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*The Contributions of Patrick Colquhoun to Social Theory and Social Philosophy**

PATRICK COLQUHOUN was born in Dumbarton on February 14th, 1745, and was descended by both parents (who bore the same name) from the ancient Scottish family of Colquhoun 'which has intermarried with several of the first nobility in Scotland'.[1] His father was a class-mate of Smollett at the Dumbarton grammar school,[2] and served as local judge and registrar of county records in Dumbartonshire until his death at the early age of forty-four. Biographical details of Colquhoun's early life are remarkably scanty. Little is known of his childhood and adolescence, except that he 'seems to have been an orphan, and not very well off, before he was sixteen years old'.[3] His only formal education was at the local grammar school, where he must certainly have learnt Latin.

At the age of sixteen Colquhoun emigrated to America. During the five years he spent in Virginia he 'occupied some sort of commercial position', and 'finished his own education' with the aid of a 'tolerable library'.[4] It has been suggested that Colquhoun developed a taste for law, political economy, and social science, from his legal acquaintances in the New World, for he was fond of listening to, and joining in, legal conversation with lawyers at Richmond.[5] In 1766, his health impaired, he returned to Scotland.[6]

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* I am indebted to Sir J. F. Rees who read the manuscript and made valuable suggestions.

1. Iatros, 5.
2. The school was then in charge of John Love 'an eminent classical scholar'. Sir Walter Scott ranked Tobias Smollett with Fielding as a novelist (cf. Irving: *Some Account of the Family of Smollett of Bonhill.* Edinburgh. 1859).
3. Bourne. 184.
4. Iatros. 6.
5. loc. cit.
6. In 1775 Colquhoun married a daughter of James Colquhoun, Chief Magistrate of Dumbarton. There were seven children of the marriage, four of whom survived. One of the three daughters married Dr. Yeats ('Iatros'), Colquhoun's biographer. In Colquhoun's letters to Boase and Lettsom, there are hints that after his wife's death in 1810, his domestic life was darkened by illness and bereavement, one of his daughters being ill for nearly a year'.

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The first phase of Colquhoun's work (1766-1789) comprises the period he spent in Glasgow after his return from America at the age of twenty-one, to establish himself as a successful merchant with a 'large business connection'.[7] He was the founder of the Glasgow Chamber of Commerce and Manufactures, and his activities were those of a 'patriotic merchant' for, besides enriching himself, he spared no pains to stimulate British commercial enterprise.[8] In 1788, he visited Ostend, then a depôt for East India goods, for the purpose of ascertaining the extent to which British manufacturers could compete with continental products, and in the following year journeyed to Flanders and Brabant to publicise the merits of British Muslims. The years 1783-'9 were devoted to working out administrative and legislative measures for relieving the distresses of manufacturers, and promoting the expansion of British industry and overseas trade, and for his efforts on behalf of Northern manufacturers, Colquhoun was rewarded with the title of 'father of Glasgow'.[9] It is characteristic of Colquhoun's indefatigable zeal that when Pitt requested him to prepare an account of the state of the cotton trade, he travelled to Manchester to obtain first-hand information for a minute report.[10] The numerous tracts on commercial subjects which Colquhoun published at his own expense during this period, have disappeared without a trace.[11]

In the year of the French Revolution Colquhoun abandoned the pursuit of commerce 'for some reason unexplained—probably because as a patriotic merchant, he had already made money enough to enable him in future to devote himself, without hindrance, to employments wholly philanthropic and altogether to his taste'.[12] He settled in London until his death in 1820, and it is by his work during this period that he is known to posterity.

In the early nineteenth century, the expression 'Political Economy' covered the entire range of social studies. Colquhoun was not uninterested in 'economics' in the narrow sense, and joined Boase in the Bullion Controversy against what he considered to be fallacious arguments of Huskisson and the 'bullion gentlemen'. 'I have no patience with such theorists', he confessed, when he was urging the issue of bank notes in lieu of gold coin.

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7. Irving. 1879. I. 321.

8. Bourne. II. 184. Colquhoun was one of the twelve principal contributors to a local fund for raising a Glasgow regiment for service in the American War of Independence.

9. Cleland. I. 177. Colquhoun was Baillie of the Barony of Gorbals (1778), Lord Provost of Glasgow (1783), and Treasurer (1785).

10. '*A Representation of the Facts Relative to the Rise and Progress of the Cotton Manufactures of Great Britain, with Observations on the Means of Extending and Improving this Valuable Branch of Trade*' (1789), listed in Iatros.

11. There are no copies of these early tracts in the British Museum. For list cf. the bibliography in Iatros. Also Espinasse; Irving 1879, I. Ch. XIII.

12. Bourne. II. 187.

He realised that distrust of paper money in times of war and public calamity was a factor to be reckoned with, and suggested that the Bank of England be authorised to give specie for pound notes in order to make the measure palatable in its first stages. No panic need thereafter be anticipated if government took the psychological precaution of removing distrust by guaranteeing to make good deficiencies arising from non-payment of bank notes, and by making these notes legal tender to the fullest extent.[13] 'That the measure will be highly beneficial to the whole nation is to me as clear as any proposition in Euclid, while the impolicy of a new and expensive coinage is equally self-evident '.[14]

Colquhoun's participation in the Bullion Controversy was but a brief interlude in a career devoted to the study of social problems. He felt that the study of these 'less splendid' subjects was of great importance in a period of unprecedented social change.[15] Colquhoun was a sociologist and social philosopher, rather than an 'economist' in the modern sense, for he was interested in the major topics of sociological enquiry, e.g. social morphology, social pathology, and social control.

The 'Reception' of Colquhoun

Colquhoun's writings during his London period gained him almost universal commendation from his contemporaries. They earned him the honorary LL.D. of Glasgow University, and brought him in contact with Pitt, Burke, Adam Smith, William Robertson, and other celebrities. His contemporary biographer had no doubt that Colquhoun would live beyond the grave, that 'the lasting beneficial effects of the well-concerted and wisely executed plans of the benevolent political economist for the happiness of his fellow creatures, will be gratefully hailed by millions yet unborn'. And Lettsom, having read Colquhoun's *Treatise on Indigence* twice, 'with renewed gratification and instruction', wrote to the author that it was the best work he had read in the field of political economy on the means of political and moral reform, and ought to be annually read by every statesman, and magistrate, and indeed by all who were interested in the welfare of the community.

13. The effectiveness of such psychological precautions were amply demonstrated during the crisis of the German mark (cf. Bresciani-Turroni : *The Economics of Inflation*. London 1937).

14. cf. the correspondence with Boase, author of *Remarks on the New Doctrine Concerning the Supposed Depreciation of Our Currency* (1801) and *Remarks on the Impolicy of Repealing the Bank Restriction Bill* (1802) for which Colquhoun was full of praise.

15. Colquhoun to Boase, January 22nd, 1803 (British Museum Add. Mss. 29281). We catch glimpses of the unrest of the times in Colquhoun's letters : he mentions, for instance, that the riots of 1795 interrupted his work (cf. his letter to Lettsom, July 24th, 1795. Pettigrew. II. 352. Letter CCIV) .

'You have raised to your memory a monument more desirable than marble or bronze, and ennobled your character among the distinguished benefactors of mankind'.[16]

But these eulogies were not echoed in more recent times. If the once celebrated *Treatise on Indigence* is occasionally cited today, it is merely to indicate a viewpoint which seems grossly out of harmony with modern social thought.[17] The 'reception' of Colquhoun by modern scholars took a grotesque turn when he was included in Max Beer's *History of British Socialism* (1929). For although Colquhoun's statistical tables, demonstrating that one-third of the national income went to the 'unproductive classes', were avidly seized by John Gray, who made them the basis of an onslaught against the existing distribution of wealth,[18] Colquhoun's own conception of social structure proceeded from fundamentally different premises.

Surveying the vicissitudes of the 'reception' of Colquhoun during the past century and a half, the extraordinary fact emerges that no comprehensive exposition of Colquhoun's substantive contributions to social theory and social philosophy has ever been made. His work has been panegyrized and misunderstood in turn, but never studied. One reason for this neglect was that Colquhoun was eclipsed by his brilliant contemporaries, particularly by Adam Smith and Bentham. Colquhoun had no academic pretensions. He was a practical administrator, a London Magistrate, who 'eagerly seized every opportunity to investigate the nature and extent of the various moral evils which afflicted society, to enable him with greater certainty to suggest practicable and efficient remedies'.[19] His contributions to social theory were only incidental to his preoccupation with burning social issues. When the *Treatise on the Police of the Metropolis* was first published anonymously in 1796, Colquhoun's primary objective was to give an account of the growing lawlessness which he noted in his official capacity as magistrate. In it he made an urgent appeal to the government and public to establish an adequate police system, and urged that the security of society could be preserved only by the operation of a system of restraints (i.e., preventive laws and punishments). It was only in the sixth edition that Colquhoun inserted a new chapter 'On the System of Punishments Theoretically Considered'—as an afterthought, as it were.

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16. Pettigrew. II. Letter CCIX, February 12th, 1807.

17. Laski's *Rise of European Liberalism* (London 1936, p. 209), overlooks Colquhoun's peculiar definition of 'poverty' as the condition of one who is obliged to work for a living (cp. Marshall: *Citizenship and Social Class*, Cambridge. 1950, p. 32).

18. John Gray: *A Lecture on Human Happiness* (London 1825).

19. Iatros. 17.

In the social sciences, a work which is rigorously circumscribed by the contemporary climate of opinion, the propagandist or unimaginative descriptive work, rarely interests posterity. Bentham's polemical tracts are known only to the curious scholar (who hears now-a-days of his tract addressed to the French National Assembly, entitled *Emancipate Your Colonies !*), while his theoretical works have become classics. Had Colquhoun written a detached work on social theory or social philosophy, it would possibly have escaped the oblivion of the string of treatises which were primarily concerned with immediate social problems. These works, like the parallel publications of an earlier London magistrate, Henry Fielding, have not withstood the test of time.[20] They are too practical, too empirical, and like the innumerable social surveys of our own time, soon become obsolete. Fielding left his novels by which he is remembered today, but Colquhoun was too immersed in current events to leave anything other than his essentially topical publications.

Social Morphology

Like many of his contemporaries, Colquhoun became interested in population problems after a study of Malthus' first *Essay on the Principle of Population* (1798). The events which followed the publication of this celebrated work lent support to the author's arguments.[21] Besides the bad harvest of 1799, increasing unemployment, and working class unrest which was heightened by a shortage of grain and the high price of provisions, Colquhoun presented statistics which clearly demonstrated that the population of England was increasing rapidly—from 6,523,000 in 1700, to 10,817,000 in 1801, and 12,353,000 in 1811. He went on to explain, however, that what was important was not absolute numbers, but the ratio of population and accessible food :[22]

' The principles of population appear as yet to be imperfectly understood. The general impression that the riches of a state depends on the number of its people, can only apply to that state of society, where individuals of every class able to work, can find full and profitable employment, enabling them to maintain themselves and their families. Where such

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20. e.g., Fielding : *An Enquiry into the Causes of the Late Increase of Robbers* (1751); *A Serious Address to the People of Great Britain, in which certain consequences of the present Rebellion are fully demonstrated* (1745) etc.

21. Malthus was in fact induced to publish a second edition of the work ' as applied to present conditions ' in the form of a tract entitled *An Investigation of the Cause of the Present High Price of Provisions, by the Author of the Essay on the Principle of Population.* (2nd ed. London : J. Johnson. 1800).

22. Colquhoun pointed out that the alarms which Malthus' work excited in the minds of men of acknowledged learning were due to a mistaken impression that Malthus favoured a depopulating system, and quotes the following passage from the *Essay* to correct this impression : ' That an increase of population when it follows its natural order is not only a *positive good* in itself, and absolutely necessary in the further increase of the annual produce of the land and labour of the country—*he shall be the last to deny* '.

employment does not exist, the redundant population becomes a great calamity ; since the surplus places a heavy burthen on the capital of the country, and on the labour and industry of those that are employed, diminishing the resources, and sapping the foundation of the state '.[23]

'Generally speaking, whatever is the rate of increase in the *means of subsistence* so will be the legitimate increase of the population. The one is limited by the other. All the children born beyond what would be necessary to keep up the population to this level can find relief only in emigration. Otherwise, great disasters will ensue, while the support of the surplus population must fall upon the most opulent classes of society for the purpose of maintaining in idleness a portion of the community for whose labour there is no demand, and where without such support they must starve, or become noxious to the public by acts of criminal delinquency '.[24]

Colquhoun concluded that the primary objective of state policy should be to ' preserve *the equilibrium in the parent state between the demand and supply of labour*, so as to keep every person able to work in full employment both at home and abroad '.[25] If all able-bodied persons were industrious and virtuous, and could find employment, an extended population was a blessing. But this was far from being the case : industrial unemployment was assuming major dimensions in the period following the Napoleonic Wars, and discharged soldiers and seamen were joining the ranks of the unemployed (according to the Parliamentary Pauper Return of 1803, 500,000 able-bodied persons in ' the middle stages of life ' were unemployed, and forced to depend on parish relief). Meanwhile the annual increase of population was 200,000, or one million in every five years.[26]

Colquhoun exposed the popular fallacy that machinery creates unemployment. ' Our Machinery, next to Agriculture, is the stamina and glory of the nation ' ; its endless ramifications opened new channels of employment and augmented wealth. He agreed with Malthus that the pressure of an increasing population on accessible food which had become a serious problem in the seventeen-nineties was not due to ' artificial ', but to ' natural ' factors.[27] In his

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23. *Considerations on the Means of Affording Profitable Employment* . . . (p.36).

24. *British Empire* 4.

25. *Considerations on the Means of Affording Profitable Employment* . . . (p. 22.)

26. Ibid. p. 12. cp. Adam Smith : *Wealth of Nations*, p. 70 : ' In Great Britain, and most other European countries they (the inhabitants) are not supposed to double in less than five hundred years '.

27. Malthus: *An Investigation of the Cause* . . . (1800), concluded that it was unavailing to blame monopolists for forestalling. ' To suppose that a year of scarcity can pass without distressing severely a large part of the inhabitants of a country, is to suppose a contradiction in the nature of things ' .

early tracts Colquhoun's only solution was to urge the poorer classes to exercise the utmost economy in their preparation and consumption of food, for 'a degree of improvidence, and want of economy beyond what it is possible to believe, almost universally pervades this useful class of the community'.[28]

In a series of tracts published in the 1790's, Colquhoun proposed the establishment of soup-kitchens for the poor—a plan which had the blessing of Malthus, Lettsom, and others. After the success of the first 'Meat and Soup Charity', Colquhoun, at the request of the Lords of the Privy Council, drew up suggestions for establishing similar institutions elsewhere.[29] Unperturbed by popular agitation for food, Colquhoun calmly explained to the 'lower orders' that there was no cause for alarm, 'much less for a spirit of discontent manifested in popular meetings', for things were not so bad in England as in France and other countries of Europe, where bread was not to be had for any amount of money.[30]

The progressive increase of urban population was another problem to which Colquhoun directed his attention. He discovered that the rural population was diminishing while population was concentrating in urban areas, and considered that the density of urban population was higher in Great Britain than

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28. *An Account of A Meat and Soup Charity* . . . (1797) pp. 7, 10.

29. Gray: *A History of English Philanthropy* (London 1905, pp. 281-2). A Committee at Lloyd's Coffee House resolved to establish the first Meat and Soup Charity in 1797. Two soups were prepared from Colquhoun's recipes: Leg of Beef Soup and Pease Soup. Twenty cooks were employed and the establishment fed over 10,000 persons a week. A small charge was levied because the poor were apt to undervalue anything they received *gratis*. (cf. *An Account of a Meat and Soup Charity*. Also *An Account of the Economy of an Institution Established in Spitalfields, London, for the Purpose of Supplying the Poor with Good Meat Soup at one Penny a Quart.* (1799). Colquhoun argued that bacon at 9d to 10d per lb. and meat tended to whet the appetite without satisfying it 'and the consequence is that recourse must be had to the ale-house for one or more pots of porter to *fill up*, which, after all, does not answer the purpose'. Soup would leave no craving for porter and would effect a saving of over £10 per year which could be more usefully spent on clothes, children's education, etc. (*Useful Suggestions* . . . 1795). There was a certain hypocrisy in some of Colquhoun's schemes of relief for the poor and he confessed in a private letter that 'Such is the perverseness of habit, custom, and prejudice, that I *durst* not and could not recommend any mode of living which I have recommended, unless I stated it as an advantage which the rich enjoyed' (Letter CCIV to Lettsom, in Pettigrew II). The reference is to a statement in his tract *Useful Suggestions* that 'there is not a single article of diet recommended to the labouring people which the children of the higher ranks do not generally use and prefer'.

30. *Useful Suggestions* . . . 17.

in any other country, the town population being less than the rural population by only 1,095,199. In short, nearly half the population lived in towns. Colquhoun explained that these metropolitan agglomerations were distributed in zones, the labouring people being confined to slum zones in certain parishes, business men living in the mercantile zone, families of rank and fortune in the wealthy parishes, while the middle classes were diffused over every part of the metropolis. London, for instance, contained one million inhabitants whom Colquhoun divided into four classes, distributed as follows :

1. ' Families of rank and fortune who reside almost wholly in the Western parishes.

2. ' Merchants, bankers, and others engaged in commercial pursuits who live chiefly in what is called the City, or that district of the Metropolis which is under the jurisdiction of the Lord Mayor and Aldermen.

3. ' The middle ranks of the people, who are engaged in various pursuits for support, and who are diffused over every part of the Metropolis.

