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The Commercialization of Agriculture in Colonial India: Production, Subsistence and Reproduction in the 'Dry South', c. 1870–1930

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Although it would now seem established beyond question that agriculture in most parts of India had been exposed to commercial influences from medieval times, there can be little doubt that a variety of developments from the second half of the nineteenth century greatly strengthened those influences.[1] Railways and road transport made possible a huge expansion in cash cropping, for national and international markets, and production regimes across the subcontinent were placed in a new context of opportunity—and of pressure.[2] While so much would scarcely be disputed among historians, what has become—and remained—more controversial, however, is an understanding of the implications of this extended commercial logic for agrarian economy and society. Since colonial times, opinions would seem to have been divided between 'optimists', for whom commercialization marked progress and a growing prosperity for all; 'pessimists', for whom it marked regress into deepening class stratification and mass pauperization; and 'sceptics' who held that it made very little difference and that its impact was largely absorbed by pre-existing structures of wealth accumulation and power on the land.[3]

[1] For the growth of commerce in late medieval South India, see S. Subrahmanyam, *The Political Economy of Commerce: Southern India 1500–1650* (Cambridge, 1990); also S. Subrahmanyam (ed.), *Merchants, Markets and the State in Early Modern India* (Delhi, 1990).

[2] See J. Hurd, 'Railways and the Expansion of Markets in India, 1861–1921', *Explorations in Economic History* 12, 1975; M. McAlpin, 'Railroads, Prices and Peasant Rationality: India 1860–1900', *Journal of Economic History* 34, 1974.

[3] These three positions can be traced back to debates in the later nineteenth century. For a recent optimistic or 'meliorist' account of, particularly, Western India, see M. McAlpin, *Subject to Famine: Food Crisis and Economic Change in Western India, 1860–1920* (Princeton, 1983); for a more pessimistic view, S. Guha, *The Agrarian*

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One historical context in which a debate along these lines has been conducted, in the pages of this journal and elsewhere, is that of 'the dry' interior of South India. My own 'pessimistic-to-sceptical' account of its colonial development saw most of the benefits of expanded cash cropping in cotton and groundnuts passing to a small group of larger-farmer 'magnates', whom I took to dominate the markets in credit, commodities and employment. These magnates were established prior to and, in many ways, independently of the expansion of commerce, through positions in the revenue and kinship systems, which enabled them to take up a highly advantageous position in the new market context as well. From these positions, they denied access to market benefits to their smaller clients and used the forces of commercialization to strengthen their own social and political grip on the countryside.[4]

My account of the 'dry' South was directly challenged by Bruce Robert who, from a detailed study of one of the 'driest' districts of all (Bellary district), came to an opposite and very 'optimistic' conclusion. For him, the deepening commercialization of the period provided the context for a liberation of the small peasantry and for an increase in their prosperity. He drew attention to a significant increase in the incidence of landholding, particularly the holding of small plots of land which were intensively cultivated with high value cash crops and yielded better returns per acre than the lands of larger farms. He further argued, from the detailed studies of the Cotton Committee (1927), that there was no evidence of a monopsonization of the cotton market, such as would give small producers lower returns than larger ones. Nor did he see significant restrictions in the credit market, such as would make small producers the consumption debtors of large ones. Finally, he took the growth of agricultural production in the region to be clearly shown by evidence of increasing cultivated acreage and of capital investment, particularly in carts.[5]

Needless to say, my own initial reaction to Robert's case, which was largely based on the same sources that I thought I had consulted, was

Economy of the Bombay Deccan (Delhi, 1985); for a sceptical view, N. Charlesworth, *Peasants and Imperial Rule: Agriculture and Agrarian Society in the Bombay Presidency, 1850–1935* (Cambridge, 1985).

[4] See my, *The Emergence of Provincial Politics: The Madras Presidency 1870–1920* (Cambridge, 1976); also, 'Country Politics: Madras 1870–1930', *Modern Asian Studies* 7, 1973; also 'Economic Stratification in Rural Madras' in A. Hopkins and C. Dewey (eds), *The Imperial Impact* (London, 1978).

[5] B. Robert, 'Economic Change and Agrarian Organization in "Dry" South India 1890–1940: A Re-interpretation', *Modern Asian Studies* 17, 1983.

one of sheer puzzlement. On certain points, I had no choice but to concede best to him: I had seriously underestimated the evidence of deepening market penetration in the region and the way that it had come to be reflected in the growth of a small-holding agriculture devoted to cash crop production. At the same time, however, Robert's translation of this evidence into a story of growing prosperity and small peasant liberation did not ring true in the light of other evidence.

Bellary district was distinguished in the Madras Presidency as the only district with a negative rate of population growth between 1891 and 1931.[6] It was at the epicentre of the Southern 'famine risk' zone and experienced repeated crop failures and dearths–in 1876–78, 1892, 1896–97, 1900, 1917, 1922–24. Admittedly, after the coming of the new famine code in 1880s, these dearths did not produce deaths on the same scale as before (between 1876 and 1878 one-quarter of the population had died).[7] Nonetheless, the havoc that they wrought with crop production was clearly evidenced in the records.[8] Further, there was little evidence of increasing productivity to off-set these regular losses. Bellary (and, in fact, the whole of the Madras Deccan) were again statistically distinguished in the Presidency for showing no increases in average crop yields across this period.[9] Further, while the statistics on commercial capital certainly showed 'progress', all the indices of 'productive' capital–from wells to cattle to ploughs–showed a common decline.[10] This pointed to a deepening paradox: that while there had undoubtedly been an expansion of commercialization, it was to be associated not with a broadening prosperity, but with a progressive crisis in agricultural production and social reproduction.

The possibility of this crisis was something which, in our different

[6] Robert calculated this decline at a rate of 0.06 per cent per annum between 1891 and 1931. Robert, 'Economic Change', p. 63.

[7] *Madras District Gazetteer.* W. Francis, *Bellary District* (Madras, 1904), p. 135.

[8] For example, the droughts of 1891–92 and 1896–97 reduced cropped area by 25 and 18 per cent, respectively, from that of their previous seasons. Bad seasons between 1917–18 and 1923–24 kept average cropped area 6 per cent lower than in 1916–17. See Government of India, *Agricultural Statistics of British India*, Quinquennial Series, 'Madras: Bellary District' (Calcutta and Delhi, various).

[9] See Government of Madras, *Season and Crop Reports* (Madras, annual). In fact, Bellary's crop yield 'norm' was briefly reduced for a few years in the 1910s, before being raised back to pre-1900 levels, which the 'seasonal adjustment' factor indicates it never reached. Bellary's stagnation is marked against the apparent dynamism of the Southern cotton belt in Coimbatore–Tinnevelly, where, particularly, cotton yields rose noticeably over the period.

[10] See below, Section V.

ways, both Robert and I had missed: he from the supposition that commercial growth must have produced economic growth; I from the supposition that the absence of economic growth must have been the result of an incomplete penetration of market forces. Neither of us considered that the expansion of the market economy, itself, might have had negative and deleterious effects on the bases of production and social reproduction. In retrospect, our mutual mistake was to put too much faith in conventional 'economic' theory and in models of 'the market' as an obvious and automatic source of growth.

But if, in Bellary, the expansion of the market economy was attended, at least in time, by a crisis of production and reproduction, why should this have been so; and what might an answer tell us for the study of other Indian regions, even those where economic growth did more assuredly take place?

II

Bellary district, of some 5900 square miles,[11] was one of the four 'Ceded' districts in the Madras Deccan (and is now in Karnataka state). In 1871, it had a population density of about 172 to the square mile, which, following various vicissitudes and recoveries from famine and disease, stood at 170 in 1931.[12] It was one of the 'driest' districts in South India with only about 2.5 per cent of its cultivation irrigated at any time before 1930.[13] Its agriculture was almost entirely dependent on the rains and was based, first and foremost, on the production of millet dry grains and pulses, which covered over 70 per cent of acreage in the 1880s and over 65 per cent even in the late 1920s.[14] The district was divided between two contrasting soil types: heavy black soil, particularly good for cotton production but difficult to work, predominated in Bellary, Adoni and Alur taluks; poorer quality red soil, which was much less productive until the coming of

[11] The district originally included a number of taluks which, after the Great Famine, were separated off into the separate Anantapur district. Subsequent to that, too, taluk boundaries underwent several changes. At various times between 1890 and 1930, the district varied between 5730 and 5975 square miles.

[12] Because of the changes in boundaries, it is easiest to express population changes in these terms. See *Census of India, 1871, Report on the Census of the Madras Presidency*, vol. 1 (Madras, 1874), p. 68; 1931, vol. 14, pt 2, p. 2.

[13] See Appendix to *Bellary District Gazetteer*, 1930, p. 16.

[14] Food crops occupied between 1.4 and 1.6 million acres of Bellary's cultivation, outside drought years, fairly continuously between 1890 and 1930. *Season and Crop Reports*.

groundnut cropping in the early twentieth century, covered most of Rayadrug taluk. By the late 1920s, groundnut had generally joined cotton even in black-soil areas as the second principal commercial crop.[15] Between 1890 and 1929, the total acreage under cultivation increased by about 20 per cent. Cotton acreage over the same period rose by about 60 per cent; and, between 1910 and 1928, groundnut acreage increased from almost nothing to about 13 per cent of total cultivation.[16]

An examination of the available data on landholding suggests that, as Robert argued, the principal force behind the expansion of cropped acreage was the proliferation of small farms. Between 1890 and 1930, the number of pattas, issued by the government for the payment of less than Rs 10 in land revenue increased from 63,000 to 113,000 and the amount of land covered by these pattas rose from about 580,000 to 800,000 acres.[17] Of course, not all small farms were new: some comprised the division of older large farms. However, in Bellary this would account for only a small part of the increase. Both 'medium' pattas of Rs 10–50 and 'large' pattas of Rs 50+ increased their numbers and acreages over the period although not by anything so considerable an extent. Medium pattas rose from 32,000 to 43,000 and their acreage from about 800,000 to 900,000; and large pattas from 4000 to 4800 and their acreage from 300,000 to 340,000.[18]

What lay behind this remarkable expansion and proliferation of, especially, small farming? As indicated previously, given Bellary's history of negative demographic growth, the pressure of population can be discounted. Robert supposed that would-be small farmers were 'induced' into cultivation by the prospects of high cash crop returns.[19] And there seems no doubt that small farmers did concentrate on the principal cotton cash crop: the Cotton Commission (1927) reported

[15] On the groundnut 'revolution', see Government of India, *Report on the Marketing of Groundnuts in India and Burma* (Delhi, 1941).

