MODERN CEYLON STUDIES

A Journal of the Social Sciences

University of Ceylon

Volume 1 Number 2
July 1970

MODERN CEYLON STUDIES is published by the University of Ceylon. It appears twice a year, in January and July, and will contain articles on subjects such as Sociology, Economics, Politics, Social Anthropology, Education, Linguistics, Psychology, History and Geography. The articles will relate mainly but not exclusively to Ceylon.

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based on a medieval wood carving at the Embekke *devale* near Kandy.

MODERN CEYLON STUDIES

VOLUME 1 1970 NUMBER 2

CONTENTS

The Impact of The Waste Lands Legislation and The Growth of Plantations on The Techniques of Paddy Cultivation in British Ceylon: A Critique*

by MICHAEL ROBERTS

I

The Waste Lands Ordinances No. 12 of 1840 and No. 1 of 1897 and the expansion of cash crop plantations for which they are believed to have paved the way have been a popular target of criticism for several decades. It is alleged that these developments led to the expropriation of land used by the inhabitants of the Kandyan Highlands (the Central Highlands) on a large-scale, thereby influencing the agrarian history of these regions in an adverse manner.[1] Recently, in what are no more than ancillary arguments in their hypothesis, two economists have drawn attention to another feature of this impact. Arriving at their conclusions independently, both S. B. D. de Silva[2] and Buddhadasa Hewavitharana[3] have alleged that a process of chain reaction was generated which ended in a serious retrogression in the technology of paddy culture in Ceylon.

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*This article is an amended version of a seminar paper entitled "The Alleged Retrogression in the Techniques of Paddy Cultivation in the Central Highlands resulting from the Waste Lands Legislation and the Growth of Plantations in British Ceylon: A Critique of the de Silva-Hewavitharana Hypothesis". The paper was No. 11 in the 68/69 Series of the Ceylon Studies Seminars at the University of Ceylon and was presented on the 26th June 1969.

Please note that the forms *AR* and *SP* in the citations refer to *Administration Report* and *Sessional Paper* respectively.

1. *SP XVIII of 1951*, The Report of the Kandyan Peasantry Commission, pp. 69-77.
A. B. Perera, "Plantation Economy and Colonial Policy in Ceylon", *Ceylon Historical Journal*, Vol. I, (July 1951).
Ralph Pieris, "Society and Ideology in Ceylon during a 'Time of Troubles', 1796-1850, Part III", *University of Ceylon Review*, Vol. X, (January 1952).
I. H. Vandendriesen, "Land Sales Policy and Some Aspects of the Problem of Tenure 1836-1886; Part II", *UCR*, Vol. XV (January-April 1957).
N. K. Sarkar, and S. J. Tambiah. *The Disintegrating Village* (Colombo: The Ceylon University Press Board, 1957) pp. xi-xii.
W. Don Michael, "Some Aspects of Land Settlement", *The Ceylon Economist*, Vol. IV (January 1958).
J. B. Kelegama, "The Economy of Rural Ceylon and the Problem of the Peasantry", *The Ceylon Economist*, (September 1959).
2. S. B. D. de Silva, Investment and Economic Growth in Ceylon (London University: Ph. D. thesis in Economics, 1962), pp. 192-94.
3. Buddhadasa Hewavitharana, Factors in the Planning and Execution of the Economic Development of Ceylon (London University: Ph. D. thesis in Economics, 1964), pp. 222-23. I appreciate Dr. Hewavitharana's kindness in lending me his dissertation.

According to their hypothesis, the expansion of plantations under the aegis of the Waste Lands Ordinances led to a loss of forest, chena and pasture – in de Silva's words "drastically curtailed the traditional access of cultivators to forest and waste land". Or, as Hewavitharana phrases it, in the Wet Zone the "clearing of land deprived paddy of its handmaiden - forest". At the same time, the neglect, and the consequent deterioration, of the irrigation works in the Dry Zone in the course of the nineteenth century affected the cattle population in that region. The limitation of pasture in turn led to a deterioration in the condition and numbers of local draught animals. Cattle murrain (rinderpest) added its quota of disaster to this trend.[4] As a result, paddy cultivation was seriously affected through loss of manure and animalpower. In the meantime, population and paddy land continued to increase. The scarcity of draught animals generated by these trends raised hire charges. All these factors created a spiralling tendency for the peasantry to rely on manpower rather than animalpower in preparing their fields. Technology had taken a large step backward.

As a convenient shorthand, this interpretation can be labelled "the chain reaction hypothesis". It is simply and plausibly constructed. The evidence supplied by de Silva is brief but fairly powerful: it is derived from the *Administration Report* of the Government Agent of Kandy, H. S. O. Russell, for 1869 (written in June 1870) and the *Sessional Paper VI of 1908*. Hewavitharana's evidence on the foundation points is negligible and is limited to a table which shows the number of cattle per hundred of the peasant population in the census years 1881-1962 and indicates a decline in numbers. The peasant population has been calculated by subtracting the figures for "estate population" from those for the "rural population" in the censuses. The cattle population has been derived from the *Ceylon Blue Books* and Statistical Abstracts which are used without any comment on their reliability. I reproduce Hewavitharana's figures here.

1881 : 67
1891 : 66
1901 : 79
1911 : 68
1921 : 59
1931 : 40
1946 : 32
1953 : 31
1962 : 29

4. S. B. D. de Silva does not refer to rinderpest at all. Hewavitharana mentions it, referring to Leonard Woolf's diaries as his documentation, but his emphasis is such as to place this factor in a secondary causal category.

One can provide some of the basic points in the chain reaction hypothesis with more muscle and sinews than its authors have employed. The observations of H. S. O. Russell, the Government Agent of the Central Province, in the course of the years 1870-72 provide strong evidence in its favour. In 1872 he noted that he was

> trying to prevent the sale of common pasture land on account of Government, or by underhand bargain of private parties, but [that] the evil of indiscriminate alienation of such land [had] already been carried so far that in many places no pasturage [was] left for villagers' cattle, and in others beasts [could] be turned out to graze only at the risk of their straying into neighbouring coffee estates, where they [would] be impounded or shot.[5]

With the comment that the circumscribed pasture land made it "no longer possible for the beasts to live in herds", he argued that this was the main cause of the prevailing "degeneracy" of the cattle. In his view "scanty food and exposure to weather" also served as contributory factors.[6] Such views are supported by the evidence of a District Judge of Kandy (Staples) who noted (in 1852) that the people complained of a scarcity of pasturage, and by a similar complaint in a newspaper in 1856.[7] A decade later a district officer in Badulla complained that the hire of a pair of buffaloes in the vicinity of the town had risen within the past five years from 1s. to 3-4s. *per diem*, while attributing the scarcity of buffaloes solely to the effect of rinderpest.[8] And decades later, in the course of his autobiography Tikiri Banda Panabokke complained that as a result of the sale of chena lands to the planting interests "pasture land for cattle . . . disappeared and so cattle farming as a means of livelihood also came to an end".[9]

5. *1871 AR*, (Kandy District and Central Province), H. S. O. Russell, 23 March 1872, p. 41
6. *Idem* and *1869 AR*, (Kandy District and Central Province), H. S. O. Russell, 27 June 1870, p. 39. Also see *infra*, pp. 180-81.
7. CO 54/296, H. J. Staples - Pakington, 17 December 1852, Encl., Memorandum relative to Kandyan Affairs, 5 December 1852,
Colombo Observer, 7 April 1856.
8. *SP IV of 1867*, Report of the Committee appointed by the Legislative Council on the 7th December 1866, to inquire into Irrigation Works and Rice Cultivation in the Island of Ceylon, with Appendices : Appendix, Part I (Replies from) the A. G. A. Badulla, W. W. Hume, 28 February 1867, p. 54. In reporting that cattle were only used to a highly limited extent in Matara District, its district officer conjectured that this was the result of "difficulties ... in providing pasture", [*Ibid*. pp. 91, 102-03]. Since few coffee plantations existed in Matara District and since it was fairly well-irrigated, the causal factors postulated by De Silva and Hewavitharana could not have operated in this region. From the district officer's report above and administration reports of the mid-nineteenth century, it would seem that the problem in a large part of Matara was created by a growing population and the expansion of cultivation.
9. P. B. Panabokke and J. A. Halangode (ed.), *The Autobiography of Tikiri Banda Panabokke* (Kandy: Miller & Co., 1938?) p. 23. This book is part autobiography (up to p. 33) and part biography. T. B. Panabokke (snr's) life-span was 1846-1902. The reference to "cattle farming" must be considered an exaggeration and should be treated loosely as equivalent to cattle-rearing, because cattle farming in the strict sense of the phrase was not a significant feature of the old Kandyan Kingdom. Also note that the Panabokke's themselves owned cash crop plantations [*Ibid*, p. 30 and general knowledge] but this was possibly on ancestral lands.

Secondly there is a certain amount of evidence on the role of forests in village ecology. From forests, Ceylonese villagers gained honey, game, oils, jungle rope, firewood, and fence sticks and timber for agricultural and building purposes.[10] Forests were also used for pasture and as easements to the paddy fields (as in Burma).[11]

But the question remains how vital they were to the village economy in various parts of the island. Students have invariably, and too readily, accepted the view that they "played a vital part in the village economy, both directly and indirectly", and contributed to a balanced agriculture.[12] Mere enumeration of their uses does not suffice. Further tests must be applied. In the Central Highlands[13] and the foothills the useful role of forests (both primary and secondary) in serving as catchment areas for rain, and in preventing rapid surface run-off of rainfall and thereby reducing soil erosion, can be accepted. On other fronts, however, their usefulness is debatable. It is difficult to give them much significance, for instance, where coconuts grow profusely or small gardens exist in plenty. Coconuts are not productive at elevations beyond 2500 feet above sea level and are of only marginal productivity at elevations between 1500-2500 feet.[14] But, as we shall see, in Kandyan times the main settlement areas in the Central Highlands were between 1200-2500 feet.[15] While the extent of coconut in the Highlands today almost certainly exceeds that which would have existed in the nineteenth century, coconut groves were not unknown to the Kandyans of early British times.[16] It is doubtful if primary forest was used extensively as pasture in Kandyan and early British times because of their denseness and the beasts of prey they contained, though some glades would have been utilised where accessible. Coconut groves, village gardens and uncultivable (even by cash crops) scrubland provided alternative sources of pasture to that provided by

10. CO 54/487, Gregory - Kimberley, No. 237, 31 July 1873.
CO 54/345, Ward - Newcastle, No. 46, 29 August 1859, App. H. in Encl. 4 (Memorial to Governor Mackenzie from some inhabitants of Sabaragamuwa District), 3 November 1840, pp. 301-03.
1871 AR, Nuwarakalawiya, T. W. Rhys-Davids, 16 July 1872, p. 90.

11. J. S. Furnivall, *Colonial Policy and Practice*, new edn. (New York : 1956), p. 107.

12. N. K. Sarkar and S. J. Tambiah (1957) p. xi.

13. The whole of the central highland mass - best demarcated by the 1000 foot contour - which is known as the Central Highlands lies within the former Kandyan Kingdom, (the Kandyan Provinces in the terminology of British times).

14. Information supplied personally by Dr. Gerald Peiris of the Geography Department, University of Ceylon. Also see Elsie K. Cook, *A Geography of Ceylon* (London : Macmillan & Co., 1931), p. 180 and R. E. Lewis, "The Rural Economy of the Sinhalese (more particularly with reference to the District of Sabaragamuwa) with some account of their superstitions", *JRAS, CB*, Vol. II, Part II, No. 4 (1848), p. 4.

patana,[17] chena,[18] and secondary forest lands. Besides providing straw, paddy fields also provided sources of pasture after the harvests[19] - a seasonal source which was (and is) of considerable value (in terms of the fodder normally available to village cattle), particularly in areas which had (and have) only one crop. Fence sticks and fuel could also be garnered from sources other than secondary and primary forest or recently chenaed land, notably from village gardens (*tennes* and *wattes*), uncultivable scrubland, and hedges. Game was probably not vital to the vegetarian-minded Kandyans,[20] though one must be cautious in estimating the extent to which Buddhistic notions were honoured in the practice, particularly by the menfolk. Nor was honey a staple. It is on such reasoning that Jayawardena concludes that forests were only of marginal utility to Kandyan village ecology.[21] Neither Gregory nor Gordon (two Governors of Ceylon) would have agreed with this view. For Gregory considered it "almost tantamount" to expulsion of the villagers to permit the clearing of the small patches of forest which grew in the vicinity of their homesteads,[22] and Gordon considered forest indispensable to the village.[23] These are no half statements but the

17. Patana, a word derived from Sinhalese, refers to grasslands in the Hill-Country. They must not be considered in terms of the grasslands common to Europe. For the most part they consist of coarse and tufty grass, the commonest being mana grass and illuk as well as lantana - the latter a comparatively recent (nineteenth century) foreign intrusion which has spread rapidly in the moist zone highlands up to about 3500 feet. Patanas are especially characteristic of the eastern and drier slopes and have been a prominent feature for at least two centuries. Some patanas, chiefly at lower elevations, are dotted with trees and scrubs and are known as talawa patanas. See *SP XLIII of 1882*, Forest Administration in Ceylon: Report on the Conservation and Administration of the Crown Forests in Ceylon, F. D'A Vincent, pp. 23-24; and Elsie K. Cook (1931) pp. 161-64; and R. A. de Rosayro, "Notes on the Patanas of Ceylon", *Bulletin of the Ceylon Geographical Society*, Vol. 9, 3 & 4 (July-Dec. 1955), pp. 35-43.

18. Chena land, derived from the Sinhalese *hena*, refers to land on which a form of shifting cultivation is practised on the slash and burn method. It is akin to the *taungya* of Burma and the *swidden* of Indonesia. It does not refer to the work of nomadic people. For the most part it is a form of cultivation employed by inhabitants of settled villages. It should be noted that all forest is potential chena land (provided the climate and terrain enables chena cultivation). Chena land, however, refers to tracts of land which are regularly chenaed or which have been recently chenaed. It will be evident that the secondary growth on such land will vary according to the soil and the stage of regeneration of a particular chena plot. Where the chena cycle of a locality covers a long period and where plenty of land exists, there will generally be an overlap of the categories "chena land" and "secondary forest" (except where the process of chenaing has resulted in permanent scrubland conditions).

19. Information communicated by Dr. Gerald Peiris. Also see R. E. Lewis (1848) p. 37. Where the three-shift system of cultivation operated and where land was allowed to lie fallow or abandoned, uncultivated paddy lands would have provided perennial pastures.

20. Hunting wild animals was banned in the eighteenth century but was clandestinely practised, (Lawrie MSS. Vol. III, Crimes and Punishments). "Beef here may not be eaten; it is abominable", noted Knox in his *An Historical Relation of Ceylon*, Ryan's edn. (Glasgow: James Maclehose and Sons, 1911), pp. 138-39.

21. L. Jayawardena, The Supply of Sinhalese Labour to Ceylon Plantations (1830-1930), A Study of Imperial Policy in a Peasant Society (Cambridge University: Ph. D. thesis in Economic History, 1963) p. 46.

22. CO 54/487, Gregory - Kimberley, No. 237, 31 July 1873.

23. A private letter from Lord Stanmore (Arthur Gordon) quoted in Jayawardena (1963) pp. 16-17.

question remains how knowledgeable the two Governors were. In short, the question is difficult to measure and the boundary between marginal utility (irritation if lost) and vital role (burdensome if lost) is not easy to draw.

II

I propose to examine the main tenets of the chain reaction hypothesis as elaborated above. That part of the hypothesis which treats the waste lands legislation as the root cause of the results depicted pertains to the whole of the Wet Zone and that portion of the Central Highlands which falls within the Dry Zone but supports plantations. It also applies to a span of ten - twelve decades and is said (by implication) to have occurred between the 1830's and the 1940's. But it is also implied that the detrimental effects were evident much earlier than the 1940's – by 1870 according to de Silva's evidence and by the 1920's on Hewavitharana's tabular evidence. Since the clearing of forest and other land for plantations were relatively more pronounced in the Central Highlands than in the Wet Zone lowlands, the theory will be examined largely (though not wholly) with reference to the Highlands. At the same time the accent will be laid on developments in the period when coffee culture predominated (the Coffee Period) from the 1830's to the 1880's.

III

I would draw attention first to two related and unspoken premises in the chain reaction hypothesis. These are: (a) the premise that, prior to the advent of the allegedly injurious forces it describes (that is, before the 1830's and 1840's), the Kandyan paddy-cultivators relied largely on animalpower rather than manpower in preparing their fields; and (b) the premise that there was an adequate number of draught animals for the existing population in the pre-British era and the early decades of British rule.

Being unspoken, no documentation is presented in support of these assumptions. This can be remedied. One must turn, as so often, to Knox. In a detailed description of the arts of paddy cultivation among the Kandyans and in the illustrations he provides, Knox leaves no doubt that buffaloes were used to prepare the fields, by dragging the plough as well by puddling the mud with their feet.[24] The possibility remains that buffaloes became scarce between the mid-seventeenth century, when Knox was held captive in the Kandyan Kingdom, and the early-nineteenth century. One cannot discountenance the possibility that the scorched earth policy implemented by the British forces in suppressing the rebellion of 1817-18 might have produced a setback in the buffalo population and in the technology of paddy culture with which it was associated. The coffee planter, R. E. Lewis's account of cultivation operations in the district of Sabaragamuwa, however, reveals that it was not uncommon for draught animals to be used in cultivation operations.[25] The witness of the chief headmen who appeared

24. Robert Knox (1911) pp. 12-18.
25. Lewis (1848) pp 36 & 49.

before the committee on cattle trespass in 1852-54 and the reports of the committees inquiring into rice cultivation and cattle disease in the late 1860's provide further confirmation that draught animals were in use within the Central Highlands.[26] As a Governor observed in 1854, in resisting pressure from the plantation interests for a more stringent law against cattle trespass, "the chief property of the natives in many districts" consisted of cattle.[27] Such evidence can be supported quantitively by concentrating on the administrative unit known as the Central Province which encompassed the larger portion of the Central Highlands.[28] The cattle and buffalo population of the province in the year 1851 was estimated at 100,000 by its Government Agent when he provided statistical returns on the impact of a rinderpest epidemic in 1852.[29] For what they are worth[30], the government returns show the following numbers of "horned cattle" (i. e. presumably buffaloes and neat cattle) in the Central Province in the middle decades of the century:

1846 :	76,253
1851 :	98,393
1856 :	118,168
1861 :	108,312
1866 :	113,510

Unfortunately such statistics do not distinguish between neat cattle and buffaloes. Their significance is further reduced by the fact that they pertain to a period which had seen some expansion of the cattle and buffalo population within the Highlands,[31] rather than to pre-British and early British days.

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26. *Report of Committee on Cattle Trespass* (1853) pp. 3, 5-6, and *passim; SP IV of 1867*, Report on Irrigation Works and Rice Cultivation, with Appendices (particularly the replies to question No. 21); *SP XX of 1869*, Report of the Cattle Disease Commission, and Appendices, *passim*.

27. CO 54/309, Anderson - Grey, No. 60, 25 October 1854.

28. The Central Province in this period (as carved out in 1833) consisted of the administrative districts of Kandy, Matale, Nuwara Eliya, and Badulla (Uva). Uva was created a separate Province in 1886. The eastern and northern borders of the Central Province contain Dry Zone lowlands but the greater part of its land mass can be said to constitute part of the Central Highlands. Portions of Kegalle District and Sabaragamuwa (Ratnapura) District within the Western Province (of the mid-nineteenth century) and a small segment of Kurunegala District within the North-Western Province constituted the rest of the Central Highlands. Kegalle and Ratnapura Districts were formed into a separate Province, that of Sabaragamuwa, in 1889.

29. *SP XX of 1869*, Cattle Disease Commission, Appendix with Extracts from Annual Reports etc., E. R. Power's Report on the Central Province in 1852, p. 49.

30. *Ceylon Blue Books* for the relevant years, from the section on "Agriculture". These statistics are based on returns sent by headmen and were (and are) generally considered unreliable. It is my supposition that headmen based themselves on the *lekammiti* (registers of village agrarian statistics on ola leaves) which were compiled in the period 1820-1840's. In which event the *lekammiti* must be deemed somewhat unreliable. Be that as it may, the prodiguous task of analysing the *lekammiti* is bound to yield a harvest of information, including data which could resolve the issues which I am examining.

31. *SP XX of 1869*, Cattle Disease Commission, p. vi.

Conclusive as this body of evidence might seem, its general validity is seriously challenged by two pieces of evidence from local sources. The observations of a Low-Country Sinhalese entrepreneur in the Kandyan districts, one Hannadige Jeronis Pieris, constitutes one. In the course of a letter[32] to his younger brother in the year 1854, he penned three paragraphs describing the agricultural practices of the Kandyans, with comments which bear the marks of a shrewd observer.[33] I present the most pertinent extract here:

> Most of the paddy lands round about Kandy are situated on the bases of hills and consequently easily irrigated by the streams running down these hills, which is not at all as you will see in paddy fields round about Colombo. The agriculture of these mountain-like paddy fields, I may so call them, is not conducted by the bullock, nor the muddy parts by the buffalo, but are tilled all over by the hoe, differently shaped from that in use among us: except in few instances where the fields are situated between two hills or two ranges of hills and consequently sufficiently level to be worked by the buffalo, I have never seen them use bullocks in ploughing.

Paraphrased in summary form, his account contains three points of historical significance: (1) the Kandyans did not use bullocks (i. e. neat cattle) in ploughing; (2) he had occasionally observed them using buffaloes to plough fields which were located at lower levels and were both muddier and possessed of stretches of level land; (3) generally they tilled their fields with a hoe and did not use draught animals. Taking the passage as a whole, the inference is that even on the relatively low-lying and flatter stretches of fields, draught animals were seldom employed.

Now Jeronis Pieris was not a mere urbanite though he had been educated at the Colombo Academy and bred in Moratuwa (then, no more than a village) and Colombo. In the 1850's, he was employed in a managerial capacity by the de Soysa brothers, Jeronis and Susew, to whom he was closely related. The de Soysa enterprises included coffee culture, arrack rents (farms), the supply trade and transport contracts. From the situation of the de Soysa plantations Jeronis Pieris would have been familiar with the locality around Hanguranketa and the areas contiguous to the Kandy-Hanguranketa road (part of which Jeronis de Soysa constructed).[34] Since his executive duties included the management of the arrack rents taken up by the de Soysas and since he engaged in trade (either for the de Soysas or on

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32. Leters of Hannadige Jeronis Pieris, 1853-56, No. 12. To Louis Pieris, 18 October 1854.

33. For instance, a brief but critical description of the weeding practices; and an emphasis on the fact that the trifling capital resources in the hands of the "respectable [Kandyan] farmers" retarded improvements in the land.

34. *The Examiner*, ? 1856, Letter to editor from "XYZ" (a Ceylonese landowner in Maturata). By an oversight we have not noted the exact date of issue. One of Jeronis Pieris's letters describes a trek up the mountain adjacent to the Hanguranketa properties, leaving no doubt that he visited the plantation.

his own account),[35] it is reasonable surmise that he had wide travelling experience throughout the administrative unit known as the Kandy District, if not the Central Province as a whole. Since he visited Colombo now and then,[36] he would have possessed some familiarity with the roadside localities between Kandy and Colombo. Delineation of his range of regional experience is important. In Ceylon, agrarian activities and their attendant problems were (and are) notable for their regional differentiation. No account is adequate which is not aware of such regional diversity. The island's economic historians have unfortunately tended to neglect or gloss over such differentiation in charting its agrarian history. In attempting to apply Jeronis Pieris's observations, we do not claim their relevance for the whole entity known as the Central Highlands or the administrative division called the Central Province. The maximum limits within which his comments could be held applicable are Hanguranketa in Nuwara Eliya District, Kandy District; and the areas contiguous to the Kandy-Colombo road in Kegalle District (the latter outside the Central Province). The question remains whether his comments are a valid generalization for this region.

Jeronis Pieris's observations do not stand in splendid isolation. Qualified but strong support is available in the opinions expressed by certain Kandyan "Chiefs and Headmen" in the course of an audience before the Governor in 1834. Their replies to certain queries,[37] presumably through a single spokesman and via an interpreter, are so valuable as to merit reproduction in extense:

> 1st: What is the ordinary extent of the landed property of *a Kandyan Inhabitant of the middle class?* About a ammonam of Paddy ground; it is generally cultivated but once a year; and yields about 10 ammonams at 5 parrahs per ammonam- 50 parrahs.[38]
>
> 2nd: Has he any other means of subsistence? He sometimes cultivates chenas, but this is by no means a certain means of subsistence. He has a garden in general containing perhaps 10 cocoanut trees, the produce of which may be reckoned at 12s; altogether, including the produce of jaks and other fruit and vegetables his garden may realise £ 1.10.0. or £ 2.

35. See Letters: No. 8, To C. H. de Soysa, 30 March 1854 and No. 10 to S. C. Perera, 25 July 1854. Most of his letters are addressed from Kandy; as often as not the address reads "Arrack Godowns, Kandy".
36. Indicated in several of Jeronis Pieris's letters.
37. CO 54/198, "An Examination of the Chiefs and Headmen assembled at the Pavilion on the [n. d.] July 1834, in the Presence of the Right Hon'ble the Governor", presented in a little booklet.
Emphasis has been added.
38. An *amunam* is a measure of sowing extent and was generally considered to be equivalent to two acres. In fact, the extent varied from locality to locality and field to field, a great deal depending on the estimated fertility of the land. A *parrah* was generally considered equal to ¾ bushel.

3rd: *Has he no advantage from cattle?* Very little - milk is not sold, excepting near towns, and very few people of this Class possess buffaloes which alone are used in ploughing. The average profit from the sale of cattle will not exceed 6 shillings.

In a traditional society with relatively little economic differentiation - the most notable differentiation being that of caste and a basic social stratification between a small traditional elite (drawn largely from the *goyigama* caste) and the rest of the populace - one can read "a Kandyan Inhabitant of the middle class" to refer to the large body of service tenants *(paraveni nilakarayo)* who held their lands on a hereditary basis (subject to service) in the days of the Kandyan Kingdom and were in a category of owner-cultivators and landowners in 1834 after the changes effected by the British in the former *gabadagam* (Crown villages)[39]; while remaining as secure service tenants in the *nindagam* (chiefs' holdings or villages) and *viharagam*. It should also be noted that this term may have referred largely to the *goyigama* landowners as distinct from those of the so-called inferior castes. On this basis, the evidence of the chiefs supports Jeronis Pieris's observation that buffaloes, and not neat cattle, were used for ploughing by the Kandyans. On this reading, too, it contradicts one of the premises in the chain reaction hypothesis in suggesting that there were few buffaloes in the Central Highlands. Thereby, it leads to further suggestion that, contrary to the other assumption in the chain reaction theory, Kandyan paddy-cultivators could not have relied greatly on draughtpower. These suggestions cannot be held conclusive. Buffaloes can be hired and need not necessarily be in a cultivator's possession. In Kandyan society some well-to-do landlords (including temples perhaps) maintained their position and influence through the ownership of herds of buffaloes which they loaned out.[40] A primitive division of labour also existed whereby the patti people, a sub-caste of the *goyigama* caste, performed the duties of shepherds. Control over the existing stock of buffaloes, or a good portion thereof, may have been vested in their lands.[41]

As neither Knox nor Lewis refer to cattle being used on the plough one can accept the evidence that Kandyans used buffaloes rather than cattle (i.e. neat cattle) to plough their fields. The distinction is of some relevance to the chain reaction hypothesis. The replacement of animal power by manpower is predicated on the basis of a decline in the cattle population. To be

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39. The *maruvena nilakarayo* (tenants-at-will) in *gabadagam* may also have gained freehold rights.
40. The evidence gathered by the Cattle Disease Commission of 1869 reveals that some individuals had very large herds.
41. These qualifications are the outcome of the Ceylon Studies Seminar on the essay referred to in the first footnote. I am particularly indebted to Dr. Hewavitharana and Professor G. Obeyesekere for some of the ideas which I have incorporated at the end of this paragraph.

valid it must distinguish between buffaloes and cattle, and prove that the quantity of buffaloes declined. Such a distinction does not prevail in the British administrative literature. Both officials and other observers often use the term "cattle" generically to include both buffaloes and neat cattle. [42] This even applies to the phrasing of the third question that was put to the chiefs in 1834, to the observations of Russell in 1870-72; and the statistical data presented earlier in this essay. The distinction is of some consequence in view of the uses to which cattle were put in transporting goods. From bygone days it was the practice to transport commodities by means of pack-cattle (and perhaps even pack-buffaloes) which were known as *tavalam* cattle. The system continued to prevail in the nineteenth and twentieth centuries in localities which lacked road and railway. With the expanding influence of a market economy in the Highlands (and the Wet Zone) the numbers of *tavalam* cattle must have increased. At the same time, the creation of a road network and the demands of the plantation industry generated a demand for cattle to draw the large number of bullock carts[43] which were put into use. Therefore the period after the 1830's witnessed an influx of cattle (and buffaloes perhaps) into the Central Highlands,[44] and a general increase in the cattle population, within the limitations imposed by deaths through disease and other causes. Equally, with the establishment of railway connections in the Highlands during the nineteenth century and, more vitally, with the advent of the motor car and motor lorry in the twentieth century the role of the cart and the cart-drawing cattle would have diminished - though never to the point of extinction (as we, alas, witness everyday). Hewavitharana's statistical proof must be appraised in this light.

The more crucial questions remain. To what extent were buffaloes used in ploughing operations in the Central Highlands? Were buffaloes found in any significant quantities in the Highlands in pre-British and early British times? On both points there is a stark conflict of evidence. On both points, and particularly on the former question, the weight of the evidence leans towards a position which contradicts the assumptions attached to the chain reaction hypothesis. Jeronis Pieris's experience was largely in Kandy District, the central core of the Highlands, and it is a fair presumption

42. The word "cattle" refers to "beasts of pasture, especially oxen, bulls and cows" (*Chambers's Twentieth Century Dictionary*, p. 167) so perhaps this is not surprising. Some individuals even used the word "bullocks" in a generic sense though "bullock" refers to an ox or castrated bull.

43. In the period 1850-62 (both years inclusive) an average of 873 cart licenses was issued every year in the Central Province, with 673 as the lowest figure and 1369 as the highest figure per year, and with more issued in the early 1850's than later on. This contrasts with the average of 10,961 for the Western Province. See A. M. Ferguson *The Ceylon Directory for 1864-65* (Colombo Observer Press, 1865) p. 187. It is probable that more carts were in use than the registration figures indicate.

44. Presented conjecturally in my seminar paper, this point is confirmed by the following evidence: "Concurrently with the rapid extension of Coffee planting in the Island, cattle were more largely imported from India for purposes of transport by tavelams (*sic*) and carts", (*SP XX of 1869*, Cattle Disease Commission, p. vi).

that the chiefs involved in the audience of July 1834 were drawn from that district. Whereas R. E. Lewis's knowledge pertained to the outlying district of Sabaragamuwa, which (while also well-peopled) lies in the foothills and contains greater extents of relatively flat lands. It is also evident that the use of buffaloes is not a practical proposition on most terraced paddy fields. It is known that they cannot be used in fields which become so soft and muddy that the buffalo tends to sink in deeply. In situations in which labour supplies were abundant,[45] moreover, cultivators (whether owners or tenants) who did not possess buffaloes would naturally have preferred to resort to manpower; rather than to meet the hire of buffaloes, when cultivating their fields.

In any event, the conflict of evidence is such as to call into question any facile acceptance of the view that buffaloes were an integral part of Kandyan village economy in the decades immediately precedent to the 1840's. More incisive studies are needed to resolve the conflict and to depict the regional differentiations as preliminary steps towards generalization.

IV

Common to both de Silva's and Hewavitharana's interpretation is the acceptance of the theory of large-scale expropriation referred to at the start of this essay. By implication, they argue that expropriation occurred to such an extent that, in conjunction with the expansion of village population, it left little or no forest chena or "waste" for village pasturage. In other words, the traditional, nationalistically-inspired theory of large-scale expropriation is an essential component of the chain reaction hypothesis. Briefly illustrated, the crux of the expropriation theory can be gathered from Ralph Pieris's comparison of the impact of the waste lands legislation and the spread of plantations with the enclosure movement in Britain;[46] and from the conclusion of the Kandyan Peasantry Commission that in the plantation areas "a century of British administration has left behind hundreds of plantation-locked villages, 'vigorously restricted to their paddy lands'".[47] In this section the foregoing thesis will be examined.

Though widely accepted,[48] the theory of large-scale expropriation is based on a mere reading of clause 6 of the Ordinance No. 12 of 1840 (which was re-enacted by Ordinance No. 1 of 1897). Little or no effort has been made to see how the Ordinances were administered, the *prima facie* evidence of injurious results being treated as sufficient proof in this regard. The evi-

45. It is not suggested that this held true everywhere but that it may well have been so in many parts of the Highlands and the Wet Zone generally.
46. Ralph Pieris (1952) pp. 82-86, 100-01.
47. *SP XVIII of 1951*, p. 71.
48. *Supra* p. 157. See also Elsie K. Cook (1931), p. 160 and Bryce Ryan, "Status, Achievement, and Education in Ceylon. A Historical Perspective", *The Journal of Asian Studies*, Vol. XX: 4 (August 1961), p. 468.

dence of injurious results presented to-date has been: (1) an analysis of clause 6 of Ordinance 12 with evidence to illustrate how the Kandyans could not have produced the proofs of ownership which it (the letter of the law) demanded; (2) the witness of several Europeans before a British Parliamentary Committee of Inquiry on the insurrection of 1848;[49] (3) one concrete instance of appropriation of land belonging to the Aluwihare family of Matale District, as presented by A. C. Lawrie [50]; (4) a powerful oral tradition continuing to dwell in the minds of long-standing Kandyan families,[51] and (5) present-day (mid-twentieth century) evidence of landlessness and impoverishment in Kandyan areas.[52] Such evidence cannot be brushed aside but, for a problem of wide ramifications, it is thin. Much of the writing on the subject is analagous to an examination of a ship's innards from the crow's nest or poop-deck. As such, and in view of the factors which will be mentioned presently, the contention that there was large-scale deprivation of village land in the Central Highlands must, at best, be cast into the land of the unproven. Such a verdict is particularly relevant to chena land, which constitutes one of the categories of pasture.