4. ' The lower ranks, composed of labourers and journeymen manufacturers, who reside chiefly in that large and populous district in the Eastern part of the town which is usually called the Tower Hamlets, including St. Giles's, Clerkenwell, and St. Luke's, Middlesex, on the North, and Southwark on the South '.[31]

Colquhoun found that poverty and delinquency were greatest in the Eastern parishes.[32] The burden of parish rates, according to the existing system, was borne by working class people residing in these overcrowded areas. Colquhoun suggested an equal distribution of parish rates on the ground that the nation was a large family, and that the opulent classes who had ' surplus labour ' in store were bound to support and assist their indigent brethren.[33]

Colquhoun's analysis of social stratification gave rise to a scheme of the ' gradation of society ' which was extremely complicated in its details. Convinced of the importance of the study of social structure and the distribution of national income amongst the various social classes, he compiled the following abstract of social stratification which he considered ' will convey to the mind a more accurate conception of the state of society, in the United Kingdom, than could be obtained by lengthened and laborious details '.[34] The criteria

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31. *An Account of a Meat and Soup Charity . . .*

32. *Treatise on the River Police.* 261-2.

33. Ibid., 37-38.

34. *British Empire* (1815) 108. cf. Appendix for the detailed ' General View of Society '.

of precedence in the social hierarchy appear to be income and 'social distance' or prestige :

	Heads of Families	*Total Persons comprising Families*
1. Highest Orders. The Royal Family, the Lords Spiritual and Temporal, the Great Officers of State, and all above the degree of a Baronet, with their families	576	2,880
2. Baronets, Knights, Country Gentlemen, and others having large incomes, with their families	46,861	234,305
3. Dignified Clergy, Persons holding considerable employments in the State, elevated situations in the law, eminent practitioners in Physic, considerable Merchants, manufacturers upon a large scale, and bankers of the first order, with their families	12,200	61,000
4. Persons holding inferior situations in Church and State, respectable clergymen of different persuasions, practitioners in Law and Physic, Teachers of youth of the superior order, respectable freeholders, shipowners, merchants and manufacturers of the second class, warehousemen and respectable shopkeepers, artists, respectable builders, mechanics, and persons living on moderate incomes, with their families ..	233,650	1,168,250
5. Lesser freeholders, shopkeepers of the second order, innkeepers, publicans and persons engaged in miscellaneous occupations, or living on a moderate income, with their families ..	564,799	2,798,475
6. Working mechanics, Artisans, Handicraftsmen; Agricultural labourers, and others, who subsist by labour in various employments, with their families	2,126,095	8,792,800
7. or lowest class. Paupers and their families. Vagrants, gipsies, rogues, vagabonds, and idle and disorderly persons, supported by criminal delinquency	387,100	1,828,170
	3,501,781	17,096,803
Army and Navy ..	130,500	931,000
	3,632,281	18,027,803*

Having thus graded society, Colquhoun suggests that 'it becomes a matter of interesting inquiry, *by what proportion* of the community at large these different classes are maintained'.[35] This, the most noticed section of the

*The population of England and Wales in 1811-1821 was 10,164,000 (T. H. Marshall: The population of England and Wales from the Industrial Revolution to the World War. *Economic History Review*, V/2. 1935). The first Irish Census of 1821 gave the population of Ireland as 6,801,827 (K. H. Connell: The Population of Ireland in the Eighteenth Century, *ibid.* XVI/2, 1946). Colquhoun gave the following statistics for England, Scotland and Wales in 1811 (*British Empire*; p. 43): England, 9,538,827; Scotland, 1,805,688; Wales, 611,788: Total 11,956,303, which makes the Irish population nearly 6 million.

35. *British Empire*, 102.

Treatise on the British Empire, is based on a careful study of authoritative records. It has been suggested that Colquhoun's data is inadequate,[36] but it cannot be denied that he made the most of available official statistics. He was well aware that his figures were only approximations and that his was a pioneering inquiry in political arithmetic[37] (i.e. 'the practice of reasoning by figures on matters relating to government'). Indeed, his treatise proved to be 'the book of revelation after which the nation thirsted'.[38]

Colquhoun's dichotomy of society into productive and unproductive classes is fundamental to his exposition. The distinction derives from Adam Smith, who in turn adopted it from the Physiocrats :[39]

'There is one sort of labour which adds to the value of the subject upon which it is bestowed : there is another which has no such effect. The former, as it produces a value, may be called productive ; the latter, unproductive labour. Thus the labour of a manufacturer adds, generally, to the value of the materials which he works upon, that of his own maintenance, and of his master's profit. The labour of a menial servant on the contrary, adds to the value of nothing. Though the manufacturer has his wages advanced to him by his master, he, in reality, costs him no expence, the value of those wages being generally restored, together with a profit, in the improved value of the subject upon which his labour is bestowed. But the maintenance of a menial servant never is restored. A man grows rich by employing a multitude of manufacturers : he grows poor, by maintaining a multitude of menial servants. The labour of the latter however, has its value, and deserves its reward as well as that of the former'.[40]

Cannan, in his edition of the *Wealth of Nations*, while admitting that Adam Smith's conception of national wealth as an annual produce was of immense value in the history of economic theory, contends that the Smithian

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36. cf. Giffen : *The Growth of Capital*, p. 101 et seq.

37. 'The attempt is bold, and the task is arduous. It is a ground that has not been heretofore at least systematically trod ; while in the nature of things accuracy to a point in so extensive and complicated a range (i.e the total value of property) is impracticable' (*British Empire*, 50).

38. Max Beer, I. 196. 'In these days . . . the science of political economy and statistical knowledge occupies the attention of the more enlightened classes of society in a much greater degree than at any former period' (*British Empire*, 117).

39. cf. the *Tableau Economique* of Mirabeau in Gray : *The Development of Economic Doctrine* (London 1931) facing p. 106. It may be fairly said that an inchoate 'labour theory of value' was suggested in the writings of the Physiocrats.

40. *Wealth of Nations* (Cannan's ed. in Modern Library, p. 314). In an editorial footnote Cannan contentiously argues that a man may grow poor by employing people to make 'particular subjects or vendible commodities' for his own use, while an innkeeper may grow rich by employing menial servants. It is not Smith who has gone wrong, but Cannan who mistakes the Smithian usage of the term 'menial'. According to the Oxford English Dictionary, Adam Smith used the expression 'menial servant' in the above passage in the sense of a *domestic* servant and not in the wider sense of *any* service of employment. Hence Adam Smith was evidently referring to 'manufacturers' (obviously employed in connection with industry) as 'productive', while 'menial' (domestic) servants were 'unproductive'. The innkeeper's employees are not 'menials' in the Smithian sense.

conceptions of capital and unproductive labour, though of historical interest, were fundamentally unsound, and were never so universally accepted as is commonly supposed'. However unsound the distinction between productive and unproductive labour may be, the bifurcation was employed by Colquhoun, and through him by the early socialists John Gray and J. F. Bray. Robert Owen used Colquhoun's *British Empire*, and impressed the sons of George III with a set of eight cubes he had constructed as visual aids to illustrate Colquhoun's table exhibiting a General View of Society (cf. Appendix)—' the working classes being represented at the base by a cube of 3 5/16 inches a side, whilst the apex was formed by a cube, representing the Royal Family, the Lords spiritual and temporal, whose side measured only three-sixteenths of an inch '.[41]

In Colquhoun's writings the Smithian ' annual produce ' was renamed ' new property ', and was contrasted to fixed capital. Following Adam Smith, Colquhoun argued that industry and parsimony, by increasing the quantum of this ' new property ', created employment for ' productive ' hands. But whereas Adam Smith regarded the docile labourer as an inert instrument in the accomplishment of his master's economic ends[42] (although in pursuing his selfish interest the master unwittingly furthered that of the slave), the mental climate of the early nineteenth century led Colquhoun to modify the Smithian conception of ' productive labour '.

The French Revolution intervened between Colquhoun's latter works and the *Wealth of Nations*. The early nineteenth century was the age of Steam and Democracy.[43] The contrast with the previous century, of which the *Wealth of Nations* was a product, is of profound interest and significance since Colquhoun's theory of society, in its essentials, was but an adaptation of Smithian conceptions to a changed social environment.[44] The industrial revolution transformed the relation of capital and labour : the worker was now the accessory of capital.[45] Steam power was accompanied by the mechanization of industry. And the working class unrest which marked the decades following the French Revolution proved to be the birth-pains of Democracy. The liberals of 1760 saw nothing of the class struggles about which the socialists of 1860 theorized. Colquhoun, living in the intermediate period, repeatedly forewarned his contemporaries of these struggles. But since Steam and Democracy belong to an age of hope,[46] he considered that ' a new era may be

41. Frank Podmore : *Robert Owen* (London : 1906) pp. 255-6.

42. The working classes, if pitied, were never idealized by Adam Smith who made it clear that in civilized countries the division of labour made them ' as stupid and ignorant as it is possible for a human creature to become ' (*Wealth of Nations*, p. 734).

43. Whitehead : *Adventures of Ideas* (Cambridge : 1933) p. 7.

44. But Colquhoun never acknowledged the source of his fundamental concepts.

45. Stark : *The History of Economics* (London : 1944) 32.

46. Whitehead loc. cit.

said to be commencing in the world, arising out of the disorganized wreck produced by the unexampled mischiefs of the French Revolution '.[47]

Labour had begun to rear its head ; its voice could no longer be disregarded. Adam Smith's ' sympathy ' for labour was born of a recognition of its powerlessness, for ' many workmen could not subsist a week, few could subsist a month, and scarce any a year without employment '. Against the superior strength of the ' capitalist ', labour was a truculent but impotent mass. The tumultuous meetings of workers invariably came to nought :

' The workmen, accordingly, very seldom derive any advantage from the violence of these tumultuous combinations, which, partly from the interposition of the civil magistrate, partly from the superior steadiness of the masters, partly from the necessity which the greater part of the workmen are under of submitting for the sake of the present subsistence, generally end in nothing, but the punishment or ruin of the ring-leaders '.[48]

If Adam Smith's personal sympathies were not always with the master, ' the strain of partisanship ' with labour which some expositors detect in his work,[49] was one of pity for an impotent and ignorant mass, rather than one of respect or fear of a powerful and intelligent class. He betrayed his ' sympathies ' when, writing of the farmer, he explained that ' not only his labouring servants, but his labouring cattle, are productive labourers '.[50] ' In the long run the workman may be as necessary to his master as his master is to him, but the necessity is not so immediate '.[51] For Colquhoun the necessity was certainly immediate. Labourers could no longer be regarded as depersonalized ' hands' at the beck and call of their ' master '.

The new climate of opinion is epitomised in Colquhoun's statement that ' it is by labour alone that all classes of the community subsist '.[52] Whereas Adam Smith pitied the ' disagreeably rigorous and unsocial morals ' of the labouring classes, ' that melancholy and gloomy humour which is almost always the nurse of popular superstition and enthusiasm '. and suggested that science, philosophy, painting, poetry, music and dancing might dissipate that melancholy,[53] Colquhoun was alarmed that ' the peace of society shall on every specious pretence be disturbed by the licentious clamours or turbulent effusions arising from the ill-regulated passions of vulgar life '.[54] The working classes had to be cajoled into docility and temperate habits, for the moral austerity which Adam Smith attributed to them was giving way to rebelliousness, levity and

47. *British Empire.*

48. *Wealth of Nations*, 66-7.

49. e.g. E. Ginzburg : *The House of Adam Smith* (New York : 1934).

50. *Wealth of Nations*, 344.

51. ibid., 66.

52. *Treatise on Indigence* 277.

53. *Wealth of Nations*, p. 748 cp. Sydney Smith : ' What a pity it is that we have no amusements in England but vice and religion !'.

54. *Treatise on the Police* 1796, p. 7.

profligacy. It is significant that Colquhoun urged the upper classes to set a moral example to the poor.[55] He feared that the moral and religious restraints which controlled the passions of the lower order would be eradicated by irreligion, revolutionary sentiment, drunkenness and levity.

Clearly the dichotomy into productive and unproductive classes, which is fundamental to Colquhoun's theory of society, is arbitrary and indefinite. In a technologically primitive society it is easier to draw the line than in an industrial society in which the 'roundaboutness' of production has increased *pari passu* with the division of labour. In primitive economies, the agriculturist and hunter are obviously 'productive' since between them they satisfy the material needs of their society. On the other hand, the magician and witch-doctor, the aged and infirm, are 'unproductive' in the sense that they create no 'new property' or capital. It is true that the magician may be called upon to produce rain in order to avert famine, but his function is not that of a primary producer, and he subsists on the material produce of the able-bodied hunter and agriculturist. Colquhoun's attempt to bifurcate industrial society into a productive class whose labour increased the national income, and a 'diminishing class' which produced no 'new property', necessitated some rough-and-ready definition of the activities which were 'productive'. Accordingly, he enumerated the chief sources of national income—manufactures, agriculture and mines, fisheries, trade, commerce, banks, and navigation.[56] His estimate of the 'new property' created annually by the productive classes was as follows :[57]

Agriculture	..	..	..	..	£ 216,817,624
Mines	..	..	..	..	,, 9,000,000
Manufactures	..	..	..	..	,, 114,230,000
Inland trade	..	..	..	..	,, 31,500,000
Foreign Commerce and Shipping			..	..	,, 46,373,748
Coasting trade	..	..	..	..	,, 2,000,000
Fisheries	..	..	..	..	,, 2,100,000
Banks	..	..	..	..	,, 3,500,000
Foreign Income		..	..	..	,, 5,000,000
					£ 430,521,372

55. And they did. For 'the French Revolution had another effect on the upper classes, for it seemed to many a warning against irreligion and the frivolous life. The red skies of Paris sobered the English Sunday and filled the English churches. The Annual Register for 1798 remarks, " It is a wonder to the lower orders, throughout all parts of England, to see the avenues to the churches filled with carriages ! " '. (J. L. and B. Hammond: *The Town Labourer*, 1760—1832. London 1925 ed. Also Kiernan: Evangelicalism and the French Revolution. *Past and Present* I, 1952).

56. *British Empire*, Adam Smith considered only agriculture, manufactures, and foreign trade.

57. *British Empire*, 89. Giffen considered that Colquhoun had greatly over-estimated the value of agricultural produce. This is perhaps due to the persistence of the Smithian notion that agricultural capital resides within the country, and agriculture 'adds a much greater value to the annual produce of the land and labour of the country, to the real wealth of its inhabitants'. (*Wealth of Nations*, p. 345).

This ' new property ' was distributed between the ' productive ' and ' unproductive ' classes in the following manner :

CLASSIFICATION OF PRODUCTIVE AND UNPRODUCTIVE LABOURERS (U.K. and IRELAND)

Productive labourers, by whose exertions a new property is created every year.

	Families	*Persons*	*Income*
Agriculture, mines, etc.	1,302,151	6,129,142	107,246,795
Foreign Commerce, shipping trade, manufacturers, fisheries, etc.	1,506,774	7,071,989	183,908,352
Fine Arts	5,000	25,000	1,400,000
	2,813,925	13,226,131	292,555,147

Unproductive labourers, whose exertions do not create any new property.

	Families	*Persons*	*Income*
Royalty, Nobility, and Gentry	47,437	416,835	58,923,590
State and Revenue, Army, Navy, Half-pay Pensioners	152,000	1,056,000	34,036,280
Clergy, Law, Physic	56,000	281,500	17,580,000
Universities, Schools, Miscell.	45,319	567,937	17,555,355
Paupers, etc.	387,100	1,548,400	9,871,000
	687,856	3,870,672	137,966,225

It appears from the above table that by ' labour ' Colquhoun meant not merely manual labour, but all persons engaged in agriculture, industry and trade. This would include shop-keepers, engineers, and transport workers—even the entrepreneur, but certainly not the rentier. His statement that ' it is by the labour of the people, employed in various branches of industry, that all ranks of the community in every condition of life annually subsist ',[58] clearly defines labour in a sense wider than manual labour. Colquhoun himself did originally harp on the apparently unqualified proposition that ' it is by labour alone that all classes of the community subsist '.[59] This proposition led John Gray and other radicals to the inference that manual labour ' created ' all wealth, yet received in wages only £81,500,000 out of Colquhoun's estimated national

58. *British Empire.*

59. *Treatise on Indigence,* 277. At a time when agriculture was considered the ' industry ' *par excellence,* Sir William Petty (1623-87) wrote : ' Labour is the Father and active principle of Wealth as Lands are the Mother ' (*Economic Writings,* Ed. Hull, 1899, 68) Adam Smith following the physiocrats persisted with this view of the primacy of agricultural labour. Colquhoun was forced to take manufacture and trade into account : the industrial revolution had supervened.

income of £430,520,000.[60] Hence arose the slogan that labour received only one-fifth of its produce, the rest being appropriated by the 'unproductive' classes.[61]

But Colquhoun subsequently refined the unqualified proposition that labour of the hands supported society at large. Even in the *Treatise on Indigence* he contended that 'the true essence of government' was 'to guide, by imperceptible means, the working classes, into channels calculated to enable them to render their labour productive'.[62] Implicit in this statement is his later formulation that manual labour *per se* is relatively unproductive, although the '*first elements of national wealth and riches*' exist in the labouring ranks.[63] The entrepreneur and the inventor thus entered into his calculations: 'new property' is created from *land, labour,* and *capital.*[64] Fixed and durable capital was not the property of the independent worker, and contrary to the line of economists from Petty to Adam Smith, land and labour were not the primary factors of production. As Ricardo pointed out, the Smithian principles were considerably modified by the employment of machinery and other fixed capital.[65]

'Capitals, thus employed, become a powerful engine in the possession of genius, talent, and industry, by which not only those who labour, but those who promote, direct and invigorate its active powers mutually derive advantage; and we trace through this medium those causes which contribute to the wealth of nations. It is the labour of the people that produces this wealth . . .