[16] In 1890–91, total cropped area was 2.10 million acres, of which 346,000 were under cotton. In 1928–29, 2.46 million acres were cropped, of which 593,000 were under cotton. *Agricultural Statistics of British India*, Madras 1890/91–95/96, p. 98; *Season and Crop Report* 1928/29. For purposes of comparison, there should be a downward adjustment of 108,000 acres in the first estimate of cropped area to allow for boundary changes. But the cotton figures require little alteration as the changes did not affect the principal cotton-producing taluks.

[17] Calculated from 'Statement of the Rent-roll' in Government of Madras, *Report on the Settlement of the Land Revenue in the Madras Presidency* (Madras, annual series).

[18] *Land Revenue Reports*.

[19] 'The higher prices for farm commodities induced cultivation of new lands'. Robert, 'Economic Change', p. 63.

that 87 per cent of the crop, in the Bellary villages which it surveyed, was grown on plots of less than 25 acres; and 21 per cent of it on plots of less than 5 acres.[20] A very large part of the 200,000+ acre increase in cotton cultivation between the 1890s and late 1920s would seem to have resulted from the activities of small farmers.

However, whether this activity was meaningfully 'induced' by the buoyancy of cash crop markets may be another matter. The economic history of the district was extremely bumpy and might best be divided into four distinctive 'mini-epochs'. The years 1890 to about 1904 were difficult for agriculture. There were droughts in 1892, 1896–97 and 1900 and cotton prices were little more than steady.[21] From about 1904 to the onset of the First World War, Bellary enjoyed something of a 'golden age' with no serious droughts, cotton prices rising by about 40 per cent and the new cash crop of groundnut starting to make its entry.[22] The Wartime years produced something close to economic mayhem with rocketing cotton prices, the collapse of the groundnut market and, from 1917–19, crop failure and famine.[23] The decade of the 1920s was disappointing: opening in famine, drought seasons recurred in 1922 and 1924 and, although the weather then became more stable, cotton prices went into slow decline for several years before the Great Depression of 1930 put them into complete collapse.[24]

A model of small farm proliferation 'induced' by rising market

[20] Government of India, *Indian Central Cotton Committee. General Report on Eight Investigations into the Finance and Marketing of Cultivators' Cotton* (Bombay, 1929). 'Madras', p. 51. The Madras investigation, which centred on Bellary district, was conducted in 1926–27.

[21] Cultivated acreage both opened and closed the decade of the 1890s at about 2.1 million acres but plummeted twice between in response to severe droughts. Bellary cotton prices rose only from Rs 15.5 to Rs 17 per imperial maund. See *Agricultural Statistics*, 'Madras: Bellary district'.

[22] Cropped area rose from 2.2 million acres in 1901–02 to 2.4 million in 1914–15. Cotton acreage rose over the same period from 287,000 to 411,000 acres. Cotton prices rose from Rs 17.5 to Rs 24. *Season and Crop Reports*, and Government of India, *Prices and Wages in India 1861 to 1921* (Calcutta, 1923).

[23] Cropped area fell from 2.4 million acres in 1914–15 to 2.2 million in 1918–19. Cotton prices peaked in 1918 at Rs 76 per maund and then halved again over the next two years. Cholum/jowar prices rose from Rs 2.25 per maund in 1915–16 to Rs 7.25 in 1918–19 and Rs 6.5 in 1919–20. *Season and Crop Reports* and *Prices and Wages*.

[24] Cropped area remained static at around 2.2 million acres from 1920–24 and then rose to 2.45 million acres by the end of the decade. Groundnut acreage increased from 20,000 to 315,000 acres and cotton from 446,000 to 593,000 acres. Cotton prices were extremely unstable (as was acreage): dropping sharply in the immediate aftermath of the War; recovering between 1923 and 1925; and then declining slowly until 1929 when they halved, from Rs 24 to Rs 12 per maund, at the onset of the Great Depression. *Season and Crop Reports* and *Prices and Wages*.

returns must anticipate that the growth of small holdings would have been fastest during Bellary's 'golden age' between 1905 and 1915, and slowest during the hard times of the 1890s and the problematic 1920s. In fact, however, the patta data indicate exactly the reverse. Between 1890 and 1901, small pattas proliferated at the amazing rate of about 1640 per annum. Between 1921 and 1929, they increased at the rate of 1345 per annum. But between 1905 and 1915, when market conditions were at their best, they grew at the rate of only 540 a year. In effect, the proliferation of smallholdings appears to have been more a response to economic adversity than to market opportunity.[25]

But why should the Bellary 'peasantry' have responded to adversity in this way? To answer this question it is necessary to look at the context from which they came to small farming. The evidence from the middle of the nineteenth century would seem to suggest that they came, predominantly, from a background of landless farm labour. Although Bellary experienced a slight de-urbanization between 1891 and 1931 (the result, mainly, of the removal of an army barracks from Bellary town), the consequent increase in rural population is too small to account for many of the new farmers.[26] In the early 1870s, before the Great Famine, the ratio of pattas to population in the district had stood at about 1:12, indicating (if we take a family to consist of five people) a large rural population without land. After the Great Famine, as cultivation came to recover in the 1880s, the ratio fell to 1:9 and, by the end of the 1920s, it stood at 1:6, which would suggest almost nobody without some kind of access to land.[27]

Evidence on land distribution and farming systems in the middle of the nineteenth century helps further to clarify the picture. According to contemporaries, the centre of local production regimes was provided by a small elite of 'magnate' families who commanded huge landed resources and who worked them, predominantly, with permanent farm servants and gang labour. It was these magnates who, at this time (whence my original 'magnate' model was derived), produced most of the cotton and also controlled local 'grain heaps', whose storage facilities were vital for fending off periodic droughts and famines. Such magnates built their houses on top of large grain pits from which they distributed subsistence wages to employees and grain loans to clients.[28]

[25] Calculated from 'Statement of the Rent-roll', in *Land Revenue Reports*.

[26] From 141,928 to 138,070. *Census of India, 1891, vol. XIV*, p. 6; *1931, Madras, vol. 2*, p. 8.

[27] Calculated from 'Statement of the Rent-roll', *Land Revenue Reports*.

[28] '. . . the bigger ryots–those who own wide acres, employ many hands and are as

The position of significance which the magnates had achieved in the district by the 1860s and 1870s may have owed much to the operations of the revenue system in the earlier decades of the century. Initial rates of assessment on Bellary district were penal: in money terms they were almost as high in the 1820s as in the 1920s. This put great power in the hands of village officer families who were able to manipulate them on the ground. The power was expressed most particularly in relation to the classification of inam land, which bore privileged (and often nil) rates of assessment. Thomas Munro, in making the first settlement of the district, had been all too conscious of the avariciousness of his employers and, to off-set their greed, had granted extensive rights of inam protection. Under his 1804 settlement, nearly half of the cultivated land (and all the best land) was classified as inam—and nearly 30 per cent of cultivation, as late as the 1920s, remained so.[29] Under the confiscatory revenue policies of the Company state, it was only the protection offered by the inam shield that permitted any profits raised out of agriculture to be retained in the district. As Bellary Collectors repeatedly claimed, cultivation was heavily concentrated on inam lands 'to the detriment of the revenues' and policies were introduced to try to force inamdars to take up valueless government land to at least the extent of inam production—thereby giving large inamdars reciprocally large holdings of revenue-paying land.[30]

And, as matters unforeseen by Munro were to turn out, the inamdars of Bellary were to be large. Munro's initial settlement had reflected a wide distribution of inam lands across broad sections of the population. However, power over the revenue system enabled the principal village officer families to shift the distribution very much in their own favour. In 1804, principal village officers had held only 22 per cent of inam land.[31] By the time of the Inam Commission in 1869, this had changed to over 60 per cent.[32] In effect, the 2000 or so principal village officers in Bellary's 1000 revenue villages had come to hold nearly 400,000 acres of the best quality land in addition to their 'ordinary' ryotwari holdings.

often as not traders in produce and moneylenders as well as landholders'. Francis, *Bellary District*, p. 99; also see J. Kelsall, *A Manual of the Bellary District* (Madras, 1872), pp. 260–70; and my 'Economic Stratification'.

[29] B. Stein, 'Does Culture Make Practice Perfect?' in B. Stein, *All the Kings' Manna* (Madras, 1984).

[30] See N. Mukherjee, *The Ryotwari System in Madras* (Calcutta, 1962).

[31] Stein, 'Does Culture'.

[32] By the late 1860s, patels and kurnams held 386,918 of Bellary's 635,251 acres of inam land. Kelsall, *Manual*, p. 191.

Given, before the revised ryotwari system of the 1850s (which greatly reduced rates of assessment), the economic impossibility of cultivating at profit without inam land, the central role played by 'magnates' in the Bellary production regime, and the large number of 'landless' labourers within it, become readily explicable. For a large section of rural society, working as the farm servant of an inamdar brought a 'share' of revenue-protected production;[33] whereas independent farm production brought only tax-bills. But there was a further logic to 'large farm' production in this context as well.