In the first place, the theory of large-scale expropriation does not take into consideration the degree to which the judiciary, in several cases taken to court, appears to have emasculated and mitigated the application of the Waste Lands Ordinance of 1840.[53] However, the judiciary was only called upon to act in those instances when administrators sought to bring the Ordinance into operation. The more vital sphere was that of executive action.

In the nineteenth century governmental administration of the waste lands, as a district officer noted, was marred by the fact that the problem was left "open" and dealt with "in a highly inconsistent and spasmodic" manner.[54] Regional differentiation was not limited to the nature of agrarian problems. It characterised administrative practice. The secretariat in Colombo had limited control over district officers and could not ensure uniformity in practice. The district officers stamped their own individuality on policy-application. Practices could vary from district to district at any one point

49. Vandendriesen (1957) pp. 40-46.
50. A. C. Lawrie, *A Gazeteer of the Central Province of Ceylon*, Vol. I (Colombo: The Govt. Printer, 1896), p. 30.
51. Seen in print in Panabokke & Halangode (1938?), pp. 22-24.
52. *SP Paper XVIII of 1951*, The Report of the Kandyan Peasantry Commission. Sarkar and Tambiah (1957) by implication.
53. S. Rajaratnam, *A Digest of Ceylon cases reported during the years 1820-1941* (Tellippalai: American Ceylon Mission Press, 1914), p. 239.
Reports on the Finance and Commerce of Ceylon, C. R. Buller - Col. Sec., No. 577, September 1846, p. 135.
1868 AR, Part III, Report of the District Judge (of) Kandy, J. Berwick, 16 July 1869, pp. 50-51.
Jayawardena (1963) p. 132 fn.2 quoting a district officer in June 1896.
Also see A.A. Wickremasinghe, *Land Tenure in the Kandyan Provinces* (Colombo: 1924) pp. 17-18.
54. *1872 AR*, Kegalle, A.A. King, Acting A.G.A. 5 June 1873, p. 35.

of time; and could vary within a specific district over a period of time.[55] With allowance for such unevenness in administrative practice, and the Aluwihare case, the observations of Russell; and other evidences notwithstanding, the weight of the evidence suggests strongly that the Ordinance No. 12 of 1840 was not implemented according to its letter. Government recognised that individual shareholders of paddy land (or villages as a whole) were entitled to possess pieces (or stretches) of highland - "technically known as appurtenances".[56] They were, however, faced with numerous and extensive claims presented by the local inhabitants, whether on the basis of encroachments or oral testimony. In an attempt to protect what they considered to be Crown rights, particularly with reference to forests containing timber, they seem to have favoured an equitable and rough and ready delineation of Crown and private rights on the lines: "you take some land, we will keep this"; and wherein, they tended to reject claims to virgin forest but recognised claims (or portions of claims) pertaining to land that had been recently chenaed, i. e. to land with vegetation that was a secondary growth.[57] This brief summary of administrative policy is supported by the lines of settlement favoured in two specific instances, one relating to a claim presented by an individual and the other to a survey settlement of fifty-four villages in the Three Korales in Kegalle District. Don Hendrick Mudaliyar's case was perhaps untypical in that he had a *sannasa*[58] in support of a land-claim he presented in 1845 and repeated in the early 1860's. But the authenticity of the *sannasa* was questioned by district officers on both occasions. After further enquiries the administration reached the decision that the forest land within the claim belonged to the Crown, but recognised Don Hendrick's title to the forest recently cultivated and to the other cultivated land, (the latter including some chena land).[59] The second example concerns a survey settlement conducted in the sub-districts of Alutgam, Dehigampal and Panawal Korales

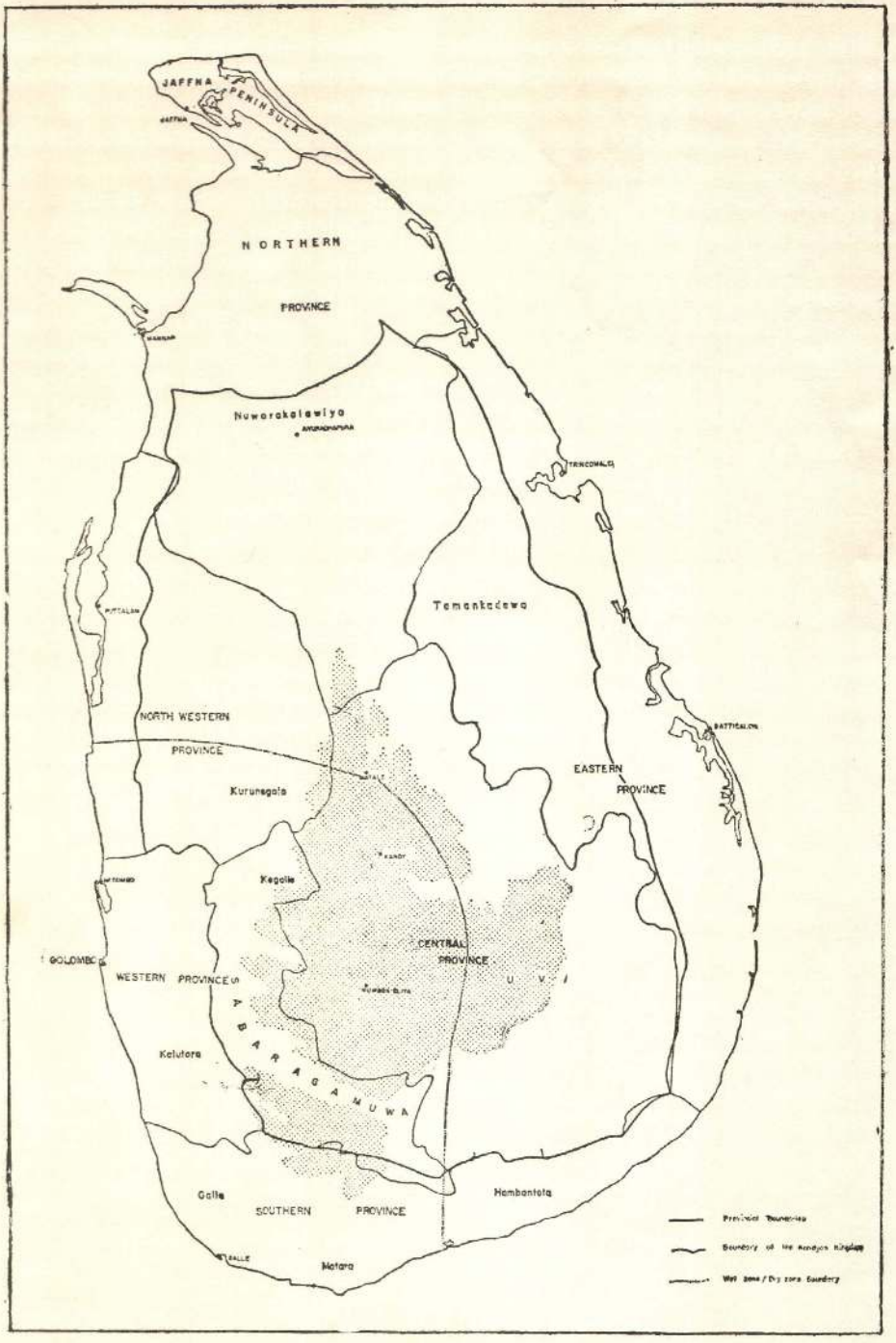
55. For illustration of this feature with reference to the administration of the taxes on home-grown grain see Michael W. Roberts, "Grain Taxes in British Ceylon, 1832-1878: Problems in the Field", *The Journal of Asian Studies*, Vol. XXVII : (4 August, 1968), *passim.*

56. *SP XV of 1873*, Papers relating to the cultivation and survey of chena lands, introduction (by Gregory) p. 5.

57. *Idem.* For further elaboration see M. W. Roberts, Some Aspects of Economic and Social Policy in Ceylon, 1840-1871 (Oxford University : D. Phil. in History, 1965) pp. 223-73.

58. A royal grant usually inscribed on a copper plate. By the mid-nineteenth century at the latest, forged *sannas* were not uncommon.

59. CO 54/475, Gregory - Kimberley, No. 66, 2 March 1872, Encl. Morgan (Queen's Advocate) - Col. Sec., No. 99, 11 May 1870.
CO 54/477, Gregory - Kimberley, No. 144, 17 August 1872, Appendix in Encl , "Answers to Queries in Col. Secretary's letter No. 224 of 2 July 1872 respecting the claim of Don Hendrick Mudaliyar, from J. F. Dickson, Acting G. A. of the Central Province". Don Hendrick's claim seems to have received partial recognition largely because of rights of possession and not because of the *sannasa*. Also note an instance when a portion of Crown land sold to a planter was rescinded because the Government Agent "was quite satisfied as to the rights of the villagers to the land within certain limits", (See CO 57/27, Executive Council Minutes, 19 September 1860).



CEYLON CIRCA 1860

Map prepared by Dr. Gerald Pieris, University of Ceylon. The shaded area indicates land above 1000 feet

and Lower Bulatgama in Kegalle District between 1873-74 and 1880. Effected by the European district officers in association with a team of surveyors and the assistance of Eknelligoda Ratamahatmaya and more junior headmen, the settlement involved 1,879 enquiries into the claims of fifty-four villages. Its outcome was the demarcation of "village henyaya" and "Crown henyaya", the specific claims of villagers being resolved by a re-distribution which consolidated all the recognised claims of village into one or more blocks of land; and left the villagers the task of sorting out the detailed distribution themselves. In the result, the villages were allocated 14,807 acres while 19,696 acres were deemed Crown land - 10,789 acres of the latter being described as chena and 8,907 acres as forest.[60] Without having located a list of the villages in which this settlement was effected, it is not possible to compare the acreage granted to the villages against the population they sustained. The census statistics for the Three Korales (Kegalle District) in the years 1871 and 1881, tabled here, denote 96 and 223 villages respectively. [61] In other

	Villages	Houses	Families	Males	Females	Total Population
1871 :	96	4,660	2,839	13,645	11,586	25,231
1881 :	223	5,395	5,417	15,254	12,754	28,008

words, the settlement encompassed 29-56% of the villages. For whatever its worth, these percentages can be applied to the number of families listed in 1881; thereby producing the conclusion that 14,807 acres had to be shared amongst 1066 to 3033 families.

The conclusion that the Ordinance No. 12 of 1840 was not implemented according to its statutory implications is also supported by a substantial and explicit body of official opinion. One example of this category of evidence must suffice:

> it is..... a most erroneous idea that Civilians have been blind to the hardships which might be inflicted on the people by a too rigid adherence to existing statutes nor am I aware that such hardships have been inflicted.....When.....it is

60. See *AR* for Kegalle District 1873-1884. For the statistics see particularly the report for the year 1879 by Robert Ievers, (20 March 1880) p. 37; and that for 1884 by H. Wace (28 March 1885) p. 22A. Having signed the general agreements which spelled out the broad lines of demarcation, later the villagers had second thoughts about the redistribution of the lands within the village block: those in occupation of land within the blocks refused to give up any portion in the interests of general reallocation. Government found itself without the legal power to enforce such agreements. See *1882 AR*, p. 25A. This experience may have contributed towards the formulation of Ordinance No. 1 of 1897 and the creation of a Land Settlement Department. In 1885 Wace complained that the postponement of a definite settlement of village claims to high lands resulted in the "suspension" of Government rights while discouraging private capitalists. In doing so he noted: "It is perhaps Utopian to expect the Kandyan villager to confine his attention to the cultivation and improvement of any one particular land or product, but it is hopeless to expect him, or ask him, to do so, as long as his eye can wander over a considerable extent of land available for chena cultivation in his village and which he feels himself at liberty to clear".

61. *Census of Ceylon 1871*, pp. 21-24 and *Census of Ceylon, 1881, Appendix* pp. 3 & 22-24. In 1871 each unit taken as a "village" often consists of two or more names, suggesting that several hamlets, and even villages, were treated as one unit. The village statistics for 1881 confirm this suggestion. Note that the population figures are exclusive of the estate population.

> proved that on many successive occasions the same land has been cultivated even with crops which pay no tax, then I believe Government has invariably, or almost invariably, withdrawn all claim,

argued a district officer named Brodie in 1859.[62] Though opinion is not a satisfactory substitute for formal tests and specific evidence where one is assessing the impact of any policy, it is of greater significance in any analysis of what a particular policy was. Where an administrator notes that he interpreted Y in such-and-such a way, or administered X in such-and-such a manner, one has (using other evidences where possible) to accept his view (wholly or modified), or reject it as a lie or bona-fide error. In the circumstances (while giving less credence to his conviction that no hardship had been caused) one can attach some value to Brodie's contention that Government had modified the statutory provisions of Ordinance No. 12 of 1840.

His statement is supported by more specific instructions adopted by Government in 1841 and 1871. One set of instructions shows that no sooner was the ink dry on the Waste Lands Ordinance of 1840 (or the Encroachment Ordinance as contemporaries, more correctly, knew it) than the secretariat decided to amend it administratively and recognise prescriptive claims to waste lands. In explaining a previous communication on this point, the Acting Colonial Secretary informed a district officer that the orders

> were not intended to convey an explanation of the construction to be put on the encroachment Ordinance as its correct reading but as the authority for the Government Agents to forego the enforcement of the proviso contained in the 9th clause and to permit Kandyans to establish their title by prescription in regard to lands which [could] only be periodically cultivated, and which [were] not subject to any tax to Government.[63]

It would appear that a general circular of the 27th May 1841 eventually clarified matters on this point.[64]

If the secretariat in Colombo proclaimed policies, the district officers and headmen disposed of such policies. A query arises as to the extent to which such instructions were followed in the provinces and villages. A general circular to the headmen despatched from the Colombo Kachcheri on 5th

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62. CO 54/345, Ward - Newcastle, No. 46, 29 August 1859, Encl. in Braybrooke's (G. A. Kandy) memorandum, A. O. Brodie (A. G. A., Matale) - G. A., Kandy, No. 142, 18 April 1859, pp. 237-38.

63. *Ibid.,* Appendix I in Braybrooke's memorandum, Anstruther (Col. Sec.) - G. A.?, No. 139, 21 April 1841. This letter was drafted by the Acting Colonial Secretary, George Turnour who was previously G. A., Kandy. The previous communication was *ibid,* Appendix H, Turnour (Acting Col. Sec.) - G. A., Galle, No. 58, 5 February 1841.

64. Dept. of Nat. Archives, Ceylon [DNA Cey.] Lot 41/163, A. G. A., Anuradhapura - G. A., Jaffna, No. 288, 30 August 1855, Encl., A. G. A., Anuradhapura - G. A., Jaffna, 4 July 1854 refers to this circular as recognising prescriptive rights as "title" to chenas, besides proofs rendered by *sannasas* or dues.

September 1872 takes us one notch further down the administrative hierarchy.[65] Among its rules, the following are of relevance:

1. No tax to be levied on fine grain cultivation.
2. No Crown hena is to be cultivated without special license from the Kachcheri.
3. Private hen cultivated with paddy liable to 1/14th tax, except in proclaimed villages, where the 1/10th is levied.
4. The question of private right will be dealt with liberally - land generally to be treated as private when cultivated regularly at stated intervals.
5. Forcible entry on Crown land will be promptly prosecuted and punished, and the whole crop confiscated.
6. Licensed hen to be taxed at 1/5th for paddy, and when exceptionally allowed to be cultivated with fine grain will be subject to a moderate rent in money.
7. The attention of the headmen is specially directed to the necessity of discouraging fine grain cultivation on Crown property, especially in the neighbourhood of forests, and on land fit for coffee cultivation.

For villages with lands traditionally used for chena cultivation with dry grains[66] rule No. 4 was of considerable significance. It shows that the statutory form of the Waste Lands Ordinance was not adhered to. Taken as a whole, these instructions support our summary of administrative policy as jealously protective of Crown lands, especially those clothed with forests, while recognising private rights to chena lands that were periodically cultivated. Nevertheless, the question remains how far the headmen sustained such instructions. A clear answer cannot be given without detailed case studies. To imply that these orders were not followed, however, is to say that the headmen followed a line of policy that was harsher on the villagers and more favourable to governmental interests than Government desired. In short, one implies the improbable.

At the very least, these circulars and the body of official opinion that has been briefly illustrated indicate administrative attitudes which were not as harsh and legalistically-hidebound as the theory of the large-scale expropriation implies. In association with the two instances of settlement described above, and in sum, they suggest that the extent of expropriation that is said to have occurred in the nineteenth century is considerably overdrawn.

65. *1872 AR*, Sabaragamuwa, E. N. Atherton, 31 March 1873, pp. 27-28.
Also see *ibid*, Kegalle, Aelian A. King, 5 June 1873, pp. 32-35 and *SP XV of 1872*, Papers relating to the cultivation and survey of chena lands. p. 10.

66. Where cultivated with *elvi* and other brands of hill paddy. such lands paid tax at the rate of 1/14th - in itself providing *prima facie* proof of ownership.

In the twentieth century administrative policy was influenced by the newly-enacted Ordinance No. 1 of 1897 and the existence of a Land Settlement Department whose primary task was the definition of Crown and private rights to land. In an analysis which graphically unfolds governmental policy, Lal Jayawardena reveals that the ordinance was "regarded as a device for preventing the peasant from selling village land improvidently himself" and that "the motive of protecting the peasant permeated the provincial administrative machine throughout", though the secretariat in Colombo would not go so far as to accept the radical suggestion that villagers should be legally restricted from alienating their properties, [67] a suggestion that was forcefully argued for by several district officers. [68] Proceeding to describe administrative practice by resorting to the diaries of land settlement officers and by studies of specific instances of settlement, Jayawardena shows that settlement officers maintained an orientation that sought to protect the villager and that the process of settlement even tended to curb the sale of private land by the villagers in a situation where villagers were taking increasingly to cash crop culture on their highlands.[69] In the settlement of twenty six villages in the Morawak Korale during the early 1900's, for instance, some 22,500 acres were declared Crown property and 6,600 acres private land. While the latter constituted only 25% of the total area, its land value was greater than that of the 77% declared Crown; and it was sufficient to provide 5½ acres per man liable to pay the road tax in the twenty six villages.[70] As a broad conclusion, Jayawardena summarises his findings on administrative policy and practice thus:

> British land policy, though limited to the Waste Lands Ordinance, nevertheless had a considerable degree of success in anchoring the peasant to his village and preventing the emergence of an estate proletariat. This was largely the result of the co-ordination of general Government policy before and after settlement with that of the Land Settlement Department during settlement. The main

67. The principle of inalienability was used as a means of protecting customary tenures in several colonies. The Dutch sustained the traditional *adat* law in Indonesia, whereby alienation by villagers to "outsiders" required executive consent. In British colonial policy it was a relatively late development. The Dutch practice was adopted in Nigeria by the "late Victorians" and subsequently in some other African colonies. Earlier, in Fiji, Gordon embodied the principle of inalienability in customary law and thereby restricted government discretion further. See C. K. Meek, *Land Law and Custom in the Colonies*, 2nd edn. (London: 1958) and J. D. Legge, *Britain in Fiji 1858-1880* (London: 1958) pp. 172-81, 194-99.

68. Jayawardena, (1963) chapter four.

69. Jayawardena (1963), chapter four; and pp. 180-94, 211-214, 238-41 and 254-55. For understanding of settlement operations also refer to the following: (a) W. T. Stace, "Notes on Life in Ceylon 1910-1932" (Manuscript autobiography in typescript. Institute of Commonwealth Studies, London) chapter on land settlement, pp. 180-187; (b) Frank Leach's Answers (1) and (2) to Questions forwarded by M. W. Roberts, January 1966 and 25 October 1967 respectively, transcripts available in Rhodes House Library, Oxford and the Library, University of Ceylon); (c) L. J. de S. Seneviratne, "A Hundred Years of Land Settlement" in *The Ceylon Observer Centenary Supplement, 4 February 1934.*

70. Jayawardena (1963) pp. 222-24.

> expropriatory influence on the peasant was not indiscriminate Crown appropriation of village land, but sale by the peasants themselves; [71] and the limits to this process were set not merely by the general tendency of land policy but by the whole pattern of village sale . . . [The] overall effect of policy was in fact to *restrict* the market for land in general: the private market in [land that was not yet settled] for both supply and demand reasons; that in settled land principally for supply reasons, and the market in Crown land because of the requirements of controlled sale . . .and by the need to have "application" sales extensively reported on before sanction. The measure of the success of Government land policy in buttressing the peasantry is then provided by the migration of capital away from Ceylon [-to purchase properties suitable for rubber cultivation in Malaya, for instance].[72]

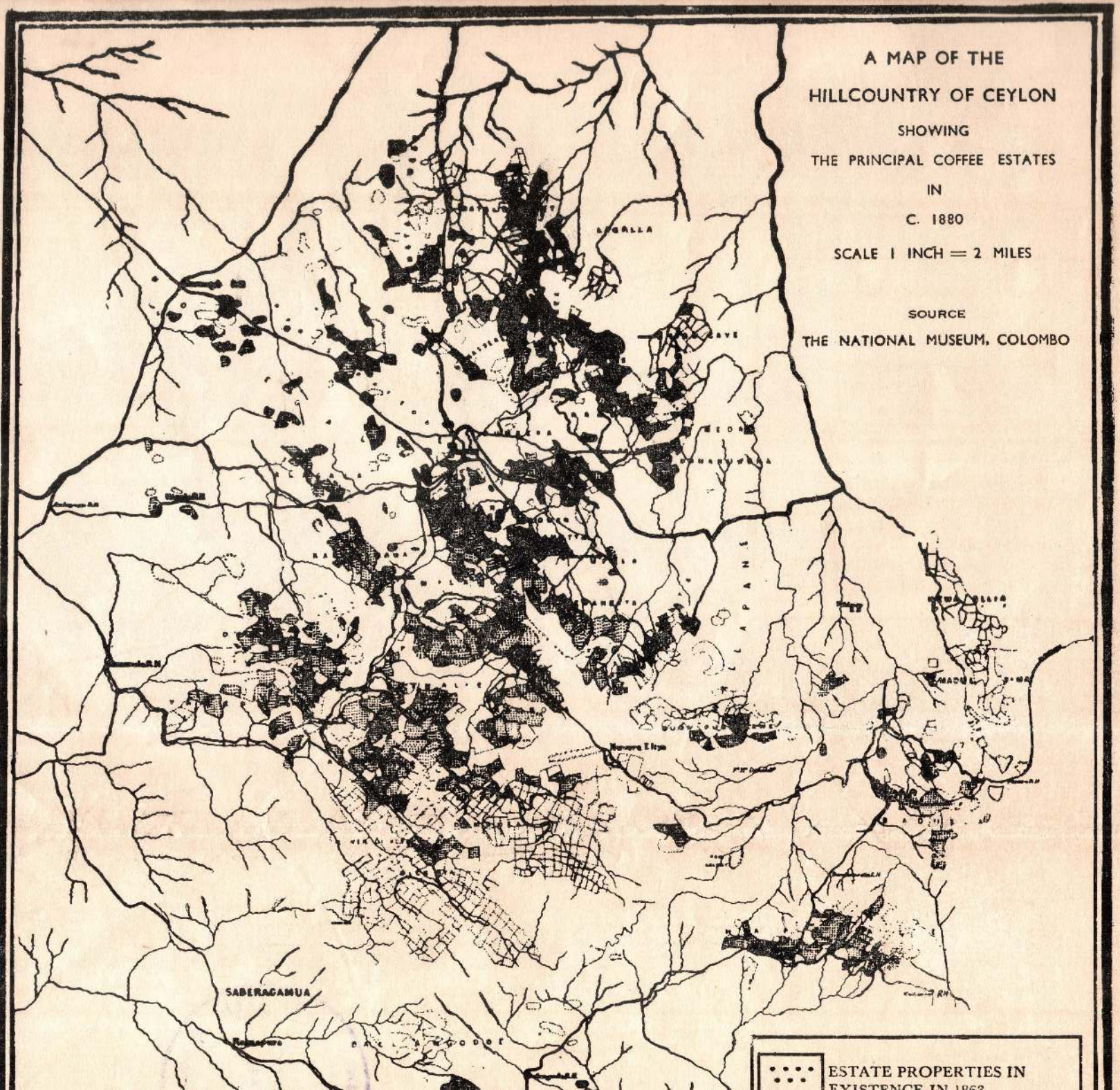
Thirdly, with reference to the Coffee Period, the theory of large-scale expropriation does not take sufficient cognisance of the elevations at which plantation coffee was largely grown in relation to the pre-plantation era settlement patterns of the Kandyans. The location of Kandyan villages was restricted by their dependence on paddy cultivation which, in Wickremasekera's opinion, "confined them to elevations less than 3000 feet." [73] Their settlements would appear to have been largely concentrated along what is erroneously and generally referred to as the second peneplain – in fact, a level of differential erosion rather than a peneplain. The second level of differential erosion lies at an elevation of 1200-2000 feet, the mural scarp or the step to the third level generally being from 2000 to 4000 feet. [74] Though the mural scarp effect is subdued by sub-aerial denudation and by intersecting and multiple faults in the northwestern and northcentral parts of the Central Highlands, these comments are confirmed by the fact that the heart of the old Kandyan Kingdom centred around the towns of Kandy, Matale, Kurunegala and Ratnapura. Kurunegala is in the low-lying North Western Province. The populated parts of Sabaragamuwa (with Ratnapura as its main centre) were on the second peneplain and the foothills. Kandy and Matale lie within the Highlands, their railway stations standing at elevations of 1603 and 1152 feet above sea level respectively. One can therefore accept Alex Gunasekera's conclusion that the third level of differential erosion was hardly inhabited till recent times and that "the typical Hill-Country Kandyan settlements" were between 1000 and 2500 feet

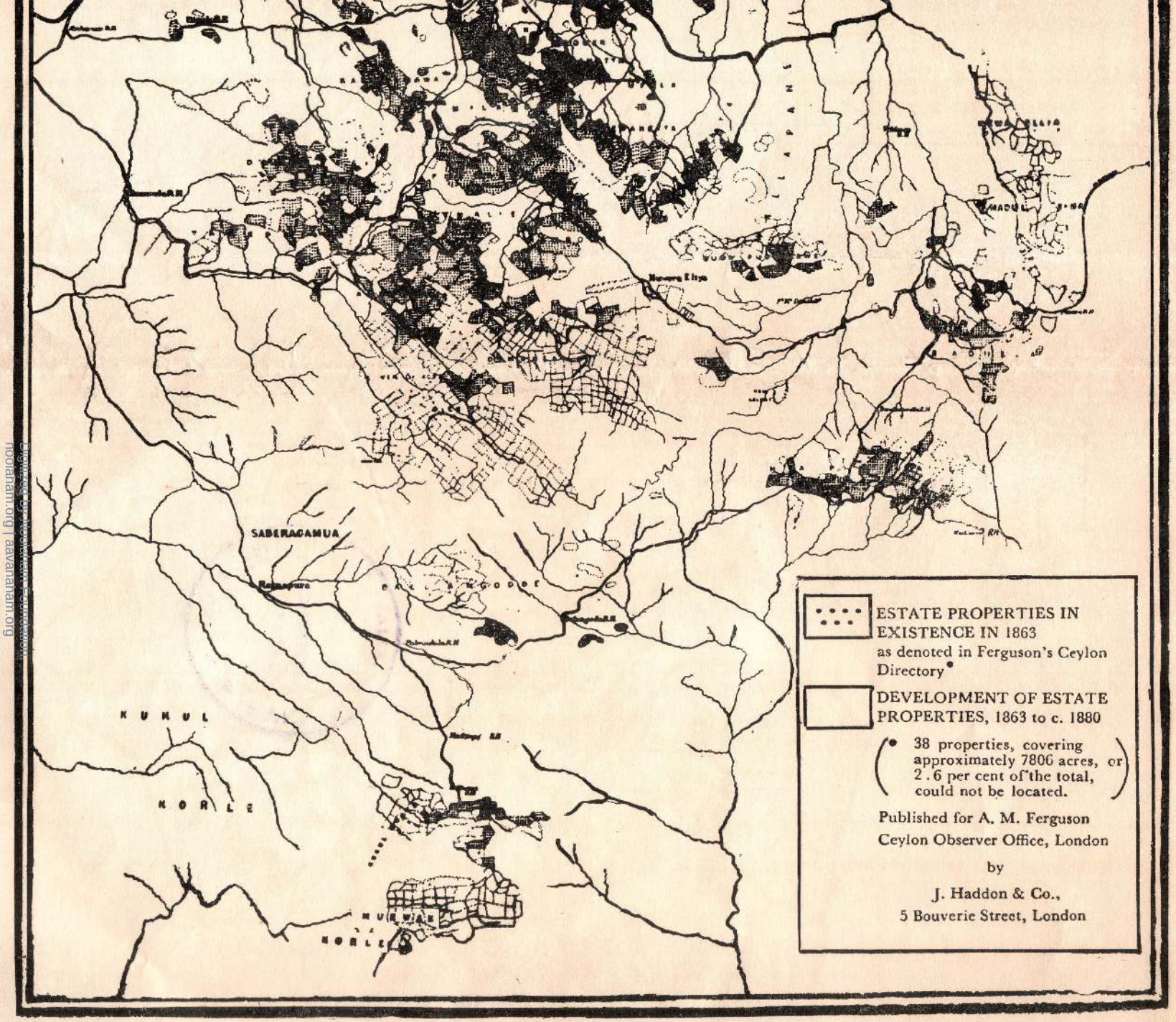
71. Among the printed sources, statistical information on such private land sales in two sub-districts is provided in the *Census of Ceylon, 1901,* Appendix F: Report of the Chief Headman of Kadawata and Meda Korales, Sabaragamuwa, Table VI, p. 125.
72. Jayawardena (1963) pp. 254-55.
73. S. B. W. Wickremasekera, The Social and Political Organization of the Kandyan Kingdom (London University: M. A. Thesis in Anthropology, 1961) p. 79. This statement must be qualified. There are at least a few pre-British villages above this elevation, among them Kotagepitiya in Kotmale where Dr. Marguerite Robinson undertook anthropological work.
74. D. N. Wadia, "The Three Superimposed Peneplains of Ceylon" in *Records of the Department of Mineralogy*, Professional Paper No. 1, (Colombo: Ceylon Govt. Press, 1944) pp. 25-26. My range of 1200-2000 feet is derived from his figures on the elevations of the two mural scraps: 800-1200 feet from 1st. - 2nd. level; 2000-4000 feet from 2nd to 3rd level. I am also indebted to Michael Katz, Visiting Lecturer, Department of Geology, University of Ceylon, for explaining relevant aspects of the geology of Ceylon.

approximately.[75] This suggests that their chenaing operations would have been concentrated on the unoccupied hill slopes and valleys which were contiguous to their villages and which must have been largely within the elevations 1000-3000 feet. "Below 3000 feet the chena cultivator is very busy", complained the forester D'A Vincent in 1882-83,[76] at a time when the population had expanded and, by implication, spread upwards. The coffee estates, on the other hand, were situated principally at elevations of 3000-5000 feet.[77] This must be taken as generalization. At another point in his report D'A Vincent himself refers to coffee plantations as extending "roughly from 2500 to 5000 feet". Plantations were cleared at much lower elevations in such localities as Dumbara, Kandy, Matale, Tumpane and Kurunegala. Several contemporary observers mention elevation spans of 1500-4000, 2000-4000 and 2000-5000 feet.[78] But D'A Vincent's observation holds true as a generalization referring to the majority of plantations. It is confirmed by the simple process of superimposing a contour map on a map of the coffee plantations.[79] In brief, then, the physical area of competition for chena land (as distinct from forest or potential chena, and patana land) was more limited than hitherto recognised. It is correspondingly more difficult to postulate large scale deprivation of chena land.

With reference to the nineteenth century, moreover, the expropriation theory ignores the paucity of population in the Central Highlands. The census of 1824-27 enumerated 256,835 people in the Kandyan Provinces as a whole. The regions comprising the Central Province contained 89,296 of this number.[80]

75. U. A. Gunasekera, Land Tenure in the Kandyan Provinces of Ceylon (Oxford University: B. Litt. thesis in Social Anthropology, 1959), pp. 7, 17.
76. *SP XLIII of 1882*, Report on Forest Administration, p. 71.
77. *Idem.* Also see pp. 22 and 24.
78. From many examples those dating the latest are: W. Sabonadiere, *The Coffee Planter of Ceylon*, 2nd. edn. (London: 1870), p. 7; T. O. Owen, *First Years Work on a Coffee Plantation* (Colombo: 1877), p. 2; W. D. Forsyth, "Coffee Planting in Mexico and Guatemala by an Old Ceylon Planter", *Tropical Agriculturist*, Vol. XII (1 November 1892) p. 503.
79. See maps attached. The map of the coffee estates is based on a copy in the Colombo Museum which can be dated around 1880. Photostats of both contour and coffee estate maps were provided by Surveyor-General's Department, who were instructed to adopt the same scale. With ordinance survey maps of the nineteenth century, however, exactness in scale cannot easily be achieved and there is some fractional difference between the two maps. By using the Mahaweli Ganga as a guideline the necessary adjustments are possible. The cartographical work on both maps was undertaken by two undergraduates, Messrs N. Medis and M. A. Amarasiri, under the supervision of Dr. Gerald Peiris. The delineation of stages of growth was achieved by using Ferguson's *Ceylon Directory for 1863* and was undertaken for general purposes not directly relevant to this essay. The photostat and cartographical work was made possible by a research grant from the University of Ceylon.
80. *Returns of the Population of the Islands of Ceylon* (Colombo : Govt. Press by Nicholas Bergman, 1827), p. 149. It is generally believed that this census was taken in 1824 but Jayawardena makes a case for the year 1821. The figure 89,296 was derived by substracting the figures for the following districts, the Saffragam (Ratnapura), Four Korales, Three Korales, Lower Bulatgama (Kegalle), Seven Korales (Kurunegala), Nuwarakalawiya and Tamankaduwa.