'Such is the structure of civil society, that the classes, whose minds are enlarged and their intellects and faculties improved by a superior education, are indispensably necessary as the master-springs in the great machine; not only for the purpose of giving energy to the efforts of the productive labourers by means of capital furnished by every member of the

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60. Gray: *A Lecture on Human Happiness.*

61. The fateful distinction between productive and unproductive labour was propounded by Adam Smith in his *Wealth of Nations,* 1776, Book II, Chapter 3. Marx, in his *Poverty of Philosophy* (1847) claimed that the English socialists J. F. Bray (*Labour's Wrongs and Labour's Remedy,* 1839), John Gray, and others were indebted to Ricardo's *Principles of Political Economy* (1817) for their proposition that labour was the source of all wealth. Gray, however, derived his statistics from Colquhoun who, writing *before* Ricardo, declared in no uncertain terms that 'it is by labour alone that all classes of the community subsist' (*Treatise on Indigence.* 1806, p. 277). But Colquhoun was no socialist, and contended that factors other than manual labour, e.g the skill of the inventor and engineer, had to be reckoned with. He therefore defined 'productive labour' appropriately. It would appear then that Ricardo's influence on the English socialists has been exaggerated, especially by Engels in his Preface to *The Poverty of Philosophy.* But both Marx and Engels are curiously silent about the obvious influence of the unsocialistic Colquhoun on socialists like Bray, Gray and others.

62. *Treatise on Indigence,* 277.

63. Ibid., 233.

64. *British Empire,* Preface vii.

65. cf. Stark: *The History of Economics,* 33.

community possessing real or personal property, from which they derive an income, but from the skill and superior knowledge of those who give employment to the labouring classes in agriculture, manufactures, trade, commerce, and navigation, and other objects of productive industry'.[66]

Even the classes which came under the category of 'unproductive' labourers were necessary to society, although they diminished national wealth:

'Thus it would appear, that more than one-fifth part of the whole community are unproductive labourers, and that these labourers receive from the aggregate labour of the productive classes about one-third part of the new property created annually. But it does not follow, as has already been observed, that a very great proportion of these unproductive labourers are not highly useful in their different stations in society. On the contrary, with a few exceptions, in addition to the benefits derived from personal exertions, they eminently tend to promote, invigorate, and render more productive the labour of the creating classes.

'Most of these diminishing classes . . . and particularly those whose great talents and cultivated minds enable them to fill important stations, are indispensably necessary in civil society, as without their assistance the social compact could not exist'.[67]

The nobility, as legislators and justices had a peculiar claim to the gratitude of the community; the clergy looked to the spiritual, and physicians to the bodily comforts of society. Even artists and musicians provided intellectual enjoyment or amusement. Recreation is necessary in civilized society, but Colquhoun was not in favour of art for art's sake. For him art should be subservient to morality, and to this end even the common ballad singer in the streets might be rendered useful instruments 'in giving a better turn to the minds of the lowest classes of the people—they too must be amused, and why not, if they can be amused innocently—if through this medium they can be taught loyalty to the Sovereign, love to their country, and obedience to the Laws'.[68] He considered that indiscriminate indulgence in art, entertainment, and amusement would be productive of levity, in contrast to Adam Smith who wanted to transform the austere moral outlook of the lower orders by inducing them to indulge in art, science and philosophy. Thus, while Adam Smith contended that the working classes enjoyed too few amusements and entertainments, Colquhoun considered that they could have too many.

In the last decade of the eighteenth century Colquhoun realised that it was imperative that Adam Smith's optimistic doctrine of harmonious social interests be modified in view of the patent conflicts of class interest which manifested themselves in tumultuous meetings and riots. Colqu-

66. *British Empire*, 6, 110.

67. Ibid., 109, 104.

68. *Treatise on the Police of the Metropolis* 1800 ed. This section, was probably invoked by a critical tract which suggested that the proposals in the first edition, under the cloak and colour of moral good, were designed to abridge the few enjoyments open to the poor man, particularly the ale-house (cf. '*Observations on a late Publication . . .*').

houn's theory of society was a compromise between the optimistic doctrine of social harmony, and the individualistic, competitive doctrine of strife. In consequence, he became a typical adherent of the liberal faith of the early nineteenth century, which assumed that struggle and strife issued in the progressive realization of social harmony.[69] In Colquhoun's scheme of society there was no essential opposition between labour and capital, between governors and the governed. He regarded society as an organism whose successful functioning depended on the complementary roles played by the different social classes. Hence ' nothing is conceded by the one class to the other without a corresponding benefit '.[70] The only people who were really useless, the enemies of society, were criminals, vagabonds, prostitutes, and those who were culpably indigent or destitute.[71]

Colquhoun's theory of society is curiously reminiscent of that of his forgotten predecessor, Henry Fielding, whose writings in connection with the poor were familiar to him :[72]

' It seems, I think, apparent, that among a civilised People that Polity is the best established, in which all the Members, except such only as labour under any utter Incapacity, are obliged to contribute a Share to the Strength and Wealth of the Public.

' And this seems to have been the great Aim of the first founders of the English Constitution; by the Laws of which no Man whatsoever is exempted from performing such Duties to the Public as befit his Rank '.[73]

Fielding contended that the duties of the highest ranks were not light nor easy ; the country squires, as a later jurist remarked were the ' judicial beasts of burden ', the Justices of the Peace. Even if they are indolent they are not burdensome to the public since they ' support themselves on what the

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69. Whitehead, op. cit., 41.

70. *British Empire*, 108. On the mutual dependence of rich and poor, cf. also R. Fellowes : *The Rights of Property Vindicated Against the Claims of Universal Suffrage* (London, 1818), p. 73.

71. *Treatise on Indigence*; *British Empire*, 112. The following are the causes of culpable indigence : vicious and immoral habits, idleness, laziness, indolence, sloth, carelessness, thoughtlessness, improvidence, prodigality, unnecessary waste, want of frugal habits, want of economy and management, apathy and sottishness, indifference as to what may happen, dissipation, habitual drunkenness, abandoning a helpless family while having the means of making adequate provision, trusting to parish maintenance, wasting earnings in ale-houses, servants losing character and place for bad behaviour, fraudulent and pilfering practices, female prostitution (' the misfortune of good looks ') producing depravity of character, disease, and loss of employment, contracting debts without ability to pay, fraudulent bankruptcy and consequent loss of credit, systematic idleness, leading the life of gipsies and others wandering as such and assuming their manners, systematic criminality in all its ramifications producing a total loss of character.

72. cf. the list of writers on the poor, *Treatise on Indigence*, 6.

73. Fielding: *A Proposal for Making an Effectual Provision for the Poor, for Amending their Morals, and for rendering them useful Members of the Society* (Dublin, 1751, 6-7).

Law calls their own ; a Property acquired by the labour of their ancestors, and often the Rewards, or Fruits at least of Public Services '.[74] At the other extreme, the poor have nothing but their own labour to bestow on society. ' On this Labour the Public hath a Right to insist, since this is the only Service which the poor can do that Society, which in some Way or other hath a Right to the Service of all its Members ; and as this is the only Means by which they can avoid laying that Burthen on the Public, which in case of absolute Incapacity alone is obliged to support '.

Writing fifty years after Fielding, Colquhoun did not go to the extent of saying that it was the duty of some men to labour, while others enjoyed the fruit of inherited wealth, however originally acquired. Labour was demanding a greater share in the national income, and were questioning the right of a leisure class to enjoy the produce of the labour of others. Hence Colquhoun took the obvious stand of a social theorist who was content to regard the existing structure of society as datum, and proceeded to make a functional analysis of the relationships between social classes. He neither justified nor condemned the existing structure of society. But in the writings of many a social theorist when society is in the throes of political or social crisis, we can frequently detect behind the veil of sociological analysis, more or less articulate programmes of action. Toynbee suggests that ' the action which they are intended to evoke is the " pegging ", at a certain social level, of an actual society which has broken down and has entered upon a decline that must end in a fall unless the downward movement can be artificially arrested '.[75] One reason why Colquhoun does not mention Adam Smith, while borrowing freely from the *Wealth of Nations* may have been that it contained ' dangerous thoughts '. The Smithian ' atheism ' would have removed the religious and moral foundations of social order, and was roundly condemned by philosophers who rejected them as dangerous.[76] Colquhoun preferred the fatalistic note of the

74. Fielding: *A Proposal for Making an Effectual Provision for the Poor, for Amending their Morals, and for rendering them useful Members of the Society* (Dublin, 1751, 6-7). The slogan ' property is theft ' came almost two centuries later.

75. A. J. Toynbee : *A Study of History* (Oxford, 1935 ed.) III, 89.

76. Dr. Horne, Bishop of Norwich, in an anonymous tract, censured Adam Smith for his ' atheism ' : ' You would persuade us, by the example of *David Hume*, Esq. that atheism is the only cordial for low spirits, and the proper antidote against the fear of death ' (*A Letter to A. Smith, LL.D. On the Life, Death and Philosophy of his Friend, David Hume. By one of the People called Christians.* Oxford, 4th ed., 1784, p. 22) De Tocqueville rightly contends : ' During the whole course of the eighteenth century unbelief had its celebrated representatives in England. Clever writers, profound thinkers, took the cause in hand ; they were never able to make unbelief triumph as in France, because all those, who had anything to fear from revolution, hastened to come to the rescue of established beliefs. Even those among them, who were most in touch with contemporary French society did not regard as false the doctrines of our philosophers, rejected them as dangerous ' (Tocqueville : *L'Ancien Regime*, Tr. Patterson. Oxford, 1947, p. 163).

Malthusian argument that social and economic crises were the product of 'natural' causes. He proceeded, therefore, to analyse the inexorable conditions of social life.

Thus, an essential postulate of Colquhoun's theory of society was that poverty is a necessary factor in any society: 'every state is supported by the poverty of the community composing the body politic. Without a large proportion of poverty there could be no riches in any country; since riches are the offspring of labour, while labour can result only from a state of poverty'.[77] It is well to emphasise Colquhoun's peculiar definition of poverty—'it is the state of every one who must labour for subsistence'.[78] Such an individual has no 'surplus labour' in store, no capital from which he could derive an 'unearned income'. The danger was that the poor man might involuntarily be reduced to destitution, due to trade depression or economic crisis. 'The great art, therefore, in managing the affairs of the Poor, is to establish systems whereby the poor man, verging upon indigence, may be propped up and kept in his station'.[79] In fact, the great object of state policy should be 'to prop up *poverty* by judicious arrangements at those times when it is in danger of descending into *indigence*'.[80] In other words, full employment is a great desideratum of economic policy:

'An active and industrious population is the stay and support of every well governed community. In the degree which this industry prevails will be found the greatest portion of virtue and happiness; the strongest disposition to support the laws; the most ardent loyalty to the Sovereign; and the greatest attachment to the existing government—On the contrary, where the quantum of labour in the higher as well as the inferior branches of industry exceeds the demand, disloyalty, insubordination, idleness, misery, profligacy, and crimes, are the never-failing result'.[81]

It is, further, 'an axiom (not to be disputed) that the wages of the labourer should be somewhat more than is sufficient to maintain himself and a medium family, otherwise this useful class could not last beyond a single generation. They must either cease to procreate children, or the mass of labourers who do not remain in a state of celibacy must unavoidably descent into indigence, and become a burden upon the community'.[82] If the rate of population growth is greater than the rate of increase in the means of subsistence, great disasters ensue—involuntary unemployment drives many to destitution, and they must be supported by the opulent classes, unless there is considerable emigration.[83]

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77. *Treatise on Indigence*, 7.
78. loc. cit.
79. *The State of Indigence*, 19.
80. *Treatise on Indigence*, 7; *The State of Indigence*, 18.
81. *British Empire*, X.
82. Ibid. 4.
83. *Considerations on the Means of Affording Profitable Employment* . . .

Since labour must produce 'surplus capital', habits of industry and parsimony were of signal importance. Indeed, if the 'propensity to consume' was so high that men abandon all ideas of thrift and parsimony and succumb to an orgy of hedonistic gratification of their every desire, the system which we designate 'capitalism' would be at an end:

'It is . . . parsimony, and not industry which is the immediate cause of the increase of capital. Industry, indeed, provides the means which parsimony accumulates; since whatever industry might acquire, if parsimony did not store it up, the capital would never be greater, and the property of the nation would remain stationary, and could never be augmented. In fact, capitals are increased by saving, and diminished by prodigality and misconduct'.[84]

Modern savings campaigns and 'productivity drives' are curiously reminiscent of Colquhoun's exhortations to 'productive labourers'. We demand productive efficiency chiefly from miners and other 'productive' workers rather than from the 'unproductive' white collar office employee. The distinction between productive and unproductive labour has lost none of its importance. Our age has only discovered more subtle devices for 'directing' labour; the totalitarian societies have resorted to the age-old expedient of forced labour, while the democracies are content with intelligence tests.

The important lesson of Colquhoun's theory of society was that a society can be top-heavy with a leisure class or idle intelligentsia. There have been numerous societies in which an elite subsisted on slave labour, but it is inconceivable that a majority be supported by a labouring minority. Thus in India, although the high caste Brahmins are in the majority, they are not averse to tilling the soil; they are 'productive'.

Social Pathology and Social Control

During Colquhoun's tenure of office as Metropolitan Police Magistrate, he had ample opportunities for studying the social disorganization incidental to a period of unprecedented social change. He observed that 'the general turpitude of the idle and dissolute is increasing everyday'.[85] He witnessed the riots and tumultuous meetings which were common during a period of scarce food supplies. He was aware of the activities of the Corresponding Society and other revolutionary movements of the day, and is said to have had a hand in the preparation of secret reports with which the government justified in Parliament the measures for checking these activities.[86] Colquhoun explained that a period of industrial prosperity was productive of crime. The progressive

84. *British Empire*, 118. cp. the almost identical sentence in the *Wealth of Nations* (p. 321): 'Capitals are increased by parsimony, and diminished by prodigality and misconduct'.

85. *Treatise on Indigence*, 35.

86. Beer, I. 144.

increase of trade and the influx of wealth produced scenes of delinquency and turpitude in the environs of the River Thames unparalleled in any district of comparable size in the known world.[87]

Tocqueville observes that throughout Europe 'the mind of man entirely lost its bearings' as a result of the French Revolution. Colquhoun was well acquainted with the pathological symptoms of social disoganization—crime and violence, irreligion, and alcoholism. Writing in 1814 he said

'It is a melancholy truth, obvious to all who have devoted their attention to a manners and habits of the labouring classes, that they have retrograded in morals in the course of the last thirty years ; and that a considerable change has taken place in the state of society (particularly in vulgar life, since the commencement of the French revolutionary war), which has been in a certain degree disorganized in every country in Europe '.[88]

He made similar observations fifteen years previously :

'The present state of society and manners—the wonderful change apparent in the habits of the lower orders of the community—the recent, and perhaps too effectual attempts to undermine that sense of religion and moral rectitude, which restrained the mass of the people from minor acts of delinquency : All these considerations call for such internal regulations as may operate in the most immediate manner, in controlling the ill-directed and tumultuous activity of human passions ; to counteract the influence of wealth under its various attractions of pleasure and pain ; and to prevent it from disseminating its poison, while it confers its blessings '.[89]

Colquhoun's details of working class destitution and his accounts of the practices of various criminals are valuable commentaries on certain aspects of London life in the early nineteenth century. He states that, in the distribution of poor relief, those who visited the abodes of the most indigent, 'witnessed scenes of distress which exceed all credibility '.

'The Author of this Tract having in the month of May, 1797, visited five different families in the Hamlet of Mile End New Town, (who had been represented to him to be sober and honest, and reduced from want of work, and from having numerous families, to great poverty and distress), he found only four miserable corded bedsteads among the whole, for *thirty three* men, women and children !—In one apartment where the family was numerous, and where the poor woman had lately been brought to bed of an infant which lay on the floor, there was not even the vestige of anything to lie upon, excepting a small portion of straw in the corner of the apartment where they all slept, with only the few rags to cover them which they wore through the day '.[90]

In his description of delinquent activities Colquhoun was even better informed. He classifies, for instance, eighteen classes of Cheats and Swindlers : They include sharpers who obtain licenses as Pawnbrokers, hawkers and pedlars; 'A class of Cheats of the society of Jews, who are to be found in every

87. *Treatise on the Commerce and Police of the River Thames*, XXV.
88. *British Empire*, 115-6.
89. *Treatise on the Commerce and Police of the River* . . . 37-8.
90. *An Account of a Meat and Soup Charity*.

street, lane and alley in and near the Metropolis, under the pretence of purchasing old clothes, and metal of different sorts'; Cheats who personate gentlemen's footmen; 'Cheats who take genteel lodgings, dress elegantly, and assume false names', and so on. Indeed, 'the avarice and ingenuity of man is constantly finding out new sources of fraud'.[91] Colquhoun also exposed the systematic traffic in stolen property, his information being communicated by a 'considerable dealer in rags and old iron and other metals'. There were over 3,000 wholesale and retail dealers in stolen property, the retailers purchasing directly from pilferers, particularly the aquatic labourers known as lumpers who were in the habit of pilfering the cargoes of West Indian ships: men and boys known as mud-larks used to prowl about and watch the ships when the tide permitted, and small parcels of sugar, coffee, etc. were thrown to them, and they in turn conveyed these packages to receivers and obtained a share of the booty. Colquhoun therefore urged that the law relating to stolen property was inadequate, as the receivers often incurred no penalty.[92]

Colquhoun contended that the 'science of police' consisted in the prevention of moral and criminal offences:

> 'By the term police, we are to understand all those regulations which relate to the comfort, convenience, and safety of the community, in which is comprised the improvement of the condition of the labouring people; the more effectual prevention of moral and criminal offences; lessening the demand for punishment, by turning the hearts and arresting the hands of evil doers, by forewarning the unwary, and preserving in innocence the untainted'.[93]

The 'science of police' thus comprised the subjects which modern sociologists designate 'social control'. For Colquhoun there were two closely related aspects of social control: the institutional (i.e., administrative and judicial), and the religious, moral and educational. He rightly urged that however severe laws and punishments may be, they were by themselves ineffective in preventing crime: 'These evil propensities and noxious qualities in the human mind in a state of depravity are not to be removed by *walls*, within which evil doers must be admitted'.[94] The hand of power, in the form

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91. *Treatise on the Police*, 1800 ed., Ch.v. There were 21 classes of cheats mentioned in the 1796 edition.