Cotton was, and had long been, the principal cash crop of the district. In the circumstances of the period, however, the best methods of producing and marketing it favoured the large producer with capital and land to spare. To gain the best cotton crops from black-soil lands, for example, required regular deep ploughing with heavy metal ploughs drawn by upwards of a dozen bullocks. Only 'magnate' farmers had the capital for such a form of cultivation. Equally, cotton production was extremely soil-exhausting and was best pursued where land could be fallowed for extensive periods: only cropping regimes where land was not a scarce factor of production could afford lengthy fallows. Further, poor road transport conditions (before the construction work completed during the Great Famine of 1876–78, which almost doubled Bellary's road mileage) made it hard for small farmers to get their crops to market and gave sellers who brought large quantities of crop to the auction block substantial advantages.[34] Farm labourers who were paid in terms of a 'share' of the product accruing to these advantages—and a sizeable share reckoned, in the 1860s, at a customary one-third of the crop—were plainly better off than had they tried to cultivate, in a small way, on their own.[35] Service on the large magnate farms also gave them entitlements to share in magnate grain stores, the difference between life and death in times of famine.

What had changed, by the later nineteenth century, to break up this magnate-centred organization of production and to convert large numbers of erstwhile farm labourers into small, independent producers? As indicated earlier, the specific timing of the conversion must raise suspicions about the extent to which it was the result of market 'inducement'. An examination of the precise conditions of production and marketing for small farmers broadens these suspicions. Admit-

[33] For a discussion of the 'share' economy, see B. Stein, 'Politics, Peasants and the Deconstruction of Feudalism in Medieval India', *Journal of Peasant Studies* 12, 1985.

[34] See Kelsall, *Manual*, pp. 262–7.

[35] *Ibid.*, p. 262.

tedly, by the later nineteenth century, land revenue charges were now no longer significant and transport improvements made it possible for small peasants to sell their crops without great disadvantage. However (and pace Robert), there is no evidence of any production advantages in Bellary-type farming to small-scale production methods and several of the old disadvantages still operated.[36] As in other parts of the Deccan studied by the Farm Management Survey of the 1950s, the celebrated 'inverse farm size:productivity ratio' did not apply and most of the surveys of Bellary conducted in the 1920s and 1930s actually found farm size:productivity ratios to be direct.[37] The Cotton Committee (1927), for example, noted the highest cotton yields to come from the largest cotton fields.[38]

In the context of production methods, this is not surprising. Cattle were extremely expensive to buy (Rs 200–400 a pair in the late 1920s) and to keep (Rs 92 p.a. in the early 1930s).[39] Small farmers simply could not afford to own them—with the result that either they had to hire them (which raised their costs of production) or, more usually, they had to skimp on ploughing, weeding and manuring.[40] Indeed, lack of cattle also kept them out of the new market in groundnut since its principal cost of production (nearly 55 per cent, according to the Imperial Council of Agricultural Research's close study of Bellary production methods in the early 1930s) came from cattle and manure.[41] Commercial farming in Bellary without 'owned-cattle' was either a very expensive or a very restricted business.

[36] Robert (p. 75) implied that Bellary farming could be drawn under a general 'inverse farm size:productivity' rubric derived from the Farm Management Surveys. But, as Bharadwaj has shown, the rubric principally operated in conditions of irrigated agriculture. The surveyed districts with 'dry' production conditions most similar to Bellary's were Amraoti and Akola districts, further North across the Deccan. They possessed no significant inverse ratio. See K. Bharadwaj, *Production Conditions in Indian Agriculture* (Cambridge, 1972).

[37] The sample sizes in both surveys were too small, and too biased towards larger producers, to make this evidence conclusive. But it can be said that, in both cases, the farms with the highest per acre productivities were large. *Madras Provincial Banking Enquiry Committee*, vol. V (Madras, 1930), pp. 272–350; Imperial Council of Agricultural Research, *Report on the Cost of Production of Crops in the Principal Sugarcane and Cotton Tracts of India*, vol. IV (Delhi, 1938–39), pp. 11–200.

[38] The Committee noted output of 108 lbs per acre on cotton areas over 50 acres but just 90 lbs on those under 5 acres and 85 on those between 5 and 25 acres. *Cotton Committee*, p. 51.

[39] *MPBCE*, II, p. 297; V, pp. 310–12; *ICAR*, IV, p. 14.

[40] *MPBCE*, V, p. 272, 298; Francis, *Bellary District*, p. 85.

[41] The *ICAR* imputed a rental charge of *c.* Rs. 3.5 per acre to production costs. If this is removed, as irrelevant to the circumstances of most groundnut farmers, charges imputed to bullocks and fertiliser come to about 55 per cent of costs of production. *ICAR*, IV, pp. 192–8. On the importance of cattle to groundnut, also see C. Baker, *An Indian Rural Economy 1880–1955* (Oxford, 1984), pp. 145–53.

In fact, not only production but also market conditions make the 'decision' of small farmers to enter cotton production difficult to understand. During both the 1890s and 1920s, when small farming was expanding at its fastest, cotton prices were not at their best. Their greatest rise in this period came across the 1910s when, as we have seen, small patta formation actually slowed down. Indeed, compared to the price of grain, cotton prices underwent a relative decline across the whole of this period. Robert seriously miscalculated the ratio of increase in cotton and grain prices at about parity (56 per cent and 60 per cent respectively). While cotton prices would seem to have risen by about this amount, the rise in grain prices was much nearer the order of 160 per cent (from an average of Rs 1.45 per maund in the last quinquennium of the 1880s to Rs 3.75 per maund in the four years preceding 1930—none of these years being famine years).[42] In effect, the grain:cotton price ratio almost halved between the 1890s and the late 1920s, making the small peasantry's 'decision' to concentrate on cotton farming, notionally at the expense of grain production, all the more wonderful.

Behind this decline in relative cotton prices there lay general problems in the market for short-staple 'Northerns and Westerns', the local varieties of Deccani cotton which, as a late 1920s commentator put it, 'have lost much of their former reputation'.[43] With the growth of longer-stapled and watered varieties of cotton in other parts of India and the South, the market for Bellary cotton went into decline after the First World War. Paradoxically, it was the market conditions associated with this decline, which Robert reported as particularly favourable to small producers. He noted, from the Cotton Committee (1927) report, that, allowing for transport costs, there was little difference between village and town prices for cotton; that the bulk of the crop was purchased by itinerant commission agents who bought from large and small producers alike at comparable rates; that there was no evidence of 'magnate' interventions to corner the crop and gain speculative profits.[44]

What Robert failed to note, however, were the reasons given for this by the Cotton Committee itself. In the depressed Bellary market, virtually the whole of the crop was forward-contracted by the purchasing houses at fixed rates and quotas. As these quotas were easily

[42] Robert, 'Economic Change', p. 63; *Agricultural Statistics*, 'Madras: Bellary district' and *Season and Crop Reports*.

[43] *Madras District Gazetteer, Bellary District* (Supplement) (Madras, 1930), p. 68.

[44] Robert, 'Economic Change', p. 74.

TABLE 1
Bellary Quinquennial Wage Census

1900*	1906	1911	1916	1921*	1926
100	131	125	233	78	110

*Years of serious dearth and high grain prices.
Source: Robert, 'Economic Change', p. 76; derived from *Quinqennial Wages Censuses*, 1906–1936. Tamilnadu Archives.

filled (in fact, overfilled since 12 per cent of the crop was left unsold and unsaleable at the season's end), there was no possibility of any speculative profit in the market. The 'commonness' of price seen throughout the market was a commonness of bottom price, induced by purchasing-house monopsony, not a commonness of top price, beaten up by fierce competition, as Robert supposed.[45]

But why, then, should small farmers decide to engage in, especially, cotton cultivation at just the times when the market for it had gone flat? A more comprehensible answer comes from a view of the situation whence they came. As Table 1 shows, the 'golden age' of Bellary farming, when small patta formation was minimal, coincided with a period of significant rises in effective wage rates. By contrast, the 1920s, when small patta formation expanded prodigiously, saw wages first in crisis and then continuously depressed. Small patta formation, here, would seem to have been a response to instabilities in the wage sector.

But what was happening in the wage sector to precipitate this response? There seems little doubt that the 'magnate-centred' production regime began to change in the 1860s and 1870s, partly as a result of the 'new' ryotwari revenue system but, perhaps mostly, because of the coming of the railways. During the American Civil War, the district had responded to boom cotton prices with a very considerable expansion in production, which showed it firmly engaging in a much larger scale of market activity.[46] With the post-War fall in cotton prices, cotton acreages fell back but market engagement continued in the grain trade.

As Michelle McAlpin, among others, has argued, the coming of the railways can be linked to the very considerable rise in grain prices, which occurred nearly continuously from the 1860s to the late 1920s. Local spatial limitations on grain markets were broken and grain was

[45] *Cotton Committee*, pp. 11–33.
[46] Kelsall, *Manual*, pp. 318–19.

'freed' to find its best price over wider areas.[47] In the case of the market for millets, this 'best price' proved to be spectacularly high: millet prices rose faster than those of any other major food-grain—for long periods, faster than those of any commercial crop and of manufactured goods. The reasons for this would seem to lie in the extent to which millets were associated with 'dry' production regimes subject to constant interruption by the weather. There was likely to be, at least, a dearth somewhere in the millet zone almost every year with the result that its 'dearth' prices became spread through the market hiking up the cost of grain everywhere.

There is evidence that, in the post-American Civil War 'depression' and the early 1870s, 'magnate' farmers were starting to run down their local grain stores and to take advantage of rising market prices. Indeed, this was suggested as one reason why the Great Famine of 1876–78 had been so severe in terms of loss of life, particularly for labourers and small peasants who depended on access to these stores as their own insurance mechanisms.[48] It was noticeable that the death-toll was heaviest in the most commercially-advanced taluks of the district (Adoni and Alur where nearly a third of the population was lost).[49] After the Great Famine, the run down of local storage facilities would seem to have continued and was noted again as a feature of the 1896–97 famine.[50] By the 1920s, large-scale local storage of grain was held to be a thing of the past and, in effect, subsistence relations had been put on a commercial and cash basis. The credit surveys of the 1920s particularly remarked on how, in comparison to thirty years before, intra-rural borrowings and lendings, which had been dominated by transactions in grain, were now run largely through the medium of cash.[51]

Needless to say, the commercialization of grain trading had far-reaching implications for the employment of labour since it was shares

[47] M. McAlpin, 'Railroads, Cultivation Patterns and Foodgrain Availability', *Indian Economic and Social History Review* 12, 1975.