The census was probably a gross underestimate.[81] Unfortunately, the statistics presented in the Government's *Ceylon Blue Books* were based on the headmen's guesses and "of no value whatever".[82] The census conducted in 1871 is more reliable, but had its defects[83] and was probably an underestimate. Only from 1881 are we on firmer ground.[84] Using the earlier figures - including highly uncertain estimates of the total area - for what they are worth, I present a table depicting the population (exclusive of "aliens" and the estate population) in the Central Province from 1840-41 to 1901. These statistics reveal a low average density of population for wet zone tropical lands. A word of caution is needed however. The Central Province included large tracts of sparsely populated land along

Table P: Population of the Central Province (Including Uva)

1 Year	2 Families	3 Population excl. of Estates	4 No. of square Miles	5 Population per sq. Mile
1840–41	—	194, 591	3016	64. 5
1851	—	214, 140	5191	41. 2
1861	—	265, 819	5191	51. 2
1871	77, 349	381, 184	6029	63. 2
1881	93, 213	452, 483	6029	75. 0
1891	89, 582	418, 656	5455	76. 7
1901	106, 061	472, 574	5454	86. 6

Sources : For 1840-41 to 1861 the *Ceylon Blue Books*.
For 1871-1901 the tables in the *Censuses of Ceylon*.

Column 2 : Only available in the census. Except for some districts in 1881, the term was *not* treated synonymously with "house".

Column 3 : The *Ceylon Blue Books* provide a population table which included "Whites" but excluded the military and excluded a separate table entitled "Aliens or Resident Strangers". The *Censuses* provide figures which include the estate population. Our figures have been compiled by substracting the estate population.

Column 4 : Only from 1881 do the *Censuses* provide the spatial extent of the major territorial units. The Registrar-General who reported on the Census of 1871 was forced to admit Government's ignorance in this sphere. We have used the 1881 figures of 6029 square miles for 1871. It follows that the extents depicted in the *Ceylon Blue Books* are probably inaccurate. The discrepancy between 1840-41 and 1851 is probably explained by the territorial reorganisation of the mid-1840's when the North Western Province was created.

A Note : In 1886 the large district of Uva, which lay within the Central Province, was transformed into a Province. Our figures for 1891 and 1901 comprise a combination of the two Provinces.

81. In a traditional society such novel undertakings as censuses invariably lean towards underestimation while the year 1821-27 were not entirely free of the fears and the havoc wrought in several Kandyan districts following the manner in which the British suppressed the 1817-18 Rebellion.
82. *Census of Ceylon 1881*, General Report by Lionel F. Lee, p. xv.
83. *Ibid*, p. xvi and *Census of Ceylon 1871*, General Report by G. S. Williams, 9 September 1873, pp. x, xiii
84. Sarkar, however, argues that under-enumeration persisted right up to the 1946 census. He puts under-enumeration at between 10-15 per cent in the census years 1881 to 1927 [N. K. Sarkar, *The Demography of Ceylon* (Colombo: Government Press, 1950) pp. 23-68].

its eastern and northern borders. Such areas brought the average down.[85] As such the average population per square mile veils the population density of specific localities. In certain chief headman's divisions within Kandy District, in Harispattuwa, Lower Dumbara, Udunuwara and Yatinuwara, for instance, the population per square mile in 1891 was 581, 309, 366 and 437 respectively.[86] Nevertheless, at the level of a macro-picture these statistics suggest that in the nineteenth century the conflict for land between plantation interests and village interests in *most parts* of the Highlands could not have been as widespread as made out.

In the fourth place, the theory of large-scale expropriation ignores the mitigating influence of the governmental policy of demarcating areas as village reserves. This policy appears to have been formulated in the 1850's to 60's at the latest.[87] There were two types of reserves: those proclaimed under the Timber Ordinance and the Waste Lands Ordinance (No. 12 of 1840) which were meant to be strictly protected from all and sundry; unproclaimed reserves administered by district officers and meant for village use. The latter usually consisted of patches of patana, chena and forest land. Though complaining that the unproclaimed reserves (as well as proclaimed ones) were unsystematically administered, D'A Vincent noted that "large numbers of these so-called reserves under 40 acres existed in many districts, and that Badulla district alone contained eleven hundred with an average area of sixty acres".[88] D'A Vincent's Report paved the way for a more systematic reservations policy. Ordinances No. 10 of 1885, No. 24 of 1889 and No. 16 of 1907 were instruments in this policy. In consequence one found three categories of reserves carved out between the 1880's and 1929: (1) "Reserved Forests" (2) "Village Forests" and (3) "Communal Reserves and Pastures". The Village Forests were mostly demarcated under Ordinance 10 of 1885 or Ordinance 16 of 1907. The "communal chena reserves", or land "set apart for chena cultivation" were under the aegis of Ordinance 24 of 1889. Lands were also set apart as pasture land without being proclaimed under any Ordinance - a practice that was widely followed in

85. This is a clearly seen in the contrast between the population of the Central Province and the Province of Uva (formerly part of the Central Province) in 1891 and 1901.

	1891	*1901*
Central Province -	126	148
Uva Province -	40	42
Both combined -	76	86

86. *Census of Ceylon, 1891*, Vol. I, p. 8.

87. *SP II of 1872*, Reports on the Working of the Paddy Cultivation Ordinance (No. 21 of 1867), Replies from the A. G. A., Nuwara Eliya, B. F. Hartshorne, 17 September 1872, p. 20.
SP XXIX of 1883, Correspondence on the subject of The Conservation of Crown Forest, Gregory - Kimberley, No. 247, 31 July 1873, pp. 8-9. For elaboration see Roberts (1965) pp. 246-47. Cf. L. J. de S. Seneviratne "Land Tenure in the Kandyan Provinces", *Ceylon Economic Journal*, Vol. IX (1937), pp. 45-46.

88. *SP XLIII of 1882*, Report on Forest Administration, F. D'A Vincent, p. 42. Also see *1885 AR*, North Western Province, C. M. Lushington, n. d., p. 28 A.

the Central Province. Table Q provides data on the extent of land reserved under the three categories in relevant districts, as matters stood in 1929.[89] Only in Uva and the Western Province do we find an absence of village forests and communal reserves. The Central Province had 2 village forests covering 150 acres, and 133 communal reserves and pastures covering 23,137 acres.

TABLE Q :- Reserved & Village Forests & Communal Reserves and Pastures in Selected Provinces, 1929

Units	Reserved Forests		Village Forests		Communal Reserves & Pastures		Total Extent
	No. of Reserves	Extent in Acres	No. of Lots	Extent in Acres	No. of Reserves	Extent in Acres	Extent in Acres
Kandy	No district details; the name of each reserve being provided		2	150	26	11, 601	—
Matale			—	—	3	1, 241	—
Nuwara Eliya			—	—	94	10, 295	—
Central Prov.	8	12, 128	2	150	133	23, 137	35, 416
Prov. of Uva	7	5, 252	1	502	—	—	5, 754
Prov. of Sabaragamuwa	28	43, 269	29	1, 480	7	20, 366	65, 117
N. Western Prov.	17	142, 473	44	1, 434	160	18, 060	161, 968
Western Prov.	4	10, 669	83	7, 674	1	13	18, 357
Southern Prov.	13	131, 311	9	536	3	38, 571	170, 418

Finally, with reference to the century spanning the 1830's to the 1930's the theory of large-scale expropriation cannot be maintained in the face of the broad statistical and other findings of Jayawardena. He shows that the crude definition of such key concepts as "family" and "landless" which were used in the economic surveys conducted under the auspices of the Ministry of Labour, Industry and Commerce in 1936-39 renders their statistical evidence of extremely dubious value.[90] As he notes, E. R. Leach's criticism of the conceptual methodology in Sarkar and Tambiah's *The Disintegrating Village* also applies to the surveys; and Leach held that the "numerical apparatus" in which the conclusions reached by Sarkar and Tambiah were embedded were "a complicated piece of self deception".[91] Grappling with the historical statistics himself and extrapolating from the agricultural census of 1946, assisted by other references, Jayawardena calculates that in 1930 between 410,000 and 870,000 peasant fami-

89. *SP VII of 1929*, Lists of Reserved and Village Forests and of Communal Reserves and Pastures.
90. Jayawardena (1963) pp. 271-73.
91. E. R. Leach, "An anthropologist's reflections on a social survey", *CJHSS*, Vol. I, No. 1 (January 1958) p. 9. Also see E. R. Leach, *Pul Eliya A Village in Ceylon* (C. U. P., 1961) pp. 242-53, 266-70.

lies had well over a million acres of highland holdings - highland holdings being defined as smallholdings and town and village gardens other than chena and paddy land. But there were only 828,000 families in the rural sector and 152,000 families in the urban sector in the year 1930 according to the population statistics. "In other words, even if every rural family is assumed to possess a cultivated dry land holding in 1930, enough land would have been left over for a substantial proportion of urban families".[92] He concludes that:

> the period up to 1930 ... saw the creation of the vast bulk of the modern highland peasant proprietorship; that this proprietorship could conceivably have comprised most, if not all, the rural peasant population of 1930; that it was based on the conversion of chena into tree crops, and that, therefore, according to the statistics, land policy could not have resulted in the transfer of chena land to planters on anything like the scale usually assumed, that is, on such a scale as to deny it to the peasant proprietor.[93]

Clarifying matters in his concluding summary, he notes that the evidence he has marshalled and his main conclusions must not

> be held to imply that there was no landlessness, or that landlessness failed to increase during British rule, or even that the peasant never left his village. All they establish is that the plantations as such made far less contribution to the landlessness than is usually assumed to have been the case, and certainly not enough of a contribution to release a supply of labour to plantations, let alone induce any substantial inter-district migration within the Island. The kind of landlessness that did develop was the result of economic relationships within the village, which however failed to liberate a proletariat for the estates because of the availability of alternative work in the village ... [and] because, on the whole, [the Sinhalese villagers] always and at all times (i. e. years) had access to some kind of agricultural work in the village.[94]

Both his findings and evidence from the nineteenth century draw our attention to two processes which are relevant to our field of inquiry. From the very outset land was alienated to plantation interests (European and Ceylonese) on a significant scale by the villagers.[95] Rhys-Davids even noted in 1872 that

> in the Kandyan coffee districts, ignorance of the real tenure [had] led to individuals being allowed to encroach upon the common property to so large an

92. Jayawardena (1963) p. 265.

93. *Ibid*, pp. 266-67.

94. *Ibid*, pp. 339-40. Also see his examination (pp. 365-73) of population and village statistics for the Central Province between 1821 and 1931. From the population figures he concludes that there was "a compound growth of 2% per annum over eighty years which is a remarkable record of absorption for a rural area [and in the face of which] it is hard to describe the growth of plantations as undermining the pre-existing village economy by taking away vital chena land". From the census data on villages too he finds "little foundation for the proposition that coffee planting undermined the rural economy".

95 *Ibid*, pp. 198-203, and Appendix C, pp. 346-64.
CO 54/237, Torrington - Grey, No. 54, 17 July 1847.
CO 54/345, Ward - Newcastle, No. 46, 29 August 1859, Encl. 3. Memorandum on the Memorial (on the chena question) from the Chiefs, Priests, European Residents, etc. interested in Chena Lands to the Secretary of State by John Bailey (Principal Assistant to the Colonial Secretary), 9 May 1859.
Lawrie (1896 & 1898) pp. 58, 393, 418-19.

> extent, or even to sell portions of it to coffee planters and other outsiders, that there [were] probably very few villages in which the common right [had] not been almost entirely extinguished.[96]

At the same time there was an expansion of the land under permanent (i. e. perennial) cultivation by villagers. The land was sometimes purchased or leased from the Crown, at other times from landlords or temples. As often as not, it was acquired by the process of encroachment and prescriptive right - for encroachments prevailed to a significant extent (impressionistically assessed) in the 19th century[97] and clauses 1, 7 and 8 in Ordinance 12 of 1840, as amended by the Order - in - Council of the 11th August 1841, enabled prescriptive claims after thirty years undisturbed possession and prevented summary ejectment by the Crown after five years undisturbed possession.[98] With reference to the extent and nature of encroachment I quote D'A Vincent once again:

> In the most thickly-populated parts of the Island, and especially in the Kandyan districts, the people . . . have annually encroached on the Crown forest until not only do they now chena beyond the boundary of the village common-land, but they also cut such timber as they require at great distances from their villages. It must before long become a question how far those rights of these people extend and whether the division amongst shareholders of what was village common-land, is to go on to an unlimited extent.[99]

Some of the lands acquired by these means were converted into highland holdings on which cash crops or garden produce were grown.[100]

These two processes, and the added weight of an expanding population, bear on the chain reaction hypothesis. Even if the waste lands legislation did not lead to much alienation of village land, it could be argued that private alienation of village land to planters and the expansion of highland smallholdings on the one hand combined with the growth of population and such alienation of village land by the Crown as occurred on the other hand to circumscribe the pasture lands available to the village, thereby generating the chain reaction described by de Silva and Hewavitharana. That there was some such limitation is highly probable, though even the broad proportions are difficult to gauge. But to emphasise these processes and to reduce the adverse influence of expropriation through the Waste Lands Ordinances to a contributory role is to alter

96. *1871 AR* Nuwarakalawiya, T. W. Rhys-Davids (Acting A. G. A.) 16 July 1872, p. 91. Note that this comment supports the view that there was very little pasture left.

97. There is a large body of evidence on this point - naturally from district officers and government sources. For references see 54/329, Ward - Labouchere, No. 76, 5 May 1871, Encl. Capt. Gosset (Surveyor-General) - Col. Sec., No. 36, 1 May 1857; *1564 Blue Book Reports*, Encl. in Encl. 7. (*1564 AR* Sabaragamuwa), J. W. W. Birch. 30 March 1865, pp. 138-39 & 144; *SP XLIII of 1882*, Report on Forest Administration, F. D'A Vincent, *passim*. For elaboration see Roberts (1965), pp. 266-81.

98. Roberts (1965), pp. 205-09, 227-28, 231-32. See particularly CO 54/237, Torrington - Grey, No. 45, 7 July 1847.

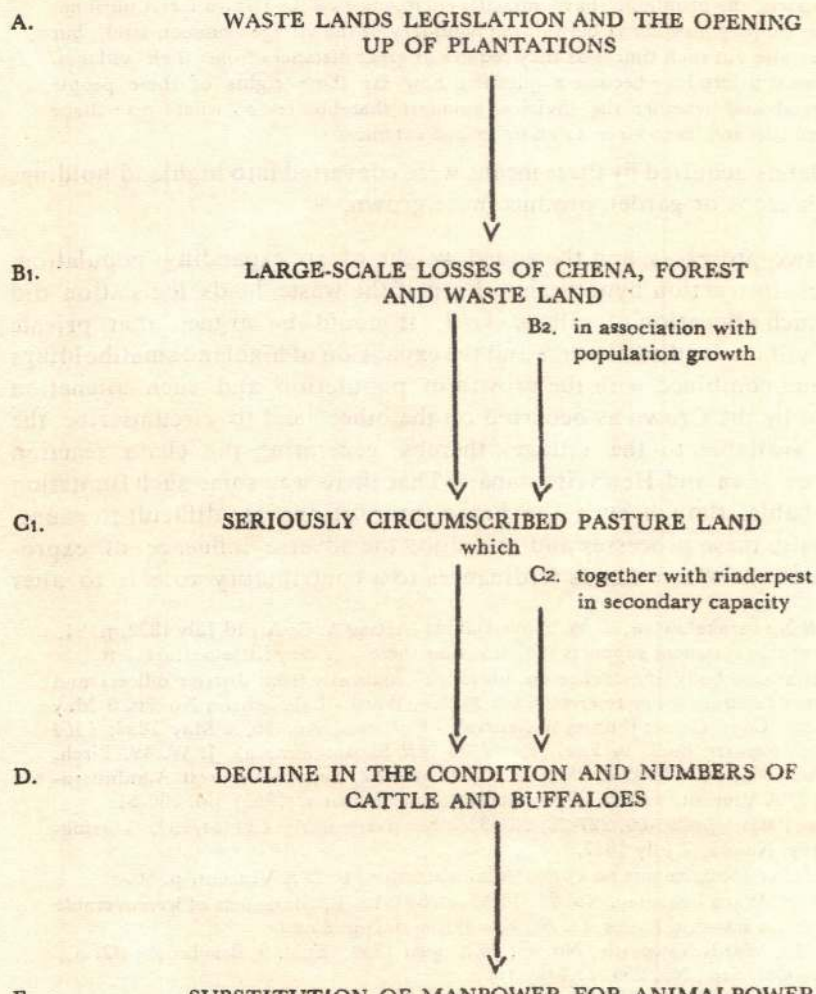
99. *SP XLIII of 1882*, Report on Forest Administration, F. D'A Vincent, p. 66.

100. CO 54/334, Ward - Stanley, No. 27, 15 May 1858, Encl., Statement of irrecoverable arrears (from Rawdon Power, G. A., Kandy), n. d., pp. 85-88.
CO 54/345, Ward- Newcastle, No. 46, 29 August 1859, Encl. 9, Braybrooke (G. A., Kandy) - Col. Sec., No. 255, 13 May 1859.
Jayawardena (1963) pp. 199-203, 337.

the complexion of the problem. On this theory one of the processes leading to a diminution of the pasturage provided positive alternatives. The villages lost their (or some of their) forest and chena, and some of their pasture, but gained several smallholdings under perennial culture. It represents a modification in the economy, not an outright loss. Being a diversification which could yield more and better food or incomes, it may even be considered an improvement.

V

To better clarify the targets of my criticism I reproduce in diagrammatic form the propositions contained in the chain reaction hypothesis with reference to the Wet Zone and the Central Highlands. The hypothesis is built brick upon brick in monolithic form so this reconstruction is quite apposite. The sign ↓ represents a causal factor:



Thus far, the proposition that the waste lands legislation and the clearing of land for cash crop plantations led to substantial losses of forest, chena and "waste" land previously used by the villagers (A & B 1) have been challenged. But presuming these propositions to hold true, the further postulate that there was a disastrous shortage of pasture land in the Highland villages (C 1) will be examined.

In this sphere the discussions, and even the source materials, are clouded by vague understandings of the categories of land which constitute "pasture". One meets a total absence of conceptual definition on the point. The chain reaction hypothesis treats forest, chena, and waste (presumably including patana) land as pasture land; and, by implication, suggests that pasturage was largely limited to such categories of land. In proceeding thus, as noticed earlier,[101] (a) it ignores the extent to which paddy fields provided seasonal, and occasionally perennial, sources of pasture; (b) it ignores the extent to which coconut holdings, garden lands, hedges and the borders of roads and housing allotments provided fodder for draught animals; and (c) overestimates the value of primary forest and patana as sources of pasture. One fears that concepts of "pasture" may even be governed by an European background derived from an upbringing in such lands or from the colonial legacy of geography lessons oriented towards British models. The nineteenth century administrative literature, certainly, suggests such influences. Some administrators, for instance, tended to equate "pasture" with patana,[102] when patana was by no means the main source of cattle and buffalo fodder. Evidence to the effect that pasture was restricted must be assessed with such possibilities in mind.

The contention that pasturage was seriously circumscribed is supported strongly by the observations of Russell, Rhys-Davids, D'A Vincent *et al* which have been quoted in previous paragraphs.[103] The report of the Cattle Disease Commission provides further evidence along these lines. A group of Sinhalese headmen and cattle owners from Uva, for instance, noted that it had formerly been the practice of cultivators to drive their herds "to the higher lands in the hill ranges" after the ploughing season, and that they had not been able to follow this custom "to nearly the same extent" since the opening of coffee plantations.[104] Conveying this type of evidence, the Commission observed that "[in] many districts the cultivation of coffee on lands formerly covered by forest [had] deprived the Natives of much of this means for grazing their herds during seasons the most trying to animal life."[105]

101. *Supra*, pp. 160-61.
102. C. J. R. Le Mesurier, *Manual of the Nuwara District, Ceylon* (Colombo: Govt. Printer, 1893) pp. 11, 82.
103. *Supra*, pp. 3, 180-81.
104. *SP XX of 1869*, Cattle Disease Commission, Appendix, Evidence of "Devitotavila Ratemahatmaya, Kosgahakumbore Kurala, Udakinda Korala and many other cattle owners" at Wilson's Bungalow on the 25th March 1868, p. 3.
105. *Ibid.*, p. vii. I am indebted to Dr. Hewavitharana for calling my attention to the importance of this *Sessional Paper*.

Such observations must not be accepted without any qualifications. A close reading suggests that the Commission's conclusion could hold true largely within the drier parts of the Central Highlands, such as parts of Uva and Dumbara, and does not pertain to the other regions. Moreover, the very same group of cattle owners in Uva stated that lack of food could not be regarded as a cause of cattle sickness because there was "usually a sufficiency of grazing for cattle" in their division. In the mid-1860's a district officer in Matale District claimed that pasture existed "in abundance for twenty or thirty times" the existing stock.[106] Closely scrutinised, the detailed descriptions of each coffee planting district in A. M. Ferguson's *Plantation Gazetteer* for 1859 suggest that there was sufficient pasture for both planters and peasants in many planting districts at that date[107]- an early date in the history of plantation growth.

All these evidences amount to little more than impressionistic observations. It is best to seek quantitative data. The Surveyor-General provided the following rough estimate[108] of the disposition of lands in the Central Province in the early 1870's:

Private Forest Standing	:	85,475 acres
Planted Coffee Land	:	210,170 ,,
Private Chenas and Patanas	:	100,000 ,,
Unsold Chenas, Waste Lands, Forest and Heavy Jungle	:	1,657,620 ,,

These statistics suggest that there were many segments of the Central Province which were available for the pastoral needs of the villages. But as noticed previously, the province included large tracts along its eastern and northern borders, in Uva, and in the Knuckles range which were sparsely peopled and which contained extensive areas of forest, jungle and waste land. Much the same could be said of the land above 5000 feet because coffee, unlike tea, was not cultivated to any significant extent beyond that level.[109] In the populated areas there was less land available for village use than these figures imply. In 1883 D'A Vincent complained that a two-way process of forest clearing, that by entrepreneurs for cash crop culture and that by villagers for shifting cultivation (chenaing), had denuded the primary forests in the localities between 2000 and 5000 feet. In his view there were "probably not 5000 acres of original forest" remaining between those two elevations; and the villagers, by a process of encroachment for chena cultivation, had gradually "swallow [ed] up all the forest on which they [had] hitherto

106. *SP IV of 1167*, Report on Irrigation Works and Rice Cultivation, Appendix, Part I, (Replies from) W. E. T. Sharpe, A. G. A., Matale, n. d., p. 51.
107. A. M. Ferguson, *Ceylon Summary of Useful Information and Plantation Gazetteer* (Colombo: Observer Press, 1859) *passim*.
108. *SP XXIX of 1873*, Correspondence on the subject of the Conservation of Crown Forests, Gregory - Kimberley, No. 237, 31 July 1873, pp. 8-9.
109. CO 54/518, Longden - Hicks Beach, No. 126, 29 March 1879.
SP XLIII of 1883, Report on Forest Administration in Ceylon, F. D'A Vincent, pp. 24, 71.

drawn for their building timber".[110] 5000 acres, of course, does not represent the total land area available to the villages for pasture, fuel and other needs which were distinct from timber for building purposes. D'A Vincent was thinking of the strict category of primary forest. There were secondary forest lands, scrub-land, recently chenaed and old chena land, *tennes* and *wattes* (gardens) available as well. The problem is to compute figures for these. All we know is that 23,157 acres of communal reserves and pastures were carved out between the 1880's and 1929.[111]

Ferguson's *Ceylon Directories* provide fairly reliable approximations of the acreages under the major cash crops but do not cover other categories of land. For these we have to turn to the agricultural statistics compiled by the bureaucracy for the *Ceylon Blue Books.* These are based on the headmen's returns and are utterly untrustworthy. The spatial extent of long-standing paddy fields, for instance, is usually overestimated by Kandyan villagers (and hence by headmen).[112] It is not certain whether the figures for certain categories were even approximations and there is grave danger that they might mislead. The *Ceylon Blue Book* for 1877 suggests that an attempt was made to improve the returns,[113] but one does not know to what extent good intentions were made effective. Till well into the twentieth century, one has also to encounter uncertainties inherent in the categorization adopted by the bureaucracy. It is not always clear what they meant by such terms as "pasture" and "uncultivated land".[114] For what its worth, Table R reproduces the acreages under the major heads (classes) in the years 1881, 1891, 1901 in the major territorial sub-divisions of the Central Province exclusive of the District of Badulla (Uva) which was created a separate Province in 1886. The crop statistics would seem to represent the area under a particular crop in the year named and not the area that was cultivable with paddy, coffee et cetera. The employment of statistics for three different years provides one with a cross-check on their reliability by means of any glaring discrepancies they reveal. At the same time Table S supplies the percentage of land under the various classes, with 100% constituting the sum total of the statistics per unit for the years specified. For our purposes the most significant categories are those which provide cattle fodder, whether partially, seasonally, or perennially, viz. land under paddy (col. 1), coconut land (col. 4), fruit and vegetable gardens (col. 5), uncultivated land (col. 7) and pasture (col. 8).

110. *Ibid*, pp. 24 & 66.
111. *Supra*, p. 179.
112. For a vivid illustration see E. R. Leach (1958) pp. 14-15.
113. "The Agricultural Returns for 1877 have on examination been found so defective that they failed to convey any correct impression of the state of Agricultural progress in the country generally. Steps have been taken to ensure greater accuracy in future returns; meanwhile, it has been decided...to omit the untrustworthy statistics", runs the note in the section where the statistics are usually provided (*Ceylon Blue Book 1877*, p. 635).
114. Within what class did uncultivated plantation properties fall: "uncultivated" or "cultivated"? Was peasant coffee cultivation in smallholdings classified under "coffee" or "gardens"? What about chena land - in what category did it fall? Presumably, forest was classified under "uncultivated" and patana was treated as "pasture"?

TABLE R

TABLE R : **AGRARIAN STATISTICS OF THE CENTRAL PROVINCE (excluding Uva) IN ACRES**

	1 PADDY			2 OTHER GRAINS			3 TOTAL UNDER MAJOR CASH CROPS			COC
	1881	1891	1901	1881	1891	1901	1881	1891	1901	1881
Kandy	40,911	34,622	33,765	4,914	7,161	6,726	152,423	145,308	108,970	3,393
N'Eliya	13,003	11,000	11,914	2,724	3,000	3,928	95,600	74,409	86,416	112
Matale	18,747	12,232	15,291	4,956	5,776	4,000	48,778	16,450	—	1,786
Central Province	72,661	57,854	60,970	12,594	15,937	14,654	296,801	236,167	—	5,291

	6 TOTAL AREA CULTIVATED			7 UNCULTIVATED LAND			8 PASTURE			WAST
	1881	1891	1901	1881	1891	1901	1881	1891	1901	1881
Kandy	216,910	211,388	253,012	316,378	241,305	192,662	24,792	—	5,181	—
N'Eliya	112,446	90,383	108,762	108,594	113,227	31,491	8,000	20,000	8,183	—
Matale	78,267	42,686	—	498,579	118,859	—	2,354	586	—	—
Central Province	407,623	344,457	—	923,551	473,391	—	35,146	20,586	—	—

NOTES ON TABLES R & S

The structure of the tables providing agricultural statistics underwent a change between 1881 and 1891. In 1881 they were enumerated simply, in one table, with the crops listed separately and one broad class, "Total Number of Acres in Crop", providing the sum total; while "pasture" and "uncultivated land" constituted the two other broad classes (in the same table). In 1891 and 1901 a table entitled "Nature of Crops, Quantity . . . (etc.)", proceeding vertically downwards, provided the extent of land under various crops in each district. Another table, proceeding horizontally across, provided the agricultural statistics under several broad classes. Here, the crops were amalgamated under three broad heads: grain of all kinds, vegetables and fruits of all kinds, (which included coconut land, at least in 1891) and products other than grain, fruit and vegetables. Another column indicated the total (our column 6) and other columns supplied figures under other broad heads, uncultivated but cultivable land, pasture, and

TATISTICS OF THE CENTRAL PROVINCE (excluding Uva) IN ACRES, 1881-1901

2 THER GRAINS		3 TOTAL UNDER MAJOR CASH CROPS			4 COCONUTS			5 FRUIT & VEGETABLE GARDENS		
1891	1901	1881	1891	1901	1881	1891	1901	1881	1891	1901
7,161	6,726	152,423	145,308	108,970	3,393	4,899	8,801	11,131	17,112	17,936
3,000	3,928	95,600	74,409	86,416	112	130	175	954	1,135	1,493
5,776	4,000	48,778	16,450	—	1.786	1,975	—	3,706	5,144	—
15,937	14,654	296,801	236,167	—	5,291	7,004	—	15,691	23,391	—

7 LTIVATED LAND		8 PASTURE			9 WASTE LAND			10 TOTAL AREA ACCORDING TO STATISTICS PROVIDED		
1891	1901	1881	1891	1901	1881	1891	1901	1881	1891	1901
241,305	192,662	24,792	—	5,181	—	125,867	121,686	558,080	578,560	572,541
113,227	31,491	8,000	20,000	8,183	—	2,010	83,884	229,040	225,620	232,320
118,859	—	2,354	586	—	—	8,606	—	579,200	170,737	—
473,391	—	35,146	20,586	—	—	136,483	—	1,375,320	974,917	—

NOTES ON TABLES R & S

district. Another table, proceeding horizontally across, provided the agricultural statistics under several broad classes. Here, the crops were amalgamated under three broad heads: grain of all kinds, vegetables and fruits of all kinds, (which included coconut land, at least in 1891) and products other than grain, fruit and vegetables. Another column indicated the total (our column 6) and other columns supplied figures under other broad heads, uncultivated but cultivable land, pasture, and waste land. We provide explanations of the columns below, except where the title is deemed self-explanatory.

Column 2 : This column covers "hill paddy, Indian corn, fine grain, small grain, gingelly etc.."

Column 3 : This column constitutes our own computations from the tables, being the sum total of the figures under coffee, tea and cinchona in 1881; and the same three crops plus cocao thereafter.

TABLE S

TABLE S: **AGRARIAN STATISTICS OF THE CENTRAL PROVINCE (excluding Uva) 1881-190**

	1 PADDY			2 OTHER GRAINS			3 TOTAL UNDER MAJOR CASH CROPS			
	1881	1891	1901	1881	1891	1901	1881	1891	1901	1881
Kandy	7	5	5	*	1	1	27	25	31	*
N'Eliya	5	4	5	1	1	1	41	32	37	*
Matale	3	7	—	*	3	—	8	9	—	*
Central Province	5	5	—	*	1	—	21	24	—	*
	6 TOTAL AREA CULTIVATED			7 UNCULTIVATED LAND			8 PASTURE			
	1881	1891	1901	1881	1891	1901	1881	1891	1901	1881
Kandy	38	36	44	56	41	33	4	—	*	—
N'Eliya	49	40	46	47	50	13	3	8	3	—
Matale	13	25	—	86	69	—	*	*	—	—
Central Province	29	35	—	67	48	—	2	2	—	—

* = less than 1%

NOTES ON TABLES R & S

Column 3 (contd):

By 1901 however coffee was a negligible factor except in Uva. By 1901 too, hardly any cinchona was grown anywhere. Note that, for the years 1891 and 1901, our computations will be a few hundred acres less than the sum total rendered under "Products other than Grain, or Fruit and Vegetables" in the Blue Books.

Column 6 : In 1881 this column was designated "Total Number of Acres in Crop". The figures under this head will not match the sum total of the figures in our columns 1 - 5 because a few minor crops have been omitted by us. In 1881 and 1891 it represents the sum of the figures under the three broad classes mentioned above.

Column 7 In 1891 and 1901 the table with broad categories has two columns designated thus. "Area in Acres of Land not cultivated during the year, though fit for cultivation" and "Area in Acres of Land not cultivated during the year capable of being rendered fit for cultivation". A third column represents the total of these two categories. Our column 7 constitutes this total.

TISTICS OF THE CENTRAL PROVINCE (excluding Uva) 1881-1901: IN PERCENTAGES.

2 OTHER GRAINS		3 TOTAL UNDER MAJOR CASH CROPS			4 COCONUTS			5 FRUIT & VEGETABLE GARDENS		
1891	1901	1881	1891	1901	1881	1891	1901	1881	1891	1901
1	1	27	25	31	*	*	1	1	2	3
1	1	41	32	37	*	*	*	*	*	*
3	—	8	9	—	*	1	—	*	3	—
1	—	21	24	—	*	*	—	1	2	—

7 CULTIVATED LAND		8 PASTURE			9 WASTE LAND			10 TOTAL AREA ACCORDING TO STATISTICS PROVIDED		
1891	1901	1881	1891	1901	1881	1891	1901	1881	1891	1901
41	33	4	—	*	—	21	21	100	100	100
50	13	3	8	3	—	*	36	100	100	100
69	—	*	*	—	—	5	—	100	100	—
48	—	2	2	—	—	13	—	100	100	—

* = less than 1%

NOTES ON TABLES R & S

figures in our columns 1 - 5 because a few minor crops have been omitted by us. In 1881 and 1891 it represents the sum of the figures under the three broad classes mentioned above.

Column 7 In 1891 and 1901 the table with broad categories has two columns designated thus. "Area in Acres of Land not cultivated during the year, though fit for cultivation" and "Area in Acres of Land not cultivated during the year capable of being rendered fit for cultivation". A third column represents the total of these two categories. Our column 7 constitutes this total.

Column 8 : By 1891 the standards for defining pasture would seem to have been more rigorous than before, to judge from the designation of another broad class which we reproduce in column 9.

Column 9 : In 1891 and 1901 the official designation read: "Area in Acres of Waste Land which is incapable of being rendered productive and is unfit for Pasturage". Such a category did not exist in 1881 and presumably such land fell within the heads of "pasture" or "uncultivated land" in the official computations for 1881.