92. *River Police*, 59. At common law receiving stolen goods with knowledge that they had been stolen was a misdemeanour. It was necessary that larceny of the goods had been committed, but the receiver was not indicatable as an accessory after the fact unless the receiving assisted the thief's escape from justice. Various subsequent statutes (whose provisions are now comprised in the Larceny Act 1916, ss. 33) widened the scope of the offence by extending it to cases where the original act of dishonesty was stealing or obtaining goods 'in any way whatsoever under circumstances which amounted to felony or misdemeanour'. (Kenny's *Criminal Law*, ed. Turner. Cambridge, 1952, 290).

93. *British Empire*, 115.

94. *River Police*, 266.

of a judicial and constabulary system, should be supplemented by moral restraints :

' Crimes of every description have their origin in the vicious and immoral habits of the people ;—in the want of attention to the education of the inferior orders of society ;—and in the deficiency of the system which has been established for guarding the morals (of the labouring classes)'.[95]

' Like unskilful artists, we seem to have begun at the wrong end ; since it is clear that the distinction which has been made in the punishments between public and private crimes, is subversive of the very foundation it would establish.

' Private offences being the source of public crimes, the best method of guarding society against the latter is, to make proper provisions for checking the former—A man of pure morals always makes the best subject of every state ; and few have suffered punishment as public delinquents, who have not long remained unpunished as private offenders. The only means, therefore, of securing the peace of society and of preventing more atrocious crimes, is, to enforce by lesser punishments, the observance of religious and moral duties : Without this, Laws are but weak foundations either of the State, or the persons or property of the subject.

' To suffer the lower orders of the people to be ill-educated—to be totally inattentive to those wise regulations of State Policy which might serve to guard and improve their morals ; and then to punish them for crimes which have originated in bad habits, has the appearance of cruelty not less severe that any which is exercised under the most despotic government '.[96]

In analysing the institutional aspects of social control, Colquhoun came to the conclusion that the fundamental principle of good legislation was to prevent rather than to punish crimes :[97]

' It seems that by punishing what are called Public Crimes with particular severity, we only provide against present and temporary mischiefs, which might have been prevented by obviating their Causes—And this may be assigned in part as the cause of Civil Wars and Revolutions—The laws are armed against the *powers* of Rebellion, but are not calculated to oppose its Principle '.[98]

Penitentiary houses should be organised as corrective centres for the early victims of crime :

' Let an appeal be made to the feelings of humanity in behalf of these early victims to vice and criminality, and let their unhappy situation plead for the establishment of local and national penitentiary houses which the legislature has authorised ; that in the progress of their future punishment, while the link of connection with their associates in mischief is destroyed, they may be arrested in the career of villainy, and after a course of labour, sobriety, and religious instruction, joined to good and judicious discipline, accurately carried into execution, they may be restored to society, with minds freed from depravity, and with those habits of industry and that disposition to lead a new life which will enable

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95. *Treatise on the Police*, (1796), 37.
96. Ibid., 1800, Ch. 2.
97. Ibid.
98 Ibid 37.

them to a certificate of good behaviour calculated to rescue them from the dreadful state of being outcasts of society, and to afford them, at least, some chance of supporting themselves by an honest employment when they are set at large upon the world '.[99]

Here Colquhoun enunciated the rationale of corrective detention, and stressed the need for what were to be known as Borstal institutions for the 'early victims to vice and criminality '.[100] Habitual criminals alone should be condemned to perpetual labour and not let loose on society.[101] But convicts who were to be discharged should be taught a trade to prevent them from reverting to a career of crime, which was usually the case : 'At large upon the world, without food or raiment, and with the constant calls of nature upon them for both, without a home or any asylum to shelter them from the inclemency of the weather, *what is to become of them* ?'[102]

There were three objects in punishing delinquents : (*a*) Amendment or reformation, (*b*) Example to others, or prevention, (*c*) Retribution. Colquhoun considered that prevention of crime was the fundamental principle of good criminal legislation. Echoing Bentham, he argues : ' If a mathematical expression may be made use of, relative to the good and evil of human life, it is the art of conducting men to the *maximum* of happiness, and the *minimum* of misery '.[103] Punishments should therefore be graded according to the heinousness of the crime or, to use a Gilbertian phrase, the punishment must fit the crime. By punishing small offences with too great severity, we inure the mind to baseness. ' In offences which are considered by the Legislature as merely personal, and not in the class of public wrongs, the disproportion of punishment is extremely shocking '.[104] Thus violent personal assault was punished with

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99. *Treatise on the Police*, 1796 ed., 311-2.

100. Corrective detention was favoured earlier by Henry Fielding (op. cit, pp. 21 et seq.) whose detailed proposals for reforming prisoners had its crudities. On arrival at the House of Correction the convict ' shall be immediately confined within the Fasting room, there to remain with no other Maintenance than Bread and Water during the space of twenty four hours '. He also emphasised the necessity of compulsory religious observance, and the learning of a trade. These suggestions were supported later by John Howard : *The State of the Prisons* (1777) who was followed by reformers like Sir Thomas Foxwell Buxton : *An Inquiry Whether Crime and Misery are produced or prevented, by our present System of Prison Discipline* (1818). Colquhoun was acquainted with the literature on the subject of prison reform, and refers Dr. Lettsom to Eddy's work on Prisons (Pettigrew II. Letter CCVIII). The so-called Borstal system was first tried in 1902, and under the Prevention of Crime Act 1908, young offenders were sent to these institutions if convicted. The success of the system justified Colquhoun's optimism. Between 1936 and 1943 an average of 59% Borstalians were not reconvicted, 21% reconvicted only once (Kenny's *Criminal Law*, ed. Turner, Cambridge, 1952, p. 512).

101. *Treatise on the Police*, 1796.

102. Ibid., p. 91.

103. Ibid., 1800 ed., p. 72.

104. Ibid.,

a fine and imprisonment, while secretly stealing over twelve pence entailed the death sentence. Yet, although few countries in Europe had more sanguinary criminal laws than England, the quantum of crime was less on the Continent.[105] Colquhoun suggested that if crimes are to be graded according to their seriousness, two criteria should be kept in mind in apportioning punishment : the immorality of the act itself, and its evil tendency or consequences.

The maintenance of social order necessitated an adequate constabulary system. Colquhoun deplored the absurd prejudice against the office of a constable. This was in part due to the false humanity of individuals who considered that prosecution of a felon was equivalent to taking away the life of a fellow creature. He therefore proposed the appointment of a Public Prosecutor, thus anticipating Bentham.[106] He went on to explain that men of credit and discretion, possessed of good moral character marked by zeal, probity and efficiency, should be glad to be constables, ' the principal engines by which the laws are to be put into execution '. The duties of a constable set forth by Colquhoun are extensive : they were required to lodge informations in cases of breaches of the Sabbath, profane swearing and cursing, drunkenness, lewdness and debauchery, disorderly houses for music and dancing, bawdy houses and brothels, obscene books, pamphlets, ballads and pictures, gaming, etc.[107].

Convinced that severity of criminal sanctions did not reduce crime, Colquhoun contended that security from criminals 'is to be attributed to a more correct and energetic system of Police, joined to an early and general attention to the education and morals of the lower orders of people ; aided by a system of industry and sobriety, which becomes universally habitual in early life, and grows up with years '.[108] Thus, besides the institutional aspects of social control, Colquhoun was deeply concerned with the diffusion of morality, religion and education as instruments of social control, for ' the only means of securing the peace of society is by enforcing the observance of religious and moral principles '.

It will be recalled that in Colquhoun's theory of society a class which laboured with their hands was necessary and inevitable. But that conception of the iron determinism of social laws frequently masks a philosophy of conservatism (cp. ante p. 29), and Colquhoun was in many respects a defender of the status quo. He was not interested in redistributing the ratios of income between the productive and the unproductive classes. For him social structure

105. *Treatise on the Police,* 1796 ed., p. 86.

106. Colquhoun made the proposal in 1796, Bentham in 1802. The Office of Director of Public Prosecutions was created in 1879 by the Public Prosecutions Act. The D.P.P. is appointed by the Home Secretary, but acts under the supervision of the Attorney-General.

107. *Treatise on the functions and duties of a Constable.*

108. *Treatise on the Police,* 1796 ed., 86-7.

was the inexorable datum. The social system was self-adjusting and no individual could complain of his status or role. The assumption that the existing social structure should be maintained at all costs underlies all his writings on moral education. Hence his determination to purge the minds of the working classes of levity and gaiety. The ale-house made them reckless and turbulent; it was virtually a seminary for rearing up rogues and vagabonds.[109]

Colquhoun's psychological argument was that the intensification of stimulation which loose and convivial morals excited, would lead to universal moral corruption, and ultimately to widespread social disorganization: 'certain it is, that if the prevailing and increasing immorality and profligacy is not checked, the licentiousness of the times will produce universal anarchy and confusion, and will at length sap the foundations of the state'.[110] It was indeed a deplorable fact that there was no obloquy for women to be seen in the tap-rooms of public houses.[111] There was the growing evil of 'lewd and immoral women' whose numbers exceeded 100,000, while a 'prodigious number' of the lower classes cohabited without marriage and separated when a difference ensued.[112]

The sanctity of existing social institutions, notably, the King, the nobility, the family, and the Church, had to be impressed on men's minds. 'The best security against indigence, vagrancy, and criminal offences, will be found in promoting and exciting religion and moral habits among the inferior classes of the community'.[113] The working classes should receive some sort of education, but Colquhoun gave a warning that it must be judiciously administered. The danger of indiscriminate education was that children of the inferior classes might be 'educated in such a manner to elevate their minds above the rank they are destined to fill in society'.

'Let it not be conceived for a moment, that it is the object of the author to recommend a system of education for the poor that shall pass the bounds of their condition in society. Nothing is aimed at beyond what is necessary to constitute a channel to *religious* and *moral* instruction. To exceed that point would be utopian, impolitic and dangerous, since it would confound the ranks of society, upon which the general happiness of the lower orders no less that those in more elevated situations depends'.[114]

The system of education proposed by Colquhoun was an ingenious one indeed. The great duty of all children was to attend to the Divine precept '*Fear God, and honour the King, and all in authority under him*'.[115] Their

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109. *Treatise on the Police*, 1796, p. 42.
110. Ibid., p. 44.
111. Ibid., 41.
112. *Treatise on Indigence*, 40.
113. Ibid., 80.
114. Ibid., 148.
115. *A New and Appropriate System of Education*, 48.

ambitions should be regulated and they should not be too aspiring. 'It is the duty of the master and mistress to encourage the diffident, the timid, and the backward; to check the forward and presumptuous'.[116] The females for instance, should be so educated as to fit them for domestic situations, and to make them good servants, and they should be shown 'that a love of idleness, finery, and dress, an impatience under restraint in servitude, an indisposition to do their duty as good servants, an instability of temper which will not permit them to listen to just and proper reproof or admonition from masters or mistresses when the duty they are bound to perform is neglected, sends many young women, who thoughtlessly gave up good places, into the streets, and entail upon them misery and wretchedness as long as they live'.[117] In general, the objects of these working class schools were as follows :

'A right bias to their minds, and a sufficient education to enable them to preserve, and to estimate properly, the religious and moral instruction they receive, is all that is, or ought ever to be, in contemplation. To go beyond this point would be to confound the ranks of society upon which the general happiness of the lower orders, no less than those that are more elevated, depends; since by indiscriminate education those destined for laborious occupations would become discontented and unhappy in an inferior situation of life, which, however, when fortified by virtue, and stimulated by industry, is not less happy than what is experienced by those who move in a higher sphere, of whose cares they are ignorant, and with many of whose anxieties and distresses they are never assailed'.[118]

Social Philosophy

As a social philosopher Colquhoun joined issue with those who advocated untrammelled individualism to the extent even of refusing to sanction the establishment of an adequate system of police, on the ground that individual liberty would be imperilled.[119] The current prejudice against the vocation of law officer was attributable to the dominant influence of the crude laissez-faire school. Colquhoun deplored their contempt for the defenders of law and order, their hostility to measures designed to prevent crime.

'If it is an honourable profession to repel by force the foreign enemies of the state, why should it not be equally so to resist and to conquer these domestic invaders of property, and destroyers of lives, who are constantly in a state of criminal warfare.[120]

An efficient police force could guard the community against criminals and buttress the moral foundations of social order.

'It is to a correct and well-planned Police, and to the removal of those obstructions which operate as a bar to its progress to maturity, that this country is ultimately to be indebted for the security of the rights of innocence; for the preservation of life, and liberty; and

116. *A New and Appropriate System of Education*, 17.
117. Ibid., 50.
118. Ibid., 12-13.
119. *Treatise on the Police.*
120. Ibid., 212.

the support of that excellent Constitution, which, standing on the basis of virtue and morality, is only to be rendered permanent and secure, by preserving its foundation, and by guarding it against the rapid inroads, which relaxed principles, arising from the sudden influx of wealth, have made upon the best interests of society '.[121]

Colquhoun's proposal for a Board of Police Revenue provoked widespread opposition. His *Treatise on the Police* first published in 1796 under the pseudonym ' A Magistrate ', was roundly condemned in a tract by ' a Citizen of London, but no Magistrate ':

' There are some men likewise so accustomed to the fight of offenders, and to the investigation of fraudulent practices, that they can think of little else, and their minds become jaundiced against the whole community.

' He has ventured to propose a new engine of Power and Authority, so enormous and extensive as to threaten a species of despotism and inquisition hitherto without a parallel in this country '.[122]

Colquhoun's reply was that the concept of liberty was a relative one. Those same liberties which are considered privileges at one period become burdens in another :

' Privileges (so considered) at one period in society, frequently become burdens in another. The result is, that the duties incumbent on those upon whom the privileges were conferred, are neglected. The calls of society however, require that they should be executed, and those whose interest is concerned in the execution, perhaps make the attempt in some shape or other. This is resisted as an infringement of ancient rights. Although these rights are burdensome to those whose province it is to move the machine ; and although they are unwilling, from the unprofitable nature of the duty, to do it themselves, yet they are equally hostile to every attempt on the part of others to fill up the chasm. The result is, that many good things for the public and the country, are either postponed or totally omitted. Where the power rests, the measure will not be pursued ; while the same power and influence operate in preventing the attempt being made by others. Mere matters of punctilio often stand in the way of great and beneficial arrangements, and minds thus deluded, grasp and eagerly cherish the shadow, while the substance passes away '.[123]

Liberty is perfectly consistent with restraint ; in fact, restricted liberty is preferable to the law of the jungle.

' Nor ought it to be argued, that such restraints as may hereafter be proposed, will affect the liberty of the subject, since it is perfectly consistent with the spirit of our ancient laws to restrain persons from doing evil who are likely to commit offences, and since they can only attach to a very few, comparatively speaking, whose criminal conduct has been the principle, if not the sole cause, of abridging the liberty, and of subjecting to risk and to danger the life and property of the great mass of the people.

' Restraints of a much severer nature attach to all trades upon which revenue is collected, and surely it can be no infringement of liberty, to extend a milder system to those nuisances in society who not only destroy liberty but invade property.

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121. *River Police*, 309.

122. *Observations on a late publication* (1800).

123. *River Police*, 308-9.

'The present state of society and manners calls aloud for the adoption of this principle of regulation, as the only practicable means of preserving the morals of a vast body of the lower orders of the people, and of preventing those numerous and increasing crimes and misdemeanours which press so hard upon society.[124]

Again :

'It cannot be too often or too powerfully inculcated, that Arrangements which have for their object the Security of Innocence and the Prevention of Crimes, ought by no means ever to be considered as an Infringement of the Liberty of the Subject ; since the effect of the System is in reality to extend, and by no means to abridge, those Privileges which are secured to every member of the body politic, who has not forfeited his natural rights by offences against the Laws of his Country.

'In restraining and preventing the Commission of Crimes, the natural Rights of the innocent become more extended and protected ; the security of the unoffending individual is strengthened, and the general state and condition of society is improved '.[125]

In arguing as he did, Colquhoun was far in advance of his time. For although people may have realised the vital necessity of social regulation in times of crisis, few were prepared to state explicitly that regulation was compatible with liberty. For in the Liberal Age, the Welfare State would have been looked upon as a contradiction in terms. Colquhoun repeatedly pointed out that there were many spheres of social life which should be regulated by the state. Even education and the improvement of morals should not be outside the purview of the legislature. A national system of education, for example, was too gigantic a task to be left to private benevolence.