[48] See *Parliamentary Papers*, 1881, vol. LXXI, pt 2: *Report of the Indian Famine Commission, 1881*, Appendix 3. Also my 'Economic Stratification' and 'Country Politics'; D. Arnold, 'Famine in Peasant Consciousness and Peasant Action: Madras 1876–78' in R. Guha (ed.), *Subaltern Studies III* (Delhi, 1984).

[49] Francis, *Bellary District*, p. 135.

[50] See *Parliamentary Papers*, 1898, vol. XXXII: *Report of the Indian Famine Commission, 1898*, Appendix, 'Madras'. Also my 'Economic Stratification' and 'Country Politics'; D. Arnold, 'Famine'.

[51] See A. Kolliner, 'The Structure of Rural Credit in the Ceded Districts of the Madras Presidency', paper presented at Conference of Rural Agrarian History, University of Pennsylvania, 1975, pp. 39–49.

in, and entitlements to, magnate grain stores that had articulated magnate-centred relations of production. The most obvious consequence would appear to have been a general disemployment of permanent and tied farm servants and a casualization of wage-labour. Certainly, if the, admittedly impressionistic, data on the situation in the mid-nineteenth century can be believed, Bellary large farming, by the 1920s, was distinguished by its absence of permanent farm servants. The Banking Enquiry (1929) and the ICAR survey reported farms of upwards of 100 acres operating with seldom more than two or three, and sometimes none.[52] And this was not because magnates were deploying their own family labour instead: the ICAR noted Bellary (large) farming to operate with the highest ratio of hired to family labour of any part of British India that it surveyed.[53]

Further evidence of the casualization of labour comes from the wage census where the Bellary reporter, at the turn of the twentieth century, was among the first in South India to claim to discern a definite shift from payments in grain and by 'custom' to payments in cash or by price-related grain dole.[54] The latter style of payment is scarcely compatible with permanent farm labour.

Besides the rising value of grain, which magnate farmers no longer wished to 'share' with their employees, the move towards a casualized labour force also fitted with other developments in Bellary large farming. Except for the 'golden age' of the 1910s, the cotton market in Bellary scarcely recovered the significance which it had had in the American Civil War era and, in the long term, proved itself much less profitable than the grain and, later, the groundnut markets. The corollary to the move of cotton towards small farm production was that it moved off large farm production. The Banking Enquiry (1929) and the ICAR report noted that, while large farms still obviously grew it, they could scarcely be said to specialize in it but produced it as a limited part of mixes dominated by grain and supported by groundnut.[55] The Cotton Committee (1927) found large-scale (50

[52] The employment of permanent farm servants seemed closely related to the number of cattle and ploughs kept and amount of wet cultivation undertaken. *MPBCE*, V, pp. 301, 330, 332.

[53] This was rated across all Bellary farming at 5 days of family labour for every 21 days hired. But in purely 'dry' farming it was considerably lower–5.2 days of family labour for 8.1 hired. *ICAR*, IV, pp. 17, 66–7.

[54] G.O. 3628 (Revenue) dated 30 November 1909, Tamilnadu Archives.

[55] The three villages examined by the Banking Enquiry were on excellent cotton soil and very close to Bellary town. Nonetheless only between 20 and 30 per cent of their acreages were under cotton. *MPBCE*, V, pp. 273, 296, 323.

acres +) production to be responsible for only 2 per cent of the total.[56]

The shift away from cotton and towards grain and groundnut cultivation, however, had drastic implications for the employment of labour. Cotton was an extremely labour intensive crop: the ICAR put labour costs at close to 30 per cent of total production costs.[57] Grain and groundnut, by contrast, were labour extensive crops (the latter being capital intensive) whose demands for labour were low. The ICAR recorded labour inputs on Bellary large farms at little more than 13 work-days per acre per year, the lowest in all the areas of British India that it examined.[58] At this level of utilization, permanent farm servants became a very expensive luxury.

How expensive may be seen from data collected by the Banking Enquiry (1929), which reckoned the annual cost of a permanent farm servant as between Rs 75 and Rs 90 a year.[59] Daily wage rates at the time were thought to have been about 3 annas for an adult male, making the actual wage-time paid to permanent farm servants the equivalent of 399 to 480 days per year.[60] Moreover, the active agricultural season lasted only about 8 months, making the effective work-time paid for the equivalent of a 598 to 720 day year.[61] Even if the permanent farm servant's work-time included that of his wife and children (paid casually at half the male rate), the value looks very questionable.

In effect, then, the case would seem much stronger that the expansion of small farming in Bellary was the corollary to changes in labour practices on the larger farms, and the break-up of the old magnate-centred production system, than that it was 'induced' by the prospects of entrepreneurial profit. Casualized labour had to find alternative means of subsistence for the times when it was no longer being paid and, in the absence of alternatives, found it in small farming. That this was, in no sense, a preferred alternative may be judged from behaviour during 'the golden age', when a price rise temporarily revived the cotton market and the demand for labour and when labourers, immediately, ceased taking up small farms.

[56] *Cotton Committee*, p. 51.

[57] Calculated after 'disallowing' for rent. *ICAR*, IV, p. 21.

[58] *Ibid.*, pp. 66–7.

[59] *MPBCE*, V, pp. 324, 332.

[60] Of course, local wage rates varied greatly. This figure is based on the 'commonest' rate found for male labour in the late 1920s. *Quinquennial Wage Censuses* (1926).

[61] The rains came in June or July and the last harvests in the black-soil areas took place in March.

It may also be judged from strong evidence of resistance to the new economic logic, which occurred at times of famine. In both 1876–78 and 1896–97, magnate farmers found themselves castigated for their grain-selling activities and facing prospective grain riots as their clients and employees refused to allow sales from their grain-pits.[62] Indeed, it may have been in response to their vulnerability as targets of public opprobrium that magnates decided to run down their grain pits on a much greater scale after the 1896–97 famine, so that they would possess no objects which could become the focus of hostility. That, in spite of protest and resistance, this run-down should, nonetheless, have taken place, and the new economic logic been imposed, may be seen as the result of three factors.

First, the appalling death-toll of the 1876–78 Great Famine broke the back both of the old economic system and of much potential resistance to the new. With a third of the population dead in the most commercialized taluks, the break with the past was almost physical and, as recovery took place in the 1880s, few of the survivors were in a position to threaten the magnate capital which they needed to restore their own livelihoods. Further, the 1880s revealed the new system in a particularly kindly light. A series of good seasons kept grain prices relatively low (and thus wages high) and cotton cropping had not, as yet, lost its profitability. By the time that bad times returned in the 1890s, it was too late to resuscitate the past.

Second, the later nineteenth century witnessed, parallel to the deepening penetration of market forces, the deepening penetration of the state. Magnate farmers could rely increasingly on the effective support of the police to sustain their 'private property' rights in the face of local resistance: and, thus, depended less upon deferring to the demands, material and moral, of their local communities.[63] And third, and relatedly, after the Great Famine, new famine codes passed the major responsibility for the reproduction of the local labour force in times of trouble onto the state. Famine was not again to bring the direct loss of life, which had taken place in 1876–78, as disemployed labourers and indigent small peasants could find some kind of succour at new government relief camps.[64] Magnate farmers were then left to enjoy the full profits which came from grain trading at famine prices.

[62] Arnold, 'Famine'; also, my *Emergence of Provincial Politics*, ch. 2.

[63] My *Emergence of Provincial Politics*, chs 2, 3; Baker, *A Rural Economy*, ch. 5; D. Arnold, *Police Power and Colonial Rule, Madras 1859–1947* (Delhi, 1987).

[64] See McAlpin, *Subject to Famine*.

III

But if, as suggested above, the expansion of small farming followed from the 'expulsion' and casualization of large-farm labour, and represented a new search for subsistence to off-set wage losses, why should it have concentrated on cash crop production, particularly of cotton, rather than direct food provision? In straightforward terms, this 'decision' would seem to make no sense of a subsistence strategy. It meant producing a crop whose relative value against grain halved across this period. It also involved its producers in a three-sided structure of risk: from the climate, from the oscillation of grain prices and from the oscillation in cotton prices which, being internationally determined, were scarcely calculable within Bellary itself. Seeking subsistence through the cotton market offered the prospects of ending up with very little of an inedible crop or piles of a crop that was unsellable or returns on a sold crop which were too low to buy much food.

If the production and market conditions of small farm agriculture are examined, however, it must be doubted whether producers had much choice in the matter for, given their specific factor endowment, cotton gave much the best returns and was, in a real sense, the only crop that they could afford to grow. In the first place, operating on fewer than 10 acres, they could make very little dent on their food requirements if they concentrated on grain production.

What the precise calculation of 'minimum subsistence needs' should be remains a very controversial question.[65] However, if we take what the (notoriously ungenerous) colonial state of the period thought, and offered for famine relief work (1 lb of grain and one anna per day for adult males and 1 lb + 0.5 annas for women and working children), the result, at the prices of the later 1920s, comes to the equivalent of 3285 lbs of grain per year for a family of five.[66] At what would seem to have been the average levels of production at the time (see below), that would represent the produce of about 10 acres. But grain was not costless to grow. Andrew Kolliner, working on the evidence of the Banking Enquiry for Bellary district, has estimated the minimal cost of grain production, excluding imputed charges for

[65] McAlpin, for example, estimated basic grain needs at 460 lbs per person per year, but this does not include allowances for other 'necessities'. McAlpin, 'Railroads'.