On my definition columns 4 (coconut), 5 (vegetable and fruit gardens), 7 (uncultivated land), and 8 (pasture) would have provided perennial sources of fodder for draught animals, though on a partial basis in that the whole extent noted under each column would not be suitable fodder. At the same time columns 1 and 2 (paddy and other grains) would serve as seasonal sources. On this basis the figures *indicate* that even in Kandy District the sources of pasture untilised by draught animals were not as seriously circumscribed as suggested.

For the twentieth century, influenced by the knowledge that a census of production was attempted in 1921, the year 1922 has been chosen for a random survey. Table T presents the acreages and percentages of land under six broad heads in the Districts of Kandy, Nuwara Eliya, Matale, Uva, Ratnapura, Kegalle and Kurunegala. The Table is derived from a similar table in the *Ceylon Blue Book* for the year, which is designated "Area in Acres Cultivated during the year".[115] But some figures read strangely, notably the extent recorded for Kandy District in column 3 which pertains to the cash crops. This is confirmed by references to another table in the same *Blue Book* which provides a breakdown of the extent of land under different crops and which was largely based on the census of production of the previous year.[116] Table U is compiled from the figures found in this table, some insignificant items being amalgamated for the sake of convenience.

In Table T the columns 2 and 5, for vegetables and for pasture respectively, might be considered - the latter somewhat doubtfully - perennial sources of pasture. Column 1 on grain of all kinds might be treated as a seasonal source. Column 3 would include a certain extent under coconut and arecanut which would be partially available for pasture, but the figures have to be drawn from Table U whose figures (even in sum) do not match that of Table T. On this basis one can derive Table V, which is embellished by an additional column (column d) which depicts the number of draught animals in the specified districts in 1922,[117] so as to afford a basis for calculating the extent of pasture available per head of cattle.[118] The discrepancies and

115. *The Ceylon Blue Book 1922*, p. R 7.

116. *Ibid.*, pp. R 4-6. The full title reads: "Nature of Crops and Quantity of Produce". It has a sub-title note as follows:

> The figures given in this table, except those under paddy, other grains, cotton and sugar cane, which are for the year 1922, and those under palmyra, which are for the year 1921, are for the twelve months ending September 30, 1921, and have been taken from the Census of Production, 1921. The figures are subject to considerable error, and cannot in any way be guaranteed accurate (tea and rubber possibly expected).

117. *Ceylon Blue Book 1922*, p. R. 8. The draught animal population in 1922 did not differ much from the numbers in 1901. In 1901 the Central Province had 106,584 and Uva 69,537. There is, however, some difference between the figures for the early 20th century and those for 1891, when the numbers recorded (especially in Uva) were smaller. For details, see Table X, *infra*, 195 p.

118. The percentages in Table V constitute percentages of column 8 in Table U.

TABLE T : **"AREA IN ACRES CULTIVATED DURING THE YEAR" 1922 IN SELECTED DISTRICTS AND PROVINCES**

	1		2		3		4		5		6		7	
UNITS	WITH GRAIN OF ALL KINDS		WITH VEGETABLES OF ALL KINDS		WITH PRODUCTS OTHER THAN GRAINS AND VEGETABLES		TOTAL CULTIVATED		PASTURE LAND		WASTE LAND		TOTAL OF COLS. 4, 5 & 6.	
	Acreage	%	Acreage	%	Acreage	%	Acreage	%	Acreage	%	Acreage	%	Acreage	%
Kandy	33,168	18	5,375	2	25,364	13	63,907	34	9,855	5	110,391	59	184,153	100
Nuwara Eliya	20,061	14	2,256	1	102,424	72	124,741	87	11,624	8	5,405	3	141,770	100
Matale	22,086	9	4,426	1	104,587	44	131,099	56	17,360	7	84,580	36	233,039	100
Central Province	75,315	13	12,057	2	232,375	41	319,747	57	38,839	6	200,376	35	558,962	100
Province of Uva	43,563	7	5,763	*	85,072	13	134,398	21	309,367	49	176,484	28	620,249	100
Ratnapura	58,058	33	1,014	*	64,635	37	123,707	71	41,333	23	8,107	4	173,147	100
Kegalle	35,300	14	9,218	3	135,352	57	179,770	75	365	*	57,072	24	237,207	100
Province of Sabaragamuwa	93,358	22	10,232	2	199,987	48	303,477	73	41,698	10	65,179	15	410,354	100
Kurunegala	134,287	31	1,716	*	213,887	50	349,890	82	72,281	17	–	–	422,171	100

* less than 1 per cent

TABLE U : **"NATURE OF CROPS" IN SELECTED DISTRICTS AND PROVINCES, LARGELY ACCORDING TO THE CENSUS OF PRODUCTION 1921**

	1		2		3		4		5		6		7		8	
UNITS	PADDY		CHENAS AND OTHER GRAINS		VEGETABLES & TUBERS		COCONUTS		TEA, RUBBER AND COCOA		ARECANUTS		CARDAMONS, TOBACCO & OTHER MISCELL-ANEOUS CASH CROPS		TOTAL	
	Acreage	%	Acreage	%	Acreage	%	Acreage	%	Acreage	%	Acreage	%	Acreage	%	Acreage	%
Kandy	37,029	13	12,541	4	2.891	1	10,857	3	207,555	73	10,806	3	2,424	*	284,103	100
Nuwara Eliya	15,427	12	9,048	7	1,475	1	242	*	99,664	77	698	*	1,819	1	128,373	100
Matale	17,680	18	9,670	10	959	1	4,900	5	58,895	61	1,915	2	1,134	1	95,153	100
Central Province	70,136	13	31,259	6	5,325	1	15,999	3	366,114	72	13,419	2	5,377	1	507,629	100
Province of Uva	25,525	16	35,712	22	1,683	1	933	*	90,716	58	1,505	*	272	*	156,346	100
Ratnapura	39,202	24	20,554	12	998	*	7,366	4	83,427	52	8,633	5	179	*	160,359	100
kegalle	31,031	15	8,911	4	1,874	*	34,236	17	106,200	53	17,247	8	43	*	199,542	100
Province of Sabaragamuwa	70,233	19	29,465	8	2,872	*	41,602	11	189,627	52	25,880	7	222	*	359,901	100
Kurunegala	100,189	27	50,022	13	2,862	*	193,527	52	17,012	4	3,117	*	1,273	*	368,002	100

*= less than 1%

uncertainties in categorisation as well as the regional statistical variation in the definition of categories[119] which mar the statistical Tables T, U and V naturally reduce the value of any conclusions which are drawn from them. It is also my view that the extent of pasture land depicted in Table V

TABLE V: Pasture : Cattle Ratio in the early 20th century

Units	a Perennial Pasture		b Seasonal Pasture		c Coconut & Arecanut	d Buffaloes & Black Cattle
	Extent in Acres	%	Extent in Acres	%	Extent in Acres	No.
Kandy	15,230	7	33,168	18	21,663	54,983
N'Eliya	13,880	9	20,061	14	942	33,296
Matale	21,786	8	22,086	9	29,418	23,267
Central Province	49,796	8	75,315	13	52,023	111,546
Uva Province	315,130	56	43,563	7	2,438	64,346
Ratnapura	42,347	23	58,058	33	15,999	41,690
Kegalle	9,583	3	35,300	14	51,483	66,394
Sab'wa Province	51,930	12	93,358	22	67,482	108,084
Kurunegala	73,997	17	134,287	31	196,644	347,630

is an underestimate because of the probability that portions of the "waste land" in Table T, a category that is one of the largest single components in most districts, could be utilised for pasture. In addition it should be noted that the numbers of buffaloes and black cattle in Table V probably include the cattle on the plantations.[120] These cattle were largely sustained on the fodder grown on the plantation properties.[121] With these qualifications and

119. The high figure of 309,367 acres in Uva (see Table T) obviously includes large extents of the patana land so common to the district. Kurunegala is recorded to have no waste land and its figure for pasture (72,281 acres) is probably inflated. An examination of Table T will reveal that Ratnapura District had much pasture and little waste, while Kegalle District was quite the opposite. This suggests that the administrators of Ratnapura defined "pasture" loosely and those in Kegalle defined it strictly.

120. *Infra* p. 193. In the 1890's the plantations containeds 35.5% of the cattle in Nuwara Eliya Distict according to the statistics provided by Le Mesurier.

121. For instance, see the description of plantation districts in A. M. Ferguson's *Plantation Gazetteer* (1859) and the replies of planters in *SP XX of 1869*, Appendices, pp. 37-46.

in such circumstances, the statistics in Table V indicate that the draught animal population did not press on the available pasture land to a significant extent. Concentrating on the district which appears to have been the most congested, that of Kandy, one finds that each head of cattle and each buffalo would have had an average of slightly more than 1/4th an acre of perennial pasture, slightly more than 1/2 an acre of grain-producing land available seasonably, and slightly less than 1/2 an acre of coconut and arecanut producing land available perennially. These amounts would have been supplemented by straw and by the fodder available along the verges of roads and building allotments, rubbish dumps, and other sundry sources.[122] In a well-managed farm in a wet zone locality which has at least 100 inches of rainfall distributed evenly over a year (as at Ambawela where a model farm is located), an acre of grassland grown for pastoral purposes could support two animals per year. Around Kandy one would need two acres of such grassland for three animals. Extending these considerations to the dispersed and varied sources from which the village cattle and buffaloes derive their fodder, one could say, at a rough estimate, that two acres were needed to support one animal.[123] In 1922, according to the statistics in Table V, the pasturage that seems to have been available in the congested District of Kandy did not fall very far short of these needs, if one takes into consideration the several sources which the statistics do not cover.

VI

Assuming that from whatever cause, the pasturage available for the village cattle and buffaloes was adversely restricted in the course of the nineteenth and early twentieth centuries, the view that such a restriction was primarily responsible for decimating the cattle and buffalo population will now be examined. For, on the face of it, there is no reason why the effect of rinderpest and other cattle diseases should be relegated to a secondary role. Nor why the conjectural probability that rough and ready methods of rearing cattle and buffaloes[124] contributed to their susceptibility to disease should have been unnoticed as a contributory factor. Or why the conjectural possibility that continuous inbreeding or indiscriminate breeding contributed towards their debility should have been neglected as a contributory cause - particularly when the possibility is reinforced by the Cattle Disease

122. It must be also kept in mind that grass can be cut and thus transported.

123. Conversation with Mr. W. D. Andrew, a specialist attached to the Veterinary Research Institute in Gannoruwa. Generally supported by Professor R. Appadorai and Dr. V. E. A. Wikramanayake of the Departments of Animal Husbandry and Agriculture respectively in the University of Ceylon. The latter felt that in village areas one acre of the types of fodder specified was not sufficient to support one animal and that 1-2 acres were needed. More cautiously, Professor Appadorai stated that 2-5 acres would be necessary according to the type of fodder. I am also grateful to Dr. Jainudeen for his opinion on related subjects.

124. For complaints on this ground see *1868 AR*, Badulla, W. E. T. Sharpe, 2 April 1869, p. 31; and *1869 AR*, Kandy District and Central Province, H. S. O Russell, 27 June 1870, p. 39; and *SP XX of 1869*, Cattle Disease Commission, *passim*.

Commission's contention that "promiscuous and premature breeding" was one of the major factors responsible for the reduction of the cattle and buffalo population.[125]

Concentrating solely on the major query raised above, one would find an overwhelming number of district administrators reporting that rinderpest had caused many deaths and had a detrimental influence on paddy cultivation. Such a theme is evident in the administration reports as well as the replies to question No. 21 in the questionnaire circulated by the committee on "Irrigation Works and Rice Cultivation" in 1866-67, which read: "Has the cultivation of paddy in your Province or District been interfered with by the destruction of cattle from murrain or other causes?". It is equally evident in the observations of those individuals who appeared before the Cattle Disease Commission. While the bulk of the complaints came from regions within the dry zone or its borders,[126] the wet zone was not free of rinderpest and its depredations. The mortality returns collected by the Cattle Disease Commission for the years 1865-67 (inclusive) reveal that there was heavy mortality in the Colombo, Sabaragamuwa, Kegalle and Matara districts - as heavy as elsewhere.[127] Unfortunately no statistics were provided for the Central Province, with the exception of Badulla District. A report from the Government Agent of that province, however shows that 25,059 head of cattle, or one-fourth of its total cattle (and buffalo) population died in the course of a rinderpest epidemic in the year 1852.[128]

125. *Ibid*, p. vii. The members of this Commission were Dr. Boyd Moss, Dr. William Smith, J. A. Perera (the Maha Mudaliyar) and John Capper (a journalist).

126. In the early 1850's a district officer in Puttalam District even reported that "in many places, three-fourths of the animals [had] died" (A. O Brodie "Statistical Account of District of Chilaw and Puttalam, North Western Province", *JRAS CB*, Vol II, Part II (1853) p. 46); and in 1857, 45,000 head of cattle and buffaloes were said to have died in the Seven Korales or North Western Province - which includes Puttalam District (*SP XX of 1869*, Appendices, p 50). Doubts remain as to how valid these returns are.

127. *Ibid*, Appendices, p. 69. The following mortality returns are provided:

	1865	*1866*	*1867*	*1865-67 Av. mortality*
Colombo District	7,996	15,159	2,061	
Sabaragamuwa ,,	5,618	16,346	1,035	
Kegalle ,,	2,079	5,675	1,465	
Western Province	15,693	37,180	4,561	19,144
These figures could be contrasted with				
Eastern Province	2,754	6,549	1,008	3,437
Northern ,,	8,471	13,373	11,479	11,107
Kurunegala District	32,717	2,476	6,847	14,076

128. *Ibid*, p. 49 He provides detailed returns of the number attacked, the number that died and the total number living in the following sub-districts and districts: Udunuwara, Yatinuwara, Tumpane, Harispattuwa, Lower & Upper Dumbura, Lower & Upper Hewaheta, Udapalata, Upper Bulatgama, Matale South, Matale East, Matale West, Nuwara Eliya and Badulla. According to this report, the total left in the Central Province was 73,940. It is evident, however, that the officer had subtracted the number dead from the previous year's (1851) total. In doing so, he failed to consider the number of births. Also see *infra*, p. 193.

There can be little hesitation in concluding that cattle murrain or rinderpest was the primary cause of any deterioration in the condition and numbers of the cattle and buffalo population in the Central Highlands (as well as elsewhere in the island).[129] Limitation of pasture must, at best, be relegated to secondary status as a causal factor. It might be retorted that the lack of suitable pasture was largely responsible for a general debility in the cattle which increased their susceptibility to disease - as indeed suggested by some administrators. Malnutrition can contribute towards the spread of most diseases, though not all diseases, in animals as well as in humans. Rinderpest falls within the category of animal disease to which malnutrition may weaken a subject's resistance.[130] But it is virus disease and can spread without the assistance rendered by malnutrition. In 1869, a group of Sinhalese cattle owners even asserted that a "strong bullock sometimes died sooner than a weakly animal".[131]

VII

Finally, it is necessary to examine the proposition that the stock of cattle and buffaloes was reduced to a significant extent, omitting altogether the impossible task of investigating the alleged degeneration in their condition and breed.[132]

One finds that Hewavitharana has represented the decline in numbers in terms of the ratio of draught animals to the rural population.[133] This means that he has introduced another variable into the computation, that of the rural population. If the rural population increased at a much faster rate than the stock of cattle and buffalo, even in a situation in which the number of draught animals did not decline it is possible for such a table to suggest that there was a reduction in the draught animal population. In short, it could produce a total fiction. Or in other words, the table assumes that the growth-rate of the rural population was constant.

Be that as it may, the proposition is worth attention in view of the evidence that rinderpest caused serious depredations among the cattle and buffaloes, and the knowledge that the slaughtering of cattle for beef would have contributed to a diminution in their numbers. It is significant, however, that many of the reports refer only to a high death rate and do not prove that there was a decline in the absolute total. Nevertheless, the Cattle Disease Commissioners were unequivocal in their conclusions that

129. In 1869 there was considerable unanimity of opinion that *tavalam* cattle helped to spread the disease.

130. Personally communicated to the author by Dr. Jainudeen of the Veterinary Faculty, University of Ceylon, 23 May 1969.

131. *SP XX of 1869*, Appendices, *op. cit.*, p. 3.

132. See *ibid*, pp. vi-vii.

133. *Supra*, p. 158.

the herds had declined in numbers, with the qualification that this held true for some districts only:

> The mortality, which has undoubtedly been very severe amongst village herds during a recent period, presses heavily and often disastrously upon the industry of the country. It is not that a sufficiency of cattle for all industrial purposes may not exist throughout the country, but it is their unequal distribution which affects native agriculture so prejudicially. In some districts cattle are abundant and cheap, in others extremely scarce and dear . . . [134]

Since their report only contains scraps of statistical evidence on the decline in the absolute totals per district, it is advisable to concentrate on these totals over a broad period of time. The necessity to do so is illustrated by the example of the Central Province in the 1850's. It has been seen that a rinderpest epidemic decimated the cattle and buffaloes in the province in 1852, reducing it - according to the Government Agent - from approximately 100,000 to 73,940. Yet the very people responsible for providing these figures supplied returns in 1856 and 1861 which depicted totals of 118,168 and 108,312 "horned cattle" respectively in the Central Province. [135]

It will be obvious that the absolute total of cattle and buffaloes in Ceylon depended on the difference between the death-rate and the additions to the stock in Ceylon. Augmentation of animals occurred through imports, largely from British India, as well as from births. The former was not insignificant as a source of replenishment. In the thirty years between 1871 and 1900 for instance, 368,533 cows, bulls, oxen and buffaloes were imported to Ceylon from British India,[136] roughly 12,200 a year. To derive regional figures on the total cattle and buffalo populations over a period of time, one has to turn to the *Ceylon Blue Books*. In using these statistics it is important to keep several factors in mind, entirely apart from their probable defectiveness. As noticed earlier, one must seek to differentiate between buffaloes and cattle. Secondly, one should note that the plantations (estates) maintained herds of cattle which swelled the district totals in some areas. This is indicated in Le Mesurier's ***Manual of the Nuwara Eliya District Ceylon***, where he not only distinguishes between "buffaloes", "black cattle" and "others" but also separates each category into "villages" and "estates". While the estates had few buffaloes (195 as against 7468 in the villages of Nuwara Eliya District), they had significant numbers of black cattle, 2994 as against 4639 in the villages.[137] Unfortunately, the *Blue Books* do not make this differentiation. It can be presumed,

134. *Ibid*, p xxi.

135. *Ceylon Blue Books* for 1856 and 1861.

136. Statistical compilation from the *Ceylon Blue Books*, undertaken for me by V. O. Ranasinghe. Most of the imports were "oxen and bulls", the cows only numbering 2,196 and the buffaloes 156. It is probable that a portion of the imports was for slaughter.

137. C. J. R. Le Mesurier (1893), p. 82. The number of cattle under "others" was not appreciable and was largely on the estates. Clearly, they refer to imported pedigree cattle.

however, that the cattle and buffaloes on estates were included in the figures provided therein. This might seem to strengthen the proposition that pasture land was seriously circumscribed. The villages had even less cattle and buffaloes than the statistics which Hewavitharana has used suggest. The argument rebounds, however. For one thing, it introduces an unconsidered variable bearing on the ratios depicted. For another, it means that the villages needed less pasture land than the figures suggest, for the estate cattle and buffaloes were fed on fodder grown (or available) within the estates.

The *Blue Books* provide other problems. The quantities of livestock in Ceylon are noted in a statistical abstract at the start whereas a more detailed provincial breakdown is included with the agricultural statistics. At times the sum total of the provincial figures do not correspond to that noted in the abstract.[138] Again, at the outset, before and during the 1870's, the number of cattle was depicted under the single head: "horned cattle". In 1879 the Central Province, North Western Province and a few other districts distinguished between the "black cattle" and "buffaloes", whereas the other districts and the statistical abstract employed the old, undifferentiated category.[139] After a short transitional period, however, the differentiated enumeration prevailed in the detailed lists. By 1891 the statistics on livestock included two columns which indicated the increase in numbers since 1866 and since 1876. In the instance of buffaloes and cattle the increases (or decreases) were generally recorded on an undifferentiated basis, both being added together in contrast to the differentiated figures in the census for the year. Table W reproduces the statistics[140] for selected districts which comprise part of the Central Highlands. Since the statistics for the 1860's and 1870's would appear to have been more unreliable than those of 1891 and since the defectiveness would probably have been in the direction of an underestimate, it is not certain that one can rely on the increases recorded. On the other hand, the livestock statistics of the decades following the year 1891 suggest that the increase reported since 1866 may, in broad terms, well be a fact. Concentrating on the districts of Kandy, Nuwara Eliya, Matale, and Uva (Badulla) Table X presents the figures provided in the *Ceylon Blue Books* for 1871, 1881, 1891, 1901, 1910-11 and 1922. A glance at the totals will indicate that there was a considerable increase in the numbers of cattle and buffaloes in the four districts between 1871 and 1922. In the light of the statistics for 1881 and 1891, however, it is possible that the figures for 1871 are an underestimate. Leaning away from the direction of criticism and treating the figures for 1881 as the base, one finds a slight decrease in the cattle and buffalo population of Kandy District between 1881 and 1922, a moderate decrease in Matale District and

138. Revealed in my first random sample, that for 1879.
139. *Ceylon Blue Book 1879.*
140. *Ceylon Blue Book 1891*, pp. 275-77.

TABLE X : **BUFFALO AND BLACK CATTLE POPULATION IN THE CENTRAL PROVINCE AND UVA, 1881-1922**

	1					2					3					
	BUFFALOES					BLACK CATTLE					TOTAL					
District	1881	1891	1901	1910-11	1922	1881	1891	1901	1910-11	1922	† 1871	1881	1891	1901	1910-11	1922
Kandy	19,673	21,559	19,489	24,381	20,995	37,770	30,097	31,728	28,739	33,988	37,250	57,443	51,656	51,217	53,730	54,983
Nuwara Eliya	5.676	6,942	6,350	7,284	9,755	5,048	7,729	10,117	8,448	13,512	8,675	10,724	14,671	16,467	15,732	23,267
Matale	22,750	17,870	21,858	20,399	16,220	17,745	15,692	17,042	18,820	17,076	17,869	40,495	33,562	38,900	39,229	33,296
Central Province	48,099	64,371	47,697	52,064	46,970	60,563	53,518	58,887	56,007	64,576	63,794	108,662	99,889	106,584	108,691	111,546
Uva Province	18,019	10,135	21,481	17,212	15,272	28,602	21,556	48,056	53,479	49,074	58,462	46,621	31,691	69,537	70,691	64,346

† Total of "horned cattle".

an appreciable increase in Nuwara Eliya District - leading to an unappreciable overall increase in the Central Province. In the meanwhile Uva records a significant increase amidst seeming fluctuations.

TABLE W : Increase in the Cattle Population between 1866 and 1891

	Number	Increase since 1866	Increase since 1876
Kandy	21,559 buffaloes 30,097 b. cattle	3,682	15,131
Nuwara Eliya	6,942 buffaloes 7,729 b. cattle	8,002	6,536
Matale	17,870 buffaloes 15,692 b. cattle	17,924	9,264
Uva (Badulla)	10,135 buffaloes 21,556 b. cattle	2,270 3,046	2,738 2,440
Ratnapura	15,580 buffaloes 14,077 b. cattle	not ascertainable	10,230
Kegalle	20,322 buffaloes 13,677 b. cattle	not ascertainable	not ascertainable
Kurunegala	117,222 buffaloes 117,283 b. cattle	— —	22,105 —

However, as emphasised earlier, in the Central Highlands buffaloes constituted the most vital element of draughtpower. Under this category one can be fairly certain that the estates did not possess significant numbers, in contrast to the item "black cattle". One should concentrate, therefore, on section 1 in Table X. This section records an appreciable increase in the number of buffaloes in Nuwara Eliya District, a virtually static position in Kandy District, and a significant decrease in Matale District leading to a slight decrease in the total of the Central Province; while the Province of Uva records a slight decrease amidst fluctuations.

From neither point of view do the statistics support the proposition that there was a significant reduction in the number of draught animals.

VIII

The conclusive evidence on the detrimental effects of cattle disease, nevertheless, requires one to balance the statistical evidence on the numbers of cattle and buffaloes against the manner in which paddy culture was affected by the occurrence of rinderpest and other cattle diseases. One

would expect that a rinderpest epidemic which decimated the buffaloes in a particular district in a particular year would have adversely influenced paddy cultivation in that district in the next few years. The evidence presented before the Cattle Disease Commission shows that this was so. Several cattle owners asserted that they did not have enough draught animals for cultivation purposes and that some paddy fields were left uncultivated as a result.[141] The questions remain whether such repercussions were short-run or long-run, and whether the residents of villages or districts so affected were forced to rely on manpower rather draughtpower. The answers would depend on the powers of recovery and replenishment possessed by the resident cattleowners and the extent to which they encountered further outbreaks of rinderpest (and other cattle diseases) thereafter. The statistics suggest that the districts within the Central and Uva Provinces possessed such powers of recovery over the long-run. It is nevertheless possible for the statistics to veil retrogression in particular localities - in which event one has still to admit that retrogression was limited.

It is also necessary that one should survey the impact with reference to the fortunes of individual cattleowners and paddy cultivators, with the qualification that one's comments will only apply to those localities in which draught animals were used to a significant extent. One can reasonably conjecture that there were individuals who did not have the means of replenishing the draught animals they had lost; and that such individuals were more likely to have been drawn from the category of small capitalists (in the sense of peasants and other residents with just one draught animal or a few animals). In this sense rinderpest may well have assisted the capital-accumulation of the few. Those who had the resources to replenish their stock may have found themselves in a better bargaining position when hiring out their draught animals. Coterminously, increasing rates of hire may have induced those cultivators who did not possess, and who previously used, draught animals to resort to manpower rather than draughtpower in ploughing their fields. These suppositions amount to a resuscitation of the final proposition in the chain reaction hypothesis on a highly qualified and conjectural basis, a basis which also differs from the chain reaction hypothesis in the direct and predominant importance it attaches to the adverse effects of rinderpest.

IX

With its emphasis on a process of chain reaction, the hypothesis presented by de Silva and Hewavitharana can be compared to a monolithic scaffolding raised brick upon brick, plank upon plank. As argued in this study, its very foundations, the unspoken premises that buffaloes existed in large numbers and were used extensively in the Central Highlands, are shaky. The proposition that the waste lands legislation and the expansion of plantations led to widespread expropriation of lands that were used by the villages is also open to challenge: expropriation was much less than normally

141. *SP XX of 1881*, Appendices, pp. 3, 5, 15, 17.

supposed (though far from non-existent), and there was a coterminous extension of highland cultivation in smallholdings by the indigenous inhabitants (Kandyans and newcomers to the Highlands) which the theory of large-scale expropriation seems wholly to neglect. Where one is speaking in general terms, the proposition that there was inadequate land available for the pastoral needs of the villages is also untenable. Again, it is evident that the outbreaks of rinderpest and other cattle diseases from time to time were largely responsible for a high rate of mortality among cattle and buffaloes; and that any reduction in the number of cattle and buffaloes cannot by any means be described as a gradual and steady decline that was largely due to a scarcity of pasture. Finally, the statistics (admittedly uncertain) that have been deployed reveal that the total number of draught animals in the Central Highlands did not decline significantly. It is accepted, however, that the retrogression in techniques implied in the replacement of draughtpower by manpower *may* have occurred to a certain extent in some localities, primarily because of the adverse impact of rinderpest.

However plausible and inviting it may seem, the chain reaction hypothesis cannot be sustained in its present form. The planks creak, rattle and totter. Some even crash down.

Urbanization in Ceylon, 1946 - 63+

GAVIN W. JONES & S. SELVARATNAM

Introduction

The growth of population in Ceylon accelerated sharply during the early postwar period due to a precipitate decline in the death rate during the 1946-48 period followed by a slower decline during the 1950's. During the entire period to which this paper refers, population growth was very rapid, as Table 1 demonstrates. Between 1946 and 1963, the population increased by 55 percent. During the 1960's, the rate of population growth has slackened somewhat, as the birth rate has been declining and the fall in the death rate has slackened. However, the growth rate in 1968 (2.3 percent) was still sufficient, if maintained, to double the population in 30 years.

Table 1: **Population Growth in Ceylon, 1946-63**

Year	Population ('000)	Average annual increase (%)	Birth rate (per 1,000)
1946	6,854		38.4
1953	8,290	2.8	39.4
1958	9,362	2.4	35.9
1963	10,646	2.6	34.6

Note The 1958 population figure is a little lower than the Registrar-General's official figure, because the Registrar-General's series was not adjusted to take account of the actual 1963 Census population. The 1958 and 1963 birth rates are slightly higher than the official figures, for the same reason.

At the beginning of the period under discussion, Ceylon's population was predominantly rural: only 16.7 percent of the people were living in towns of more than 2,000 inhabitants. This percentage had risen very little since 1921, when it was 14.2 percent. This does not mean that the towns had not been growing quite rapidly: the urban population grew by 74 percent between 1921 and 1946; but most of the increase must have been contributed by natural increase of the urban population itself, not by migration from the rural areas.

Problems in Analyzing Urbanization in Ceylon

In many countries, there is an important obstacle to obtaining a clear picture of urbanization, namely that urban populations as measured in censuses are delimited by the official definitions of urban places required for administrative purposes. Two difficulties result. One is that boundaries may not accurately delimit the urban population as defined in demographic, occupational, sociological or morphological terms, (or perhaps they used to, but have not been

+ The authors wish to thank Mr. A. T. P. L. Abeykoon and Miss A. J. Gooneratne for their assistance in the preparation of this paper, Mr. N. Kumara Deva of the Survey Department for supplying a map on which Map 1 is based, and Mr. N. Kandiah, Operations Manager, Ceylon Transport Board, for information on commuter traffic.

altered to keep pace with the changing character and extent of the urban areas). The other is that clusters of population that would qualify as "urban" according to definitions based on population density, occupational structure or some other criterion may simply never have been granted urban status in administrative terms, and are therefore included in the rural population by the census.

Such problems are often not taken very seriously in academic studies of urbanization based on census data, though they can greatly distort the picture obtained. How much do they effect the study of urbanization in Ceylon?

In Ceylon, urban status is conferred by the Minister of Local Government for local administrative purposes and the classifications adopted are, in ascending order, Town, Urban and Municipal Councils. Towns can graduate from one status to the next. There are no definite criteria to guide the Ministry in its decisions. According to the Department of Town and Country Planning, ministerial discretion in the creation of new Town Councils, in the absence of such criteria, seems to be based on "the nature of the development . . . . . (of the locality) . . . . or its amenities and urban character."[1] These are not defined and are vague, but apparently, accessibility of the locality and the availability of electricity are given some weight. There is no question that personal and political considerations are also of some importance in the creation of new Town Councils, the upgrading of Town Councils to the higher status of Urban Councils, and the upgrading of Urban Councils to Municipal Councils.

Between 1953 and 1963, a number of new Town Councils were created in Ceylon, and more have been created since 1963. The 1963 populations of five of those created after 1953 exceeded 20,000. With only one exception, these were in close proximity to the Colombo municipal area, and their classification as Town Councils was a belated recognition that many areas surrounding Colomo are assuming suburban status. Some of the other new Town Councils, however, include substantial rural areas, and more than half of their workforce is engaged in agriculture.

There has undoubtedly been some exaggeration of the level of urbanization as a result of the bloated areas of these Town Councils; but the more serious problem is almost certainly the underestimation of urbanization resulting from the existence of urbanized areas that have not yet been awarded Town Council status. The Department of Town and Country Planning states that there are many "urbanized villages" with populations exceeding 5,000, with developed socio-civic institutions, transport facilities, and electricity supply, which indeed are comparable to most Town Councils in terms of their urban character, but which have not been accorded Town Conncil status. Inclusion of such towns could alter the picture of urbanization to some extent, but as discussed later in the paper, probably not enough to alter our major findings regarding trends.

1. "Urbanization in Ceylon", unpublished report of the Department of Town and Country Planning (mimeo.).

TABLE 2: **Number of Towns in Ceylon by Size of Population, 1953 & 1963 : Unadjusted Data**

Size of Town in Terms of Population	NUMBER OF TOWNS			POPULATION		
	1946	1953	1963	1946	1953	1963
2,000 - 5,000	24	20	21	79,325	66,684	74,681
5,000 - 9,999	17	13	23	129,326	95,750	158,280
10,000 - 19,999	12	21	21	164,226	275,789	278,153
20,000 - 49,999	5	6	18	178,595	154,727	487,986
50,000 - 99,999	4	6	5	221,388	383,038	379,265
100,000 and over	1	1	2	368,700	426,127	622,578
All Towns	63	67	90	1,141,560	1,402,115	2,000,943

SOURCE: Department of Census & Statistics, unpublished data from 1963 Census; 1953 Census; Annual Reports of the Registrar-General's Department, various years, Table XI.

Notes

•In 1946 and 1953 only the populations of Municipal and Urban Council areas were published in the Census, whereas in 1963 Town Couucil areas were also included. However, in the table above, the populations of Town Councils in 1946 and 1953 have been included, since their populations at the census dates are available from the Registrar-General's Reports, Table XI. The 1946 Town Council populations are *estimates* by the Registrar-General's Department. Figures for some other towns in 1946 whose boundaries had been extended between 1946 and 1953 are estimates of the 1946 population within the 1953 boundaries.

*Wattala-Mabole and Peliyagoda were separate towns in 1963 but constituted only one town in 1946 and 1953. We have split it into two in 1946 and 1953 according to the proportions of the total population in 1963. Hikkaduwa and Dodanduwa were separate towns in 1953 and 1963 but constituted only one town in 1946. We split it into 2 in 1946 according to the proportions of the total population in 1953.