By conceding that there was a principle of self-love which prompted each individual to exert himself in improving his condition in society, and at the same time insisting that ecological factors such as concentration of population in the metropolis created problems of social disorganization and crime which made social regulation inevitable, Colquhoun was ultimately driven to the paradoxical doctrine of compulsory individualism. On the one hand, 'It is an axiom in politics, that the legislature should do nothing to disturb the exertions of individuals, aided by capitals, in every fair pursuit to improve their condition, since such improvements tend to be to the general good '.[127] On the other hand, this principle of self-love had to be awakened in the breasts of the labouring classes who did not know their real interests and had to be 'guided into the way of helping themselves ' by religious and moral education.[128] And

124. *Treatise on the Police*, 1796, pp. 21-22.

125. *River Police*, XXXIX.

126. *A New and Appropriate System of Education*. . . p. 71.

127. *Treatise on Indigence*, 278 ; cf. also Fellowes, op. cit., p. 111.

128. Ibid. 279, cp. Adam Smith : 'But though the interest of the labourers is strictly connected with that of the Society, he is incapable of comprehending that interest, or of understanding its connection with his own. His condition leaves him no time to receive the necessary information, and his education and habits are commonly such as to render him unfit to judge even though he was fully informed ' (*Wealth of Nations*, p. 249).

in their case, the principle of self-love should not be allowed free rein, for the lower orders should not be too ambitious and presume to step outside their social class. Thus Colquhoun contrived to reconcile the optimistic Enlightenment doctrine of social harmony, with the nineteenth century notion of social strife and ruthless competition, by advocating rational control of human activities.

RALPH PIERIS

Works by Patrick Colquhoun

Observations and facts relative to licensed ale-houses, in the City of London and its environs, humbly submitted to the consideration of Magistrates in every part of Great Britain. By a Magistrate, (1794).

(There were three later editions of the above).

Useful suggestions favourable to the comfort of the labouring people and of decent housekeepers, explaining how a small income may be made to go far in a family, so as to produce a considerable saving in the article of bread, a circumstance of great importance to be known at the present juncture, (1795).

A Treatise on the Police of the Metropolis, explaining the various crimes and misdemeanours which at present are felt as a pressure on the community, and suggesting remedies for their prevention. By a Magistrate. (London : H. Fry, 1796; 2nd ed. C. Dilly, 1796).

There were seven large editions of this work, the sixth being :

A Treatise on the Police of the Metropolis, explaining the various crimes and misdemeanours by which public and private property and security are, at present, injured and endangered ; and suggesting remedies for their prevention. The sixth edition corrected and considerably enlarged. By P. Colquhoun, LL.D. (London: J. Mawman, successor to Mr. Dilly, 1800).

An account of a meat and soup charity, established in the Metropolis, in the year 1797, with observations relative to the situation of the poor, and on the means of bettering the condition of the labouring people with regard to food ; and of increasing their comforts in other respects, by a more frugal mode of living, particularly in the City of London and its environs. By a Magistrate, (London : H. Fry, 1797).

A general view of the national police system as recommended by the Select Committee of Finance to the House of Commons ; and the functions of the proposed Central Board of Police Revenue ; with observations on the probable effects of the general designs in the prevention of crimes, (1799).

The state of indigence, and the situation of the casual poor in the Metropolis, explained ; with reasons assigned why the prevailing system, with respect to this unfortunate class of the community, contributes, in a considerable degree, to the increase and multiplication of crimes : with suggestions, shewing the necessity and

utility of an establishment of pauper police, immediately applicable to the casual poor, under the management of responsible Commissioners, with their functions explained. (London : H. Baldwin, 1799).

A friendly recommendation to labouring people and to persons having families of young children, shewing the advantages, in point of health, nutriment, and economy, in rearing a family, which may be derived from an improved mode of dressing animal and vegetable food in their own houses, (1799).

Suggestions offered to the consideration of the public . . . for the purpose of reducing the consumption of bread corn ; relieving at the same time the labouring people, by the substitution of other cheap, wholesome, and nourishing food ; and especially by means of soup establishments, (1800).

(There were two editions of this work).

A Treatise on the commerce and police of the River Thames : containing an historical view of the trade of the Port of London ; and suggesting means for preventing the depredations thereon, by a legislative system of river police. With an account of the functions of the various magistrates and corporations exercising their jurisdiction on the River ; and a general view of the penal and remedial statutes connected with the subject. (London : J. Mawman, 1800).

A Treatise on the functions and duties of a constable ; containing details and observations interesting to the public, as they relate to the corruption of morals, and for the protection of the peaceful subject against penal and criminal offences. (London : J. Mawman and J. Hatchard, 1803).

A Treatise on Indigence ; exhibiting a general view of the national resources for productive labour ; with propositions for ameliorating the condition of the poor, and improving the moral habits and increasing the comforts of the labouring people, particularly the rising generation ; by regulations of political economy, calculated to prevent poverty from descending into indigence, to produce sobriety and industry, to reduce the parochial rates of the kingdom, and generally to promote the happiness and security of the community at large, by the diminution of moral and penal offences, and the future prevention of crimes. (London : J. Hatchard, 1806).

A new and appropriate system of education for the labouring people ; elucidated and explained, according to the plan which has been established for the religious and moral instruction of male and female children, admitted into the free school, No. 19, Orchard Street, in the City of Westminster ; containing an exposition of the nature and importance of the design, as it respects the general interest of the community : with details, explanatory of the particular economy of the institution, and the methods prescribed for the purpose of securing and preserving a greater degree of moral rectitude, as a means of preventing criminal offences by habits of temperence, industry, subordination, and loyalty, among that useful class of the community, comprising the labouring people of England. To which are added, concluding

observations, on the importance of extending the system generally, under the aid and sanction of the legislature. (London : J. Hatchard, 1806).

A Treatise on the wealth, power, and resources, of the British Empire, in every quarter of the world, including the East Indies : the rise and progress of the funding system explained ; with observations on the national resources for the beneficial employment of a redundant population, and for rewarding the military and naval officers, soldiers, and seamen for their services to their country during the late war, illustrated by copius statistical tables, constructed on a new plan, and exhibiting a collected view of the different subjects discussed in this work. (London: J. Mawman, 1814. 2nd ed., 1815).

Considerations on the means of affording profitable employment to the redundant population of Great Britain and Ireland, through the medium of an improved and correct system of colonization in the British territories in South Africa. (London : G. Smeeton, 1818).

Biographical, Critical, and Expository Works

Observations on a late publication intituled a Treatise on the Police of the Metropolis, by P. Colquhoun, Esq., by a Citizen of London, but no Magistrate. (London : R. Shaw, for H. D. Symonds, 1800).

Beer, M. : *A History of British Socialism.* 2 Vols. (London, 1929).

Beer, M. : Art. on Colquhoun in the *Encyclopaedia of the Social Sciences* (1933).

Boase, H. : Manuscripts (British Museum Add. Mss., 29281).

Bourne, H. R. Fox: *English Merchants. Memoirs in Illustration of the Progress of British Commerce* (London, 1866).

Cleland, J. : *Annals of Glasgow.* 2 Vols. (Edin., 1881).

Colquhoun, M. F. and N. C. (Eds.) : *The Clan Colquhoun Society* (Glasgow, 1898).

Espinasse, F. : Art. on Colquhoun in the *Dictionary of National Biography*, ed. Leslie Stephen (1887).

Giffen, R. : *The Growth of Capital* (London, 1889).

Gray, B. K. : *A History of English Philanthropy* (London, 1905).

'Iatros' (G. D. Yeats) : *A Biographical Sketch of the Life and Writings of Patrick Colquhoun, Esq., LL.D.* (London, 1818).

Irving, J. : *The Book of Dumbartonshire.* 3 Vols. (Edin., 1879).

Irving, J. : *The Book of Scotsmen* (Paisley, 1881).

Pettigrew, T. J. : *Memoirs of the Life and Writings of the late John Coakley Lettsom, with a Selection from his Correspondence.* 3 Vols. (London, 1817).

Reith, Charles : *The Blind Eye of History. A Study of the Origins of the Present Police Era* (London, 1952).

AN ATTEMPT TO EXHIBIT A GENERAL VIEW OF SOCIETY

And to shew how the *New Property* in Great Britain and Ireland, arising from Agriculture, Mines and Minerals, Manufactures, Inland Trade, Foreign Commerce and Shipping, Coasting Trade, Fisheries, and Foreign Income, is *distributed* among the different Classes of the Community, with reference to the Population of Great Britain and Ireland; as ascertained from various Authentic Documents, and where no Documents exist from the best attainable information on the subject. (1812)

Number of Heads of Families	RANKS, DEGREES, AND DESCRIPTIONS	Averaged Number of Persons in each Family	Aggregate Number of Persons in the Families of each Class	Population of Great Britain and Ireland			Averaged Yearly Income of the Family of each Class	Aggregate Income of each Class of the Community in Great Britain and Ireland
				Estimated Number of Males	Estimated Number of Females	Estimated Population		
							£	£
1	ROYALTY:—The King, Queen, and Princesses of their Family	50	50	23	27	50	146,000	146,000
1	The Prince Regent, the Princess of Wales, and the Princess Charlotte	50	50	23	27	50	172,000	172,000
10	The remaining Princes and Princesses of the Blood, both lineal and collateral	20	200	95	105	200	18,300	183,000
516	NOBILITY:—Temporal Peers, including Peeresses in their own Right	25	12,900	6,400	6,500	12,900	10,000	5,160,000
48	Spiritual Lords or Bishops	15	720	320	400	720	5,010	240,480
861	GENTRY:—Baronets	15	12,915	6,400	6,515	12,915	3,510	3,022,110
11,000	Knights and Esquires	10	110,000	54,000	56,000	110,000	2,000	22,000,000
35,000	Gentlemen and Ladies living on Incomes	8	280,000	130,000	150,000	280,000	800	28,000,000
	STATE AND REVENUE:—							
3,500	Persons in higher Civil Offices	7	24,500	12,000	12,500	24,500	980	3,430,000
18,000	Persons in lesser · · · Idem	5	90,000	44,000	46,000	90,000	300	5,400,000
5,000	ARMY (A):—Military Officers, including Surgeons, Quarter Masters, Pay Masters, Engineer and Artillery Officers, Recruiting Staff-Officers, and the Commissariat	5	25,000	28,000	12,000	40,000	21,000 Officers at 200*l* each per ann	4,200,000
70,000	Common Soldiers in the Regulars and Militia, including Non-Commissioned Officers and Artillery and Engineers	4	280,000	330,000	120,000	450,000	280,000 Soldiers Artillery and Engineers, at 35*l* each per annum.	9,800,000
3,000	NAVY (B):—Naval Officers, Marine Officers, Surgeons, Pursers, etc.	5	15,000	13,000	12,000	25,000	8,380 Officers at 250*l* each per annum	2,095,000
50,000	Seamen in the Navy and Revenue Service and Marines	4	200,000	220,000	100,000	320,000	171,540 Seamen and Marines at 42*l* each per annum.	7,204,680
2,500	HALF-PAY, etc. (C):—Military, Naval and Medical Half-pay Officers, including Superannuated Officers, Retired Chaplains, and Widows and Children of Officers receiving Pensions	5	12,500	8,200	6,300	14,500	6,500 Half-pay etc. Officers at 100*l* each per annum 2,066 Widows and Children of Officers at 100*l* per annum.	856,600
199,437	Continued			852,461	528,374	1,380,835		£91,909,670

*From the *Treatise on the British Empire* (2nd edition, 1815), 124-125.

Number of Heads of Families	RANKS, DEGREES, AND DESCRIPTIONS	Averaged Number of Persons in each Family	Aggregate Number of Persons in the Families of each Class	Population of Great Britain and Ireland: Estimated Number of Males	Estimated Number of Females	Estimated Population	Averaged Yearly Income of the Family of each Class	Aggregate Income of each Class of the Community in Great Britain and Ireland
199,437	Continued			852,461	528,374	1,380,835	£	£ 91,909,870
	PENSIONS (D):—Pensioners of Chelsea Hospital, in and out; Pensioners of Greenwich Hospital, Idem; Pensioners of the Chest at Chatham; Pensioners of the Royal Hospital at Kilmainham } Averaged	4	80,000	62,000	30,000	92,000	42,000 *In* and *Out* Pensioners (Soldiers and Sailors) averaged at 15*l* each per annum	630,000
	The above mentioned Pensioners receiving besides from Labour	. .	. . . . .	. . . . .	. . . . .	. . . . .	Idem at 10*l* each per annum	420,000
1,500	CLERGY:—Eminent Clergymen	6	9,000	4,300	4,700	9,000	720	1,080,000
17,500	Lesser Idem	5	87,500	43,000	44,500	87,500	200	3,500,000
19,000	LAW:—Judges, Barristers, Attorneys, Clerks, etc.	5	95,000	46,000	49,000	95,000	400	7,600,000
18,000	PHYSIC:—Physicians, Surgeons, Apothecaries etc.	5	90,000	44,000	46,000	90,000	300	5,400,000
5,000	FINE ARTS:—Artists, Sculptors, Engravers, etc.	5	25,000	12,000	13,000	25,000	280	1,400,000
	AGRICULTURE, MINES, etc.							
70,000	Freeholders of the better sort	5½	385,000	190,000	195,000	385,000	275	19,250,000
210,000	Lesser Freeholders	5	1,050,000	500,000	550,000	1,050,000	100	21,000,000
280,000	Farmers	5½	1,540,000	730,000	810,000	1,540,000	120	33,600,000
742,151	Labouring people employed in Agriculture, Mines, and Minerals, including Earnings of the Females	4¼	3,154,142	1,526,635	1,627,507	3,154,142	45	33,396,795
	FOREIGN COMMERCE, SHIPPING, MANUFACTURES, AND TRADE:—							
3,500	Eminent Merchants, Bankers, etc.	10	35,000	17,000	18,000	35,000	2,600	9,100,000
22,800	Lesser Merchants trading, by Sea, Including Brokers, etc.	7	159,600	79,600	80,000	159,600	805	18,354,000
8,700	Persons employing professional skill and capital as Engineers, Surveyors, Master Builders of Houses, etc.	5	43,5000	21,500	22,000	43,500	300	2,610,000
	FOREIGN COMMERCE, SHIPPING MANUFACTURES, AND TRADE, INCLUDING THE FISHERIES:—							
500	Persons employing Capital in building and repairing Ships, Craft, etc.	6	3,000	1,400	1,600	3,000	804	402,000
8,750	Ship Owners letting Ships for Freight only	5	43,750	21,750	22,000	43,750	600	5,250,000
80,000	Aquatic Labourers in the Merchants' Service, Fisheries, Rivers, Canals, etc.	4	320,000	195,000	205,000	400,000	180,000 Men averaged at 45*l* each per annum	8,100,000
44,000	Manufacturers employing Capitals in all branches, as Cotton, Wool, Flax, Hemp, Leather, Glass, Pottery, Gold, Silver, Tin, Copper, Iron, Steel, and other Metals, Silk, Paper, Books, Gunpowder, Painters' Colours, Dy'd Stuffs, etc. Beer, Porter, Distilled Liquors, Sweets, Candles, Soap, Tobacco, Snuff, Salt, etc., etc.	6	264,000	129,000	135,000	264,000	804	35,376,000
900	Principal Warehousemen, selling by Wholesale	6	5,400	2,500	2,900	5,400	804	723,600
140,000	Shopkeepers and Tradesmen retailing Goods	5	700,000	340,000	360,000	700,000	200	28,000,000
43,750	Persons employing Capitals, as Tailors, Mantua-Makers, Milliners, etc. in the Manufacture of stuffs into Wearing Apparel and Dresses, etc.	5	218,750	110,000	108,750	218,750	180	7,875,000
1,916,051	Continued			4,928,146	4,853,331	9,781,477		334,977,265

APPENDIX—(*Continued*)

Number of Heads of Families	RANKS, DEGREES, AND DISCRIPTIONS	Averaged Number of Persons in each Family	Aggregate Number of Persons in the Families of each Class	Population of Great Britain and Ireland: Estimated Number of Males	Estimated Number of Females	Estimated Population	Averaged Yearly Income of the Family of each Class	Aggregate Income of each Class of the Community in Great Britain and Ireland
							£	£
19,160,51	Continued . . .	. . .	. . . . .	4,928,164	4,853,331	9,781,477		334,977,265
42,500	Clerks and Shopmen to Merchants, Manufacturers, Shopkeepers, etc.	5	262,500	130,000	132,500	262,500	95,000 at 70*l* each per annum	6,750,000
87,500	Inn-keepers and Publicans licensed to sell Ale, Beer, and other Liquors	5	437,500	216,500	221,000	437,500	100	8,750,000
500	Umbrella and Parasol-makers, Silk Lace Workers, Embroiderers, Domestic Spinsters, Clear Starchers, Laundresses, Manglers, etc.	4	150,000	74,000	76,000	150,000	on 70,000 persons earning 50*l* each per annum	3,500,000
1,021,974	Artisans, Handicrafts, Mechanics, and Labourers employed in Manufactories, Buildings, and Works of every kind . .	4¼	4,343,389	2,103,219	2,240,170	4,343,389	48	49,054,752
1,400	Hawkers, Pedlars, Duffers, and others, with and without Licences	4	5,600	2,800	2,800	5,600	45	63,000
	UNIVERSITIES AND SCHOOLS, for the Education of Youth :—							
874	Persons educating Youth in Universities and Chief Schools .	4	3,496	1,700	1,796	3,496	600	524,400
35,000	Persons engaged in the Education of Youth of both Sexes, and generally employing some Capital in this pursuit . .	6	210,000	100,000	110,000	210,000	204	7,140,000
	MISCELLANEOUS :—							
5,000	Clegymen regularly ordained dissenting from the Established Church, including itinerant Preachers	4	20,000	10,000	10,000	20,000	100	500,000
875	Persons employed in Theatrical pursuits and attached to Theatres and Concerts, as Musicians, etc.	4	3,500	1,700	1,800	3,500	200	175,000
70	Persons keeping Houses for Lunatics	10	700	350	350	700	500	35,000
	Lunatics and others under Mental derangement	—	4,000	2,000	2,000	4,000	each person 40*l*	160,000
3,500	Persons confined in Prisons for Debt	5	17,500	8,500	9,000	17,500	30	105,000
	Vagrants, Gipsies, Rogues, Vagabonds, Thieves, Swindlers, Coiners of base Money, in and out of Prisons, and common Prostitutes (including Wives and Children)	—	. . . . .	129,720	179,021	308,741	Each person averaged at 12*l* per annum	3,704,892
	Persons included in the various Families above-mentioned, who have Incomes from the Funds and other Sources, including also Trustees for Orphans, Minors, and Charitable Foundations and Institutions, about	—	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	5,211,063
387,100	PAUPERS :—							
	Paupers, producing from their own Labour in miscellaneous Employments	4	1,548,400	768,350	780,050	1,548,400	10	3,871,000
	And receiving from Parochial rates about	—	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	6,000,000
3,501,781				8,476,985	8,619,813	17,096,803	£	430,521,372
Families in Great Britain and Ireland				Males in Great Britain and Ireland, including Soldiers, Seamen, etc.	Females in Great Britain and Ireland	Souls in Great Britain and Ireland including the Army & Navy		Total Yearly Income of the Population of Great Britain and Ireland