[66] Francis, *Bellary District*, II, p. 139.

family labour, at Rs 5 per acre.[67] At current market prices, Rs 5 represented the equivalent of 106 lbs per acre, which would have needed to be raised and sold to cover costs. That would have required a further 3.5 acres of production which, with its own costs added, would have required a further 1 acre. In effect, and as many contemporaries noted, it would have taken about 15 acres of average quality land for a family of five to produce directly its own subsistence needs annually.[68] The problem was that the average size of farms among the 70+ per cent of farmers who paid less than Rs 10 in land revenue was about 7 acres.

As Robert correctly noted, necessary farm size could be cut very considerably if cotton, even at the low prices of the 1920s, were produced.[69] Kolliner estimated the costs of cultivating cotton, under the same conditions, at about Rs 12–15 per acre. But, for small farmers, this would have to be raised to pay for bullock-hire, say to Rs 14–17.[70] In the year of the Banking Enquiry (1929), gross returns to cotton cultivation on the farms which it surveyed, where all produce (kapas, seed, straw and interplanted korra) was sold, ranged between Rs 28 and Rs 34.[71] Small farmers, however, did not get the highest returns and, for them, Rs 16 per acre would have been an excellent profit. Nonetheless, on that basis, 3285 lbs of grain could have been purchased off the 'profits' of 9.5 acres. For land-short peasants, cotton's higher returns per acre provided a better chance of approaching subsistence targets than did grain cultivation itself—even if, at 9.5 necessary acres, the majority of small farmers would still not have been able quite to reach it. Of course, groundnut which, on Kolliner's calculations, yielded 'profits' of Rs 25+ would have been better still but, without cattle, this was uncultivable.[72]

[67] Kolliner, 'Structure of Credit', p. 15.

[68] See my 'Economic Stratification'; also *MPBEC*, V, p. 350.

[69] Robert, 'Economic Change', pp. 60–1.

[70] Kolliner, 'Structure of Credit', p. 15. The *ICAR* put the costs of cotton cultivation in the early 1930s at Rs 12–13 per acre. *ICAR*, IV, p. 37.

[71] Robert claimed that Kolliner and the Banking Enquiry indicated net profits per acre of Rs 30 for cotton, Rs 18 for groundnut and Rs 10 for cholum. But it is hard to see how these figures are derived. The highest gross return to cotton acreage in the Banking Enquiry's survey was just Rs 34, which, allowing even for low cultivation costs, could not have yielded a net return of more than Rs 22 per acre. Kolliner's actual conclusion was that net profits per farm averaged between Rs 10 and Rs 25 per acre, depending on what was grown. Robert, 'Economic Change', pp. 63, 74–5; Kolliner, 'Structure of Credit', p. 15.

[72] Gross returns to groundnut acreage varied between Rs 37 and Rs 45 against costs of production, recalculated by Kolliner, at about Rs 15–18. *MPBCE*, V, pp. 275–333; Kolliner, 'Structure of Credit', p. 15. Robert's attempt, by manipulation of

In various other ways too, cotton suited the needs of small farmers. It was highly drought resistant and thus promised some returns even when grain crops failed. It also, as noted before, was highly labour intensive, which meant that it favoured the one factor of production which small farmers possessed in greater abundance than large farmers—unpaid family labour. Indeed, had Kolliner imputed labour costs to cotton production (as large farm management would require), the profitability of the crop would have become very seriously reduced. At the ratio of labour costs seen by the ICAR survey, cotton production with hired labour would then appear to have cost Rs 16–20 per acre and 'profits' to have dropped to Rs 8–18 (say Rs 12). At a cost:profit ratio of just about 1:0.8 cotton would have been the least profitable of any of the three major crops of the region: the returns to labour-extensive grain and groundnut production, at Kolliner's figures, give possibilities of ratios of 1:1.4 and 1:1.5, respectively.[73] These ratios suggest very clearly why large farmers, for whom land scarcity was not a significant issue and who farmed for returns on capital, were withdrawing from cotton production. And also, they indicate that the principal 'advantage' which small farmers possessed, and which made cotton production still 'profitable' for them in the depressed conditions of the 1920s cotton market, was cheap family labour.

IV

But 'advantages' and 'profits' for whom? It can hardly be held as of much meaningful benefit to small farmers, themselves, that their appearance of market competitiveness should depend upon their receiving nothing for their labour. Moreover, as soon as the question of retained 'profits' and even 'income' is raised, a large schedule of other and hidden costs against small farm production comes to light.

price and acreage statistics, to demonstrate 'small farm' cropping choice as including groundnut is extremely curious. Besides the problem of production conditions, there is also one of location. Before the mid-1920s, 80 per cent of the cotton and the groundnut crops were produced in different (black-soil and red-soil) taluks: if farmers did make price-rational decisions about choosing between them, their farms must have been spread over dozens of miles! Robert, 'Economic Change', pp. 74–5.

[73] The *ICAR* found a 'business' income of Rs 7 per acre on cotton against production costs of Rs 13. Although cotton prices were lower in the mid-1930s than in the late 1920s. *ICAR*, IV, pp. 106–7. Cholum returned Rs 11–14 per acre against costs of Rs 5–8 per acre. *MPBCE*, V, pp. 275–333; Kolliner, 'Structure of Credit', p. 15.

TABLE 2
Distribution of Debt by Revenue Value of Land

Pattas	% Debt	% Revenue Value
Rs0–10	34	26.5
Rs10–30	34	36.5
Rs30–50	13	15
Rs50+	19	23

Source: Derived from Robert, 'Economic Change', p. 69, and 'Statement of the Rebt-roll' in *Land Revene Report* 1925/26.

Some of these we have seen already—in, for example, the need to hire cattle. Others, however, come as soon as we consider how small peasants may have gained access to land and have financed their cultivation of it. Although Bellary land-values were very low (in the 1920s, the equivalent of 1.5–2 years' gross yields), if land was bought these still had to be met.[74] If land was rented, as some 30 per cent of inam land (although very little ryotwari land) was, there were heavy additional charges to meet. According to the Banking Enquiry (1929), the standard rental rate in the villages which it examined was Rs 5 per acre or five-times the equivalent land revenue charge.[75] Even if 'virgin' land were cleared, the necessity of digging out deep-rooted nath grass with a heavy iron plough and bullock team made its costs of reclamation by no means negligible.

Then there were the costs of farming itself, which could only be met off future income at the end of the harvest. Cotton farming had several unavoidable cash expenditures—for seed and bullocks—and, in addition, there was the family's subsistence through the growing season, which casual labour on large farms was likely to meet only in part. In effect, small farmers needed credit in order to cultivate at all and, as Table 2 demonstrates, their cultivation was more heavily burdened with debt, in relation to the revenue-based asset value of their land, than that of larger farmers.[76] The figures reflected in this Table come from the Banking Enquiry (1929), which estimated the general level of debt on Ceded Districts' farming at Rs 23 per acre.[77] On this basis

[74] Between 1926 and 1930, black-soil land averaged about Rs 53 per acre, which was down by about 35 per cent on values during the boom years of the First World War. *Government of Madras. Statistical Atlas of the Madras Presidency* (Madras, 1936), p. 337.

[75] E.g., *MPBCE*, V, p. 300.

[76] Due to variations in land fertility, it seems preferable to quote revenue asset values (which were, albeit loosely, related to fertility) than simple acreages.

[77] *MPBCE*, I, p. 76.

(which is almost certainly an underestimate since it overlooked petty hand and grain loans), the debt per acre on small farming was over Rs 30 per acre or about the equivalent of the gross value of the cotton crop. Such credit, of course, had to be paid for—and heavily.

Robert claimed that 'most loans were short-term production and/or consumption credits which carried interest rates at 9 to 12 per cent.'[78] This is a remarkable summary of the report which Robert claimed as his authority but which actually found:

> A good first mortgage can ordinarily be got anywhere at 12 per cent but for unsecured loans and for large doubtful mortgages, 15 to 18 per cent are common rates, while 24 per cent, particularly in the Ceded Districts, where crops are precarious and credit proportionately low, is not an uncommon rate.[79]

Admittedly, a superficial reading of the Banking Enquiry, and of other credit surveys of the 1920s, may give the impression that credit was not a serious problem in the region. These surveys concentrated in the main on the situation of the larger farmers, whom colonial officials considered, anachronistically, to be the principal commercial producers, and who had access to a variety of different credit sources and at moderate rates of interest.[80] The rather different situation of the mass of the poorer peasantry received much less attention. But it is hard to disagree with Kolliner that, when teased out from the data, what these reports reveal is that 'the wealthy ryot looking to take a large loan and able to offer his land as security was in a far better bargaining position than the cultivator who existed on the margin'.[81] Without much security, he found it difficult to get loans; had to pay the highest rates for them (of 25 and sometimes 50 per cent); and, not infrequently, had to perform labour and other services as part of the arrangement.[82]

Indebted up to and sometimes over, the total value of his crops, and paying the heaviest interest charges of all, it must be seriously doubted whether many small farmers made any meaningful 'profits' out of their cultivation. Interest payments at 24 per cent on a principal of Rs 30, would have come to Rs 7.2 per acre of cotton cultivation and halved the notional profit figure calculated by Kolliner (and hence would have doubled the effective acreage needed to 'buy' subsistence

[78] Robert, 'Economic Change', p. 68.
[79] *MPBCE*, I, p. 82.
[80] Kolliner, 'Structure of Credit', pp. 53–5.
[81] *Ibid.*, p. 53.
[82] *Ibid.*, pp. 54–6; my 'Economic Stratification'.

to close to 20 acres). But perhaps making 'profit' was not the point for, looked at another way, what the new economic system did permit small farmers to do was to live on, and by, credit–which was itself a valuable source of subsistence.

Credit advances represented consumption in the present against costs in the future. Should crops fail and the small peasant debtor prove unable to repay his loans, he had at least eaten that loan in the first place; and his creditor was unlikely to have much recall against him afterwards. At the land values current in Bellary, it was hardly worth going through the procedures of repossession, if, indeed, the land belonged to the debtor and was not rented in the first place. The best way in which a creditor stood to get anything back from his defaulting debtor was, in fact, to advance him more credit for the next season in the hope that its crops might be better.