An important aspect of any study of urbanization is the trend in the degree of primacy of the principal city in the country. This can indicate a great deal about the pattern of economic development (or lack of it) in the country. In Ceylon, Colombo is by far the largest city. As indicated later in the paper, metropolitan Colombo had a population about 11 times as large as that of Jaffna, the second largest town, in 1963. The Colombo District (which admittedly has a population more than double that of metropolitan Colombo) contains nearly

80 percent of all the industrial establishments in Ceylon.[2] However, the official municipal boundary gives a totally misleading picture of the trends in Colombo's metropolitan population over time, because there is an acute shortage of land for housing or industrial sites within the municipal area, and most of the growth during the last decade has taken place in the suburban towns immediately surrounding Colombo. That the function of this growth is largely one of providing commuter suburbs for Colombo is clearly indicated by the marked increase in traffic on some of the bus routes linking these areas to Colombo.[3] Happily, there is a complete ring of such towns around Colombo, and by adding their populations to that of the Colombo Municipal Council at the different census dates, it is possible to obtain a useful approximation of the trends in the metropolitan population.

Trends in Number of Towns and Level of Urbanization, 1946-63: Unadjusted Data

As indicated in Table 2 above, the number of towns with populations exceeding 2,000 grew from 67 to 90 between 1953 and 1963, after increasing only very slowly between 1946 and 1953. The increase was primarily caused by the creation of new Town Councils. Whereas only two such councils had apparently been created between 1946 and 1953, 15 Town Councils were created in the subsequent decade, four with 1963 populations between 2,000 and 5,000, six with 1963 populations between 5,000 and 10,000 and five with 1963 populations between 20,000 and 33,000.

Table 3 shows that the level of urbanization according to the unadjusted census data rose very slowly between 1946 and 1963 : by only two to three percentage points, whether defined as the proportion of total population living in towns above 2,000, 10,000 or 20,000 population. According to this unadjusted data, the urban population grew marginally faster than the rural population between 1946 and 1953, but rather more rapidly in the decade to 1963. The population living in the larger towns (population above 20,000) grew more rapidly, and consequently the share of these towns in the total urban population increased from 67 percent in 1946 to 74 percent in 1963. However, population growth in Colombo City was quite slow, and Colombo's share of both the total Ceylon population and the urban population declined steadily.

2. These are establishments that have been registered with the Department of industries.

3. The following table shows the marked increase in passenger carried between 1959 and 1963 on some of the lines linking commuter areas to Colombo. Route No. 101 (Lunawa - Ja-Ela) is linked service, giving express bus services to areas both to the north and south of Colombo. The 1963 traffic totals would probably be higher still were it not for a one-month strike in January 1963.

Route Number	Service	Passenger Carried 1959	Passenger Carried 1953	Percentage Increase 1959 - 63
101	Lunawa - Ja-Ela	5,185,234	11,752,835	127
114	Pita Kotte - Pettah	5,907,770	7,138,639	21
120	Horana - Colombo	2,201,949	4,848,507	120
260	Hendala - Colombo	2,368,886	2,890,412	--

SOURCE: Ceylon Transport Board.

TABLE 3 : **Ceylon – Unadjusted Data + on Urbanization**

	1946	1953	1963	1946–53	1953–63
% of total population in towns above 20,000	11.2	11.6	14.0		
% of total population in towns above 10,000	13.6	14.9	16.6		
% of total population in towns above 2,000	16.7	16.9	18.8		
Urban population (Towns 2,000+) ('000)	1,142	1,402	2,001		
Rural population ('000)	5,712	6,888	8,645		
% increase in urban population (average annual)				3.0	3.6
% increase in rural population (average annual)				2.7	2.3
% increase in population of towns above 20,000 (average annual)				3.3	4.4
% increase in Colombo city population (average annual)				2.1	1.8
% Distribution of the urban population					
Towns 2,000 – 5,000	6.9	4.8	3.7		
,, 5,000 – 10,000	11.3	6.8	7.9		
,, 10,000 – 20,000	14.4	19.7	13.9		
,, 20,000 – 50,000	15.6	11.0	24.4		
,, 50,000 – 100,000	19.4	27.2	19.0		
,, over 100,000	32.3	30.3	31.1		
Total	100	100	100		
Cumulative % distribution of the urban population					
Towns over 100,000	32.3	30.3	31.1		
,, ,, 50,000	51.7	57.5	50.1		
,, ,, 20,000	67.3	68.5	74.5		
,, ,, 10,000	81.7	88.2	88.4		
,, ,, 5,000	93.0	95.0	96.3		
,, ,, 2,000	100.0	100.0	100.0		

+ No estimate is included of the 1946 and 1953 populations of Town Councils created between 1953 and 1963.

Trends in Number of Towns and Level of Urbanization, 1946-63: Adjusted Data

There are two reasons why the trends shown in the previous section must be queried: the first is that the trends in urbanization in the two periods (1946-53 and 1953-63) are somewhat distorted by the official recognition between 1953 and 1963 of many towns that were already quite sizeable before 1953; the second is that the Colombo City boundary excludes virtually all the suburban commuter areas that were tending to grow much faster than the city population.

In Table 4, a rough adjustment has been made for the first source of distortion by including estimates of the 1953 and 1946 populations of those Town Councils created after 1946. The populations of Town Councils created between 1953 and 1963 were projected backwards to 1953 and 1946 on the assumption that in both 1953-63 and 1946-53 periods, their rate of population increase was a third higher than that of the other towns that were in their town size class in the terminal year of the period under consideration. The reasoning behind this assumption was that a town probably had a better chance of being awarded Town Council status if its growth was unusually rapid, and that there is no question that some of the new Town Councils (especially those near Colombo) were growing more rapidly than other towns of comparable size.

TABLE 4: **Number of Towns in Ceylon by Size of Population 1946, 1953, 1963**
(adjusted by including estimates of 1946 and 1953 populations of towns created between 1953 and 1963)

Size of town in terms of population	NUMBER OF TOWNS			POPULATION		
	1946	1953	1963	1946	1953	1963
2,000 - 5,000	32	29	21	104,919	99,128	74,681
5,000 - 9,999	19	13	23	147,319	95,750	158,280
10,000 - 19,999	17	25	21	230,582	339,470	278,153
20,000 - 49,999	5	7	18	178,595	177,145	487,986
50,000 - 99,999	4	6	5	221,388	303,038	379,265
100,000 and over	1	1	2	368,700	426,127	622,578
All Towns	76	79	90	1,251,503	1,520,658	2,000,943

SOURCE: As for Table 2.

Notes: *As for Table 2.
*As for Table 2.
*The populations of those Town Councils that were created between 1953 and 1963 were projected backwards to 1953 and 1946 on the assumption that in both 1953-63 and 1946-53 periods, their rate of population increase was 1/3 higher than that of the other towns in their town size class.

The result of this adjustment is to raise the number of towns, and the urban population, in 1946 and 1953, and to yield a slower rate of growth of the urban population during the period.[4] Indeed, according to this adjusted data, the urban population grew at the same rate as the rural between 1946 and 1953, and only marginally faster than the rural in the decade to 1963. In the entire 17 year period, the percentage urban increased only from 18.3 to 18.8 (see Table 5).

Our adjustments make very little difference to the proportion of population living in the larger towns (above 20,000), and this proportion *does* show a more marked increase - from 11.2 percent in 1946 to 11.9 percent in 1953 and to 14.0 percent in 1963. The proportion of the total *urban* population living in such towns also rises - from 61 percent in 1946 to 74 percent in 1963. Given the slow growth of the Colombo City population, the outstanding trend is the increase in the share of the urban population living in towns in the 20,000 to 100,000 size range - from 32 percent in 1946 to 43 percent in 1960 (despite the loss of Dehiwela - Mt. Lavinia to this size class through passing the 100,000 population limit). This increase results partly from the entry of new towns into this size range and partly from the above-average growth of some towns, notably those that are growing as commuter suburbs of Colombo (e. g. Kotte, Peliyagoda) and those that have a role to play as service centres for rural areas that are rapidly increasing in population and production (e. g. Anuradhapura, Badulla, Matale).

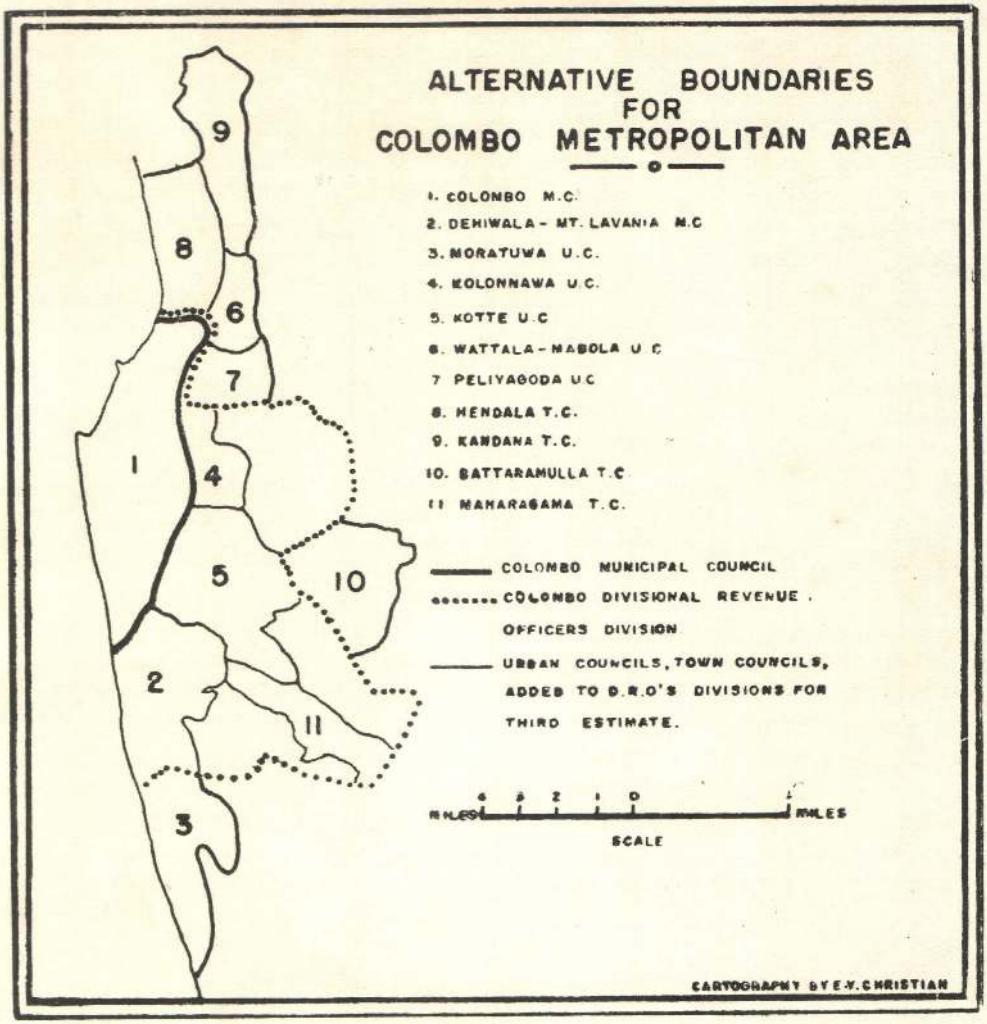
As mentioned earlier, Colombo City grew more slowly than Ceylon's population as a whole. But, as indicated in Table 6, alternative estimates of the growth of the Colombo metropolitan area give a rather different picture, because they include surrounding areas that have been growing more rapidly than the rather heavily built-up city area. The ideal estimate of the growth of the metropolitan population would perhaps require a moving boundary, to incorporate localities into the metropolitan area at the time they reached suburban status in terms of criteria such as density, occupational structure and commuting patterns. Failing this, however, the use of a fixed boundary for the metropolitan area that appropriately defines the metropolitan area as of the terminal point of the study, although it tends to exaggerate the metropolitan population at the beginning of the period and hence to ***understate*** its rate of growth, brings us a step closer to reality.

Two alternative estimates of the metropolitan population have been used in this study. One is the population of the Colombo Divisional Revenue Officer's (D.R.O.'s) Division, the other is the population of the D.R.O's Division plus a few adjoining Urban Councils and Town Councils that are in reality, suburban areas of the Colombo metropolis. As shown on Map 1,

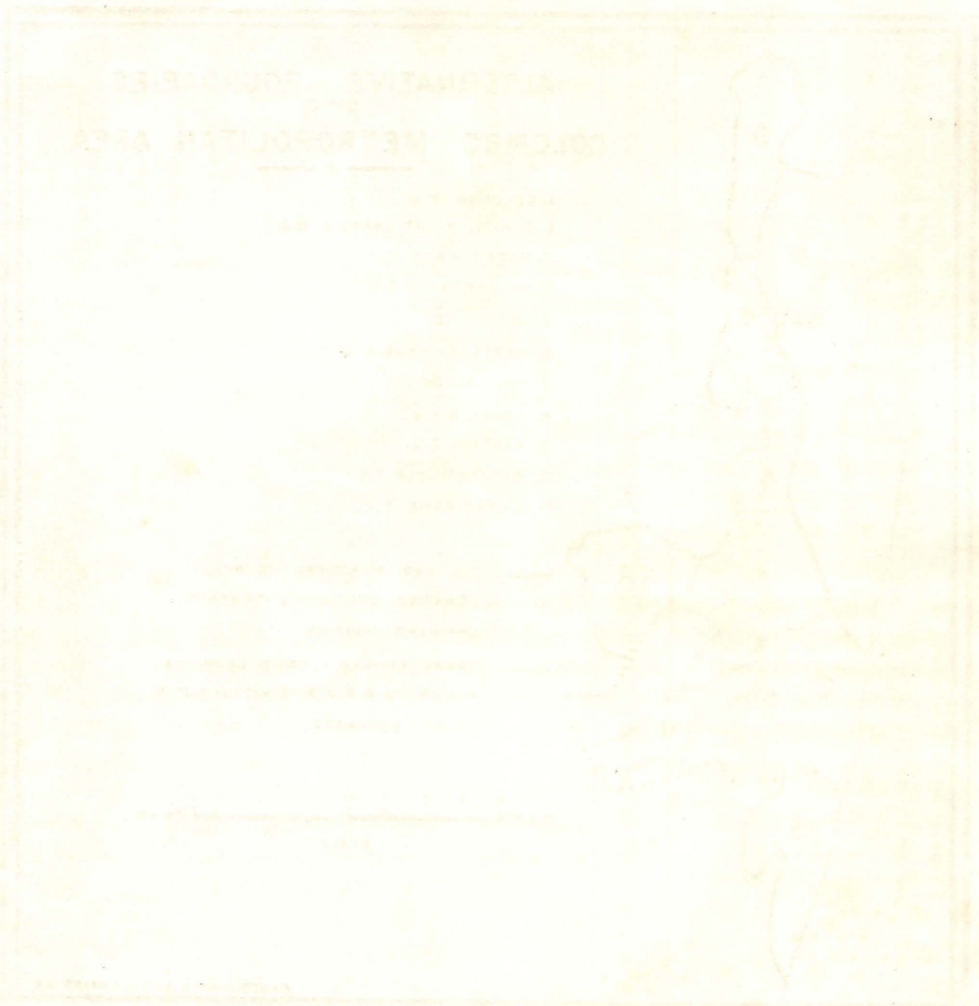
4. If we had assumed that the new Town Councils had been growing at the same rate as other towns in their size class, the rate of growth of the urban population would appear to be slower still.

TABLE 5 : **Ceylon – Adjusted Data on Urbanization**

	1946	1953	1963	1946to53	1953to63
% of total population in towns above 20,000	11.2	11.9	14.0		
% of total population in towns above 10,000	14.6	16.0	16.6		
% of total population in towns above 2,000	18.3	18.3	18.8		
Urban population (Towns 2,000+) ('000)	1,252	1,521	2,001		
Rural population ('000)	5,602	6,769	8,645		
% increase in urban population (average annual)				2.8	2.8
% increase in rural population (average annual)				2.8	2.4
% increase in population of towns above 20,000 (average annual)				3.6	4.2
% increase in Colombo city population (average annual)				2.1	1.8
% increase in Colombo metropolitan population (average annual)				3.4	2.8
% Distribution of the urban population					
Towns 2,000 – 5,000	8.3	6.5	3.7		
,, 5,000 – 10,000	11.8	6.3	7.9		
,, 10,000 – 20,000	18.4	22.3	13.9		
,, 20,000 – 50,000	14.3	11.6	24.4		
,, 50,000 – 100,000	17.7	25.2	19.0		
,, over 100,000	29.5	28.0	31.1		
Total	100	100	100		
Cumulative % distribution of the urban population					
Towns over 100,000	29.5	28.0	31.1		
,, ,, 50,000	47.2	53.2	50.1		
,, ,, 20,000	61.5	64.8	74.5		
,, ,, 10,000	79.9	87.1	88.4		
,, ,, 5,000	91.7	93.4	96.3		
,, ,, 2,000	100	100	100		



Map-1



the D. R.O.'s Division incorporates large areas to the east and south of the city; our second alternative estimate includes, in addition an area to the north of the city, plus Battaramulla T.C. to the east and Moratuwa U. C. to the south. Although the latter is located at a fair distance from the city centre, it is joined to Colombo by unbroken urban development and is served by frequent commuter bus and train services.

Neither of the two alternative estimates of the Colombo metropolitan area are ideal, but the second estimate does come close to including all of Colombo's "commuting suburbs" as of 1963.[5] Both estimates give a similar rate of growth for the metropolitan population, a rate well above that for Colombo city

TABLE 6 : **Alternative Estimates of Trends in Colombo Metropolitan Population, and its share of Urban and Total Population of Ceylon**

	1946	1953	1963	%increase 1946-53 (Av.ann.)	%increase 1953-63 (Av.ann.)
Colombo City	368,700	426,127	511,644	2.1	1.8
Colombo Divisional Revenue Officer's Division (1)	532,212	656,152	846,401	3.0	2.6
Colombo D.R.O.'s Division + surrounding towns (2)	621,463	783,213	1,036,141	3.4	2.8
Share of total urban population (3)					
Colombo City	29.5	28.0	25.6		
Colombo D.R.O.'s Division	42.5	43.1	42.3		
Colombo D.R.O.'s Division + surrounding towns	49.6	51.5	51.8		
Share of total Ceylon population					
Colombo City	5.4	5.1	4.8		
Colombo D.R.O.'s Division	7.8	7.9	8.0		
Colombo D.R.O.'s Division + surrounding towns	9.1	9.4	9.7		

(1) In 1946, was called Colombo Mudaliyar's Division. Area in all years was 42 sq. miles. Area includes Colombo Municipality plus the Nugegoda food control area, or more precisely, Colombo Municipality plus Kolonnawa U. C., the area that is now Kotikawatta T. C., Kotte U. C., Maharagama T. C., Dehiwela-Mt. Lavinia M. C. and Kotte-Galkissa V. C.

(2) Includes, in addition to the D. R. O.'s division, Hendala T. C., Kandana T. C., Wattala-Mabole U. C., Peliyagoda U. C., Battaramulla T. C. and Moratuwa U. C.

(3) Using the adjusted figure for urban population.

5. Additional areas that might have been included are Ja-Ela urban council, to the north of Kandana T. C., and the areas adjoining Peliyagoda V. C. and Battaramulla T. C. that were formed into Town Councils in 1964; Dalugama T. C., Kelaniya T. C. and Mulleriyawa T. C. However, 1963 populations of these three T. C.s are not available.

As indicated in Table 6, the Colombo metropolitan population has been increasing slightly faster than the total Ceylon population, and also a little faster than the remainder of the urban population. Hence its share of both the total and urban population of Ceylon has risen very slightly. Our refined estimates, then, although they correct the misleading impression that Colombo's share of Ceylon's population has been declining, certainly do not point to any marked "metropolitanization" of Ceylon's population. Nor do they point to any substantial net migration inflow: the rate of natural increase has almost certainly been lower in the metropolitan area than in the rest of the country, but possibly not very much lower, because the lower birth rate in Colombo is probably offset to some extent by a lower death rate.[6]

There has not yet been any detailed analysis of the migration data from the 1963 Census. But what has almost certainly happened is that the commuter suburbs circling Colombo city have, on balance, gained population from two migration streams, one originating in crowded Colombo city and the other in the rural areas and to a much lesser extent the towns away from Colombo. (This was certainly the pattern revealed by analysis of migration data in the 1953 Census).[7] The net gain in the population of the suburbs has done little more than offset the net loss in the population of Colombo city, with the result that the metropolitan area has barely increased its share of the country's population.

Table 7 shows the Colombo metropolitan population as a multiple of the population of Jaffna, the second largest town in Ceylon. The data must be interpreted cautiously, since we have not been able to adjust for possible extension of Jaffna's built-up area outside the municipal boundaries. As they stand, the data show a slight increase in Colombo's primacy, which is in contrast to a fall in the degree of primacy that would be indicated if the Colombo city population were used in the calculation.

6. Unfortunately, although birth and death rates are given for residents of both rural and urban areas in the Registrar-General's Report (Table XII), the data are not reliable due to mis-reporting of place of residence, and it would be unwise to base any conclusions on them. However, fairly good indications of fertility differentials between urban and rural areas are given by the child - woman ratios (ratio of children 0-4 to women 15-44) and data on children ever born to women in the child bearing ages. These show a more substantial difference between rural and urban fertility. Child - woman ratios in rural areas of Ceylon were consistently about 20 percent higher than the urban areas of the Colombo district (-1, 19 and 23 percent higher in 1946, 1953 and 1963 respectively), which in turn were almost the same as in urban areas for the country as a whole. In 1946, the number of children ever-born per woman 15-44 years was 38 percent higher in rural than in urban areas. Part of these fertility differences can be explained by earlier marriage in the rural areas (Sarkar op cit., p. 112).

7. See W. Percy T. Silva and Kusuma Gunawardena, "The Urban Fringe of Colombo: Some Trends and Problems Concerning its Land Use", (mimeographed), Ceylon Studies Seminar 69/70 Series, No. 3, University of Ceylon; see also S. Vamathevan, *Internal Migration in Ceylon 1946-53*, Monagraph No. 13, Department of Census and Statistics, Ceylon, 1961.

Table 7: **Colombo Metropolitan Population as a Multiple of the Population of the Second Largest Town (Jaffna).**

Estimate used for Colombo population	1946	1953	1963
Colombo D.R.O.'s division	8.5	8.5	8.9
Colombo D.R.O.'s division + surrounding towns	9.9	10.1	10.9

Reasons for slow rate of urbanization in Ceylon

Ceylon appears to be following the recent Indian pattern in its slow rate of urbanization. However, whereas India experienced a "spurt" in urbanization between 1931 and 1950,[8] Ceylon has had little increase in urbanization throughout the present century.

Explanations for the slow rate of urbanization since World War II are not difficult to find. A major reason is that the postwar period, and particularly the interval between the 1953 and 1963 Censuses, was one of very slow economic growth; indeed, during the early 1960's, only Indonesia and Burma of all the countries in the ECAFE region had as slow a rate of economic growth.[9] Tea production and exports increased substantially during the period, but exports of rubber declined and of coconut products did not increase much. The terms of trade turned against Ceylon, and increasingly severe import duties had to be imposed in an attempt to stem the increasing deficits in the balance of payments, culminating in the imposition of quantitative import restrictions in 1961 that led to a 20 percent reduction in the physical quantity of imports. As a result of the relatively small increase in the volume of international trade in the 1946-63 period there was no great boost to the transport system, including port activities in Colombo, such as might have caused a rapid growth of urban-based employment. The development of manufacturing industry, hampered by the small domestic market, was also very slow, and the growth of tourism was held back by the lack of hotel accommodation.

On the other hand, there was a substantial amount of new land opened, primarily for rice cultivation for the domestic market, and this enabled increasing numbers of farmers to be accommodated on the land, and reduced the tendency for population growth in rural areas to result in urbanward migration. It must be borne in mind, too, that the rate of natural population increase in rural areas was rather less rapid than in many areas of Asia where rural-urban migration has been much greater.

8. For a discussion of the Indian experience, see Ashish Bose, "*Six Decades of Urbanisation in India, 1901 - 1961*", The Indian Economic and Social History Review, Vol. II, No. 1, Jan. 1965.

9. United Nations, *Economic Survey of Asia and the Far East, 1967*. Table II - 1. Per capita G. N. P. barely increased at all in Ceylon between 1960 and 1965.

In many countries of Asia, migration to the cities has been boosted by a flow of refugees seeking security from the unrest and instability of the rural countryside. This factor was not operative in Ceylon, except possibly to a very small extent around the time of the race riots in 1958.

One might also speculate that the tight family structure in Ceylon inhibits the movement of single young men and women to the towns to a greater extent than in some other Asian countries.

It is also noteworthy that Ceylon has a better network of facilities such as health and education services and electricity supply throughout the country than most Asian countries, and consequently there is not such a strong incentive for urbanward migration to make use of these facilities. However, the quality of health and education services is higher in the urban areas, and this is recognized by the rural population.

One might well query whether urban, as opposed to rural residence has much meaning in relation to the process of socio-economic development in Ceylon. Ceylon is a small country with a fairly well-developed urban hierarchy, and the great bulk of the rural population lives within 30 miles of a town of 20,000 or more people and has relatively frequent contacts with it. Many rural areas are well-served with amenities such as electricity, schools and health facilities. Moreover, the settlements on the larger tea and rubber estates, while not considered to be urban, certainly perform many urban functions for their inhabitants. In general, there is no question that the rural/urban dichotomy is less sharp in Ceylon than in many countries of Asia.

The Future

Between 1963 and 1968 the population of Ceylon increased by 1.4 million. A recent set of population projections for Ceylon[10] indicate that in the next 20 years, the population will increase by a further 8.3 million if fertility remains at 1968 levels, and by 5.2 million if fertility declines rapidly to western levels by 1988. In the higher-fertility case, then, the urban population will increase by 1 8 million in the 25-year period 1963-88 if the percentage urban remains constant, and the Colombo metropolitan population will increase from 1.04 million to 1.97 million during the same period if it merely maintains its 1963 percentage of the total population.

However, it appears highly likely that both urbanization and metropolitanization will occur during the next 20 years. In the absence of urbanward migration, the rural labour force will increase by 75 to 80 percent during the 20 years following 1968, whereas even if the ambitious Mahaveli Ganga scheme is developed according to schedule and some additional opening of new land takes place, the land under cultivation is likely to increase by only

10. S. Selvaratnam, Nicholas H. Wright and Gavin W. Jones, *Population Projections for Ceylon*, 1968 - 98, Ministry of Planning and Economic Affairs, Colombo, 1970.

about 20 percent. Thus the man / land ratio will rise unless substantial movement to the towns occurs. It is not entirely clear whether the new rice technology will require an increase in labour inputs per acre, but it seems unlikely that the entire increase in the rural labour force can be absorbed in this way.

Future trends in urban-based employment also remain uncertain. There is no indication that the volume of overseas trade will increase substantially during the next few years at least, since production of Ceylon's major exports is not increasing rapidly, tight import restrictions will be maintained and the major effort will be in the direction of import substitution. Expansion of the service sector will be slow unless growth of the other economic sectors is rapid; for example, the current aim is merely to maintain, not to substantially expand, the coverage of health and education services. The main hopes for a rapid expansion of non-agricultural employment must be pinned on the development of manufacturing and tourism; developments here will carry over into the construction and service sectors.

The most reasonable prognosis is for a slow increase in the proportion of Ceylon's population living in urban areas. A rapid increase is likely only if the rural economy were to fail in reaching the ambitious targets that have been set for it (in which case urban unemployment would probably be aggravated), or if industrialization grows very rapidly.

APPENDIX Ceylon: Population of Principal Towns, 1946, 1953 and 1963

	1946	1953	1963	% increase 1946 - 53 (Average annual	% increase 1946 - 53 Absolute	% increase 1953 - 63 (Average annual)
Colombo	368,700†	426,127	511,644	2.1	20.1	1.8
Dehiwela-Mt. Lavinia	56,881	78,213	110,934	4.7	41.8	3.5
Jaffna	62,543	77,181	94,670	3.0	22.6	2.1
Moratuwa	50,698	60,215	77,833	2.5	29.2	2.6
Kotte	41,600†	54,381	73,324	3.9	34.8	3.0
Kandy	51,266	57,200	68,202	1.6	19.2	1.7
Galle	49,009	55,848	65,236	1.9	16.8	1.6
Negombo	32,479	38,628	46,908	2.5	21.4	2.0
Trincomalee	32,507	26,356	34,817	2.9	32.1	2.8
*Battaramulla-Thalangama	—	—	32,775	n.a.	n.a.	n.a.
Matara	23,000†	27,641	32,541	2.7	17.7	1.6
Anuradhapura	12,314	18,390	29,426	5.9	60.0	4.8
*Maharagama	—	—	28,599	n.a.	n.a.	n.a.
Kolonnawa	13,815	21,384	27,460	6.4	28.4	2.5
Badulla	13,387	17,043	27,115	3.5	59.1	4.7
Kalutara	18,965	20,223	25,260	1.0	24.3	2.2
Matale	14,090	17,244	25,609	2.9	48.5	4.0
Panadura	18,400†	20,395	23,967	1.5	17.5	1.6
Peliyagoda	7,686††	9,900††	23,247	3.7	134.8	8.9
Batticaloa	13,037†	17,439	22,986	4.2	31.8	2.8
*Kehelwatta	—	—	22,936	n.a.	n.a.	n.a.
Ratnapura	12,600†	16,598	21,592	4.0	30.1	2.7
*Hendala	—	—	21,531	n.a.	n.a.	n.a.
Kurunegala	13,372	17,505	21,179	4.0	21.0	1.9
*Kandana	—	—	20,038	n.a.	n.a.	n.a.

* Town Council created between 1953 and 1963.

† Estimated population within 1953 boundaries.

†† The populations of Peliyagoda and Wattala-Mabole were not separated at the 1946 and 1953 Censuses. We have separated them according to their share of the total populations of Peliyagoda and Wattala-Mabole in 1963.

The Rulers and the Ruled in British Ceylon: A Study of the function of petitions in Colonial government

L. A. WICKREMERATNE

The Mechanism of petitions

In the study of British rule in Ceylon the close consideration of the attitudes of the ruled towards the rulers is of paramount importance.

These attitudes are to some extent reflected in the reports of the government agents who ruled in the various provinces. But the existence of a powerful hierarchy of native officials constantly intervening between a government agent and the people as well as general considerations of empathy, warrant a search for evidence dealing more directly with the people.

Petitions in this sense are of considerable value. This article is based largely on a study of petitions relating to the North Central and Southern provinces in the last quarter of the nineteenth century. As a preliminary to a more extended study it was necessary to consider first not only a reasonably limited period of time but also the areas with broadly similar problems. Groups of petitions dealing with the Chilaw and Puttalam districts - though less useful - have also been examined.

Petitions fell into certain broad categories. Some were sent to a government agent of a province or to his assistant. Secondly there were the petitions addressed directly to the Governor. Thirdly petitions were also sent to the Colonial Office. For the particular purpose of this article the last category may be ignored. It may be also said that petitions to the Colonial Office were few and far between.[1] They were noteworthy for the great pains taken by the governor concerned to explain those policies of government even peripherally touched upon by the petition.[2]

Petitions to the governor did not necessarily deal with subjects of graver importance than those received by a government agent. Indeed in either category were found matters pertaining to land problems, irrigation,

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1. Two types of petitions sent to the Colonial office have been excluded as they were in no way relevant to the issues discussed in this article. The first encompassed a variety of matters such as pensions, salaries and questions of leave which concerned the European officials serving in Ceylon. The second consisted of numerous memorials sent by groups of inviduals and associations to the Secretary of State for the Colonies.

2. See C. O. 54/463, for despatch no. 36 of 2 February 1871, from Sir Hercules Robinson to the Earl of Kimberley, for petition of Don Hendrick Tilakaratne.

tax assessments and the offences of local officials.[3] It was nevertheless true that often petitions were sent to the Governor because the petitioner believed that he had failed to get satisfaction from the Government Agent. Sometimes even though actual experience did not justify such an attitude, certain petitions seem to have from the start had a strong prejudice against making submissions to the government agent.

However, the method adopted in dealing with petitions sent to the Governor made differences between the two categories of petitions even less discernible. Petitions to the Governor were in effect handled by the Colonial Secretary's Department.[4] It was invariably the Colonial Secretary's practice to refer these petitions for report to the Government Agent concerned. Much of the investigations were therefore made at an essentially provincial level. It will be seen that often it was at this stage that the fate of a petition was really decided.

This tendency did not however reduce the importance with which the Colonial Secretary's Department viewed the petitions that it received. Certain standing instructions given to the government agents ensured that they would not deal cursorily with petitions referred to them for report by the Colonial Secretary. For one thing a government agent was required to send back a petition with his report within eight days.[5] Failure to do so could and did elicit sharp strictures from the Colonial Secretary. In 1898, when evidently an effort was made to enforce the existing regulations, the Colonial Secretary ordered the government agents to quote details of previous correspondence when reports were being submitted on petitions.[6] On receiving this circular, Evan Byrde who was the Government Agent of the North Central Province at the time decided 'to take careful note of it'.[7] In the following year however Byrde himself was reminded that certain petitions which had been sent to him had 'remained thirty days or upwards unreported on'. He was ordered to submit the reports within ten days.[8]

3. See files under lots 27 and 41. In particular see files nos. 27/271to 27/274 Department of National Archives, Gangodawila.
4. Sometimes - especially when matters of principle were involved - petitions were submitted to the Executive Council by the Colonial Secretary. This was more likely to happen in the immediate aftermath of an important ordinance when questions unanticipated by those who drafted it, constantly arose. The unsually large number of petitions which followed the enaction of the Service Tenures Ordinance of 1870 in effect helped the government to issue important modifying instructions to the government agents with regard to its implementation. See Minutes of the Executive Council, 17 July 1871. C. O. 57/55. *Ibid.* 15 August 1871. Also C. O. 57/60 for Minutes of the Executive Council, 1 July 1870
5. Dickman, C. *The Ceylon Civil Service Manual.* (1833 Ed.) p. 299 ff.
6. Circular no. 204. 20 October 1898. 41/492. D. N. A.
7. *Ibid.* Evan Maberly Durant Byrde was appointed the Government Agent to the North Central Province in 1895. He was a comparatively senior civil servant whose career in Ceylon had begun in 1867.
8. Colonial Secretary to the Government Agent, Anuradhapura, 24 March 1899. 41/492 D. N. A.