Thunderstorm Phenomena in Ceylon

IT has become natural to associate rainfall in Ceylon with the Monsoons. Perhaps this is understandable, because the greatest proportion of rain falling (in terms of amounts) in the Island is that produced by the Monsoonal currents. It has also become commonplace to refer to the island's climate as being Monsoonal. But from a climatological point of view it is erroneous to accept these attitudes: firstly, to consider the Monsoonal characteristics as being typical and in synonymity with climate, and secondly, to associate rainfall in the island with the Monsoons only. The Monsoon, in fact, does not refer to the rainfall associated with it, as is assumed by the average layman. Considered from a meteorologic point of view, the Monsoon is essentially and basically a 'wind' with characteristic opposite-seasonal direction of blowing; the rainfall accompanying it is but incidental and not necessarily a Monsoonal attribute.[1] Further, it is assumed that the island's typical weather phenomena is Monsoonal; this again, is incorrect climatologically. Basically, from the standpoint of the island's latitudinal situation it is the convectional weather phenomena that is typical.[2] It is only when other weather phenomena produced elsewhere invade the island's atmospheric environs that this convectional activity is lessened to such an extent so as to be almost absent; the Monsoon, the Tropical Cyclone and other weak depressional activity are such 'foreign weather importations'. It is during the period of convectional activity, namely during the months of March-April and October that all over the island, thunderstorm phenomena are dominant. During the dominance of the respective Monsoonal currents convectional activity and therefore thunderstorm phenomena are confined to the areas least affected by the Monsoonal currents; on the eastern side of the island during the South-west Monsoonal period (May to September) and on the western side during the North-east Monsoonal period (November to February). However, it must be mentioned that this is more true during the South-west rather than during the North-east Monsoonal period.

The thunderstorm to the layman brings to mind the phenomena of sudden heavy short-duration rainfall accompanied by gusty winds, thunder and lightning. Perhaps, he has also noticed that such phenomena seem to be confined to certain periods of the year, notably in March, April and October. From a meteorological and climatological standpoint, the island is typically located,

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1. *Meteorological Glossary* (London: Air Ministry, 1940), 134. For detailed consideration refer, George Thambyahpillay, *Climates of Ceylon*: M. A. Thesis (Univ. of California, 1952), 59-65.

2. Thambyahpillay, op.cit., 65; 72-76.

so as to be a regular source of thunderstorm activity.[3] However, as mentioned earlier certain meteorologic conditions over the Indian sub-continent and the South-East Asiatic environs transmit their influence to the island's atmospheric environment so as to modify and vitally nullify the normal weather sequence. Thus are created the weather anomalies of the island in the form of depressions, cyclones and Monsoons. A detailed analysis of thunderstorm activity in the island must be preceeded by a consideration of the typical meteorologic conditions that would render the day potentially a thunderstorm-day .

Let us consider a typical day in the months of March, April or October; insolation performs its dominant role. The incoming solar short-wave radiation is partly lost to the upper atmosphere, and partly absorbed by the gases and particles in the lower atmosphere and by the earth's surface. The rapidly heated land surface, begins to transfer the heat by the processes of conduction and radiation (to the surface air). The air above the surface gets heated and with its newly acquired thermal character becomes of low density; it will therefore seek to reach areas of similar density. Thus begins the initial vertical movement of a mass of air. When air begins to indicate a tendency for vertical ascent, it is said to be *unstable.*[4] This, *unstable* air to begin with, is 'dry', though it does contain water vapour; it is termed 'dry' meteorologically, because it does not contain the optimum amount of water vapour that it has the capacity to hold, in terms of its temperature.[5] The higher the temparature

3. Latitudinally the island is situated so as to receive high insolation throughout the year; further, no part of the island is more than 65 miles from the coast, so that the influence of the cool sea breeze is felt far inland.

4. Air that is *stable* does not acquire vertical ascent *in situ,* unless induced by some mechanical or thermal agency. It is found that temperature decreases with increasing altitude; this seems, at first a meteorological paradox, but is easily explained. At upper levels, the atmosphere is free from many of the impurities such as dust, water vapour, etc. which act as insolation absorbing media; these are either naturally or artificially induced material and form a fair proportion of the lower atmosphere. The freer upper atmosphere therefore forms simply a media for the insolation radiational waves to pass through. Thus temperature decreases towards the upper levels of the atmosphere. This change of temperature with change in altitude is termed the *lapse rate.* The normal *lapse rate,* i.e., decreasing temperature with increasing height is termed the *environmental lapse rate* and amounts to about 3·3°F/1,000 feet. When a mass of air acquires a *lapse rate* more than the *environmental lapse rate* it begins to displace itself vertically. *Stability* and *instability* are of various types, but no detailed discussion will be made here, because of the technicalities involved.

5. The water vapour carrying-capacity of air is a function of temperature; the higher the temperature the greater is the capacity for it to hold water vapour. *Absolute humidity* refers to the total water vapour present in a mass of air and is expressed as an amount of grains; *relative humidity,* on the other hand, is the amount of water vapour present expressed as a per cent of the water vapour-carrying capacity of the air at the particular temperature.

0°F	*Water vapour carrying capacity (grains)*
30	1·9
40	2·9
50	4·1
60	5·7
70	8·0
80	10·9
90	14·7
100	19·7

As the temperature increases, the 'carrying capacity' also increases in greater proportions; thus while between 30°F and 40°F the capacity is only 1·0 grain, between 90°F and 100°F it is as high as 5·0 grains.

of the air the greater is its capacity to hold water vapour; absolute humidity therefore is a function of temperature. When the air contains the optimum amount of water vapour, then it is said to be *saturated*. The air, that is *unstable* and therefore ascending will do so at a certain *lapse rate* which, when the air is dry is termed the *dry adiabatic lapse rate*.[6] This process of vertical ascent of unstable air is technically termed *convection;* in other words, the air acquires turbulence and overturning. Convectional currents are therefore the product of thermal characteristics of the immediate surface from which the air ascends; shimmering surfaces (metal roads, surfaces, bare rock surfaces and sandy areas) indicate the process of convectional activity. The air ascending at the DALR would also begin to cool as it reaches higher altitudes and therefore lower thermal layers. The cooling of the mass of air would involve the release of heat that it possesses. Since the heat released is latent within the rising mass of air, this process of cooling is termed *adiabatic*.[7] The air mass is now rising to higher levels and is cooling adiabatically in the process; however, the air is no more as dry as it was during its initial stage of ascent, because the temperature is lower and the optimum water vapour-carrying capacity is lowered. Thus, the cooling air mass becomes more moist though the absolute amount of water vapour has not increased; the absolute humidity (actual amounts of water vapour) has not changed, but relative humidity has remarkably increased (i.e., humidity in terms of temperature). A stage will soon be reached in the process of ascent when the air mass at its new temperature becomes *saturated*; in other words, the air mass has now reached the stage when in terms of its temperature it holds the optimum, in terms of water vapour-carrying capacity. This moist or *saturated* air will now acquire a new *lapse rate*, namely the *saturated adiabatic lapse rate* (*SALR*).[8] Any more cooling by ascent would mean the release of the excess water vapour from the air, which would now be considered to be *supersaturated*. This process of release of excess water vapour is

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6. Henceforth it will be designated DALR; correspondingly the *saturated adiabatic lapse rate* would be SALR. The rates are as follows :—

DALR : 5·6°F/1,000 feet

SALR : 2·8°F/1,000 feet

7. A process is said to be adiabatic when no heat is added to or withdrawn from, the air that partakes in the process. In other words the heat required to ascend vertically is latent within the air and when cooling takes place this heat that is latent is released; thus, warming and cooling processes are performed adiabatically.

8. For detailed consideration of the thermodynamic principles involved, see Petterssen, *Introduction to Meteorology* (New York : McGraw-Hill, 1941), 49-79.

termed *condensation*[9] forming clouds. For condensation to be effective, there must be present in the air *hygroscopic particles or nuclei*[10] to absorb the released water vapour. However since condensation releases latent heat (of vaporisation) and therefore increases the air temperature, the tendency would be to make the air relatively drier. Thus these two processes—cooling (condensation) and heating (latent heat release) tend to counteract each other. Thus, in order to maintain the process of condensation it is indispensable that the air should be cooled to such a degree so as to counteract the heating process. This would mean the need for *supercooling* the air.

When condensation takes place at lower levels of the atmosphere, the typical cloud developed is that termed *Cumulus*. This cloud type is easily recognised because of its dome shape or rather cauliflower character. During the months of March, April and October, these cloud types are familiar phenomena in the Ceylon Sky. Their initial development takes place as soon as the insolation process becomes to be effective in producing convectional currents. By the early afternoon the sky is characteristically patterned with these clouds. The process of convective activity is too familiar a phenomenon in Ceylon and thus does not warrant a detailed description here.[11] The characteristic Sea breeze phenomenon is a further indication of the effective operation of convectional circulation. Land and sea bodies possess different heat coefficients and

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9. In simplified form, clouds may be classified in terms of altitude : thus high clouds are the *Cirrus* types, the medium high clouds the *Alto*-types (Alto-stratus or Alto-cumulus) and low clouds, the *stratus*. The Cumulus clouds are convective clouds that exhibit vertical development and may reach the levels of the *Cirrus* zone, when in combination with them, the term *Cirro-cumulus* is applied. Condensation can occur even at surface levels and all forms of mist, fog, etc. are really ' surface cloud formations '. Even in the University Park, condensation is a characteristic phenomenon during the mornings following a cloudless, starry night. Here because of the rapid nocturnal terrestrial radiation, (the heat of the surface is radiated back to the atmosphere and if clouds are absent this long-wave radiation process goes unimpeded) the surface gets ' chilled ' and so the air higher above is relatively warmer than the surface and the air close to it ; thus is caused ' ground fog or mist ' in the University Park. As soon as the air begins to be heated after sunrise, the mist gradually ' dissipates '. Dew, also results from condensation due to surface saturation.

10. Not all particles of dust can absorb water vapour. To be *hygroscopic* the nuclei must posses affinity for water. Such nuclei occur in the form of calcium chloride and sodium chloride particles (salt in sea spray) and various sulphates (products of combustion). Sulphur dioxide resulting from the burning of fuels, oxidises the air and forms hygroscopic nuclei of sulphur trioxide. On the average, a cloud droplet contains one part hygroscopic material to 10,000 parts of water by weight. The size of this nucleus may be realized when it is known that while a nucleus is at most 2 microns in diameter, the cloud droplet is 40 microns and a raindrop varies from 500 to about 4,000 microns (i.e., 0·5 to 4 mm.).

11. However see Thambyahpillay, op. cit., 72-76 for a detailed description. The writer has had occasion to observe these phenomena from Adam's Peak as well as from the Western coast.

thus in the early afternoon the moist cool air from the ocean blows inland to take the place of the heated and ascending air over the coast and central highlands of Ceylon. This ascending air cools adiabatically and is wafted in the form of cumulus clouds towards the coast in the late afternoon and evening. Now the Land breeze sets in, i.e., the sea is relatively warmer and therefore the wind from the land blows towards the sea to take the place of the warm air ascending from the warmer sea surface. But, before these clouds (convective cumulus clouds) make their eastward and westward journeys from the central highlands of the island, they may precipitate to produce rain.[12]

All clouds would not necessarily give rain ; Cirrus and Alto-Stratus clouds can generally be considered non-rain bearing clouds. But our context-Ceylon-being a tropical environment it is the convective clouds namely the Cumulo-types that are more significant and are potentially responsible for thunder-storms. However all Cumulus clouds may not necessarily develop into rain-bearing clouds. As the process of condensation continues—the original flat based cumulo-clouds begin to ' grow ' vertically producing a towering effect. Small scattered Cumuli gradually coalesce into larger ones and begin to develop ' towers '. From the onset of this *towering* process the original fair weather Cumuli acquire rain-potentiality.

Hence the saying,

' When clouds appear like hills and towers,
The earth's refreshed by frequent showers '.

Let us visualize the ' mechanics ' of the process of condensation and eventual precipitation within a cumulus cloud. A highly pregnant cumulus cloud developing into a cumulo-nimbus cloud under certain favourable conditions is the ultimate thundercloud producing the ' storm '. From the initial condensation stage onwards the hygroscopic nuclei absorb the water vapour from the air. The growing nuclei would cause further condensation to occur ; but, the growing rain-drops become less effective hygroscopic nuclei. In fact, smaller rain-drops grow at a faster rate than the larger drops ; it has been computed that, while it takes a condensation nucleus only 100 seconds to grow to an average cloud droplet, it would take almost 24 hours for the cloud droplet to grow to the size of an average rain-drop. The rain-drops do not ' grow ' through continued condensation ; they do so by the process of coalescence of small cloud droplets. With the ' towering ' process reaching, to over 15,000 feet above the surface, *supercooling* takes place and consequently water droplets solidify into ice particles. Thus at temperatures between 20° F and 0° F, the cloud generally consists of ice particles or water droplets mixed with ice particles. The process

12. These are the typical convective showers. The daily ' procession ' of the convective cumuli from the central highlands towards the coast is a familiar phenomenon observable from the University Park.

of precipitation therefore requires initially the stage of coalescence of cloud droplets into large rain-drops ; if the process of coalescence is absent, the cloud is technically considered to be *colloidally stable*[13]. The coalescence of cloud droplets is therefore the result of what is termed *colloidal instability*. The latter is a function of five basic conditions, namely :—

(i) *Electric charges of the droplets* : each cloud droplet acquires an electric charge—positive or negative. When neighbouring droplets possess opposite charges, they naturally are attracted, leading to coalescence ;

(ii) *Size of the droplet* : it is found that the saturation vapour pressure varies slightly with the curvature of the water surface ; the larger the drop the lower the saturation vapour pressure. The smaller drop tends to evaporate and would condence on the supersaturated larger drop ;

(iii) *Temperature of the droplet* : saturation vapour pressure varies with temperature and increases with rising temperature This is of great significance in tropical latitudes because of the higher temperatures. In the turbulent cloud, the colder droplets from above in their descent would meet the warmer droplets ascending from below. *Supersaturation* would take place over the colder droplets and *subsaturation* over the warmer droplets ; this would mean the growth of the colder droplets at the expense of the warmer ones;

(iv) *Motion of the droplets* : turbulence may cause coalescence by collision of the droplets ; this is however, found to be not a necessary condition.

Bergeron observed that these four conditions were not necessary for precipitation to take place ; that in spite of the prevalence of these conditions, precipitation did not necessarily follow. Therefore he postulated the really significant condition, namely :—

(v) *The presence of ice crystals* : it is considered that *colloidal instability* could be readily induced in a cloud in which are present a mixture of *subcooled* water drop-lets and ice particles. The difference in the saturation vapour pressure of the *subcooled* water droplets and ice crystals would result in the relative evaporation of the water droplets ; this would in turn condence on the ice particles. These ice particles by a process of such accretion would become heavier and begin to fall through the cloud ; in this process of ' falling through ' the ice crystals would collide with water droplets leading to further coalescence. This ' collision-coalescence ' process would occur until the crystals leave the cloud mass. These crystals as they descend towards the earth's surface would begin to melt because of the higher temperature and would reach the surface as rain only if they can counteract the ascending warm air currents.

This theory of precipitation of Bergeron is widely accepted as the best explanation. However, it has also been observed in tropical latitudes that, because

13. Since technical details have to be kept to a minimum, detailed consideration will not be made as to the character of *colloidal stability and instability*.

of the high temperatures prevalent, turbulence can bring about a mixing of the colder and warmer water droplets, which would result in precipitation. But such showers are very light and are of very short duration. These showers are not predictable, because the cumulus clouds do not exhibit ' towering ' character. Very often these showers occur when the sun is shining brightly and baffles the layman ; this meteorologic anomaly is understandable, for the low cumulus clouds would be regionalized to give the highly localized showers. This is the so-called ' all-rain ' theory as opposed to the ' ice-crystal ' Bergeron theory. Bergeron's theory also explains the sudden release of rainfall ; as long as the cloud consists of only water droplets resulting from condensation, the cloud is *Colloidally stable.* Such clouds are typically observable in the island. Very often despite the overcast sky with dominant alto-stratus and alto-cumulus clouds rainfall does not occur : this often baffles the layman not conversant with simple meteorologic understanding. When the cumulus clouds build up and ' grow ' into towering formations, to reach a ceiling of over 15,000 feet, ice crystals form and the *colloidally unstable* clouds would suddenly release their abundant ' burden ' resulting in the squally and intense deluge. For, as Sir Napier Shaw put it, ' it is a gigantic, if comparatively slow, explosion of moist air, the latent heat of the moist air acting as fuel '.