In the precarious circumstances of the Ceded Districts, being a 'consumption debtor' was by no means a bad option for labourers-cum-small-farmers to pursue. It enabled them to re-form the connections of a shared subsistence with significant economic actors, which the break-up of the old production regime had severed. One thing which evidence from such people to the banking and credit surveys of the period makes clear is that, for them, there was no problem of 'indebtedness' as such: rather the problem was expressed as one of 'credit' and of their difficulties in getting hold of it in sufficient quantities to be able to immerse themselves in the security of 'debt'.[83]

Their need for credit may be seen as another factor pushing them towards 'independent' farming and cotton production. Land and cash crops represented some security for loans and the higher the per acre value of the crops, the higher was the volume of credit likely to be available to the producer. That the potential profit of these crops might be absorbed in interest charges, made all the heavier by the extra costs of production that had to be borrowed in order to produce them, mattered little when the principal strategy was simply to get hold of credit adequate for subsistence in the first place. Small peasants, in effect, reproduced themselves and their cultivation, from day-to-day and season-to-season, through the credit system.

And, at the end of all this, were they any better off than they had been under the old production system? It would, perhaps, be easier to see their situation as 'different' rather than 'better' in any qualitative sense. As clients and dependants in the old magnate-centred

[83] *MPBCE*, II, p. 297; IV, p. 74. See also, V. V. Sayana, *The Agrarian Problems of Madras Province* (Madras, 1949), espec. pp. 151–7.

economy, they had had few opportunities of significantly 'improving their lot' and had had to share in the deadly risks of famine borne by all semi-isolated local production regimes in the pre-railway age. There had been bad times, but also some noticeably good ones. The 'share' basis of customary payment schemes meant bonanza harvests and boom profits were distributed (albeit very differentially) through society. There were moments of plenty to help off-set those of desperate scarcity. Indeed, and perhaps ironically, in periods after a famine had been survived, conditions could temporarily become exceptionally good. With labour scarce and valuable, employers and patrons were unusually supportive of its welfare: in the 1880s, the Bellary population recovered nearly 60 per cent of its Great Famine losses.[84]

Equally, while the old production regime had necessitated certain back-breaking forms of labour, and the exploitation of female and child labour, it had provided long months of non-labour and alternative means for women and children to earn their millet-porridge outside the fields. Millet and cotton roughly shared the same eight-month growing cycle, leaving the other four months free; and, before the invasion of Indian markets by industrially-spun yarn, the hand-spinning of cotton thread had provided an important by-employment for all classes of the rural poor.

The new production regime, supported by the new famine codes, certainly offered better protection from the extreme vagaries of the climate. Direct loss of life due to sudden starvation was never to be the same problem again. However, famine relief works supported life only at the most minimal levels of subsistence and labourers-cum-poor-peasants, who were obliged to return to them again and again—in 1892, 1896, 1900–1, 1917–19, 1922–24—were scarcely likely ever to become 'sleek' and to rise above their allotted station in life. Moreover, at famine relief camps, they faced death by other means rather than escaped it altogether. As Elizabeth Whitcombe has argued, famine camps were notorious centres of disease and may have killed with microbes as many lives as they saved with food.[85] One of the major reasons for Bellary's demographic stagnation, which saw its 1880s recovery from the Great Famine peter out and remain incomplete fifty years later, was the recurrent outbreak of plague, which frequently centred on the famine relief camps. Instead of a roller-

[84] *Census of India, 1881, Madras, vol. I* (Madras, 1883), p. 227; *1891, vol. XIII* (Madras, 1893), p. 2.

[85] E. Whitcombe, 'Disease and Mortality in Indian Famines', presentation at workshop on Famine in India, SOAS, October 1989.

coaster ride between starvation and glut, the Bellary poor now faced a long death of attrition between a more constant but inadequate supply of food and murderous diseases.

Further, to sustain even this supply required greater and harder labour than ever before. Put most simply, with a labour force of the same size, the district was cultivating 20 per cent more land and 60 per cent more labour-intensive cotton in the late 1920s than it had done in the late 1880s. It was also doing so at lower levels of profit (at least to cotton) and at no increase in piece-related rates of wage. The process was accomplished, via the casualization of wage labour, in part by lengthening the working year and, in part, by tapping new sources of unpaid family labour. One of the 'advantages' of groundnut cultivation was that its work schedule made demands for labour at previously slack times of the year, increasing the effective work-load of agriculture.[86] The shift of cotton into small farm production, as we have seen, was principally made possible by the harnessing to it of the unpaid family labour 'stored' inside the peasant family. In fact, cotton made especially heavy demands for female and child labour, whose 'nimble fingers' were essential to successful picking.

In spite of the extra burden of work, however, there is precious little evidence that labourers-cum-small-farmers ever did better than to achieve a precarious subsistence—and that only with regular 'help' from the famine department. Their small scale of debt-loaded production and casual earnings from wage labour can have left them with little surplus in good years and, come bad years, their trailing in large numbers to risk the diseases of the relief camps hardly bespeaks much in the way of 'progress'. A life that had once been a gamble on the monsoon became one dependent on the whims of the market-place and the medical profession; and, over nearly fifty years, the greater 'securities' of the market-place failed to provide it with the means to ensure even its own regular reproduction.

But if the new regime brought few clear benefits to labourers-cum-small-peasants, who did gain from it? Most obviously, the purchasing companies and the ultimate consumers of Bellary cotton, grain and groundnut obtained these commodities at lower cost-of-production prices, certainly in terms of labour. But perhaps the greatest beneficiaries were the local magnate farmers themselves. They increased the profitability of their farming by sloughing off labour's costs of

[86] Groundnut was harvested in November and December, which previously had been a lull in the agricultural season.

reproduction onto the state; by cutting their wage bills; by speculating on rising grain markets; and by adopting groundnut cultivation.

They were also in a position to gain directly from small-farm production. In part, these gains came from renting out scarce factors of production to small farmers: land at five-times the revenue rate; bullocks at Rs 1 per acre of work. But, in perhaps most part, they came from the implications of the credit system. Kolliner has estimated that the volume of credit in Ceded Districts' agriculture may have quadrupled between the late 1880s and late 1920s—alongside the expansion of cash cropping.[87] Robert argued that this credit was supplied by many sources: purchasing houses and banks, Komatis (the main professional moneylending caste of the region) and farmers with surpluses to spare.[88]

Of these, however, there cannot be much doubt that the latter greatly predominated. The Cotton Commission explicitly noted that, in the depressed condition of the market for 'Northerns and Westerns', purchasing houses made very few advances against the crop.[89] Groundnut purchasing houses certainly did make advances but, as this was a large-farmer crop, only to large farmers. Banks, too, concentrated on large-farmer clients who, alone, could provide the kind of security which they required. Komatis, in fact, were very scarce in Bellary and grouped only around the main towns: in 1921 they numbered scarcely 7,000 or 0.075 per cent of the population.[90] The great bulk, perhaps 90 per cent, of credit was supplied by farmers themselves.

And, among farmers, who had the greatest surpluses to lend? Robert argued that the evidence of the credit surveys of the 1920s showed lending to be a promiscuous activity among all sections of farming society and not to be concentrated in the hands of the magnates.[91] Of course, there was indeed much promiscuous lending—and lending on of money itself borrowed. However, Table 3, largely taken from Robert's own evidence, hardly reveals a lack of concentration. The first three columns are given as by Robert to show that all farmer classes participated in the credit market. In column 4, I add a series which Robert omitted to offer, showing the proportion of revenue payers represented by each of the revenue-paying categories.

[87] Kolliner, 'Structure of Credit', pp. 24–41.
[88] Robert, 'Economic Change', p. 68.
[89] *Cotton Committee*, pp. 24, 29.
[90] *Census of India, 1921, vol. XIV, pt 2*, p. 120.
[91] Robert, 'Economic Change', pp. 69–70.

TABLE 3
Distribution of Creditors by Revenue Paying Category

Pattadars	% Creditors	% Loaned	% Pattadars
Rs0–10	34	18	72.0
Rs10–30	32	22	20.0
Rs30–50	14	15	5.0
Rs50+	20	45	3.0

Source: Robert, 'Economic Change', p. 70; and 'Statement of the Rent-roll', *Land Revenue Report* 1925/26.

As can be seen, the addition of column 4 alters the entire meaning of the Table: it reveals that 45 per cent of rurally generated credit was provided by a group comprising less than 3 per cent of the landowning population. If this does not represent significant 'concentration', what does?

Given the expansion of the credit system, it also represented an enormous aggregate investment. Kolliner, following the credit surveys of the period, estimated the debt on Bellary agriculture at between Rs 2.9 and Rs 4.5 crores.[92] Taking just the lower figure, and allowing 90 per cent of it to have been farmer credit, the 45 per cent of it held by the 3 per cent of richer farmers comes to Rs 1.2 crores: Rs 12,000,000 held by some 4,000 pattadars at an average of Rs 3,000 each.

Moreover, it seems highly probable that most of this lending was directed at the smaller peasantry. As Kolliner's analysis suggested, the principles of intra-rural lending depended more on 'personal' than formal 'institutional' relations.[93] The major problem facing small farmers was that, in institutional terms, they possessed little security. Who was better placed to develop personal ties with them than the employers who provided them with their principal sources of off-farm work and could off-set debts against notional wage payments? For 'medium' farmers, who employed more labour from their own families than they hired, small-farm debtors were a much greater risk.

Indeed, viewed in this way, the entire shift of cotton production from large to small farms can be seen as a mechanism whereby, through the application of usury and 'service' capital, magnate-creditors sought to respond to the conditions of depression in the cotton market and to continue to squeeze a healthy profit out of the crop. By acting as its major financiers and advancing it the factors of

[92] Kolliner, 'Structure of Credit', pp. 25–6.
[93] *Ibid.*, p. 55.

production which it lacked, magnate farmers were able to draw returns from small farming's one supposed advantage—unpaid family labour. The family now laboured longer and harder and passed most of the profits of its work to the magnates in interest payments and rents. Not only did the new economic system 'rationalize' the deployment of labour, most critically it cheapened it—in this case, literally, to the price of nothing.