In reporting on petitions, usually a government agent's extensive knowledge of local affairs enabled him to explain fairly fully why he had taken a particular course of action or to expose attempts sometimes made in petitions to deceive the government. When certain Muslims in Anuradhapura petitioned the Governor that they should be exempt from the payment of the grain tax on the ground of poverty, the Government Agent replied that the inhabitants who lived in the town of Anuradhapura, particularly the Muslim traders who had signed the petition, could well afford to pay the tax.[9] He also made much of the point that the chief petitioner was well known for his affluence and was really an owner of extensive paddy fields.[10] A certain Muslim cultivator, also of Anuradhapura, had prayed that he be exempted from the payment of irrigation rates as his crops had been ruined due to the failure of the officials to supply him with water.[11] In his report the Government Agent pointed out that, although the Yoda Ela which ordinarily provided water to numerous cultivators had been closed on account of certain repairs at the time referred to by the petitioner, in anticipation of the difficulties which cultivators would have to face, ample water was made available from the Tissa Wewa.[12] The Government Agent remarked in addition that irrigation rates were levied for the maintenance of tanks and canals rather than for the actual quantities of water supplied at any given time.

In circumstances such as these, for all the fervour with which a petition might have been written, the Colonial Secretary had no alternative other than to reject it. Arachchilage Appuhamy and a number of other villagers of Keledivulwewa in Eppawela Korale, Anuradhapura, in a strongly worded petition blamed the Government Agent for the lack of water for cultivation.[13] They added that notwithstanding this difficulty, they had been fined for neglecting to cultivate their fields. They were therefore compelled to think of leaving a district in which their families had lived for generations.[14] The Government Agent, who had got the irrigation Officer of the area to make a report on the complaint, was able to show clearly that on the contrary the petitioners had been adequately supplied with water.[15] A *Vel Vidane* might petition the Governor against his dismissal from office creating the impression that he had been dealt with unjustly.[16] But the Governor himself was compelled to reject the petition

9. Sena Mana Kader Mohideen and others of Anuradhapura to the Government Agent. n. d. *circa* March 1898. 41/492. D. N. A.
10. *Ibid.*
11. The petitioner S. R. M. Mohideen Pichchai wanted exemption from all taxes for this reason. 41/492 D. N. A.
12. *Ibid.*
13. Arachchilage Appuhamy and twenty three others of Keledivulwewa to the Government Agent, Anuradhapura. 4 August 1889. 41/497.
14. *Ibid.*
15. *Ibid.*
16. See 41/497 D. N. A. for details of petition no. 2018 of 1899. A *Vel Vidane* was a headman who had a certain amount of authority on irrigation matters.

when he was assured by the Government Agent that the *Vel Vidane* had been dismissed for deliberately making false statements regarding the sales of land in a certain village.[17]

It was no doubt this knowledge of local affairs that often made a government agent resent the fact that the Colonial Secretary should, as a question of principle, refer for report certain petitions, to which the government agent himself would have paid scant attention. D. S. Appuhamy, who lived in the Anuradhapura town had sent several petitions to the Governor. His complaint was that he was compelled to pay local rates although he was not liable to do so.[18] Moreover despite this, he as well as certain others were not provided with lighting and sanitary facilities which they as ratepayers were entitled to. Investigations however had clearly shown that Appuhamy lived within the jurisdiction of the Local Board and was therefore liable for the payment of rates.[19] At an early stage in the protracted correspondence between the Colonial Secretary and the Anuradhapura Agency on this subject, Byrde had advised, 'I see no reason to make any other report than that already made on a previous petition. D. S. Appuhamy is a troublesome and impertinent wretch . . .'[20] The incorrigible Appuhamy was not however discouraged. In a subsequent petition he alleged that his objections to the levy of local rates had led to the seizure of his properties coupled with physical harassment.[21] Byrde, whose patience had been worn thin, exploded, 'I beg that the whole of the petition may be translated when it will be seen that the man D. S. Appuhamy holds a threat against the Government Agent . . . the statements are utterly false . . . I request that the Attorney General be asked his advice as to prosecuting this man for presenting a petition full of false statements. . .'[22] Appuhamy however continued to give expression to his penchant for petition writing until Leonard William Booth, who had succeeded Byrde as the Government Agent, suggested to the Colonial Secretary that Appuhamy should be informed that 'no further petition from him on this subject will be entertained'.[23] The Colonial Secretary agreed to do so.[24] Thus a correspondenee which began in early 1898 was finally closed in May 1900, no doubt to the immense relief of the Anuradhapura agency.

Sometimes, however, a mere knowledge of local affairs did not help a government agent to convince a sceptical Colonial Secretary about the reasonable-

17. *Ibid.*
18. See 41/492 and 41/497 D. N. A. for details of the following petitions, 4781 (1897); 354, 2492 (1898); 1155, 2674 (1899) and 492 (1900). Practically all the material for this article was extracted from files deposited in the Department of National Archives. To avoid unnecessary repetition the abbreviation D. N. A. is henceforth avoided in specifying the particular files from which the material is used.
19. *Ibid.*
20. *Ibid.*
21. *Ibid.*
22. *Ibid.*
23. *Ibid.* L. W. Booth who was appointed as a writer in 1875 assumed duties as Government Agent, Anuradhapura in 1900.
24. *Ibid.*

ness of his actions. In 1898 a certain Hendirishamy, a cultivator in Anuradhapura, distressed at the possible damage to his fields by lack of water had dramatically sent a series of telegrams to the Governor.[25] Clearly implied in his complaint was the belief that this situation had been brought about by certain government officials. When investigations were begun, the Government Agent reported that the Yoda Ela, which had been silted up, was being repaired by the Public Works Department. His explanations were corroborated by the irrigation officer who in any case felt that in such circumstances occasional loss of crops would be inevitable.[26]

The Colonial Secretary's Department however did not think so. It took the Government Agent to task for lightly dismissing the petition as being the work of a 'notorious humbug'.[27] It was pointed out to him that remarks of this nature did not help the government in its investigations. It was moreover the Colonial Secretary's view that it is not unnatural that the entire loss of crops should give the petitioner "something to grumble at". The government agent had chosen a singularly inopportune time for repairing the canal, when a severe drought was prevailing.[28] The matter was referred back to the Government Agent for a fuller report. He was also asked to give his opinion about the possible payment of compensation to Hendirishamy.[29] The Government Agent however thought that such a step would be extravagant.[30] Consequently the papers were once again referred to him with the admonition that there was much justice in the petitioner's complaint.[31] As the Colonial Secretary had already referred the matter to the Central Irrigation Board, a way out of the impase was evident.[32]

Clearly the Colonial Secretary's Department could match a government agent's superior knowledge of local affairs with a deeper grasp of underlying principles. This was evident when Adikari Mudiyanselage Senatige Wannakkurala, a cultivator in the Kalagam Palata, Anuradhapura, complained that a piece of land which he had cultivated for years had been seized and put for sale by the government.[33] The Government Agent, on the other hand, contended that the petitioner had encroached on crown land, and done so quite successfully, with the connivance of certain headmen. The Government Agent added that encroachments which were a common

25. The Hendirishamy affair. 41/492.
26. *Ibid.*
27. *Ibid.*
28. *Ibid.*
29. *Ibid.*
30. *Ibid.*
31. *Ibid.*
32. In 1885 Provincial irrigation Boards were set up to take in hand the larger irrigation works. In 1887 an ordinance was passed creating a Central Irrigation Board to Co-ordinate the proposals of the Provincial Boards and for the general management and promotion of irrigation.
33. See 41/493 for petition no. 2463 of 1898 and other related papers.

occurence in the Anuradhapura districts must be dealt with firmly.[34] The matter however did not end there. An extensive correspondence between the provincial government and the Colonial Secretary followed. The Government Agent was asked to examine the period during which the land had been cultivated by Wannakkurala. 'His Excellency further desires that you should not put up for auction any more occupied land without reference to Government'.[35] When it was discovered that the land had been occupied by Wannakkurala for over five years, Sir Edward Noel Walker, the Colonial Secretary, pointed out that in principle the petitioner was entiled to the land by virtue of 'occupation and improvement'.[36]

'I did not understand', he minuted severely, 'Mr. Byrd's action in this matter. The mere fact that the petitioner was "a very stubborn man" does not seem qualification for dealing with him otherwise than under ordinary regulations'.[37] The Governor Sir West Ridgeway himself thought that Wannakkurala had been dealt with rather harshly, 'in view of our lenient and habitual practice with encroachers of this class'.[38] What might have dragged on interminably was ended when the purchaser of the land consented to surrender it to Wannakkurala in return for the sum he had paid at the sale.[39]

As evident was a certain sensitivity displayed by the Colonial Secretary's Department to violations of some accepted principle or policy. In a petition to the Governor concerning the *Ratemahatmaya* of Hurulu Palata in the North Central Province, it was alleged with subtle casualness that the *Ratemahatmaya* and his wife had bought some land in the village of Manankattiya, notwithstanding the rule prohibiting government officers from buying land.[40] It was alleged further that following a dispute which had arisen from this very transaction, the *Ratemahatmaya* had prevented the execution of writ by bribing the Fiscal's clerk.[41] Evidently the allegations were true. The Colonial Secretary intimated to the Government Agent that the whole affair was 'eminently unsatisfactory.... and should not be allowed to remain as it is'.[42] He pointed out that the *Ratemahatmaya* should have first obtained the sanction of the Government.[43] The Government Agent, clearly evincing a reluctance to pursue the matter, replied that the *Ratemahatmaya* had thought that such sanction was not necessary. The Colonial Secretary was convinced that 'the *Ratemahatmaya* cannot be permitted to plead ignorance of important standing instructions issued by

34. *Ibid.*
35. *Ibid.*
36. *Ibid.*
37. *Ibid.*
38. *Ibid.*
39. *Ibid.*
40. The Colonial Secretary to the Government Agent, Anuradhapura. 25 March 1897. 41/492.
41. *Ibid.*
42. *Ibid.*
43. *Ibid.*

government'. The Government Agent was warned to give adequate publicity to such instructions for the benefit of 'provincial subordinates'. After further correspondence, the Colonial Secretary who never tired of impressing on the Government Agent that the whole affair was 'unsatisfactory from beginning to end', ordered that the *Ratemahatmaya* should be censured. The matter ended when the Government Agent undertook to do so.[44]

Whatever the nature of a petition might be in the final analysis it was the *Mudaliyar* who conducted the investigations. On receiving a petition, the first step taken by a government agent was to forward it to the *Mudaliyar* of the district with which the petition was concerned. On the spot inquiries which a *Mudaliyar* made together with his intimate knowledge of local affairs, enabled the *Mudaliyar* to submit short reports which were both knowledgeable and useful. A *Mudaliyar* was moreover the essential link between the Government Agent and a miscellany of subordinate native officials in the District. It speaks much for the trust reposed on the *Mudaliyars* that their reports alone were the basis on which the Government Agent often took decisions on petitions. Sometimes a government agent would summon the petitioners and conduct investigations himself. But even on such occasions, which did not occur often, the *mudaliyar's* assistance was found to be useful. Indeed with regard to requests for exemption from taxes, matters pertaining to land disputes, irrigation and land sales, – matters which loomed so large in the lives of the peasantry - the *Mudaliyar's* voice was fairly decisive.

Perhaps at no time was his influence made more evident than when petitions were received against the subordinate native officials. A government agent's faith in the knowledge and judgement of the *Mudaliyar* on such occasions was striking. In fact neither the tone of the petitions, nor their length, or the matters complained of, made it possible to pick out the genuine from those petitions that subsequent investigations showed to be the product of family animosities and all manner of petty rivalries.

A certain man who lived in a remote village in the Southern Province complained that he was being harassed by the *Vidane Arachchi* who belived that he rather than the petitioner, was the real owner of some lands which the petitioner was cultivating.[45] The *Vidane Arachchi* had not only prevented the petitioner from reaping the crops, but had arbitrarily sold portions of the petitioner's land. The *Mudaliyar* reported that the allegations were true and added with characteristic gravity that the *Vidane Arachchi* 'had not acted credibly to himself at these instances'. Inevitably the *Vidane Arachchi* was sharply reprimanded by the Government Agent.[46] When the villagers of Pahala Hammillewa, a village in the Nuweragam Palata in the North Central Province, made strong complaints against the *Vel Vidane* to the Government Agent and later to the Governor, the

44. *Ibid.*
45. Petition of Tennekoon Gammahey of Pahalagama n. d. 27/340.
46. *Ibid.*

Ratemahatmaya was able to show that the chief petitioner was actually the brother of the *Vel Vidane* and that animosities between the two brothers had long since been evident on account of a land dispute.[47] The *Ratemahatmaya* who dismissed the petitioner as 'a great scoundrel' reported that the *Vel Vidane* performed his duties well and set a good example to other cultivators as a landowner. Booth, who was the Government Agent was therefore able to suggest to the Colonial Secretary that the petitioner should be firmly told that the government had no intention of removing the *Vel Vidane* from his office.[48] A man who lived in Labuhengoda, a village in the Hambantota District, complained to the Assistant Government Agent that the Police Officer of the village was harassing him. The *Mudaliyar* of Giruwa Pattuwa was on the other hand, certain that the allegations were false. He added that villagers were not on the best of terms with the Police Officer and that there was a case between the Police Officer and the petitioner.[49]

On the other hand when petitions were received against the *Mudaliyars* themselves, or against other native officials holding posts of comparable importance, the situation was wholly altered. Petitions of this type were invariably sent to the Governor rather than to a government agent. The petitioners usually made no secret of their mistrust of the government agents. It is significant that the Government Agent should have been represented as a gullible official who was blind to the misdemeanours of his *mudaliyars*. In a petition against the *Ratemahatmaya* of Kalagam Palata in the North Central Province it was said that although the *Ratemahatmaya* was an unscrupulous man he was powerless to influence the courts of law, 'though he could circumvent the Government Agent and make that credulous unsuspecting official believe all the falsehoods he was capable of telling'.[50] Another petitioner accused the Government Agent of maintaining 'silence' despite knowledge of the very things of which the petitioner was complaining.[51] A third petitioner simply declared '... if Your Excellency were to refer this petition to the Government Agent, the petitioners submit that they will not answer. Why? Because if the Revenue Officer were to give his explanation... there will be no mercy shown to them by him'.[52]

Ironically it was a government agent himself who decided the fate of this type of petition, which as a matter of course, were referred to him. It was evident that a government agent preferred to be guided by his own knowledge of the *mudaliyar* or a *Ratemahatmaya* concerned, rather than place much reliance on the typically amorphous statements made in petitions. In fact as part

47. Petition of Kesarasinghe Appuhami and others of Pahala Hammillewa, 28 September 1899.
48. *Ibid.*
49. Petition of W. C. I. Don Andiris Appu to the Assistant Agent, Hambantota. 22 October 1866.
50. Ekanayake Mudiyanselage Kiri Banda and others to the Governor. 12 June 1897. 41/497.
51. The Colonial Secretary to the Government Agent, Anuradhapura enclosing petition no. 3159 of 11 September 1902. 41/494.
52. T. B. Minneriya and others to the Governor. 20 February 1901. 41/496.

of the procedure usually adopted, the Government Agent would forward the petition to the *mudaliyar* concerned to give him an opportunity of answering the various allegations made. Sometimes the Government Agent held an inquiry to which the petitioners were summoned. At such inquiries it was not uncommon to discover that the real basis for the petition was some hitherto undisclosed animosity or that the petition had been signed by fictitious characters.

Often even before such knowledge was forthcoming, a government agent would feel justified in stoutly backing his subordinate. Certain peasants who lived in Hurulu Palata had alleged that the *Ratemahatmaya* had not merely imposed arbitrary fines on them and subjected them to all manners of hardships, but that the *Ratemahatmaya* had not even spared their women.[53] Moreover it was the *Ratemahatmaya's* practice to accept bribes in recommending persons to the Government Agent for subordinate native posts like *koraleships*.[54] In reporting on this petition Booth remarked that the Colonial Secretary should have rejected the petition no sooner than it was received. It was his opinion that the allegations against the *Ratemahatmaya* were 'gross and insulting'. Booth added that he had no reason to believe that the allegations were true.[55]

In February 1901 T. B. Minneriya who evidently commanded considerable influence in the locality together with over three hundred persons who lived in the Tamankaduwa District in the North Central Province, submitted a strongly worded petition to the Governor against Gabriel Wijesinghe Jayawardane who was the Revenue Officer of the district.[56] In addition Jayawardane was the President of the local village tribunal. The petitioners alleged that it was Jayawardane's practice to take their rice, coconuts and livestock without making payment. If payment was demanded, the petitioners were harassed and often assaulted. As President, Jayawardane decided cases by accepting bribes from one or the other of the parties. The petitioners also alleged that when an epidemic of cholera broke out in the Dastota District, it spread widely on account of Jayawardane's negligence. Although he did not think that the petition deserved to be considered at all, Booth referred it to Jayawardane himself so that Jayawardane could 'ascertain how far the signatures are genuine and to give a more categorical denial than I can give to some of the statements'. Even as matters stood Booth was certain that certain allegations at any rate were 'quite untrue'. When Jayawardene had made his explanations, Booth told the Colonial Secretary that the petition was 'a tissue of falsehoods from end to end'. Nor

53. 'If he hears even a false report that a poor village woman commits adultery he proceeds to the spot and recovers fines ..... when he goes to hold his division days he orders all the pretty women to be brought for him'. Petition no. 3159 of 11 September 1902, 41/494.
54. *Ibid.*
55. *Ibid.*
56. Petition of T. B. Minneriya and others to the Governor, 20 February 1901, 41/496.

was it genuine as many of the signatures were false. Moreover Jayawardane was 'an officer of the highest discretion, zeal and integrity, incapable of such misconduct as is attributed to him'. Booth had no doubt at all that the petition should be rejected.[57]

The extent to which a government agent supported a *mudaliyar* or *ratemahatmaya* in these circumstances was clearly decisive. In June 1897, in a petition against the *Ratemahatmaya* of Kalagam Palata, it was stated that the *Ratemahatmaya's* conduct was so oppressive that the petitioners were not over dramatizing their plight in regarding themselves as slaves. Specifically the petitioners alleged that the *Ratemahatmaya* had punished them severely for their failure - due to entirely unavoidable reasons - to provide provisions for the use of the Governor when he last visited the district.[58] The petitioners also declared that it was the *Ratemahatmaya's* practice to exact provisions unfairly and call upon the villagers to render certain services such as the erection of pandals whenever important official visits took place. Moreover the *Ratemahatmaya* had persons of questionable competence and background - the weightier consideration - appointed to subordinate posts. Such a person was the *Korala* who was a stranger to the district and whose conduct too was objectionable.[59]

Bryde, who was the Government Agent at this time, was certain that the petitioners had 'clubbed together to try to injure the *Ratemahatmaya*'. Nonetheless Byrde sent the petition to the *Ratemahatmaya* himself and made arrangements to hold an inquiry. When those investigations were over, Byrde reported to the Colonial Secretary that he saw no reason to take further notice of the matter.[60] But petitions against the *Ratemahatmaya* did not cease. In 1899 two petitions were received by the Governor. These accused the *Ratemahatmaya* of corruption and the general abuse of his administrative powers.[61] These petitions too were rejected. But Booth, who had succeeded Byrde as the Government Agent, confessed that his 'acquaintance with the *Ratemahatmaya* . . . has been too short for me to express an opinion as to whether there is any truth in the charges of corruption and interference . . . '. He assured the Colonial Secretary that he was determined to watch the *Ratemahatmaya's* conduct carefully.[62]

Despite the rejection of petitions of this nature largely due to the intervention of the government agent, certain incidental references to the petitions themselves showed that the *mudaliyars* and the *ratemahatmayas* sometimes abused their power and made themselves obnoxious. In more than one petition concerning the *ratemahatmayas* in the Anuradhapura district one reads that a *ratemahatmaya*, in order to punish petitioners, would forbid the village *dhobies* to wash their clothes.[63] When the *dhobies* seemed defiant on one occasion they had

57. *Ibid.*
58. Ekanayake Mudiyanselage Kiri Banda and others. 12 June 1897. 41/497.
59. *Ibid.*
60. *Ibid.*
61. Petitions 2495 and 4174 of 1899. Ibid.
62. *Ibid.*
63. *Ibid.* Also petition no. 3159 of 11 September 1902. 41/494.

been told that they would be tied to trees and assaulted.[64] The petitioners who claimed to be Kandyans of high birth made the point to the Governor that more than the inconvenience, the action of the Kalagam Palata *Ratemahatmaya* had humiliated them in the eyes of the entire village. The petitioners declared that the *Ratemahatmaya* could not have chosen a more effective means of causing them injury. An attempt to persecute the *dhobies* had been of no avail as there was no legal basis for doing so. In no instance did the *Ratemahatmaya* concerned deny that he had given such an order to the *dhobies*. The *Ratemahatmaya* of Kalagam Palata on the contrary justified his action on the ground of custom. It was he said a mode of punishment specifically reserved 'for the disobedient and stubborn', according to native custom. It is significant that the *Ratemahatmaya* should have taken care to point out that this was not a practice he had begun, but that it had been much availed of by his predecessors. Although the Government Agent intimated to the Colonial Secretary that he had ordered the *Ratemahatmaya* to withdraw the prohibition, it is clear that he did not consider this mode of punishment particularly obnoxious.[65]

Although the *Ratemahatmaya* sought to justify action such as these on the basis of custom, the evidence suggests that in the late nineteenth century there was a growing antagonism to those very customs. It is worthy of note that this should have been evident in the North Central Province which had at the beginning of the last quarter of the century been considered 'backward' in official circles.[66] It is as noteworthy that this feeling should have been manifest not among extraneous Low Country Sinhalese settlers who seem to have come in significant numbers to the Anuradhapura district during this period, but among the indigenous Kandyan villagers themselves.[67]

It was also made the subject of general complaint that the *Ratemahatmayas* when deciding disputes did so 'solely according to the Sinhalese fashion and customs'.[68] An all too evident preference for the courts of law as opposed to the traditional institutions of justice at village level, is in this context significant.[69]

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64. *Ibid.*
65. *Ibid.*
66. This notion was given considerable expression during the governorship of Sir William Gregory (1872-77). It was Gregory's boast that he had taken the first major step in making the North Central Province accessible thereby paving the way for its subsequent development.
67. The influx of the Low country Sinhalese to the North Central Province was viewed with hostility by the Kandyan villagers who rather unfairly blamed the *Ratemahatmayas* for a development these officials were powerless to control. These attitudes were probably engendered by the nature of the economic activities in which the Low Country Sinhalese were involved. Like the Muslims, the Low Country Sinhalese were engaged principally in trade. This apart they competed with the Kandyan peasants for the lease of tank lands, became renters of the grain tax and held an undisputed sway in the arrack trade.
68. Petition no. 3159 of 11 September 1902. 41/494.
69. Ekanayake Mudiyanselage Kiri Banda and others. 12 June 1897. 41/497.

There were other straws too which indicated the change of wind. The practice of obtaining provisions from the people of districts through which high officials like the Governor or the Government Agent travelled had no sanction other than custom. As a certain petition explained, the *Ratemahatmaya* would call upon the Sinhalese in the village to contribute such commodities as 'coconuts, coconut oil, shell spoons, peas, straws and hats and the Moorish inhabitants are compelled to give fowls'.[70] The *Ratemahatmaya* denied indignantly that provisions obtained in this fashion were not paid for.[71] In any case the *Ratemahatmaya* would strongly defend the practice on the grounds of ancient custom.

Byrde himself remarked that the practice was in complete accord with custom. He described this and the erection of pandals for which the *Ratemahatmayas* requisitioned the services of the people, as *Rajakariya*. Bryde has left unnoticed the *Ratemahatmaya's* statement made purely incidentally, that the *Korala* acting under his orders had compiled lists of all those cultivators who did not 'pay their respects to the Governor' on his visit to the district. One may wonder why such lists should have been made. It is significant that the petitioners, although they conceded that the obligation to fetch provisions arose from custom, should have retorted that 'this custom will doubtless be condemned by every Englishman . . .'.[72]

The underlying Assumptions

Reflecting on the usefulness of petitions both as a 'safeguard of the subject' and as a means of enabling the government to know 'the actions of . . . subordinate officers', a government agent remarked that in Ceylon a petition was the equivalent of the British practice of writing to the local paper, - 'a petition to the Governor ranking with a "letter to the Times" '.[73]

More significantly however petitions mirrored a certain divergence of attitudes with regard to the obligations of the rulers towards the ruled. For example, that a great many petitions drew attention to the lawlessness prevailing in certain districts was not *per se* particularly significant. There were, however, a closely allied group of petitions reflecting a widespread belief that the government's duty to protect its subjects necessarily involved its intervention in private disputes which - as the government agents were never tired of reminding the petitioners - should have been referred to the courts of law.[74]

70. Petition of T. B. Minneriya and others . . . . . 41/496.
71. *Ibid.*
72. *Ibid.*
73. E. Elliot, Assistant Government Agent. Report on the Matara District. Administration Reports 1870, p. 147.
74. Petition of S. A. Eliyas and others of Beliatta 26 July 1888. 27/271. Petition of Abeydeera Liyanage Don Simon and Sixty seven others of Galagama, West Giruwa Pattuwa Southern Province. 26 February 1870. 27/271. Petition of certain Tamil traders of Madampe to the Assistant Government Agent, Chilaw. 30 December 1877. 42/735. Also M. A. L. Mohamadu to the Government Agent, Anuradhapura n. d. 41/493.

Clearly the limits of paternalism had in some way to be defined. If, as the evidence suggests, the generality of the rural peasantry expected a great deal more from the government than was - in the eyes of the government agents permissible - a possible reason suggests itself. As part of the policy of projecting the image of alien rule with as much an indigenous colouring as possible, the British had maintained - in form at any rate - the native hierarchy of officials in provincial government.[75] And in effect too, the power exercised by these officials at village level merely served to strengthen the image of native rule. Besides, broadly peripheral factors such as teh partiality shown by some government agents towards archaic Sinhalese customs - so alien to their own outlook - also suggest a certain broad similitude to the indigenous model. It is inconceivable that these developments did not have a corresponding impact on the attitudes of the ruled towards government. It is possible that with increasing affinities to traditional form an equally traditional outlook towards the rulers manifested itself.

On the other hand the government agents were fairly agreed on what should constitute the peripheries of paternalism. They washed their hands of many questions on the ground that these were beyond the pale of legitimate government concern. The resulting lack of identification with matters that bothered the simple peasant was sometimes given expression to if only in relation to particular issues.[76] For example in 1871 a government agent in the Kurunegala District wondered whether it would not after all be useful to take note of 'petitions respecting matrimonial squabbles in respect to which the parties do not seek for separation but merely beg that inquiry be made and justice awarded'.[77]

At a considerably more elevated level the incongruity of attitudes was brought into sharper focus. The study of petitions concerning Buddhist questions is of manifest relevance in this sense. For more comprehensively

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75. 'The success with which the administration of the Government of Ceylon has been carried on is due in no small degree to these headman, the Ratemahatmayas in the Kandyan Provinces, the Mudaliyars in Maritime Districts . . . . . and the maintenance of this power has done much to reconcile the people to British rule' C O. 54/531. Confidential Despatch of James Longden to the Earl of Kimberley 8 February 1881. C. O. 54/531. Also in Lot 6 (5) D. N. A. no. 3482 for lengthy memorandum on the headmen establishment written by W. C. Twynam who was the Government Agent in the North Central Province. 7 October 1871.

76. And yet, interestingly enough, a government agent implied that the Government in enacting legislation regarding the institution of marriage among Kandyans had made crucial inroads into the social sphere.

    As far as economic issues were concerned there was a greater willingness to make changes in existing institutions presumably in the interests of British entrepreneurship.

    R. Morris, G. A., Report on the North Western Province, Administration Reports, 1875, 1871. p. 75.

77. W. D. Wright, Actg. G. A., Report on the Kurunegala District, Administration Reports, 1871. p. 221.

and indeed more explicitly than was evident in petitions concerning other subjects, this particular *corpus* of petitions clearly reflected the indigenous view concerning the obligations of the government towards the ruled.

Primarily there were three types of petitions concerning Buddhism. The first - really the least important - was strictly related to matters which impinged on certain measures which the government had adopted towards Buddhism. The petitions therefore merely reflected the administrative difficulties in implementing these measures. In particular, the great majority of petitions in this group principally involved the specific issues - the registration of temple lands and the administration of Buddhist temporalities.

Briefly, after 1856 the government had set about the task of systematically registering temple lands with a view to demarcating clearly the lands that genuinely belonged to the various temples.[78] It was thought that many temple authorities had exaggerated the extent of their legitimate temple holdings to secure an undue advantage from the provision which the British had made in 1818 to exempt temple lands from taxation.[79] But inspite of the finality with which the registration of temple lands had been done under the ordinance of 1856, there was a constant flow of petitions from individual temples claiming that mistakes had been made in surveying temple lands.[80] It was usually claimed that a particular temple had been unjusty deprived of this or that land, due to the failure of the Temple Lands Commissioner to take adequate cognizance of *sannasas* and *talapats* according to which the temples, by ancient grant, had irrefutable claims to the lands in question. Decisions which a government agent made from time to time to sell crown lands triggered off this kind of petition, the claim being strongly made that certain portions of these crown lands belonged to a particular temple.

Often these petitions were rejected outright on the ground that the *sannasa* or *talapat* in question was a fabrication.[81] Sometimes however, a government agent would relent sufficiently to make more extended investigations. As the genuineness or otherwise of a *sannasa* or *talapat* was at best a

78. The Proclamation of 21 November 1818 exempted temple lands from taxation. The Government however made clear in the Proclamation of 18 September 1819 that it was necessary in the interests of collecting revenue to register the lands belonging to the temples. This resolve was reiterated in a third Proclamation issued on 21 May 1822.

79. The Temple Lands Registration Ordinance 1856.

80. C. O. 57/46. Minutes of the Executive Council. 19 August 1868.
C. O. 57/46. Minutes of the Executive Council. 22 June 1868.
C. O. 57/68. Minutes of the Executive Council. 18 April 1876.

81. Petition of the incumbent of the Rankotmulle temple, 8 December 1866, drawing attention to certain lands surrounding the temple with which it had been endowed by virtue of a grant of 1772. 27/340.
Petition of Dipankara Unnanse of Handagoda Vihare in Hurulu Palata, N. C. P. 27 December 1898. To this petition is attached an interesting translation of a *talapat* dated 1773. 41/494.

moot point, inquiries were more realistically directed towards ascertaining whether, in tradition, in the belief of the people and above all in the opinion of those most likely to know, the land in question belonged to the temple. As might be expected in these circumstances the government agent would place heavy reliance on the opinion of the *Ratemahatmaya* and other native officials.[82]

A similar orientation towards purely administrative considerations was reflected in the petitions relating to Buddhist temporalities. After decades of indecision, the government had enacted an ordinance for the regulation of Buddhist temporalities.[83] As a result, the government agents were able to react somewhat more positively to petitions which dealt with the formation of committees, the appointment of trustees and a number of other matters, for all of which the ordinance had made some kind of provision.[84]

More significant in terms of the basic themes was the second group of petitions. These were clearly symptomatic of a belief that it was traditionally the government's business to look after the interests of Buddhism. For example, some peasants who lived in the Kalagam Palata in the North Central Province, urged the government to appoint a certain D. B. Ratwatte - a retired *Ratemahatmaya* - as an *Upasaka Adikarama*. They insisted that Ratwatte should moreover be invested with the authority to levy fines of 25 cents from 'people who do not perform their religious obligations'.[85] The Government Agent's laconic rejoinder that this was not a matter that could legitimately concern the government was significant. The essence of another petition, submitted by a group of Buddhists in Anuradhapura was that animals were being slaughtered in the area disregarding the ancient law of the Sinhalese kings forbidding this. The petitioners complained that in general the attitude of the government towards Anuradhapura - which they urged was a place of special significance to the Buddhists - did not conform

82. *Ibid*.

83. Sir William Gregory who had a genuine regard for the wellbeing of the Buddhist temporalities tried hard to persuade the Colonial Office that the initiative in solving this problem should be taken by the Government. For a clear grasp of the underlying issues which were indeed undeniably complex, see C. O. 54/503. Gregory to Carnarvon. 291 of 26 September 1876.
C. O. 54/404. Gregory to Carnarvon, 397 of 29 September 1876.
C. O. 54/507. Gregory to Carnarvon, 40 of 7 May 1877.
C. O. 54/527. Longden to Kimberley, 89 of 7 August 1880.
C. O. 54/533. Douglas to Kimberley, 153 of 15 June 1881.
C. O. 54/547. Longden to the Earl of Derby, 307 of 28 June 1883.

84. Buddhist Temporalities Ordinance of 1889. For critical comments concerning its implementation see,
Administration Reports 1890, p. E4
Administration Reports 1891, p. J24.
Administration Reports 1893, p. J10.

85. Kiribanda and others to the Government Agent, Anuradhapura.
Circa January 1899. 41/492.

to tradition. As a result not only had the adherents of non Buddhist faiths been able to gain a foothold in Anuradhapura, but they had also built places of worship there.[86] When he was asked to report on this petition the Government Agent remarked to the Colonial Secretary that 'the petitioner's case needs only to be stated to show its absurdity'.