The stage in the gradual ' growth ' of the simple, fair-weather cumuli into the ' towering ' cumulo-nimbus clouds, with anvil development to finally produce the thundercloud is easily observable in the island on almost any day during the aforementioned convectional months, i.e., March, April or October. In Figure 1, an attempt has been made to portray the stages ' in the ' genesis and dissipation of the cumulus cloud during any convective day in the island.

Fig. 1—Convective Cloud Types[14]

(*a*) These are the flat, non-towering cumuli, noticeable on any day in Ceylon (when the Monsoonal or the Cyclonic weather phenomena are absent). These are well separated with little or no tendency for 'vertical growth' or for 'coalescence'. These cumuli ('cumulus humilis') portend fair weather and are indicative of the stability of the atmosphere above the condensation level. If, by the early afternoon such cumuli show no tendency to ' tower ' then they positively portend no rain in the evening. These cumuli, therefore are composed only of water particles without ' ice-crystal ' development.

(*b*) The second stage, if developed, gives the cauliflower 'towering' effect and is the typical cumulus cloud type. Though this cloud

14. The writer would be glad to illustrate with colour slides the stages in the development of these convective cloud types.

stage is also not a rain-potential (because water droplets still form the composition of the cloud) it might develop into the third stage (*c*) ; unlike the cumuli of the (*a*) type, these exhibit signs of 'growth'.[15]

(*c*) Here, is a further stage in the cumulus development with the 'scarf' being the characteristic feature ; the 'scarf' usually consists of water droplets, though ice crystals may also be present. The 'scarf' is indicative of the transition from the fair-weather cumulus to the potential rain-bearing cumulo-nimbus cloud.

(*d*) The progressive development of the cumulus has now reached the 'rain-cloud' stage. The 'growth' vertically has ceased and the 'towers' dissipate and begin to 'flatten out' ; this 'flattening process' indicates the 'crystallisation of water droplets' into ice due to cooling in higher levels. The cloud ceiling may be over 15,000 feet. This is the 'penultimate' stage of the convective cloud and precipitation would naturally result. This type of cloud is termed cumulo-nimbus calvus or bald cumulo-nimbus. The nimbus character of the cloud is easily observed by its 'dark and ominous looking' nature.

Trinculo : ' . . . ; yond same black cloud, yond huge one,
looks like a foul bombard that would shed his liquor . . .
. . . yond same cloud cannot choose but fall by pailfuls . . .'

Act II, Scene II, *The Tempest* (Shakespeare).

(*e*) This is the 'ultimate' stage of the convective cloud, namely, the thundercloud and technically termed cumulo-nimbus incus or cumulo-nimbus with anvil. The 'anvil' is the clue to the 'deluge' to come ; an anvil develops when it is composed of ice crystals. Thus, this stage is imminently rainy ; the thunderstorm finally is 'mature' and is marked by the sudden, squally intense rainfall, accompanied by thunder and lightning.

(*f*) The final stage is the gradual dissipation of the thundercloud. This cloud stage termed the strato-cumulus may also result immediately after the fair-weather cumulus stage, when a sheet of high cloud develops above them. The strato-cumuli are sure indications of the atmosphere developing a stable stratification ; thus they portend potential non-rainy spells.

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15. These 'towering cumuli' are responsible for the 'bumps' that are experienced by the pilots flying on the Colombo-Kankesanturai and Colombo-Gal Oya routes.

In forecasting the potential weather during the months of convectional activity, observation of the cumuli (clouds) with special attention to the progressive development of the 'top' surface warrants very good results;[16] 'towering' is an indication of a potential rainy spell.

Fig. 1—Vertical section through convective thunderstorm

Cu : Cumulus clouds
M : Mammatus clouds
A : Anvil top of cumulo-nimbus cloud
P : Protruding anvil cloud
G : Strong gusts
U : Updraft (warm air currents)
D : Downdraft
R : Primary rain or hail area (initial sudden shower)
R' : Secondary rain (continuous rain but less intense, sometimes drizzle)
Z : Freezing isothermal level (O°C/32°F)
W : Wind direction.

The thunderstorm may be considered to be an 'overgrown', intensely colloidally unstable cumulo-nimbus cloud. Two basic meteorologic conditions are indispensable for the genesis of thunderstorms: intense insolation resulting in high temperatures and high humidity produced by rapid adiabatic cooling of the vertically ascending air currents. The first condition is fulfilled in Ceylon during the equinoctial periods, i.e., March-April and September-October;[17] the second requirement is necessarily a result of the first and therefore is automatically present. These two conditions, form the *raison d'etre* of intense thunderstorm activity during the afore-mentioned months and also of their marked development during the hottest days. A consideration of the 'mechanics' within the thunderstorm reveals interesting features. The 'thunderstorm' is the 'ultimate' stage in the development of the simple convective cumuli, provided that meteorologic conditions are present facilitating the gradual 'growth of the towers' and eventual ceiling development to over 15,000 feet. Within the cumulo-nimbus cloud the ice particles tend to constantly fall towards the earth's surface; in these attempts they melt into water drops (raindrops) on leaving the cloud and entering the warmer atmosphere. But, in order to

16. Forecasting weather from the observation of convective clouds is gained by following simple rules and experience. The favourable geographical situation of the University Park permits very satisfactory observations to be made.

17. However, it must be mentioned, that in reality in September, convective activity is not dominant because of the still weakly persisting South-west Monsoonal currents. Further, a short 'lapse' period is observed in equinoctial insolation and is reflected in the island's weather periods. See Thambyahpillay, op. cit., Chapter III, Part A, 24-46.

finally reach the earth's surface as rain, these must be of such size and weight so as to overcome the ascending currents of air ; thus, before a single rain-drop reaches the surface of the earth it must have undergone a series of descents and ascents. It has been computed that if the drops grow larger than 4 mm. in diameter, they will fall with a velocity of 8 metres per second (about 27 feet per second). The drops then break into smaller drops and fall slowly. But, if the ascending air currents reach a velocity of over 8 metres/sec., then the drops are split up into smaller ones and will be carried upwards by the air currents. These drops will now acquire more moisture probably by crystallization into ice and thereby leading to water droplets condencing on the crystals ; the latter then begin to fall through the cloud and into the atmosphere. In Figure 1, is reproduced a vertical section through a convective thunderstorm according to Haynes. The characteristic features are the strong updrafts and downdrafts ; while the updraft is initially responsible for the ' growing ' thundercloud, the strong downdraft is the cause of the heavy rainfall reaching the earth's surface. This fall of rain is so vigorous that it has become natural to refer to 'thunder-showers' rather than to 'thunderrains'. The intensity of the thunderstorm rain varies from about ten minutes to well over an hour or two,[18] depending on the degree of 'convectivity' attained in the locality. However, because of the diurnal temperature variation, the land-sea breeze phenomena determine the movement of the thunderstorm. Thus, the thunderstorm precipitating over the Kandy environs in the early afternoon or late afternoon, would reach the western coast between 3 p.m. and 6 p.m. accordingly.

The ' shower ' is not the only attribute of the thunderstorm ; perhaps the more fascinating and noteworthy to the layman are the *thunder and lightning*. From a meteorologic viewpoint, there are other phenomena namely the *squall wind*, and *hail*.

Lightning and thunder : These two phenomena occur simultaneously, but thunder is preceeded by lightning, because of the difference in the speed of travel of these two phenomena—namely light and sound. As rain-drops grow in size, they reach a stage of growth, when no more cohesion is possible ; further attempts to 'grow' would result in the splitting up of the rain-drops. The larger drops continue to fall towards the lower levels of the cloud and remain there, or fall as rain ; the smaller drops, on the other hand, are carried into upper

18. To mention a few observations in the University Park : on the 27th of March the thunder-shower suddenly occurred about 4-20 p.m. and the intense fall ceased by 4-45 p.m., while drizzle continued till about 5-30 p.m. Widely spread strato-cumulus heralded the clearing sky. The shower on the 25th of March was very intense and lasted for about two hours from 9-00 p.m. The fore-and afternoon of 31st March was unusually warm and the ' growing ' cumuli finally precipitated by about 2-30 p.m. ; after 3-30 p.m. drizzle continued till about 4-30 p.m. The *squall wind* was very noticeably marked.

levels by the ascending currents. These drops—the smaller and the larger—would posses different electrical charges ; the larger ones carry positive charges and the smaller ones negative charges, while the earth itself is usually of negative charge. Continued development of the charges leads to the discharge of electrical currents in the form of a flash of lightning. These lightning flashes may be either between neighbouring oppositively-charged clouds or between the earth and the positively-charged cloud. Thunder is due to the violent expansion of the air due to an extremely sudden and great increase of temperature consequent upon the tremendous heat of the lightning.

The Squall Wind : As shown in Figure 1, this wind is caused by the strong downdraft of the cool, moisture-laden air in front of the main storm. This squall wind attains great velocities and occur in gusty form. They function as ' heralds of the storm '.

Hail : Hail, is in fact, simply a form of precipitation; but, since it occurs as ' stones ' or hardened globules of ice, it is a much dreaded phenomenon, because of the tremendous damage it causes to crops and even lives and property. It occurs only in the most intensely developed thunderstorm ; it often baffles the layman, that ' ice globules ' should fall during the hottest part of the afternoon[19] and in the tropical latitudes. The explanation, is however, simple: when convectional currents are most vigorous so as to attain velocities of about 50 miles per hour, descending rain-drops are caught up in this tremendous upsurge and are therefore carried into higher levels, where the temperature is below freezing (Figure 1). Here they mix with snow and freeze as ice globules. In their descent to lower ' rain-levels ' they acquire a coating of clear ice by the condensation of the rain-drops upon them. If caught up within another updraft, they are further carried into the higher levels of freezing temperature ; they now acquire another coating of ice and this process of ' ice-layering ' is continued corresponding to the ' ascent-descent ' phenomenon, until they grow into larger sizes. They fall to the earth when a temporary lull occurs in the updraft, and when caught within the downdraft. The size of the ' hailstones ' depends on the strength of the updraft and on the number of their ' ascent-descent ' series.

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19. On the 13th of March (1954) at about 2-30 p.m. an intensely developed thunderstorm precipitated hail. Though the ' hailstones ' were of small diameter (about 5 mm. on the average) yet the occurrence was interesting. Since the writer was in Peiris Hall observations before the ' hailstorm ' were made and showed remarkably the characteristic sequences of thunderstorm potentiality, as exhibited by the progressive cloud ' growth '. The ' hailstones ' on examination revealed at most a ' dual-layering ' indicating that the ' hailstones ' had only a couple of ' ascent-descent ' series. Examination of ' hailstones ', in California, by the writer have revealed three to four layers of ice-coating. This coating occurs in the form of alternating concentric layers of clear ice and opaque layers of partially melted snow.

In resumé, it might be mentioned that from the climatologic point of view, Ceylon is latitudinally situated to be a source region of potential thunderstorm activity and should form part of the normal weather sequence of the island. However, their activity being conditioned by ideal convective circulation, they are confined to those periods of the year, when the island's weather anomalies ('Monsoons, depressions and Cyclones) are absent. The regional concentration of these phenomena depends on the weather conditions during the day (thermal and/or anomalous weather) ; during the 'advance' and 'retreat' stages of the South-west Monsoonal period, thunderstorm phenomena prevail even in the western part of the island.[20] The references in this paper, to 'thunderstorms' are to those that are characteristically associated with convectional weather conditions—which latter, the writer considers to be the climatologically warranted *normal* weather of the island.

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20. Detailed considerations of intensity and regional occurrence of thunderstorm rain will be made in a subsequent paper entitled, 'The Rainfall Rhythm in Ceylon'. The writer here, wishes to deplore the poor appreciation by the general public of the weather reports of the Colombo Observatory. A critical study of these reports reveal the validity of the forecasts. However, the difficulties of weather forecasting in tropical latitudes must be taken into consideration ; perhaps only those who are meteorologically or climatologically inclined would appreciate this fact.

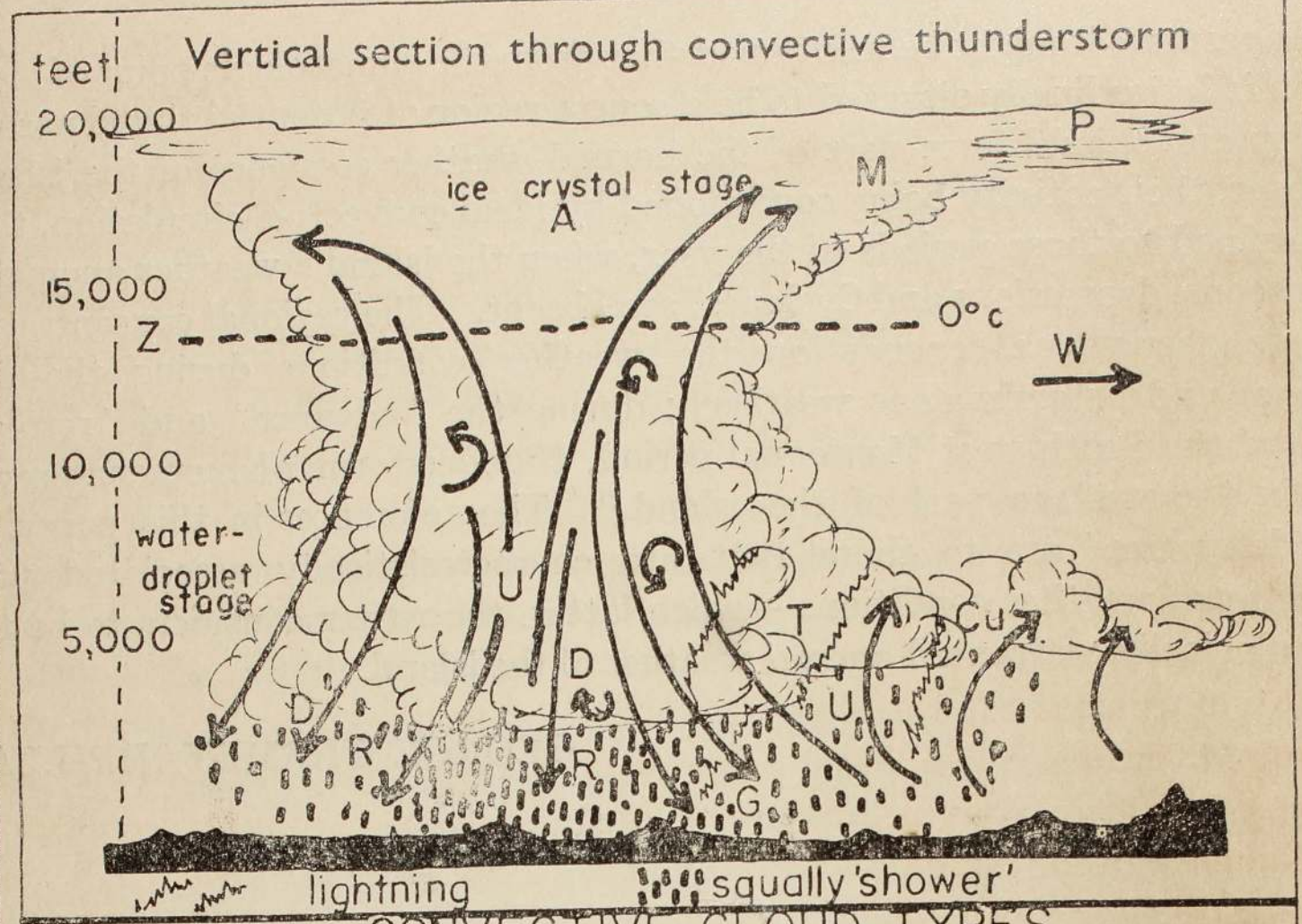

Figure 1

The use of the 'Inanimate' Noun with 'Animate' Significance in Sinhalese Inscriptions

THERE appear to be a few instances in Sinhalese inscriptions of the 10th c., A.D., wherein certain nouns apparently indicating inanimate objects are employed sometimes in their normal 'inanimate' sense and at other times in an 'animate' sense with reference to some individuals. In the following, I propose to examine some instances of this peculiar phenomenon.

(i) *tuḍi* and *soḷi* : Dr. Paranavitana[1] discussing these two words points out that Dr. Wickremasinghe has left them untranslated, while Mr. Bell interpreted them to mean Toṇḍiyans and Cholians. Examining a number of instances in which these words occur, he rightly concludes that they mean particular kinds of drums. The first word appears to be a loan word from Tamil *tuḍi* (= T. *uḍukkai*, Sinh. *uḍäkki*, a small drum tapering from each end forming a small neck in the middle) which occurs in Tamil literature of the early Christian era [vide *Silappadikāram*, Canto VI, l. 51]. The etymology of the second word is not certain ; however, that too may perhaps be a word of Dravidian origin. In the following instances *tuḍi* and *soḷi* appear to have been employed in the sense of two kinds of drums.

(*a*) *tuḍiyä soḷiyä gasā no vadnā koṭ isā*,[2] 'and not to enter by beating on *tuḍi* and *soḷi* (drums)'.

