional 'safety net' for the provision of credit and a distribution system offering advantageous prices; lack of knowhow in the use of new agricultural products; small peasants' lack of experience in so-called 'entrepreneurial' management systems; ignorance of or aversion to intermediaries and other outside agricultural advisers; and finally, climatic changes, above all variable rainfall patterns, leading to increased uncertainty and risk factors. Only ideologues entertaining a teleological vision (of globalization) could fail to see that this patchwork does not form a seamless garment.

Notes

- 1 On the issue of suicides, see the articles by Parthasarathy (1990), Assadi (1998), Revathi (1998), Prasad (1999), Vasavi (1999), Menon (2001) and Deshpande (2002).
- 2 Compare the multi-site approach of Marcus (1995).
- 3 These contextual distinctions are made by Beck (2000: 9–11). 'Globalism' is the liberal ideology of the world market; 'globality' signifies that we have been living for a long time in a world society; 'globalization' is a process in which the sovereign nation states are undermined in their prerogatives. The notion of 'glocalization' comes from the Japanese term *dochakuka*, which refers to the adaptation of an agricultural technique to local conditions.
- 4 More than 80 per cent of the farmlands consist of small holdings of less than 2 hectares; India counts approximately 100 million farms.
- 5 On the strategy of this company, see Tokar (2002) and Shiva *et al.* (1999).
- 6 For a sociological and historical account of the Karnataka Rajya Raitha Sangha (KRRS) and the Shektkari Sangathan (SS) of Maharashtra and the Bharakta Kisan Union (BKU) of Andhra Pradesh, see Assadi (1997); cf also Brass (1995).
- 7 On the history of the Indian middle class, cf Varma (1999) and a critique by Assayag (2005: ch.3).
- 8 On fundamental changes in agriculture, see Vasavi (1994), Appadurai (1989), Gupta (1998) and Panini (1999).
- 9 For wheat and rice (but not cotton), they confuse the 'hybrids' with the 'high-yield varieties' (HYV), which are not hybrids but were disseminated from the time of the 'Green Revolution'. There are thus three types of 'non-traditional' seeds: the HYV, the hybrids and 'terminators'.
- 10 On symbolic associations with seed and earth, see Dube (1986), and in relation to gender, Agarwal (1994).
- 11 A commercialization which developed in the nineteenth century, see Raj *et al.* (1985), Bharadwaj (1985) and Washbrook (1994).
- 12 On the question of trafficking in organs in India, see articles by Changappa (1990) and in *Frontline* (1997), but above all the works of Cohen (1999) and Das (2000).
- 13 On globalization of organ traffic, see Scheper-Hughes (1996; 2000).
- 14 For details and an explanation of the collapse in prices of globally traded primary products in the last five years, see Patnaik (2002).
- 15 See, for example, Painak and Chandrashkar (1995), and Bhalla and Singh (2001).
- 16 For details of the mechanisms of this crisis, see Harnetty (1971); cf Patnaik (2002: 125–8) and the more generally suggestive work by Davis (2001).

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