V

But yet there may still have been a price to pay for capitalism's new efficiencies and rationalities. As Christopher Baker has argued, during the 1940s and 1950s evidence began to accrue of a general decline in levels of agricultural productivity and fertility across the whole of South India.[94] In many ways, this decline could be associated with the rapid expansion of cultivation, which had taken place over the previous seventy-five years. In Bellary, the decline would seem to have started earlier and to have been marked even by the 1920s.

During the first great cotton boom in Bellary, in the 1860s, average per acre outturns were reckoned to be in the region of 375 lbs of kapas, making about 93.75 lbs of lint.[95] This was, admittedly, an impressionistic figure and can only have related to exceptionally good seasons. Nonetheless, as a 'best season' possibility, it compared vary favourably with other levels of cotton production found in other parts of the South at this time. This favourability was also reflected in the fact that Bellary town was chosen as the site of the first spinning factory in the South.[96]

By the 1920s, such levels of production (and the spinning factory which closed down in 1915) were but golden memories. The Season and Crop Reports had slimmed down Bellary's notional cotton yields to 50 lbs of lint per acre (200 lbs of kapas). But, when the changing 'seasonal factor' is read against this figure, it appears that in not a single season of the decade was it actually reached: outturn varied between 52 and 94 per cent of the norm and averaged 75.8 per cent, or 151.2 lbs of kapas/37.8 lbs of lint per acre.[97] Even this figure would have astounded the Cotton Committee (1927), which claimed to find,

[94] Baker, *Rural Economy*, pp. 227–8, 509–13.
[95] Kelsall, *Manual*, p. 262.
[96] *Madras District Gazetteer, Bellary District* (Supplement), p. 68.
[97] *Season and Crop Reports*, annual.

on the Bellary farms which it examined, cotton yields averaging just 86 lbs of kapas per acre—the lowest, by a considerable margin, of any it found anywhere in British India.[98] However, it should be said that the season of its survey was the worst in the decade for cotton production: the Season and Crop Reports estimated outturn at just 52 per cent of the notional norm, or 104 lbs of kapas per acre.[99]

The detailed village and farm surveys of the Banking Enquiry and of the ICAR report on production confirm this dismal picture. The Banking Enquiry, which operated during a cotton season with a rating of 93 per cent, noted yields varying between 150 and 220 lbs per acre on the sixteen Bellary farms which it examined.[100] Close crop-monitoring procedures in three Bellary villages between 1933 and 1936, revealed cotton outturns which varied between 27.2 and 308.8 lbs per acre and which averaged 174.4 lbs in 1933/34; 99.7 lbs in 1934/35; and 170.4 in 1935/36.[101] As 1933/34 and 1935/36 were the two best-rated seasons in Bellary since the First World War (at 99 per cent and 96 per cent of norm respectively), these levels of production suggest a near halving of yields since the 1860s.[102]

Something of a similar case can be made for yields of cholum/jowar, the principal millet crop, although the fall was rather less steep. What is, admittedly, only impressionistic evidence from the second half of the nineteenth century, confidently expected cholum yields, in what must have been good seasons, to average 5 imperial maunds (417 lbs) per acre.[103] The Season and Crop Reports throughout the 1920s kept a figure close to this (450 lbs) as the anticipated norm. Once again, however, the annual seasonal ratings indicate that it was never actually reached in the whole of the decade. Outturns varied between 61 and 96 per cent and averaged 80.8 per cent or 363.6 lbs per acre.[104] In the villages surveyed by the Banking Enquiry, during a season with a cholum rating of 93 per cent, outturns varied between 192 and 320 lbs per acre.[105] The ICAR noted, in 1934–35, district-wide average yields of 333 lbs.[106]

[98] *Cotton Committee*, p. 51.
[99] *Season and Crop Reports*, 1926/27.
[100] The yields are given in Bellary 'country' maunds of *c.* 26 lbs. *MPBCE*, V, pp. 272–335.
[101] *ICAR*, IV, pp. 164–73.
[102] *Season and Crop Reports*, 1933/34–35/36. Guha has noted similar problems in the Western Deccan. Guha, *Agrarian Economy*, pp. 110–12.
[103] C. Benson, *An Account of the Kurnool District* (Madras, 1889), p. 25.
[104] *Season and Crop Reports*, annual.
[105] The yields are given in Bellary 'kadavas' of *c.* 63 lbs. *MPBEC*, V, pp. 272–335.
[106] *ICAR*, IV, p. 111.

Against these statistics of decline and stagnation, of course, should be set those relating to groundnut, which rose from virtually nothing before the First World War to cover close to 15 per cent of the cropped acreage by the early 1930s. Where it displaced cholum, it offered a crop capable of generating cash returns three times higher per acre. It also survived the dry conditions of Ceded Districts' agriculture particularly well (three times, in the decade after 1921, its seasonal rating topped 100 per cent and it averaged 91 per cent of a norm of 1,120 lbs per acre).[107] Further, it was a leguminous crop and thus soil-replenishing in its effects. In many ways, the coming of groundnut saved the Ceded Districts' economy although, and very particularly, saved it only for the larger farmers. In the Banking Enquiry survey, only one small farmer was found to produce it—and he was a cattle owner and leaser-out who happened to farm on the side.[108] In the ICAR survey, it was a noticeable absentee from the cropping mixes of the few smaller farms examined.[109]

In seeking explanations of this decline, an immediate cause might be found in deteriorating rates of productive investment in agriculture. Well-irrigation, for example, declined over the period: whereas about 18,000 acres of cultivation were well-watered in the 1890s, the number had fallen to barely 9,000 by the early 1930s.[110] Perhaps more seriously, cattle and plough to acreage ratios also deteriorated: from about 1 plough per 22 acres of cultivation and one bullock-pair per 10 acres in the late 1880s to 1 : 30 and 1 : 12 by the late 1920s.[111] Cattle became extremely sparsely used in Bellary agriculture. The ICAR noted average rates of work of only 4.9 days per acre—among the lowest in British India and about 1/8th of those used on comparable farms in Coimbatore district in the much more successful South Indian cotton belt in Tamilnadu.[112] Further, as both the Cotton Commission and Banking Enquiry reported, there was little investment either in the improved varieties of 'Hagari' cotton available after the First World War. Although these varieties offered better

[107] *Season and Crop Reports*, annual.

[108] *MPBEC*, V, p. 278.

[109] The smallest farm (13.98 acres) in the *ICAR* survey grew no groundnut. The two others below 25 acres grew it only once in the three years of the survey. *ICAR*, IV, pp. 88–121.

[110] *Season and Crop Reports*, 1902/03 and 1933/34.

[111] In 1890/91, 85,000 ploughs and 209,000 bulls and bullocks were held to be working 2.1 million acres of cultivation; in 1925/26, 80,000 ploughs and 208,000 bulls and bullocks were held to be working 2.4 million acres. *Agricultural Statistics 1890/91* and *Season and Crop Reports* 1925/26.

[112] *ICAR*, IV, p. 14.

yields and quality premiums at market, their take up was extremely slow and, even by the late 1920s, they covered barely a quarter of Bellary's cotton acreage.[113]

Behind the deteriorating production conditions in Bellary agriculture, it is difficult not to see several factors directly related to the nature of its economic 'expansion'. Magnate-centred production regimes up to the 1860s and 1870s had concentrated production on best quality inam lands, using high levels of animal inputs and allowing for fallowing rotations which never put cotton on the same land more than once in three years and which left fields unused 2 years in 7.[114] Under such production conditions, even in the 1920s and 1930s, very high yields were clearly possible. One Bellary magnate farm, using the old methods of production and surveyed by the ICAR in the early 1930s, obtained cotton outturns of over 300 lbs in the best year and grain yields of over 400 lbs in two years out of three.[115] But the production conditions of the new small-farm agriculture were very different.

In the first place, small-farm proliferation took agriculture towards low productivity marginal land. Under the Bellary revenue system, land was tax-rated according to estimates of its fertility in bands varying from 4 annas to Rs 3–4-0 per acre. The massive expansion of small farming was very much onto the lower qualities of land: in 1929/30, the average per acre assessment of land in pattas worth less than Rs 10 was slightly under 8 annas (Rs 0.5) compared to an average of about Rs 1 across the full scale of patta-holding.[116]

Equally, small farming had to cope with minimal animal inputs. This brought two problems, which several agronomic experts of the 1920s and 1930s claimed to be acute in the district. First, there was a tendency not to 'deep-turn' black soil as often as was optimal to limit the progress of nath grass and to retain the fertility. Small farming relied heavily on the 'guntaka', a kind of hoe, which, while adequate for day-to-day operations was not a long-term replacement for the plough.[117] Second, of course, lack of cattle meant a shortage of manure and 'undermanuring', particularly for soil-exhausting crops such as cotton, was held directly to be a major cause of declining yields.[118]

[113] *Madras District Gazetteer, Bellary District* (Supplement), pp. 68–9; *Cotton Committee*, p. 51.
[114] Kelsall, *Manual*, pp. 262–7.
[115] *ICAR*, IV, pp. 164–73.
[116] Calculated from 'Statement of the Rent-roll' in *Land Revenue Report* 1925/26.
[117] Francis, *Bellary District*, p. 85.
[118] *Ibid.*, p. 86; *MPBEC*, V, p. 272.

Such yields were further depressed by the inability of small farmers to allow adequately for fallowing. To overcome the difficulty, they usually interplanted cotton with korra millets. This practice, however, while partly protecting the land, caused cotton yields to drop drastically. It also was, in the end, no substitute for fallowing and eventually would still ruin the soil.