The tendency to look to the government - notwithstanding its alien and basically Christian character - was sometimes emphasised by references to a past which was invariably presented with idyllic overtones. 'In old times', remarked Medhankara Unnanse of Habarana vihare in a petition to the government Agent in Anuradhapura, 'this country being resorted to by happy princes, men of affluence and pundits versed in Pali grammar and other branches of learning, was in a state of prosperity'. Instead there was in his own times, the clearest symptoms of degeneration among laymen and priests alike. In sum the great void in contemporary society was the absence of the *Dharma* the law of religion.[87]

Medhankara Unnanse was determined to remedy this state of affairs. He confided in the Government Agent - as though the Government Agent and he were in perfect accord about the spiritual objects. Medhankara Unnanse had in mind - that he had been thinking of building a preaching hall, a dormitory for the accommodation of priests and a school room. To do so on his own was impossible. On the other hand, he was denied the little assistance he might have ordinarily expected from the villagers who lived nearby because of their extreme poverty. Hence the appeal to the government to perform a function - which Medhankara Unnanse implied - came legitimately within its purview.[88] Predicated on similar assumptions was the petition of the *Nayake* Priest of the Atamastane in Anuradhapura applying for a free grant of land to build a *pirivena* near the Thuparama.[89]

As revealing were the third group of petitions. The underlying assumptions however were more complex. In these petitions there was a more intense awareness of the decline of Buddhism. The real divergence however came in the manner of responding to this. Instead of looking to the government, there was in this group of petitions - largely submitted by reformist minded Buddhist priests - the idea that the problem of the decline of Buddhism must be dealt with by individual efforts, either because of the apathy of the government towards Buddhism, or because an alien government could not really be expected to be mindful of its interests. The most striking and depressing outward manifestation of the decline of Buddhism was the

86. Tennekoon and other Buddhists of Anuradhapura to the Governor. *Circa* January 1901, 41/497.

87. Medhankara Unnanse to the Government Agent, Anuradhapura. Petition no. 759, 7 April 1900. 41/494.

88. *Ibid.*

89. The Nayake Unnanse of the Atamastane to the Governor. Petition No. 2433 of 1900. 41/497.

degenerate condition of the traditional places of Buddhist worship. The ambition of these priests was to restore these places of worship to their pristine grandeur by individual effort. Hence the petitions to government for permission to do so. Indeed a more dramatically symbolic mode of highlighting the condition of Buddhism could not have been conceived.

The government however did not take kindly to these efforts. Since the time of Sir Hercules Robinson - when an Archaeological Committee had been established - and more particularly during the governorship of his successor, Sir William Gregory, the preservation of ancient monuments especially in the Anuradhapura area had been an aspect of government policies.[90] Indeed the lone efforts of an obscure Buddhist priest to repair a large *dagoba* in Anuradhapura about which Gregory wrote feelingly to the Earl of Kimberly, had served him well in drawing the Colonial Office to the need to preserve ancient Buddhist monuments.[91] It is noteworthy that the government should have been at pains to disclaim that it was in anyway identifying itself with the Buddhist religion.[92] The point was made sufficiently clear that what mattered was to safeguard the monuments or the sake of their historical and aesthetic value. With the institution of an Archaeological Survey this work was taken in hand more vigorously. [93] Correspondingly the official antipathy to Buddhist priests who were anxious to 'restore' ancient monuments was more pronounced. Often the priests were regarded as charlatans, solely motivated by a desire to collect money from credulous Buddhist pilgrims who frequented the places of worship. Alternatively they were stigmatised as misguided zealots who did great damage to ancient monuments by putting up extraneous edifices and all manner of additions which marred the aesthetic integrity of the original.

Whether this attitude was so wholly justified is questionable. It is noteworthy that permission was sought not only to restore the more famous places of worship in Anuradhapura, but also to take in hand the less frequented and clearly less accessible such as, the Somavati dagoba in Trincomali, Nagalkande in the Minneriya district and Seruvila in Tamankaduwa.[94] Moreover the

90. C. O. 54/492, Gregory to Kimberley no. 21 of 15 January 1874.

91. C. O. 45/492, Gregory to Kimberley no. 21 of 15 January 1874, also
C. O. 54/566, Gordon to the Colonial Office, No. 308 of 11 August 1886

92. Considerable emphasis was placed on the preservation of ancient inscriptions. To effect the scientific reproduction of these inscriptions - a cognate consideration - Gregory secured the service of Dr. P. Goldschmidt who had been recommended to Lord Carnarvon by R. C. Childers See C. O. 54/495.
Also Governors' Addresses (1860-77) p. 384 ff. Also p. 523.

93. Devendra, D. T., Seventy years of Ceylon Archaeology. Reprint from *Artibus Asiae* Vol XXII. p. 23 ff. Also SMITHER, J. C. *Architectural Remains, Anuradhapura*, Ceylon. See Preface.

94. Petition no. 3621 of 1901. 41/497 Also petition no. 2911 of 1900. Kotawewa Sangananda Unnanse to the Government Agent, Anuradhapura. 41/497.

'restoration' complex was a significantly diffused phenomenon suggesting in a sense a strong kinsmanship to the broadly contemporary Buddhist revivalist movement.[95] Indeed petitions for restoration did not originate from Anuradhapura alone or from a particular region in the island but from widely separated areas such as Kegalle, Tamankaduwa, Colombo - to mention but a few.[96]

But the redoubtable Archaeological Commissioner of the day, H. C. P. Bell did not see matters in this light.[97] Indeed he fought tooth and nail to prevent various Buddhist priests from tampering with the monuments. 'It is not desirable' remarked Bell on petition from a priest in Kotahena, concerning the Gal Vihare in Polonnaruwa 'to allow any priest to occupy and inevitably "modernise" the Gal vihare . . . the sad experience gained at Isurumuniya rock temple in giving an ignorant priest a free hand to disfigure the grand old rock by . . . minarets and a hideous belfry should be sufficient warning'. When the Gover..ment Agent demurred pointing out that the priest sought permission to merely clean the surrounding jungle, Bell replied, 'I can personally certify that the Gal Vihare was nicely cleared and easily accessible in September 1893 and there is little doubt that it is so still'.[98] With as much characteristic asperity Bell gave vent to his feelings when Kotawewa Sangananda Unnanse of Minneriya wanted to restore three *dagobas* in the Tamankaduwa district.[99] Bell who dismissed the proposal as being patently absurd, remarked that what the priest really wanted from the Governor - to whom the petition had been first sent - was 'a roving commission to collect money from innocent pilgrims'.[100]

The rigid policy of excluding 'interlopers' from a preserve which Bell could legitimately regard as his own, exposed him to a certain measure of public criticism. In a sense the tables were turned on Bell when S. N. W. Hulugalle,

95. A well defined and significantly diffused revivalist movement among the Buddhists was by far the most conspicuous feature of the religious history of Ceylon in the last quarter of the nineteenth century. The movement was as much a protest against the campaigns of the christian missionaries as it was a concious search for the institutions and facets which symbolised the traditional culture.

96. Petition no. 1007 of 1900, M. K. Sanga Tissa Unnanse of Kotahena to the Government Agent, Anuradhapura. 41/497.
Also petition of Sumangala Unnanse of Henpitikande vihare in Galboda Korale, Kegalle District. *circa* June 1900. 41/497.
Petition no. 2911 of 1900. Kotawewa Sangananda Unnanse to the Government Agent, Anuradhapura. 41/497.

97. H. C. P. Bell who began his career in Ceylon in 1873 had served in various capacities until he was appointed Archaeological Commissioner in 1890 - a post which he held for years with great distinction.

98. See 41/497, petition no. 1007 for letter from H. C. P. Bell to the Government Agent, Anuradhapura of 7 January 1895. Also letter dated 12 January 1895.

99. Petition no. 2911 of 1900 in 41/497.

100. A reason sometimes put forward against monks who wanted to restore *dagobas* was that such monks were often strangers to the locality concerned and therefore would be unacceptable to the villagers. In the above petition, Bell remarks that he would have no objection to Kotawewa Sangananda Unnanse restoring a small *dagoba* below the Minneriya tank bund 'provided he is supported . . . . . by the consent of the villagers who may prefer to entrust the work to other hands'. Booth echoed these sentiments.

who represented the Kandyans in the Legislative Council, specifically charged Bell with having damaged Buddhist monuments by careless excavations. Hulugalle added that he was giving utterance to the fears of many Buddhists which, indeed were substantiated by his own observations.[101] This incident - even though the Governor had prevailed on Hulugalle to retract and virtually apologise to Bell - merely served to give his outbursts a somewhat sharper edge.[102] In reporting on another typical petition, Bell ruefully remarked to the government agent of the North Central Province 'from paragraphs 2 and 3 of the petition it would appear as though the Archaeological Commissioner was the officially recognised "Bill Sykes" of the Ceylon Government - a brutal burglar of Buddhist buildings'.[103]

This bitterness was often tinged with a sense of exasperation. For example when he was asked to comment on a petition submitted by a Buddhist monk seeking permission to occupy an ancient *pansala* in Sangili Kanadarawa, Bell replied, 'there is no objection . . . . . to this or any other monkish dreamer of dreams for his own benefit being allowed to settle at the ruins of Sangili Kanadarawa'.[104]

To the priests concerned however - and the divergence was made apparent - official attitudes were clearly inexplicable. This was invariably the sequel to petitions of this sort. In their eyes, the monuments which were scattered throughout the North Central Province and elsewhere were primarily places of worship and not merely spiritually barren historical relics. The fact of their antiquity was proof of their continuing importance as places of great religious significance.[105] To journey to distant Anuradhapura, to live for months in the vicinity of some ancient *dagoba* plastering crevices or cleaning the surrounding jungle was in itself a deeply spiritual experience to those who habitually read in a spiritual meaning to the simple act of sweeping the temple compound.

At other points too in the broad spectrum of official policies, one may see a similar gulf between the rulers and the ruled. Was the gulf therefore inevitable? Institutionally British rule in the East had been based on certain ideas conceived towards bringing the rulers into greater proximity

101. The background to this incident was partly the Antiquities Ordinance of 1900. *Inter alia* this ordinance declared that antiquities were the absolute property of the state and that it was an offence to willfully injure, tamper or deface antiquities. In the Sessions of 1901, Hulugalle in moving for papers containing instructions to guide the Archaeological Commissioner, drew particular attention to the Abhayagiri Vihare which he said had been damaged by Bell. Debates of the Ceylon Legislative Council, 23 October 1901.

102. L. W. Booth to H. C. P. Bell, 15 July 1900 in petition no. 2204 of 1900.

103. H. C. P. Bell to the Government Agent, Anuradhapura. 14 March 1901. See papers on petition no. 109, 41/497.

104. H. C. P. Bell to L. W. Booth, 19 December 1900, 41/97.

105. 'These *dagobas* are distinct objects of veneration and I have to submit that in the eyes of the Buddhists any interference with them would be most offensive to their feelings'. Hulugalle, Debates of the Ceylon Legislative Council, 23 October 1901.

with the ruled. The broad aims were to preserve the institutional *status quo*, to restrict change to remedying abuses in prevailing institutions and systems, and to generally preserve the image of continuity with the old order of things which British rule had supplanted. It is true that these seminal ideas were evolved and received their best expression in relation to a certain historical context - the crucial period when expecially in India, British rule was in the throes of displacing native power. But the ideas were too valuable to pass into oblivion even though with time the British took a firmer grasp of their possessions. They continued to be useful in ruling essentially peasant orientated societies characterised by the slow tempo of economic change. Besides extraneous influences, such as for example the wide impact of Sir Henry Maine's ideas, led to a fresh appreciation, a new seeking out of native administrative institutions.

If nonetheless the gulf remained it was because in the hands of the government agents the ruling ethic of paternalism was in turn diluted by a congeries of extraneous values, inspite of the determination to rule the natives in their own idiom. Hence against the proneness of the people to look to the government was matched the sturdy Victorian virtue of independence and self-reliance. The very frequency with which the phrase 'self-reliance' occurs in the documents is significant. Indeed to many Government agents the concept was almost a touchstone in weighing the usefulness of various measures which the government took particularly in respect of irrigation and land problems.

Land Tax in Ceylon: Doctrinal Influences in the Controversy Between William Colebrooke and Charles Cameron.

VIJAYA SAMARAWEERA

I

The produce of the land being traditionally the main source of revenue of the state, the question of land tax confronted many European powers in their colonial administration in Asia.[1] In India, perhaps the most conspicuous example, the question was argued and debated by many generations of administrators, and the introduction of Utilitarian views into a setting in which conservative elements held sway, had a powerful impact upon the formulation of policy of the British Raj.[2] In the neighbouring colony of Ceylon too, though it escaped the complexities that beset the problem in India by the very nature of its traditional systems, land revenue attracted the attention of the governors from the beginning of British rule. The question of a land tax was subjected to much discussion in the colony, and though to a lesser magnitude than in India, experimentation was conducted by the early administrators.[3] The attitudes of these men were devoid of any theoretical or doctrinaire trappings; purely pragmatic considerations guided their actions. There were of course the instances where, as in India, theoretical or doctrinaire proposals were brought forward.[4] These invariably faced the rigid opposition of administrators suspicious of theoretical views, and consequently had hardly any significant influence on policy making.[5]

In the early 1830's, however, there was a remarkable change. Contemporary English economic thought which had a bearing on the question of land tax, entered the colonial scene with significant results - beginning from this period, theoretical views had an equally important influence as practical considerations in the formulation of policy on land tax in Ceylon.[6] This change was not brought about by the men on the spot, but by an agency of the imperial government. Faced with a recurrent deficit in the colony, a characteristic feature of

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1. M. W. Roberts, *Some Aspects of Economic and Social Policy in Ceylon, 1840 - 71* (Oxford University D. Phil. thesis, 1965), p. 379.
2. See particularly, E. Stokes, *The English Utilitarians and India* (2nd ed., Oxford, 1963), pp. 81-139.
3. See, C. R. de Silva, *Ceylon Under the British Occupation* (Colombo, 1942), ii, 373-384.
4. Perhaps the most noteworthy were those made in 1813 by William Orr. These broadly followed the Permanent Settlement introduced by Lord Cornwalis in Bengal. See, C. O. 416/2-A1.
5. Orr's proposals, for example, were dismissed as 'admirable in theory, but wholly inapplicable to the circumstances of this Country', *Ibid.* Orr's chief mistake seemed to have been illumination of his proposals with reference to the works of Adam Smith.
6. See Michael Roberts, 'Grain Taxes in British Ceylon, 1832-1878: Theories, Prejudices and Controversies', *Modern Ceylon Studies*, I, (1970), pp. 115-146.

its finances from the inception of British rule, the authorities at home decided in 1822 to institute an investigation of the colony with a view to resolving the problem - as it was stated by a spokesman in the House of Commons, the investigation was 'in order to satisfy the public regarding the manner in which its resources were managed'.[7] The task was assigned to the Commission of Eastern Enquiry, a royal commission of inquiry then being mooted for investigation of the two other Eastern colonies, Cape of Good Hope and Mauritius, where an urgent need had arisen to solve complex problems.[8] The inquiry into Ceylon was undertaken by the commissioners of inquiry, William Macbean George Colebrooke and Charles Hay Cameron,[9] two men who were influenced by the divergent strands of thought seen among the political economists of contemporary England.

II

After the appointment of the commission of inquiry, the scope of the inquiry was extended to cover every aspect of the government and administration of the colony.[10] The financial system of the colony came within the purview of William Colebrooke, the senior and the more experienced of the two, under a careful division of labour adopted by the commissioners of inquiry. The land tax[11] assumed a position of central importance in Colebrooke's investigations in this field. As he stated, 'this I consider to be a subject of great importance to the prosperity of this country and eventually to the British settlements in India'.[12] The prevailing modes of collection of land revenue in the colony came

7. *Hansard*, new series, VII (1822) p. 1802.
8. Royal commissions of inquiry were the favourite instruments by which the imperial government investigated and decided upon many colonial questions of importance during the 1820's and the '30's. See, V. K. Samaraweera, *The Commission of Eastern Enquiry in Ceylon, 1822-1837: A Study of a Royal Commission of Colonial Inquiry* (Oxford University D. Phil. thesis, 1969), pp. 11-12.
9. Colebrooke (1787-1870) was a military officer serving in the East at the time of his selection as a commissioner of inquiry. He served successively in Ceylon, in India, first in Malabar and then in Madras, in Java with the successful British expedition, in India again and in the Persian Gulf. After the completion of his work as a commissioner of inquiry, he served in the West Indies as the Governor of a number of island colonies. He was knighted in 1835 for his work as a Commissioner of Eastern Enquiry. Cameron (1795-1880), a lawyer, functioned as a commissioner for inquiring into charities, and as an assistant commissioner for inquiring into the working of the poor laws of England, after returning from Ceylon. In 1835 he was appointed a member of the Law Commission of India, and played an important role in the formulation of the Indian Penal Code, as chief adviser to Lord Macualy, and in the spread of English education, as the president of the Council of Education of Bengal. Later in his life, in 1875, he returned to Ceylon as a coffee planter, and lived there until his death. Both Colebrooke and Cameron benefitted from patronage in being selected as commissioners of inquiry.
10. For an analysis of the work of the commission of inquiry see, V. K. Samaraweera, *op. cit.*
11. The term land tax is a misnomer as regards the policy of the Ceylon government, for only lands cultivated with grain came under the tax; lands under commercial crops were not subjected to a tax. The term, however, will be used in view of its usage by both Colebrooke and Cameron.
12. C. O. 54/121, Colebrooke to Hay, 1 May 1832.

under the heavy criticism of Colebrooke. By this time three different systems were in operation, and all were rejected by Colebrooke as equally unsuitable for the conditions of the colony. In the Maritime Provinces, the tax, being a certain portion of each crop (generally one-tenth), was in the main farmed out to speculators, who collected it in kind and paid the amount of their contracts to the government in cash. In certain regions of the Kandyan Provinces, the collection was made in detail by local officials acting under European Agents, and in other Kandyan areas there were specific agreements with each landholder calculated according to the average production of his land.[13] The farming of the rent, argued Colebrooke, though convenient to the government in that the collection of revenue was made by a middleman, resulted in the interference with the cultivation of land by the rent farmers 'to guard against negligence, fraud a[nd] evasion', the consequences of which were often 'extortions on the poor people'.[14] The system of collection in detail by revenue officials too was open to vexation, and to fraud, and further the government was forced to employ 'an army of Revenue Agents', thereby incurring a high expenditure. It also discouraged the application of capital to the improvement of land and agriculture. [15] The system of specific agreements could succeed only in regions where the soil was fertile and where the climate was favourable, and therefore it was inapplicable in areas exposed to floods and droughts. In regions like Nuvarakalaviya, the remoter provinces of dry zone of the colony, the government had been forced to remit the tax from time to time on account of unfavourable climatic conditions.[16]

Having thus rejected the modes of collection of land revenue in operation, Colebrooke faced a question of fundamental importance. He found that, with the exception of tobacco in the North, the land tax was not applied to cash crops, and thus was operating as a 'premium in favour of other branches of culture not more important, a[nd] often less so'. It was in the power of any landholder to evade the tax and thereby escape from his share of the public burden by merely cultivating on his land the crops not subjected to the land tax. Clearly the tax was levied, for all practical purposes, only upon the subsistence of the people, (for grain was the staple of the inhabitants of the colony) and upon that branch of agriculture which was 'of the first importance to encourage'.[17]

13. *Ibid.* Colebrooke's memorandum on land tax, enclosed in Colebrooke to Hay, 2 May 1832.
14. *Idem.* See also, C. O. 54/121 , Colebrooke to Hay, 24 Dec. 1832.
15. *Idem.* and C. O. 54/122, Colebrooke's Report upon the Revenues of Ceylon, 31 Jan. 1832. A printed version of this report is found in *British Parliamentary Papers* [cited as *B. P. P.* hereafter], 1831/32, XXXII (274), pp. 33-54.
16. Colebrooke's criticisms of the land revenue systems of Ceylon were remarkably similiar to the views expressed by some of the later officials who were more intimately acquainted with the conditions of the colony. The views of some of these officials have been examined in Michael Roberts, 'Grain Taxes in British Ceylon', *Modern Ceylon Studies*, I (1970), pp. 115-146.
17. C. O. 54/121, Colebrooke's memo., 2 May 1832 and his memorandum on Ceylon Revenues enclosed in Colebrooke to Hay, 14 Mar. 1832; C. O. 54/122, Report upon the Revenues.

Colebrooke had to decide whether the tax thus limited should be extended to lands cultivated with other types of crops as well. He had already objected to an attempt of the colonial government to introduce a tax on coconut, a produce which was perhaps second only to grain in its importance to the indigenous population.[18] Considering it manifestly unfair to leave gardens (in contradistinction to land under grain) without taxation, from the beginning of the British rule attempts had been made to impose a tax on these lands hitherto untaxed. The first attempt, limited to coconut lands, made in 1796 failed 'in consequence of the difficulty in regulating the assessment and the great opposition made to it by the proprietors'.[19] A subsequent attempt, again only on coconut,[20] mooted by the Governor Sir Edward Barnes (1824-1831), was postponed several times in the face of the opposition of the landowners. Finally, at the time of the commission of inquiry, on the recommendation of Colebrooke the tax was withdrawn.[21]

Colebrooke objected to direct forms of taxation both on theoretical and pragmatic grounds. As he stated, the return cultivators received from land was 'precarious', and the population was 'too poor to advance a *direct* tax'.[22] With the disastrous results of the first attempt to introduce a coconut tax before him, he firmly believed that the petty landholders of the colony would invariably resist a new direct tax.[23] 'When property is minutely subdivided and the people indigent, the collection of any direct tax from a great number of small proprietors or tenants is attended with greater expenses and inconveniences than of an equal amount by means of duties on articles consumed by them'.[24] In a country where the landholder cultivated for subsistence, a direct tax was objectionable on theoretical grounds as well; the tax would have to be paid, as in the case of the rents imposed upon the Irish peasantry, by resorting

18. Colebrooke wrote: 'These [coconut] plantations contribute largely to the subsistence of the people, and are a great resource when [grain] crops are destroyed from inundation. They also support several useful manufactures', C. O. 54/122, Colebrooke's Report upon the Administration of the Government of Ceylon. 24 Dec. 1831. For a printed version of the report see, *B. P. P.*, 1831/32, XXXII (274), pp. 3-33.
19. C. O. 54/122, Report upon the Revenues. The introduction of the tax coincided with the outbreak of popular discontent in certain areas of the Maritime Provinces in 1796-97. Controversy reigns as to what extent the coconut tax was responsible for this revolt. In a recent study, U. C. Wickremeratne contests the traditional view that the tax was a principal cause of the revolt. *British Administration in the Maritime Provinces of Ceylon, 1796-1802* (London University Ph. D. thesis, 1964), pp. 31-33. For the traditional view see, C. R. de Silva, *op. cit*, ii, 331-334. Like many of the officials who were serving in Ceylon at the time, Colebrooke believed that the tax was partly responsible for the revolt. See, C. O. 54/122: Report upon the Revenues.
20. This measure was also designed to promote certain commercial crops, for lands cultivated with coffee, cotton, pepper, and arecanut were exempted from the new tax.
21. C. O. 54/121, Colebrooke to Goderich, 25 Aug. 1831. Colebrooke sustained the arguments put forward by the coconut landholders by pointing out that though there was no direct tax on coconut, the indirect taxes imposed upon it contributed more (£35,573) than the entire revenue from grain lands (£21,000).
22. *Ibid.* Colebrooke to Hay, 24 Dec. 1832.
23. *Ibid.* Colebrooke to Hay, 2 May 1832.
24. C. O. 54/122, Report upon the Revenues.

to other resources such as wages of their labour. Moreover, 'even at present with every disadvantage under which the country has laboured, the indirect revenue had exceeded more than ten fold the land tax'.[25] Even in England the revenue was primarily raised by customs and excise, and the land tax was redeemable, and formed only an inconsiderable part of the revenue. The main source of revenue in Ceylon too should be in the form of duties on articles consumed by the people, the tax on tea in England being the guide line.

When one considers these views expressed by Colebrooke, it is no surprise that he decided to strike out an entirely new approach to the question of land tax. Initially he showed some uncertainty as to what course of action should be recommended - a permanent settlement, a redemption as well as an abolition were equally considered - but the proposal he advocated was that of a redemption of the tax. The redemption, at an equitable rate, was to be afforded to all landholders in the colony. They were to be given the option of either redeeming the tax in consecutive years or in years when their crops were most productive, paying in other years a rate no more than the ordinary tithe or other assessment already imposed upon their lands; the redemption itself could be by payment either in cash or produce.[26] To overcome the practical difficulties that could arise in consequence of the greatly subdivided nature of land held by cultivators, the returns of which were at best only marginally profitable, Colebrooke suggested that the redemption should be introduced over a long period of time, ten or twenty year schemes being most suitable. Colebrooke believed that under this measure the revenue of the colony would be augmented, while its agriculture would be brought back to its former state of prosperity, and 'time would be thus gained for the realization of other branches of revenue'.[27]

Practical consideration, no doubt, guided Colebrooke in recommending this measure, but a more important influence of a doctrinaire nature can be traced. The period during which Colebrooke conducted investigations in Ceylon, saw the emergence of the most productive era in English economic thought. The prolific writings of Adam Smith, David Ricardo, T. R. Malthus, James Mill and J. R. MacCulloch, among others, marked the age. The publication of Mrs. Marcett's *Conversations on Political Economy* (in which, it was claimed in the sub-title, 'Elements of that science are familiarly explained') in 1816, exemplified the public interest in the work of the masters. The discussions on political economy were no longer confined to a narrow band of activists. A Political Economy Club was formed in 1822 to disseminate the new ideas among the masses. Professorships in political economy were founded in the Universities of Oxford, Cambridge, Edinburgh and London soon after. Among the several questions which were subjected to debate by the political economists was the question

25. C. O. 54/121, Colebrooke's memo., 11 Oct. 1831 and C. O. 54/122, Report upon the Revenues.
26. C. O. 54/122, Report upon the Revenues. See also, C. O. 54/121, Colebrooke's memo., 14 Apr. 1832.
27. *Idem.*

of rent. The theories of distribution, which together with the theories of production were central in the work of the political economists. led to a deepening interest and discussion on the origins and causes of rent.[28] Although this interest stemmed mainly from a theoretical point of view, it had important practical bearings. Malthus stated in his *Nature and Progress of Rent* (1815) that rent 'had perhaps a particular claim to our attention at the present moment on account of the discussions which are going on respecting the Corn Laws, and the effects of rent on the price of raw produce and the progress of agricultural improvements'.[29] The controversy that arose over the commutation of the tithe in England, gave a new dimension to the question of rent; an immense mass of pamphlets on the question flooded the public.

The dominant group of political economists during this period of time were those who came to be known as the Classical Economists. Beginning from the time Adam Smith published his *Wealth of Nations* (1776) until the publication of John Stuart Mill's *Principles of Political Economy* (1848), the classical economists held a position of primacy in English economic thought.[30] Much of the theoretical framework of the economic reforms that were undertaken during the following years of the century was erected by them. But even at the height of their success, rumblings of dissent were heard. The first significant attempt to contest the methodology adopted by the classical economists was made by the Reverend Richard Jones, a forerunner of the historical school of economists who successfully challenged the supremacy of the classics. It was Richard Jones who provided Colebrooke with his theoretical inspiration.

Although now of relative obscurity, Richard Jones (1796-1855) was not devoid of influence during his life time.[31] He was the Professor of Political Economy at King's College, London, and later the successor of Malthus at East India College at Haileybury. He was actively associated with the movement for the commutation of the tithe in England, writing several influential pamphlets upon the question.[32] In his chief work,

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28. See, E. Cannan, *A History of the Theories of Production and Distribution in English Political Economy from 1776 to 1848* (3rd ed., London, 1924), chapter vi.
29. Cited, *Ibid.*, p. 223.
30. J. Schumpeter, *Economic Doctrine and Method* (London, 1954), p. 69.
31. On Jones the following works have been consulted: J. A. Schumpeter, *History of Economic Analysis* (London, 1955), p. 822; M. Blaug, *Economic History in Retrospect* (Homewood, Illinois, 1962), p. 127, 202 and 251; E. Cannan, *op. cit.*, pp. 333-335: and *D. N. B.*, X, p. 1045.
32. See for example, *A Few Remarks on the Proposed Commutation of the Tithe...* (London, 1833); *Remarks on the Government Bill for the Commutation of the Tithe...* (London, 1836); and *Remarks on the Manner in which Tithe should be Assessed...* (London, 1838) Jones was closely involved with the passage of the Tithe Commutation Act of 1836 (6 & William IV chap. 71) and was one of the assistant commissioners appointed under its provisions on the recommendation of the Archbishop of Canterbury.

An Essay on the Distribution of Wealth and on the Sources of Taxation (1831)[33], Jones made the first 'real attempt to replace the theoretical treatment of economic problems by detailed historical research.[34] He condemned hasty generalizations based on particular reasons or circumstances, the brunt of the attack being directed towards Ricardo, the theorist who by then had begun to dominate English economic thought, and advocated the patient use of factual research. With a much wider and deeper perspective than Ricardo, Jones in his study surveyed not only the history of but also the conditions prevailing in widely different countries of the world - as John Stuart Mill was to remark later, Jones' *Essay* contained 'a copious repertory of valuable facts on the landed tenures of different countries'.[35] It is generally admitted by modern economists that Jones failed to prove Ricardo wrong and that he did not establish any new significant principles in political economy, but nevertheless several intellectuals of his generation came under his influence, John Stuart Mill being the most noteworthy.[36]

Colebrooke was attracted to Jones rather than to his more famous contemporaries by the wider perspective displayed by him. Having served in the East, where strikingly different conditions from his mother country prevailed,[37] Colebrooke was acutely conscious of the need for such an outlook. The importance with which Colebrooke held this factor was clearly revealed when he delivered a telling indictment on the classics for their narrow vision: 'Altho[ugh] an economist, I see great reason to differ from the views of Mr. Mill a[nd] MacCulloch a[nd] those of their school who reason from their observations in this country rejecting a more enlarged consideration of the facts and arguments to be deduced from the arrangements of policy which prevail in other countries'.[38] Thus it is no surprise that he chose Jones' *Essay* as his guiding light in deciding upon the question of land tax in Ceylon. For him, as revealed in his writings, Jones' *Essay* was the most distinguished work on the theory of rent produced in England.[39]

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33. Jones intended to issue several tracts on the subject, but only the first part, on rent, was published. The collected works of Jones have been edited by W. Whewell, *Literary Remains of Richard Jones* (Cambridge, 1859).
34. J. Schumpeter, *op. cit.*, p. 162.
35. J. S. Mill, *Principles of Political Economy* (6th ed., London, 1873), p. 152.
36. Mill in his *Principles of Political Economy*, the most authoritative of his works, accepted several arguments put forward by Jones relating to the position of the Indian peasants, and his emphasis on the role of 'custom', particularly with respect to land tenure, was thoroughly Jonesean, M. Blaug, *op. cit.*, p. 202 and E. Stokes, *op. cit.*, pp. 135-136.
37. With keen insight and interest, Colebrooke surveyed the different customs and tendencies that prevailed in the coutries of Asia he served. See, for example, Royal Artillery Institution, Woolwhich, MS/20; Description of the native inhabitants of Java, their language, local custom and manners, enclosed in Colebrooke to Watson, 22 Mar. 1813.
38. C. O. 54/121, Colebrooke to Hay, 24 Dec. 1832.
39. *Idem.*

Jones' study, in the opinion of Colebrooke, embodied 'an Elaborate investigation of the Ricardo Theory of Rent which is found at variance with the experience of different countries a[nd] quite inapplicable in India'.[40] Jones argued that in countries of Asia, where 'peasant rents' prevailed, the very nature of the rent systems prevented the productive powers of the earth from realizing their full potential. The encroachment of the tenant's share of the produce from time to time in the guise of tax under these systems, led to the 'increasing penury of the cultivators', retarding the growth of agriculture. The landlords, on the other hand, were invariably affected by the fluctuating fortunes of the cultivators. The landlords could not reap the advantages that could be derived from their position as the land owners until their income was fixed. Further, the entry of the capitalists into the field of agriculture, a necessary prerequisite for its improvement for they alone possessed the capital for investment, would be possible only when conditions under which both the landlords and the peasants were disposed to apply capital to land, were realized. The demands of the state upon land needed to be limited, for the interests of these categories, peasants, landlords and the capitalists, to coincide. This led him to conclude that a system of redemption of the land rents payable by cultivators of these countries should be initiated for the improvement of land.[41]

It has been generally assumed by historians that in proposing reforms for Ceylon, Colebrooke drew his inspiration from the Utilitarian movement which began to play a decisive role in England beginning from the later years of the 1820's.[42] Like many of his contemporaries, Colebrooke too came under the influence of Utilitarianism, but it was far from doctrinaire, and not all embracing, and at times it was even completely subjugated to influences which had a strong anti-Utilitarian bias. This was best exemplified in his proposal for the redemption of the land tax in Ceylon. Richard Jones, Colebrooke's mentor, took a determined stand in opposition to the advocates of Utilitarian political economy, particularly against Ricardo whose doctrine became 'the orthodoxy of the Utilitarian group'.[43] Colebrooke not only accepted Jones' views, but he also came out against the Utilitarians. In the evidence he gave before a select committee of the House of Commons on the affairs of the East India Company, which clearly revealed to what extent his basic outlook differed from that of the Utilitarians, he argued that,

> although the Cingalese (sic) have suffered from the government monopolies, from the restrictions of trade and the forced labour exacted from them, I believe that there are no peasantry throughout the territories of the East India Company

40. *Idem.*
41. R. Jones, *An Essay on the Distribution of Rent* . . . . , pp. 157-164.
42. See for example, G. C. Mendis ed. *The Colebrooke - Cameron Papers* (London, 1956), i, introduction.
43. E. Halevy, *The Growth of Philosophic Radicalism* (London, 1928), p. 318.

> who are so much at their ease as are the peasantry of Ceylon, where no zamindary and ryotwarry (sic) settlements have been made. I can only attribute this to the circumstances that the demands of the government upon land have been more limited in Ceylon, than in any parts of the continent of India.[44]

The expansion of cultivation and the increase in general prosperity under the Permanent Settlement in Bengal was, in Colebrooke's view, because 'the limiting of the demand upon land .... led to the employment of capital and to the improvement of the resources of the country'.[45] The argument thus put forward, that the limiting of the state's demands upon land would lead to increasing prosperity, an argument completely at variance with the teachings of the Utilitarians, no doubt was an important consideration in Colebrooke's proposal for a redemption of the land tax in Ceylon.