After furrowing and (under-)manuring his fields, the small farmer then had to find seed. The reason generally given for the failure of Hagari cotton to spread more widely was that small farmers could not afford to pay the cash prices required for its seed; nor to retain any seed from season to season since its sale (mainly to magnates as cattle fodder) provided an important supplement to per acre earnings.[119]

Small-farming practices, then, tended both to put heavy pressures on the soil and to be unable to utilize the new technological advances of the period. This left large-farming to develop the forces of production—or at least to sustain the productive base. To some extent it did, through the introduction of Hagari cottons and groundnut and by maintaining fallowing, deep-ploughing and manuring procedures. However, there is little evidence of large farmers significantly increasing their productive investments on the land in relation to the improvements in profitability which they were enjoying in the grain and groundnut markets. Dwindling cattle-acreage ratios indicate that they were not extending their investments in cattle. Equally, the decline of well-irrigation shows their unwillingness even to maintain, let alone increase, investments in irrigation. Indeed, in many ways they were 'withdrawing' from their once central role in agriculture—producing less cotton, letting out lands, farming a progressively smaller proportion of total cultivation.

But what, then, were they doing with their profits? There is some evidence of their becoming involved in the marketing and crop-processing industries: several magnates acquired cotton gins and groundnut decorticating machines.[120] However, and most obviously from the statistics on the expansion of credit, they were investing in moneylending—and on a huge scale. In the late 1920s, wells were estimated to cost about Rs 1,000 to dig and agricultural costs of production averaged around Rs 13 across all crops.[121] The Rs 1.2 crores of credit issued by the 3 per cent of large farmers in the district represented the equivalent of 12,000 new wells or 900,000 acres of

[119] *Madras District Gazetteer, Bellary District* (Supplement), pp. 68–9.
[120] See my 'Economic Stratification'.
[121] *MPBEC*, III, p. 807.

cultivation. Plainly, the short-term 'profitability' of capital invested in agriculture now turned more on its ability to exploit the subsistence needs and unpaid family labour of the small peasant workforce than it did on its ability to raise levels of production.

VI

But what caused this situation: why should the increasing penetration of capital into production, in the circumstances of Bellary, have resulted in ecological devastation and poor peasant exploitation? Superficially, the history of the market and of a variety of geographical and ecological factors might seem to supply the answers. Obviously, the declining market for Deccani short-stapled cotton seriously reduced the profitability of cotton production, the principal cash crop. Climatic uncertainties and water shortage made it impossible, at least under criteria of competitive profitability, for Bellary farming to respond by taking up the new long-stapled and 'watered' cottons that now dominated the market.

There was some response in terms of the development of groundnut as a new major cash crop. However, Bellary's great distance from the nearest cattle breeding grounds (in Nellore district), and lack of adequate pasturage, limited the possibilities of this crop. Further, neither groundnut nor grain demanded the same levels of labour input as cotton. This left labour as Bellary's most abundant and progressively cheapening factor of production, which capital came most naturally to exploit.

Yet it is never satisfactory to treat society simply as the passive victim of intangible forces of nature and the market. Clearly, different patterns of human intervention could have brought about different results. One such pattern can be traced to the activities of the state, which, through acts of both omission and commission, bore a heavy responsibility for these consequences. In terms of omission, of course, the colonial state did remarkably little to find technological solutions to Bellary's ecological and agronomic problems. As Christopher Baker has seen, its obsessions with riverine irrigation meant that it left the 'dry' uplands without adequate support or investment.[122] Nor did its concerns with crop improvements extend beyond crops with export potential to the millet grains on which most of society lived.

[122] Baker, *Rural Economy*, ch. 5.

In terms of commission, however, the colonial state's responsibilities are even more direct and open up questions on a second pattern of human intervention—that represented by class relations. In many ways, it was the actions, intended and unintended, of the early Company state that set up Bellary's social problems into the twentieth century. Penal levels of revenue assessment, together with the careless granting of inam rights which could be confiscated by a small elite, fundamentally altered the distribution of wealth and power within the district. As a new and more penetrative age of capitalism dawned in the second half of the nineteenth century, Bellary entered it with most of its potential sources of 'capital' (good quality land and supra-subsistence surpluses) concentrated in the lands of a very small group of landed magnates. Subsequent state intervention further helped them to turn their wealth into capital. The new famine codes enabled them to withdraw from responsibility for the reproduction of their own labour forces. And more effective administrative and policing systems helped to guarantee their 'private' rights of property against the moral and material demands for 'shares' still emanating from society. The state made the particular capitalist class which dominated Bellary farming.

And having made it, and made it in a way which opened a vast gap between the resources of the magnate elite, on one side, and the 70+ per cent of indigent labourers-cum-small-farmers, on the other, it stood back to allow the logic of capital to work itself out. Hardly surprisingly, that logic saw capital attaching itself to and exploiting the very indigence of the labourer-cum-small-peasant, whose relative share in a social product, expanded by the extension of cultivation and cash-cropping, declined in proportion to capital's own advance. And profitable though this pattern of exploitation may have been in the short-term, its effect on the long-term development of the forces of production was largely negative.

The wide variety of different histories of the market, ecology, state intervention and class relations in colonial Indian farming, of course, make it impossible to generalize directly from Bellary's experience to that of other regions. But if this experience does have something to tell, it must be of the importance of factors of 'distribution' (and hence of class) in determining the way in which the deepening penetration of capitalism, from the later nineteenth century, affected the means and relations of production. Prior distributions of rights and resources, and the ability or inability to defend them, structured capital's possibilities of 'progress'. In Bellary, they gave capital a near-rightless

and -resourceless mass of labour, broken further by the Great Famine, which became its greatest, and ultimately almost only, source of profit. Had magnate success in seizing the grain heap, and selling it for profit, been resisted more adequately, capital's trajectory of 'development' must necessarily have been different.

Besides pointing to the importance of 'distribution' and class 'resistance', Bellary's experience, relatedly, can also be seen to pose economic history a teasing set of questions, which, as yet, have been inadequately addressed. These concern the rising price of grain, which 'outperformed' the prices of both commercial export crops and of manufactured goods. Grain, however, represents food and, immediately, opens up the issue of how far colonial India's economic growth may generally have been retarded by a structure of prices which raised the cost of subsistence faster than that of anything else.

Several other issues flow from this. It has been conventional to look to export-orientated commercial crops as the principal source of 'profitability' in the economic development of the 1880–1930 period. Yet, in Bellary, it was the profitability of grain production which was in the ascendant and which virtually doubled in relation to that of cotton over these years. Through the operations of the grain:cotton price ratio, large farmers, who produced most of the grain, can be seen to have transferred to themselves much of the notional surplus earned by consumption-deficit small peasant cotton producers. We may need to examine much more closely intra-rural relations of production, marketing and subsistence before assessing the 'benefits' of the commercialization of the epoch.

And, indeed, there are questions concerning the reasons for the massive hike in grain prices, particularly 'dry' grain prices, in this period. As noted earlier, standard explanations have focused on 'the transport revolution' and, clearly, this was an important element of the context. However, it must be counted as, at least, passing strange that, of all food grains, the highest rises in price should be found in the markets for millet grains. These, being extremely bulky to their nutritional content and having a low 'quality' preference, circulated the least widely of any of the standard food grains. In fact, it is even quite difficult to work out who, on a regular basis, would have been involved in this market. Urban populations, in the Ceded Districts as elsewhere, rarely consumed the crop since they could import a wide variety of rices (premium for the rich and 'broken' for the poor) and much preferred to do so. Outside times of dearth and famine it must

be doubted that millets were much consumed outside their locales of production.[123]

But perhaps that is the answer, or part of it. As discussed earlier, millets were associated with climatically dangerous 'dry' zones in which crop failure, in one locale or another, was a near certainty: millet circulated largely in response to local dearths which spread their high prices through its market. However, if this were all that there were to the matter, it would not explain, of itself, why the underlying floor price of millets should have risen continuously and been sustained, as in the later 1920s, through years when there were no serious crop failures in the millet belt. Nor why annual oscillations in price should noticeably have diminished.[124]

To function adequately, the model must presuppose the long term and progressive structuring of 'dearth' conditions into the grain market. But what could have caused this? McAlpin had argued vigorously against the once-held notion that rising food prices reflected declining food production as acreages under commercial crops displaced those under grain.[125] She pointed to the general expansion of all cultivation as having kept food acreages in line with population. In Bellary, where there was no population increase, this was certainly the case: actual acreage under food crops remained about the same through the 20 per cent expansion in total cultivation, which took place between 1890 and 1930. But what of yields? On the evidence we have presented (which parallels that presented by Baker for Tamilnadu), there is a strong prima facie case for a decline in grain yields, which, if true, would certainly account for a steady rise in price as a consequence of progressively deficient supplies.[126]

And our evidence suggests a further possibility too. How far did changes in the relations of labour, themselves, generate an increased market demand for food stuffs and thus contribute to their price rise? The evidence which we have seen of the casualization of wages, of the shifting of the wage medium towards cash and of the proliferation of a food-deficit small peasantry all suggest an increasing 'market'

[123] S. Krishnaswami, who was concerned with food-deficit problems during World War II, took the entire millet crop to be rurally, and locally, consumed. S. Krishnaswami, *Rural Problems in Madras* (Madras, 1947).

[124] M. McAlpin, 'Price Movements and Economic Fluctuations' in D. Kumar (ed.), *Cambridge Economic History of India, II* (Cambridge, 1983).

[125] McAlpin, 'Railraods'.

[126] Baker, *Rural Economy*, pp. 227–8, 509–13. See also, G. Blyn, *Agricultural Trends in India 1891–1947* (Philadelphia, 1966).

demand for grain—and a demand inside the countryside itself—which would help to explain the apparent lack of dry grain movement along the railways. In effect, the class transformation of rural Bellary, which we have been discussing, must be given a prime responsibility for having raised food prices as part, and only one, of the strategy whereby capital increased its profitability at the direct expense of labour's subsistence, family relations, leisure-time and, ultimately, even ability to reproduce its own life.