III

The stance Cameron, Colebrooke's colleague, took on the question of land tax, forms a study in contrast. Cameron had strong intellectual links with the Utilitarian movement. Ricardo, MacCulloch, George Grote, Charles Buller and the Mills were his intimate companions. His close association with the University College in London, an institution founded by the Utilitarians, and with the *Westminister Review*, the radical journal which espoused the cause of Benthamism, too reveal his Utilitarian connections. He was even described by a contemporary as 'a Benthamite Jurist and Philosopher of great learning and ability'.[46]

Cameron's approach to reforms in Ceylon bore a strong doctrinaire Utilitarian imprint. Under the division of labour laid down by the commission of inquiry, Cameron was responsible only for the reforms in the judicial branch of the administration of the colony. This however, did not preclude him from offering his own suggestions on the question of reforms in the spheres covered by Colebrooke. Indeed, Cameron disagreed with many of the conclusions reached by Colebrooke. But, only rarely did he carry forward the differences to a stage where long drawn out debates between the two prevailed. Land tax was one subject which Cameron debated with much vigour - this perhaps is no surprise, for it constituted the core of Utilitarian political economy.

The question which should be posed as regards the land tax was, Cameron argued, 'simply whether the present Land Tax in Ceylon should be

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44. *B. P. P.*, 1831/32, XI (735-III), p. 244.
45. *Idem.* Although he admired the Permanent Settlement, Colebrooke decided against a similiar measure for Ceylon on the grounds that many tracts of fertile land of the colony were still left uncultivated, C. O. 54/121, Colebrooke to Hay, 2 May 1832.
46. H. Taylor, *Autobiography* (privately printed, London, 1877), ii, 33. Leslie Stephen, the historian of the Utilitarian movement, wrote of Cameron as 'a disciple, and ultimately perhaps the last surviving disciple of Jeremy Bentham', *D. N. B.*, VIII, p. 289. Stephen's *The English Utilitarians* (London, 1900), 3 vols., is the standard English work on the movement.

commuted for an annual payment fixed for a certain number of years, or should be redeemed'. There was not the need for him to dwell upon the advantages of a fixed annual payment over a tithe or other proportional assessment, for the differences between him and Colebrooke centred only on the merits of a commutation of the Land Tax as compared with those of a redemption. The levying of a tithe or another proportional tax on the gross produce, was not favoured by either of them. Commutation was advocated by Cameron because 'a Land Tax, in so far as it can be made to fall upon Rent, as distinguished from the return to capital laid out on Land, seems to me the very best of all taxes'. It was the only tax, claimed Cameron, which did not interfere with 'the natural, i. e. the most beneficial distribution of Capital'; by commuting the land tax, the revenue from land in Ceylon could be brought 'very nearly to the condition of a tax falling exclusively upon Rent'.[47]

Cameron's concept of land rent was closely modelled on the classical Utilitarian view. Rent, he defined as the difference between the return received for capital employed on land and the usual return received for capital invested in other speculations. In other words, the rent of a given portion of land was that sum which a capitalist could afford to pay for the right to apply his capital on that land. The rent therefore, Cameron argued in strictly Utilitarian terms, if taken by taxation would not lead to any pernicious results, for it would not interfere with the price or quantity of raw produce or with the rates of profit derived from the produce. If the state was not the owner of the soil, or was not in possession of a part or whole of the rent, or of any share of the produce of land, the veneration for private property would prevent the state from taking the rent from the hands of those to whom it rightfully belonged. But, if the state was actually in possession of a larger portion of the soil, and by tradition was the receiver of a share of the produce, as in Ceylon, the state had every right to collect the rent by taxation.[48]

Cameron unequivocally rejected the view that the demands of the state upon land ought to be limited. He held that before any attempt was made to relinquish the state's rights over land, all the more oppressive modes of revenue ought to be removed.[49] Viewed in this light, Colebrooke's proposal for the redemption of the land tax in Ceylon, Cameron felt, was premature. He found the terms embodied in the proposal too favourable to landholders. He argued that by allowing the owner of land the purchase of the tithe, which rightfully belonged to the public, by paying in the course of ten or

47. C. O. 54/121, Cameron to Goderich, 25 Aug. 1831 and Cameron's memorandum, 8 Apr. 1832.
48. *Ibid.*, Cameron's memo., 13 Dec. 1832.
49. As an oppressive mode of revenue, Cameron instanced the salt monopoly. He wrote that the monopoly 'seems to me to unite all the bad qualities which it is possible for a tax to possess', and looked upon its abolition as one of the most essential financial reforms in the colony, *ibid.*, Cameron to Hay, 8 Apr. 1832, encl.

twenty years only five-tenths in addition to the customary payment, the state would unwarrantably give an advantage to the landholder over the public. He also doubted the practicality of Colebrooke's measure. For, as Colebrooke had argued, if the uncertainty of the seasons and the poverty of the landholder had led to difficulties in paying an annual sum not exceeding one-tenth of the average produce of the land, still less would the landholder be able to pay in any reasonable period of time a sum sufficient to redeem the perpetual charge.[50]

Cameron admitted that there would be practical difficulties in the application of his proposal too. These however, could be overcome by 'talent a[nd] perseverance coupled with an intimate knowledge of the habits a[nd] opinions of the natives'. The principal objection to the commutation system had been that under its method of periodical assessment, the improvements made upon land by the land owners were subjected to increased taxation. This objection could be overcome by extending the period of each assessment.

> If the Government is to step in at the end of three years a[nd] increase the tax because the produce of the land has been increased, the motive for the improvement in the mind of the cultivator will be much weaker than it would be if the whole profit to be derived from the improvements were left to him for twenty or thirty years, a[nd] as his prosperity a[nd] the prosperity of the Revenue both depend upon that motive, it ought to be impaired as little as it can be consistently with the principle that the Government ought not to relinquish any portion of the rent of land to which it is already entitled until it shall have remitted all other more objectionable taxes.[51]

In making a new agreement with the landholder at the expiration of each period of twenty or thirty years, Cameron stipulated that the state should rightly adhere to the principle that no advantage be taken of any increase of produce which may have resulted from the application of capital or labour by the landholder. However, if any increase had taken place in the average price of the raw produce, or if any diminution of the cost of transporting that produce to the markets had taken place, either on account of the construction of new towns or by the improvement of systems of communication, the state could increase the rate of the tax. He realised that in practice difficulties would arise in assessing acurately this increase. He advised that the state should act with circumspection, and added that if there was to be any margin of error in the new estimates, it should be in favour of the landholder rather than against him.[52]

The limited manner in which the modes of collection of land revenue operated in the colony drew the criticism of Cameron. The exemption from

50. *Ibid.*, Cameron's memo., 13 Dec. 1832.
51. *Ibid.*, Cameron's memo., 1 May 1832.
52. *Ibid.*, Cameron's memo., 13 Dec. 1832.

the land tax received by commercial crops, Cameron pointed out (using a favourite phrase of the Utilitarians) interfered with the 'natural distribution of capital', and further was also detrimental to the revenue of the state. Yet, in consistent with the good faith demanded from a government, Cameron recommended that where landholders acted upon the exemption, the privilege should be continued without invalidation. With the exception of much specific instances, the provision for exemption should be immediately revoked, and the land tax and its commutation should be applied on a more realistic universal basis.[53]

The tone and tenor of Cameron's argument were Utilitarian, the Utilitarian political economy as expounded in relation to India. The theories of James Mill seemed to have been the model upon which Cameron fashioned his. As Colebrooke perceptively observed, 'Mr. Cameron I found has taken precisely the same view that Mr. Mill has done in his evidence on the Indian system of Revenue'.[54]

Predictably Colebrooke vehemently opposed the views put forward by Cameron. 'The prosecution of Mr. Mill's system', Colebrooke claimed, 'would be a complete bar to the prosperity of the country. It proceeds from a theory of rent which if not questionable, [had] at least no application to India'.[55] Colebrooke argued that the view, held by both Mill and Cameron, that a land tax was the most suitable mode of taxation because it was taken from rent, was inapplicable in a country where indigent landholders cultivated for subsistence, uniting in it the profits of their stock and the wages of their labour.[56] Apart from this major theoretical objection to Cameron's proposal, there were also the practical objections. The greatly subdivided nature of the land in Ceylon would necessitate the consultation with numerous petty landholders at each assessment, and this, Colebrooke pointed out, would become an insurmountable obstacle when effecting detailed settlements. The periodical reviews under which increased assessments might be applied, could act as a discouragement on the application of capital to land, and he doubted whether it would be possible to distinguish between public and private improvement in assessing the increase in the value of the produce of land. Again, as the payment in respect of the commutation would have to be remitted in years when failures of crops occur, the government would derive no advantage from abundant crops in prosperous seasons.[57]

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53. *Ibid.*, Cameron to Goderich, 25 Aug. 1831 and Cameron's memo., 13 Dec. 1832.
54. *Ibid.*, Colebrooke to Hay, 1 May 1832. Colebrooke referred to Mill's evidence before a select committee of the House of Commons. For the evidence see, *B. P. P.*, 1821/32, IX (735-I), XI (735-III), XII (735-VI), XIV (735-VI).
55. *Idem.*
56. C. O. 54/121, Colebrooke to Hay, 2 July 1832.
57. *Ibid.* Colebrooke's memo., 21 Dec. 1832.

IV

By contrast to India, where there was a bewildering mass of conflicting proposals for land revenue, the choice before the Colonial Office in deciding upon the question of land tax in Ceylon was limited to the proposals brought forward by the two commissioners of inquiry, Colebrooke and Cameron. The issue became less complex mainly because no proposal in opposition to either commissioner was put forward from the colony. The views of the Governor and Council of the colony happily coincided with those expressed by Cameron.[58] Weighty though were the recommendations of Cameron, the decision taken by the Colonial Office was in favour of Colebrooke. In the decision-making undertaken on the reports of the Commission of Eastern Enquiry, the Colonial Office generally acted according to the recommendations put forward by the commissioner responsible for the investigation of the subject under consideration; the views expressed in opposition by the colleague were accepted only with great hesitation. This policy seemed to have been based on the belief that only the commissioner who investigated a particular subject, possessed the knowledge to submit a well balanced recommendation.[59] The verdict in favour of Colebrooke cannot be interpreted simply as an act which conformed to this general pattern of decision-making. The officials at the Colonial Office seemed to have been swayed by the intrinsic merits of the proposal as well. This clearly emerged in a communication of the Secretary of State addressed to the Governor of Ceylon:

> The vexations attending the collection of [the land tax], particularly where property is so much subdivided as it is in Ceylon....have already given rise to representations and complaints.....from the people.....[This tax which is] imposed on the subsistence of the people, from which other articles of produce are exempt, or upon which alone a rate of duty is levied, must by discouraging the natural application of Capital, operate as a check to that branch of Agriculture, which is the most important, and which ought, on every ground to receive the utmost encouragement. Although [the tax] in Ceylon does not generally exceed a tenth of the produce, it appears to have been found necessary, in order to encourage the cultivation of waste lands to remove it for a term of years on such land.[60]

The Secretary of State thus reiterated faithfully the objections raised by Colebrooke against the land tax, and considered it 'manifestly politic' to introduce in Ceylon 'the redemption, at an equitable rate, of the Tithe or Grain Tax, now chargeable on all Corn Lands'.[61]

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58. *Ibid.*, Cameron's memo., 8 Apr. and 1 May 1832.
59. See, V. K. Samaraweera, *op. cit.*, pp. 284-285.
60. C. O. 55/74, Goderich to Horton, 23 Mar. 1833.
61. *Idem.*

The Declining Birth Rate in Ceylon

C. H. S. JAYEWARDENE

The published vital statistics for Ceylon indicate that there has been a fall in the birth rate over the period 1946 through 1966. The birth rate (Table 1) was 38.4 in 1946 and in 1966 it was 31.6. The fall, however, has not been regular. Till 1959 the birth rate has fluctuated between a high of 40.6 reached in 1948 and a low of 35.8 in 1958, but even during this period the overall trend has been a downward one. Since 1959 the decline has been steady though small. The recorded annual decline has varied from 0.1 to 0.9.

The decline in the birth rate has been the subject of some investigation. Abhayaratne and Jayewardene[1] and Jayewardene and Selvaratnam[2] studied fertility in the earlier part of the period when the birth rate was more or less constant. This constancy in the face of a dramatic fall in death rate, which made the length of the fecund marital period longer and the probability that a woman would produce more children in her life time greater, they attributed to a real decline in fertility produced by a postponement of marriage. Supporting their hypothesis was the data collected at the census of 1946 which indicated a decrease in the size of completed family.

Fertility in the latter part of the period has been studied by Wright[3] who contends that the discernible decline in the birth rate is the result of changes in the age structure of the population. He has shown, using age specific fertility rates, that the crude birth rate in 1963 would have been no different from that in 1953 had the age distribution of the population in 1963 been the same as that in 1953. It must, however, be pointed out that the total fertility rate –a measure of the average size of completed family– shows a decline even during this period.

There are three factors that could conceivably affect the recorded birth rate - (1) registration of vital events, (2) mortality and (3) fertility. What contribution these factors have made to the decline in the birth rate is a matter of interest, especially as the birth rate is sometimes used to assess the efficiency of a family planning program. In this study an attempt is made to assess the effect that each of these factors has had on the birth rate in Ceylon.

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1. O. E. R. Abhayaratne and C. H. S. Jayewardene, 'Fertility Trends and Population Growth in Ceylon,' *Ceylon Journal of Medical Science*, 13 (1964), pp. 1 - 77.
   O. E. R. Abhayaratne and C. H. S. Jayewardene, 'Fertility in Ceylon,' *Ceylon Journal of Historical and Social Studies*, 7 (1964), pp. 99 - 111.
   O. E. R Abhayaratne and C. H. S. Jayewardene, *Fertility Trends in Ceylon*, Colombo, Colombo Apothecaries Co. Ltd., 1968.
2. C. H. S. Jayewardene and S. Selvaratnam, 'Fertility Levels and Trends in Ceylon,' *Contributed Papers to the Sydney Conference of the International Union for the Scientific Study of Population*, (1967), pp. 237 - 244.
3. N. H. Wright, 'Recent Fertility Change in Ceylon and Prospects for the National Family Planning Program,' *Demography*, 5 (1968), In Press.

Registration of Vital Events

During the period relative to this study there has happened nothing to account for changes in the registration of vital events. Birth and death registration was introduced into Ceylon by the Registration of Marriages, Births and Deaths Ordinance No. 6 of 1847. Yet registration proper could be considered to have started only in 1895 when penalties for non-registration were introduced by the Birth and Death Registration Ordinance No. 1 of 1895. Since 1946 birth registration can be considered to be particularly good. First, encouraged by a system of social medicine, a large proportion of births occur in government hospitals. This ensures registration. Second, the system of free education, the advantage of which is liberally taken, acts as an incentive to birth registration. Third, the rice ration scheme, through which rice is distributed free of charge or at a subsidised price to Ceylonese, makes it imperative that a birth be registered.

In 1953, however, a post enumeration survey in which the extent of birth and death under-registration was also assessed, indicated that there was a birth under-registration of 11.9%.[4] Though this figure has been unquestionably accepted by the United Nations and quoted widely in their demographic yearbooks, its accuracy has been questioned mainly on the ground that the correction of birth and death under-registration and census under-enumeration with the figures of the study gives a more unbalanced balancing equation than the one with the uncorrected figures.[5] Birth under-registration has been estimated by Sarkar[6] at 4.0%, by Raja Indra[7] at 4.4% and by Abhayaratne and Jayewardene[8] at 5.0% during the period 1946 through 1953. A more recent survey of birth and death under-registration indicates that birth under registration is only 1.0%.[9] This latter study also indicates that the difference in the result from that of the previous survey is due, not to better reporting between 1953 and 1963, but to a better technique used in the later survey which assured more accurate estimation.

The birth rate is also affected by census under-enumeration and death under-registration, as these two factors enter in the computation of the estimated mid-year population which forms the dominator. The survey conducted by Kannangara[10] indicated an under-enumeration of 0.7% at the Census of 1953. On this basis, the United Nations assumed an under-enumeration of 10% at the census of 1946. Under-enumeration at the census of 1946 has been estimated

4. I. Kannangara, *Post-enumeration Survey 1953*, (Colombo, Department of Census and Statistics, 1953).
5. O. E. R. Abhayaratne and C. H. S. Jayewardene (1968), *op. cit.*
6. N. K. Sarkar, *The Demography of Ceylon*. (Colombo, Government Press, 1957).
7. R. Raja Indra, *Sinhalese Population Growth* (Colombo, Department of Census and Statistics, 1955).
8. O. E. R. Abhayaratne and C. H. S. Jayewardene (1968), *op. cit.*
9. L. Aponso, *Birth and Death Registration in Ceylon* (In preparation).
10. I. Kannangara, *op. cit.*

by Sarkar[13] at 6.3% and at both the census of 1946 and 1953 by Abhayaratne and Jayewardene[14] at less than 1.0%. It is perhaps reasonable to assume that census under-enumeration was 1.0% during the entire period. Death under-registration has been estimated at 5% during the entire period by Abhayaratne and Jayewardene.[15] Kannangara's survey[16] revealed an under-registration of 11.1% while Aponso's survey[17] gives a figure of 4.0%.

Birth under-registration tends to depress the birth rate by giving smaller enumerators, census under-enumeration tends to elevate the birth rate by decreasing the denominator while death under-registration tends to depress it by increasing the denominator. The net effect of birth under-registration, census under-enumeration and death under-registration on the birth rate depends on the relationship between births, deaths and total population on the one hand and the errors in their counts on the other.[18] Birth under-registration of 5%, census under-enumeration of 1% and death under-enumeration of 5%, which are perhaps accurate estimates of these errors in Ceylon, have had a combined effect of depressing the birth rate by 4.9%.

Mortality

Changes in mortality affect the birth rate by alterations in the age structure of the population.[19] The birth rate is computed from the births in a year - the result of activity of a segment of the population, the female population in the age period 15 - 45 years old, and the total population in that year. When mortality remains constant, the birth rate is constant if fertility is constant. When mortality changes, the birth rate will yet remain constant if fertility is constant and the mortality changes does not affect the relationship of the child bearing population to the total population. Mortality changes produce changes in the birth rate in the face of constant fertility, if the mortality changes affect different segments of the population differently and change the age structure of the population so that the relationship between the child bearing population to the total population is altered.

The effect that the change in the age structure of a population has on the birth rate could be assessed by computing the birth rate in the different years with the age structure of the population in that year keeping the age specific fertility constant. With the age specific fertility of 1953, the birth rate in a

13. N. K. Sarkar, *op. cit.*
14. O. E. R. Abhayaratne and C. H. S. Jayewardene (1965), *op. cit.*
15. *Ibid.*
16. I. Kannangara, *op. cit.*
17. L. Aponso, *op. cit.*
18. J. B. Scarlborough, *Numerical Mathematical Analysis* (London, Oxford University Press, 1958).
19. R. Freedman and A. L. Adlakha, 'Recent Fertility Declines in Hong Kong, the Role of the Changing Age Structure', *Population Studies*, 22 (1968), pp. 181-190. N. Keyfitz, 'Changing Vital Rates and Age Distribution', *Population Studies*, 22 (1968), pp. 235-252.

population with an age structure found in 1946 would be 38.7. The birth rate of 1953 was 39.4 (age specific fertility of 1953 and age structure of 1953). The birth rate in a population with the age structure found in 1963 and the age specific fertility of 1953 would be 37.2 (Table 2). During the period 1946 through 1953, consequently, the change in the age structure of the population has acted to elevate the birth rate, while during the period 1953 through 1963 the change has tended to depress it. The effect of the change in the age structure of the population could be eliminated if the birth rate of 1953 and 1963 was standardised to the population of 1946. With the standardisation, the birth rate of 1953 is 38.7 and the birth rate 1963 is 35.2 (Table 3). The recorded birth rate in these two years (Table 1) was 39.4 and 34.1 so that the change in the age structure of the population has elevated the birth rate in 1953 by 0.7 points or 1.8% and depressed the birth rate in 1963 by 1.1 points or 3.4%.

Fertility

Any change in the birth rate after correcting for errors due to registration of vital events and changes caused by the change in the age structure of the population must be due to changes in fertility. Correction for registration and enumeration errors makes the birth rate of 1946, 1953 and 1963, 40.4, 41.4 and 35.9 respectively. Correction for the change due to the changes in the age structure of the population makes the birth rate in 1946, 1953 and 1963, 40.4, 40.3 and 34.7 respectively. These figures indicate that between both 1946 and 1953 and 1953 and 1963, there has been a decrease in fertility.

Changes in fertility could be the result of alterations in the fecund marital period – alterations caused by changes in the age at marriage and the joint survival of husband and wife – or by changes in the practice of family planning. The average age at marriage[18] for males in 1946 was 28.8. In 1953 too the average age at marriage for males was 28.8 years. In 1963, it was 28.3 years. During the period 1946 through 1963 the average age at marriage for males has remained more or less constant. In the case of females the average age at marriage was 22.0 years in 1946, in 1953 it was 23.0 and in 1963 it was 23.2 years. There has been a steady increase. The average age difference between husband and wife has decreased from 5.9 years in 1946 through 5.8 years in 1953 to 5.2 years in 1963. The increase in the age at marriage for females has been attributed to the increasing use of educational facilities by females.[19] While there is an association between the change in the age at marriage and the change in the school leaving age for females, which is the cause and which is the effect is difficult to determine.

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18. The figures are given in the Registrar General's Report on Vital Statistics.
19. C. H. S Jayewardene and E. C. Fernando 'Fertility in Developing countries', *Contributed Papers to the Sydney Conference of the International Union in the Scientific Study of Population* (1967), pp. 300-308.

Wright[20] explains the increase in the age at marriage by what has been termed the marriage squeeze[21] - an increase in the disproportion between males and females of marriageable age. The inevitable increase in the age at marriage of females with a fall in mortality in a community with full nuptiality, has been demonstrated by Hajnal.[22] When eligible males are all exhausted without all the eligible females being married, some of the eligible females must get married later on and consequently raise the age at marriage. This is, of course, in a population where the female mortality is lower than the male. Table 4 shows the number of females in the age groups 15 - 19 years old, 20 - 24 and 25 - 29 and 30 - 34, respectively in the years 1946, 1953 and 1963. In the important age group, females 20 - 24 years old and males 25 - 29 years old – the prime ages at marriage– the ratio has declined from 101.9 in 1946 to 100.3 in 1953 and 100.2 in 1963.

With the decreasing mortality the expectancy of life for both males and females has increased. In table 5 are presented the probability that a woman aged 20 - 24 would live till she passed age 45 - P_w - the probability that a woman would survive from marriage to the end of her reproductive period and the probability that a man aged 25 - 29 would live till he has passed age 50 - P_h - the probability that a man would survive from marriage till the end of his wife's reproductive period. The probability of joint survival till the reproductive period of the woman is over could be calculated from these two figures - P_w P_h - and from this probability of joint survival the average length of the fecund marital period.[23] Table 5 shows that the average fecund marital period was 11.4 years in 1946. It has increased to 16.9 years in 1953 and 17.4 years in 1963. The increase in the average length of the fecund marital period means a longer period in which the woman could bear children and in the absence of the use of contraceptives means an increase in the size of the completed family.

The increase at the age at marriage has tended to decrease the fecund marital period between 1946 and 1953 by 0.1 years and between 1953 and 1963 by 0.3 years. This at the earlier end of a woman's reproductive life when she is more fertile. The increased expectancy of life has tended to increase the fecund marital period between 1946 and 1953 by 5.6 years and between 1953 and 1963 by 0.5 years towards the end of the reproductory period. Assuming a very negligible use of contraceptives, the minimum pregnancy rate per elapsed time for a woman in the age group 20 - 24 (the age at marriage) is 37.1 and in the age group 35 - 39 and 40 - 44 (the age at which the effects of the

20. N. H. Wright, *op. cit.*
21. D. Akers and R. Parke, 'On measuring the Marriage Sqeeze'. Abstract in *Population Index*, 33, No. 3, July-Sept. 67.
22. J. Hajnal, 'Age at marriage and proportions marrying', *Population Studies*, 7 (1953), pp. 111-136
23. R. S. S. Sarma, *The effect on declining mortality on fertility.* Paper read at Annual meeting of Population Association of America, (1968).

mortality decline are felt) is 34.9.[24] On this basis the postponement of marriage would have prevented the birth of 0.1 children per woman in both 1953 and 1963. The increased longevity would have produced an additional 2.0 births in 1953 and 2.1 births in 1963. The nett result of the changes in the fecund marital period would have been to increase the size of completed family by 1.9 in 1953 and by 2.0 in 1963. The total fertility rate indicates that the size of completed family was 5.1 and 4.5 in 1953 and 1963 respectively.[25] Census data on motherhood and fertility gives the size of completed family in 1946 as 5.6. [26] The size of completed family consequently fell short of the expected by 2.4 in 1953 and 3.1 in 1963. This must necessarily be due to an increase in the use of birth control methods.

Pregnancy rates round the world indicates that a rate of 0 - 3.0 per 100 woman years of elapsed time is found among those practising birth control with a high degree of efficiency, rates of 3.1 - 15.0 among those practising birth control with a moderate degree of efficiency, rates 15.1 - 30.0 among those practising birth control with a low degree of efficiency, rates of 30.1 - 50.0 among those practising birth control to a negligible extent and rates of 50.1 - 100.0 among those who practise no birth control at all.[27] On this basis the computed size of completed family in Ceylon for the years 1946, 1953 and 1963 using the fecund marital period for the respective years and assuming a 10% pregnancy wastage are shown in Table 6. The size of completed family in 1946 - 5.6 - is what would be expected in a population not practising birth control at all. The size of completed family in 1953 - 5.1 - indicates a population using contraceptives to a negligible extent. The 1963 figure - 4.5 - is what is to be expected in a population that is practising birth control with a low degree of efficiency.

The changes that have occurred in the age specific fertility (Table 3) are of a type that favours a reduction in fertility through the postponement of marriage than the practise of birth control. As birth control is usually used to terminate child bearing than to control and space it, the use of birth control is usually associated with a fall in the age specific fertility of the older age groups. A fall in the age specific fertility of the younger age groups is usually taken as evidence of postponement of marriage,[28] though the possibility of the practise of birth control by the younger age groups cannot be ruled out. From the age specific fertility and the proportion married in that group the marital age specific fertility could be calculated.

24. C. H. S. Jayewardene, 'Pregnancy Rates in the Evaluation of Family Planning Programs', *Contributed Papers to the Sydney Conference of the International Union for the Scientific Study of Population* (1967), pp. 406-412.
25. Annual Administration Reports of the Registrar General of Ceylon on Vital Statistics for 1953 and 1965.
26. Report of the Census of 1946, Vol. 2.
27. Summarised in Abhayaratne and Jayewardene (1968), *op. cit.*
28. R. Raja Indra, *Recent Fertility Trends in Ceylon.* Paper presented at the International Population Conference, Ottawa, 1963.

The figures for 1953 and 1963 are given in Table 7. There has been a marked increase in marital fertility in the 15 - 19 years old age group, perhaps as a result of better nutrition. Whatever it may be this group certainly does not appear to practise birth control. The marital fertility of the age groups 20 - 24 years old and 25 - 29 years old has shown a decline suggestive of the use of contraceptives. The marital fertility of the other age groups has shown an increase so small as not to indicate a change. The conclusion possible from this analysis is that some birth control is being practised and that by the younger age groups.

The changes that have occurred in Ceylon since 1946 – the change in the age at marriage and the joint survival of husband and wife - indicate that the size of completed family should have been 8.0 in 1953 and 8.7 in 1963, if there had been no change in fertility. The actual performance of the women produced a result that is 2.4 below the expected in 1953 and 3.1 below the expected in 1963. As the period in which this reduction is effected is the fecund marital period of the woman – 16.9 years in 1953 and 17.4 years in 1963 – 0.14 births per reproducing women were prevented in 1953 and 0.18 in 1963. Assuming a 90% efficiency in the use of contraceptives 15.6% of the reproducing couples in 1953 and 20.0% of them in 1963 would have been practising family planning.

TABLE 1

Crude Birth Rates in Ceylon, 1946-1967

Year	Birth Rate	Year	Birth Rate
1946	38.4	1957	36.5
1947	39.4	1958	35.8
1948	40.6	1959	37.0
1949	39.9	1960	36.6
1950	40.4	1961	35.8
1951	40.5	1962	35.5
1952	39.5	1963	34.1
1953	39.4	1964	33.3
1954	36.2	1965	33.2
1955	37.9	1966	32 3
1956	36.4	1967	31.6

SOURCE: Registrar General's Reports on Vital Statistics, 1946 - 1963.
Figures for 1964-67, obtained from the Registrar General's Department.

TABLE 2

Estimated Birth Rates for 1946, 1953 and 1963 with the Age Specific Fertility of 1953 and the Age Structure of the Population of those years.

Age Group	Age Specific Fertility 1953	Female Population in Thousands 1946	1953	1963
10 - 14	0.4	387	483	572
15 - 19	59.8	300	391	496
20 - 24	249.1	313	388	442
25 - 29	298.5	270	334	397
30 - 34	230.5	203	251	354
35 - 39	142.7	200	256	309
40 - 44	35.6	135	173	262
45 - 49	6.4	126	168	214
Estimated Total Births (thousands)		259	321	395
Population (thousands)		6695	8155	10625
Estimated Birth Rate		38.7	39.4	37.2

SOURCE: Age Specific Fertility: Registrar General's Report on Vital Statistics for 1953. Female Population and Total Population, Registrar General's Reports on Vital Statistics for 1946, 1953 & 1963.

TABLE 3

Birth Rates for 1953 and 1963 standardised to the Population of 1946

Age Group	Female Population (thousands) 1946	Age Specific Fertility 1953	1963
10 - 14	387	0.4	0.3
15 - 19	300	59.8	59.0
20 - 24	313	249.1	207.0
25 - 29	270	298.5	233.0
30 - 34	203	230.5	245.2
35 - 39	200	142.7	153.4
40 - 44	135	35.6	46.3
45 - 49	126	6.4	6.3

SOURCE: Female Population, Registrar General's Report on Vital Statistics for 1946. Age Specific Fertility, Registrar General's Reports on Vital Statistics for 1953 and 1963.

TABLE 4

Ratio of females to prospective husbands, 1946, 1953 and 1963

Age of Female	Ratio Female/100 males			Age of Male
	1946	1953	1963	
15 - 19	96.8	103.1	103.1	20 - 24
20 - 24	101.9	103.3	100.2	25 - 29
25 - 29	110.0	98.7	98.8	30 - 34

Computed from Census figures.

SOURCE: Census Reports of 1946, 1953 and 1963.

TABLE 5

Fecund Marital Period 1946, 1953 and 1963

Year	P_w	P_h	$P_w P_h$	Fecund Marital Period
1946	72.7	70.9	51.5	11.4 years
1953	88.3	86.7	76.6	16.9 years
1963	90.0	87.9	79.1	17.4 years

P_w Probability of survival of a woman aged 20 - 24 till she is passed 45 years of age.

P_h Probability of survival of a man aged 24 - 29 till he is passed 50 years of age.

$P_w P_h$ Probability of joint survival of husband and wife from marriage till end of reproductory period of wife.

Fecund marital period is calculated on the assumption that the natural fecund period - the married life of a woman (M)-is the period from average age at marriage to age 45. Fecund Marital Period $= M P_w P_h$

SOURCE: Statistical Abstracts of Ceylon - 1946, 1953 and 1963.

TABLE 6

Computed size of completed family at different levels of use of contraceptives in 1946, 1953 & 1963

Level of contraceptive use	1946	1953	1963
High degree of efficiency	0-0.31	0-0.45	0-0.47
Moderate degree of efficiency	0.31-1.54	0.45-2.29	0.47-2.35
Low degree of efficiency	1.54-3.06	2.29-4.57	2.35-4.70
Negligible use	3.06-5.09	4.57-7.61	4.70-9.97
No use	5.09-10.07	7.61-15.31	7.97-15.66

The computed size of family size has been calculated on the basis of a pregnancy rate of 0 - 3.0 per 100 woman years of elapsed time in population practising contraception at a high level of efficiency, 3.1 - 15.0 at a moderate level of efficiency, 15.1 - 30.0 at a low level of efficiency, 30.1 - 50.0 with negligible use, 50.1 - 100.0 with no use of contraceptives taking into account that the fecund marital period was 11.4 years in 1946, 16.9 years in 1953 and 17.4 years in 1963 assuming a 10% pregnancy wastage.

TABLE 7

Age Specific Marital Fertility 1953 and 1963

Age Group	1953			1963		
	A.S.F.	% married	A.S.M.F.	A.S.F.	% married	A.S.M.F.
15 - 19	59.8	23.7	252.4	59.0	15.0	393.5
20 - 24	249.1	65.8	378.7	207.0	57.4	360.7
25 - 29	298.5	84.4	353.7	233.0	80.9	288.1
30 - 34	230.5	87.7	262.9	245.2	89.1	275.2
35 - 39	142.7	86.5	165.0	153.4	89.9	170.7
40 - 44	35.6	80.7	44.1	46.3	86.1	53.8

A. S. F. = Age Specific Fertility.

A. S. M F. = Age Specific Marital Fertility.

Age Specific Marital Fertility calculated from the Formula

$$ASMF = \frac{ASF}{\%\ \text{married}} \times 100$$

SOURCE: Registrar General's Reports on Vital Statistics for 1953 and 1963.

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The Editors welcome articles based on research in the social sciences. While the emphasis will be on Ceylon, articles of general interest on South and Southeast Asia will also be considered for publication. Contributors are requested to send articles intended for publication in the January issue before 1 July of the previous year and those for the July issue before 1 February of the same year. Each contributor will receive free twenty five off-prints of his article. Manuscripts, books for review and all related inquiries should be addressed to the Editor.

Manuscripts should be typed on one side of the sheet only, in double spaced typing, leaving margin of about two inches for editorial purposes. Articles should not normally exceed 15,000 words in length. References and foot-notes should be given in a numbered list at the end of the article. Maps and line drawings should be sent in their final form ready for the printer.

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Printed at Balin & Co., Kandy, Ceylon.