(*b*) *tuḍi soḷi no gasanu isā*,[3] 'and not to beat *tuḍi* and *soḷi* (drums)'.

(*c*) *tuḍi soḷi ber*,[4] 'drums, *tuḍi* and *soḷi*'.

(*d*) *soḷi bera tuḍi gattan no vadnā isā*,[5] 'and those bearing *soḷi* drums and *tuḍi*, not to enter'.

But in the following instances these words *tuḍi* and *soḷi* and also *nāḷā* (flutes) are used not as inanimate objects, but with a personal significance, referring to the individuals who play the instruments :

(*e*) *tuḍi soḷi no vadnā isā*,[6] 'and *tuḍi* and *soḷi* (i.e. those bearing *tuḍi* and *soḷi* drums), not to enter'.

(*f*) *tuḍi nāḷā rajkol-kämiyan no vadnā koṭ*,[7] '*tuḍi* and *nāḷā* (bearing) servants of the royal household, not to enter'.

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1. *Epigraphia Zeylanica* (*E.Z.*) III, pp. 146-148.
2. *E.Z.* IV, p. 189, C 3-6.
3. *E.Z.* III, p. 147.
4. ibid.
5. ibid.
6. *E.Z.* III, p. 140.
7. *E.Z.* II, p. 214, l. 44.

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It is a noteworthy fact that the inflexion of *tuḍi* and *soḷi*, when they mean persons, remains the same as when they are employed as 'inanimate' substantives. Dr. Paranavitana[8] thinks that *tuḍi* and *soḷi* in the above (*e*) are to be considered as derivatives formed without any change in the form of the noun and hence to be translated as 'bearers of *tuḍi* and *soḷi* drums'. I am not aware of any such formation of secondary (*taddhita*) derivatives, without the addition of a secondary derivative suffix, given by any grammarian; nor have I ever come across elsewhere such secondary derivatives. Further, if they are secondary derivatives meaning persons connected with those instruments, as Dr. Paranavitana thinks, it is not very likely that they would be employed in the zero-inflexional-form (normal for the 'inanimate' substantive) for the Oblique plural of the 'animate' agent in the above (*e*), but in an 'animate' Oblique plural form like **tuḍiyan*, **soḷiyan* which will distinguish them from the inanimate objects denoted by the 'inanimate' plural forms, *tuḍi*, *soḷi*. It is more natural, in my opinion, to regard *tuḍi soḷi* in the above (*e*) as abbreviation for the phrase *tuḍi soḷi gattan* (those bearing *tuḍi* and *soḷi*), and *tuḍi nāḷā rajkol-kämiyan* as abbreviation for *tuḍi nāḷā gat rajkol-kämiyan* (servants of the royal household bearing *tuḍi* and *nāḷā*); cf. *soḷi bera tuḍi gattan* in the above (*d*). If they do not, somehow, represent such abbreviated speech, they may be regarded as instances of the figure of speech known as metonymy in which a person or thing may be indicated by a prominent accompaniment for the sake of picturesqueness or dignity.

(ii) *suvar mahavar:* The exact etymology and meaning of the two terms *suvar* and *mahavar* are still uncertain. Dr. Wickremasinghe[9] translates them as 'goldsmiths' and 'chief artisans' respectively, and suggests in a foot-note the following various possibilities of etymology and meaning of these words: *suvar* = Sk. *suvarṇa-kāra-* (goldsmith); *mahavar* = Sk. *mahā-kāra-*? which is rendered as 'chief artisan' on the basis that Sinh. *maha-äduru* (= Sk. *mahā-ācārya-*) is a title applied to a master-carpenter. Alternatively, *suvar* = Sk. *sūpakāra-*, 'cook' or Sk. *sūtrakāra-*, 'weaver'; *mahavar* = Sk. *matsya-kāra-*, P. *maccha-kāra-*, 'fisher' or 'fish-monger' or Sk. *māṃsa-kāra-*, 'butcher'. But, as Dr. Paranavitana[10] points out, the context in which they occur shows that they may indicate some kinds of imposts remitted in the case of lands to which the immunities were granted. Dr. Paranavitana conjectures that *-var* in *suvar* and *mahavar* is derived from Sk. *vāra-*, 'turn' and may denote in a secondary sense the forced labour which was exacted from the peasants. Hence, he thinks, *mahavar* (< **mahāvāra-*) means 'principal turn of service' and *suvar*, 'the secondary turn of service', taking the latter to be a contraction of **suḷuvar* as opposed to *mahavar*. This derivation and the rendering appear

8. *E.Z.* III, p. 148.
9. *E.Z.* I, p. 171.
10. *E.Z.* IV, p. 191, fn. 2.

to be rather forced and far-fetched, and quite apart from the fact that there is no evidence to show the existence of **suḷuvar*, a contraction of **suḷuvar* into *suvar* is not possible according to the laws of phonology, as *ḷ* is one of those stable consonants which never disappear in Sinh. phonology.[11]

It may be possible, in my opinion, to trace the terms *suvar* and *mahavar* to Sk. *sukara-*, 'charity', 'benevolence', and Sk. *mahākara-*, 'a large revenue' or 'rent' or 'tax' respectively. The use of euphemistic term 'benevolence' is well known in English history as a device, employed by certain English kings to hide the odious nature of a certain levy, they made on their subjects, as this levy was made out to be a 'benevolence' or a 'loving gift' made to the king. Hence, if the example in English history may be taken as a parallel, *suvar* (<*sukara-*) may indicate a forced levy of such a nature, besides the alternative possibility that it meant a tax, collected for public charities. The term *mahavar*, 'large tax' in our records probably meant a land tax.

Whatever be the exact derivation of these words, the question that concerns us here is their use in their contexts in the inscriptions, sometimes as 'inanimate' words indicating some kinds of imposts and at other times as 'animate' nouns indicating some persons who were probably connected with the levying of the imposts, e.g., in *pu(da) sut-vat suvar mahavar no gannā koṭ isā*,[12] 'and not to levy gifts, tolls, "charity-tax" (or "benevolence", *suvar*) and large tax (*mahavar*)', the words in question are used in an 'inanimate' sense. On the contrary, in the clause, . . . *suvar mahavar radkol-kämiyan no vadnā koṭ*,[13] '*suvar* (collectors), *mahavar* (collectors) (and other) employees of the royal household, not to enter',[14] they appear to refer to some persons probably connected with the levying of those imposts, and as such they are used with personal 'animate' signification. If the above rendering is correct, we notice that the zero-inflexion remains the same in both the applications of these words.

(iii) *deruvanä* (or °*nā*) *dekamtän*: These two words of obscure origin and sense, perhaps, mean two treasuries and two departments (?) as suggested by Dr. Paranavitana.[15] Whatever be the actual sense, it is clear that these words were used first, in the sense of an institution or office, with 'inanimate' significance, and later, also in a personal 'animate' sense to indicate a class of officials connected with these institutions, e.g.,

(*a*) *deruvanä dekamtän vässan no vad . . . .*,[16]

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11. W. Geiger: *A Grammar of the Sinhalese Language*, Colombo, 1938, §§ 44·1; 48; 50; 51; 52.
12. *E.Z.* IV, p. 189, C 1-3.
13. *E.Z.* I, p. 169, p. 174.
14. This may also be rendered as 'servants of the royal-household, *suvar* (and) *mahavar*, not to enter'.
15. *E.Z.* III, pp. 143-144.
16. *E.Z.* IV, p. 251.

(*b*) (*deruvanä dekamtän*) *vässan no vadnā koṭ isā*,[17] 'and occupants (or employees) of *deruvanä* and *dekamtän*, not to enter'.

(*c*) *deruvanä dekamtän vässan vädä ākul no karanu isā*,[18] 'and employees (lit. occupants) of *deruvanä* and *dekamtän*, not to enter and cause confusion'.

In the above instances, the words in question have definitely an 'inanimate' significance, as they appear to indicate some institutions in their context.

In the following instances, however, these two words in their context clearly refer to some persons who were connected with the institutions of *deruvanä* and *dekamtän*, and as such may be said to have an 'animate' significance.

(*d*) *deruvanā̈ dekamtän no vadnā koṭ isā*,[19]

(*e*) *dekamtän deruvenā̈ no vadnā koṭ isā*,[20] 'and *deruvnā̈* and *dekamtän* (i.e. the employees of *deruvanä* and *dekamtän*), not to enter'.

Again it should be noticed that no 'animate' inflexion is added to these nouns, when they are employed to refer to persons.

(iv) *maňg-div ƥiya-div* : Other variants of this phrase that occur are the following :

maňgdiva ƥiyadiva,[21] *maňgdiva ƥediva*,[22] *maňgdiv ƥediv*,[23] *maňgdivä* [*ƥedivä*],[24] *maňgiva ƥiyaňgiva*,[25] *maňgiva* (*ƥegi*)*va*,[26] *maňgiva ƥiyagiva*,[27] *magiv* (*ƥigiv*),[28] *magiva ƥegiva*.[29]

This pair of words occurring frequently in so many variants in the grants of immunities in the 10th c., A.D. is also of obscure origin and meaning. Dr. Wickremasinghe deriving them from Sk. **mārga-jīva-* and **pāda-jīva-* translates them as 'those who live by highway robbery' and 'those who live by vagrant habits'[30] respectively, and elsewhere, as 'tramps' and 'vagrants'.[31] Dr. Paranavitana,[32] however, points out that 'in a pillar inscription from Mihintale[33] the phrase *maňgdiv ƥediv no vadnā isā* is followed by *sesu radkol-kämiyan*

17. *E.Z.* III, p. 299.
18. *E.Z.* I, p. 33, l. 25.
19. *E.Z.* II, p. 24, C 11-14.
20. *E.Z.* I, p. 174, A 15-17 ; p. 168, B 22-26.
21. *E.Z.* I, p. 174, B 13-14.
22. *E.Z.* II, p. 4, C 2-3.
23. *E.Z.* I, p. 205, C 18-19.
24. *E.Z.* III, p. 299. C 9-10.
25. *E.Z.* II, p. 12, B 18-20.
26. *E.Z.* II, p. 18, B 20-21.
27. *E.Z.* II, p. 24, C 8-9.
28. *E.Z.* II, p. 47. B 27.
29. *E.Z.* III, p. 139, C 18-19.
30. *E.Z.* I, p. 171, fnn. 1, 2.
31. *E.Z.* II, p. 5.
32. *E.Z.* III, p. 146.
33. *Ancient Inscriptions of Ceylon*, London, 1883, No. 115.

no vadnā isā' (not to be entered by other royal officers), proving that *maňgdiv pediv* in that record were meant to be some category of royal officers. Thus, in all the instances where these two words and their variants occur along with the verbal phrase *no vadnā koṭ isā*, there is no doubt that they were employed with personal 'animate' signification, meaning some royal officers. But this seems to be due to a secondary application of originally 'inanimate' words. For they appear to be employed in the original 'inanimate' sense in the instance, *maňgdiv pedi[v] no gannā koṭ isā*,[34] 'not to levy *maňgdiv pediv'*, where they refer to a certain kind of levy. But in the two instances, *maňgdiva piyadiva sorun koṭhā van no gannā koṭ isā*,[35] and *maňgdīv piyadīv sorun koṭā van no gannā koṭ isā*,[36] they may be rendered either in the 'inanimate' sense as 'and not to take *maňgdiva piyadiva* (imposts) thieves and murderers' or in the 'animate' sense of royal officers as 'and thieves and murderers not to be arrested by *maňgdiva* and *piyadiva* officers'. Syntactically both these renderings are possible. But the latter rendering is possible only if these officers were charged with the arrest of criminals like thieves and murderers. As they are more likely to be officers connected with the levying of imposts *maňgdiv* and *piyadiv*,[37] it may be preferable to take the occurrence in these two records also in the 'inanimate' sense of imposts.

In the above examples (i), (ii), (iii) and (vi), the presence of inflexions typical of the inanimate is maintained even when they are used to denote animate beings. This fact shows beyond any doubt that they were primarily 'inanimate' words, but were employed secondarily to refer to the persons connected with those institutions. Such an extension in the use of 'inanimate' nouns constituting attributes or prominent accompaniments to refer to persons connected with them, for the sake of picturesqueness or dignity, may be regarded as a case of metonymy. And it is not peculiar to Sinhalese alone, as can be seen, for instance, in the use of the word 'crown' in English to denote the king, as well as the inanimate object worn by the monarch on his head.

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34. *E.Z.* I, p. 205, C 18-21.
35. *E.Z.* I, p. 174, B 13-17.
36. *E.Z.* I, p. 169, C 17-24.
37. See the above 34.

Ancient Cultural Relations between Ceylon and China

'Missions were constantly despatched charged with an interchange of courtesies between their sovereigns; theologians and officers of state arrived in Ceylon empowered to collect information regarding the doctrine of the Buddha; and envoys were sent in return bearing royal donations of relics and sacred books'.

J. E. Tennent.

THIS remark made by J. E. Tennent, a recognized authority on Ceylon history, very aptly shows the cordial and intimate cultural relationship that existed between Ceylon and China in ancient times. Indeed, the ancient Chinese travellers to the shores of the Indian Ocean and Laṅkā Dvīpa were not allured by treasure or riches but prompted by religious devotion in search of the True Dharma. The common link which brought China and Ceylon together was obviously Buddhism. Through Buddhism there came into existence a cordial friendship between these two countries for over 1,500 years. The very fact of this lengthy duration makes us believe that there must have been something extraordinary in this relationship which stood the test of time. We shall, in the following sections, endeavour to illustrate the historical factors which cemented the cultural ties between the two countries.

I. The Visit of Fa Hien

Buddhism was formally introduced into China in 67 A.D. From that time onwards a chain of Indian Buddhist sages and scholars continued to pour into that country for the spread of Buddhist doctrines and the translation of Canonic literature. It might appear to have been a 'one way traffic' had Fa Hien not been able to pay a return visit to India on behalf of the Buddhists in China. The primal urge which prompted him to undertake this journey was, as is stated in his famous work *The Travels of Fa Hien*, that he had felt the imperfect condition of the *Vinaya Piṭaka* in China. Being desirous of making improvements on it, he had agreed with his friends to go to India for the purpose of seeking the original Vinaya texts.[1] This noble mission in quest of truth had far-reaching consequences. He was the first Chinese who visited India and Ceylon in such early a time as 401 A.D. and left behind him an invaluable record concerning his journey as well as the social, political, religious and

1. Cf. Beal: *Buddhist Record of Western World*, p. xxiii.

other conditions of the countries he had visited. This record of his not merely inspired hundreds of Chinese Buddhists including Hsuan Tsang and I-Tsing who at a later period (in the 7th century A.D.) also went to India and wrote *Travels*, but also received universal recognition as a documentary on the general conditions in ancient India and Ceylon.

Having spent over thirteen years in India Fa Hien came to Ceylon in the Winter of 413 A.D. by sea. The last port whence he boarded the ship was Tāmralipti in Bengal. He stayed in the Island for over two years in search of Buddhist texts and paying homage to the sacred places including Adam's Peak, Anuradhapura and other Buddhist sanctuaries. Among the Scriptures he acquired from the monasteries in Ceylon[2] were a copy each of the *Mahīśāsaka Vinaya*, the *Dīrghāgama*, the *Saṃyuktāgama* and a collection of the Miscellaneous Piṭaka (Sannipāta). All these were introduced into China for the first time and some of them were later on translated into Chinese. Probably these were the original texts which constitute the Hīnayāna section of the Chinese Tripiṭaka.

Regarding the general condition, both religious and secular, in Ceylon at that time, he informs us in detail about the exposition of the Tooth Relic of the Buddha, the ceremony of cremating an Arhat, the donation of land to the Saṅgha by the Ruler, the magnificent ornamentation of the Abhayagiri Saṅghārāma, the deep veneration shown to the Bhikṣus and the blooming prosperity of the people who were wealthy and free from famine and starvation, and other particulars. This information is indeed very valuable to the student of history.

II. The Ceylonese Bhikṣuṇīs Visited China

It appears that both the Bhikṣu and Bhikṣuṇī Saṅghas were well-established from the time when Buddhism was first introduced into Ceylon, because we know that these Orders had been represented by Mahendra and Saṅghamitrā. Comparatively China was not so fortunate as Laṅka with regard to the Bhikṣuṇī Saṅgha and that is why there was the necessity in inviting Ceylonese Bhikṣuṇīs to China. According to the ' Biography of the Bhikṣuṇīs ',[3] in the year 429 A.D. there was a captain of a foreign ship, Nandi by name who brought Bhikṣuṇīs from the Siṃhala-Country (Shih-tzu-kuo) to the Capital of the early Sung Dynasty (420-477 A.D.) at Nanking. They were staying in the Chin Fu Monastery and their purpose in coming to China was to form a Bhikṣuṇī Sangha so that under this Body the higher ordination would be given

2. Ibid., lxxix. *Fo-Kwo-Ki*, Ch. xl.

3. *Pi-chiu-ni-chuan*, compiled by Pao Chang in 526 A.D., Nanjio's Catalogue of Chinese Buddhist Tripiṭaka, No. 1497.

to the nuns as hitherto they had been ordained by the Bhikṣu Sangha. It seems that the first batch of Sinhalese Bhikṣuṇīs was small in number and that a fresh batch of 11 Bhikṣuṇīs from Ceylon led by Theri Triśaraṇa (Tieh-sa-ra) had to be invited. The new arrivals landed in China in 433 A.D. and consequently over 300 nuns were ordained by them under the able guidance of Saṅghavarman, a prominent Indian Śramaṇa who came from India in the same year.

This event took place just thirteen years after Fa Hien's visit to Ceylon (he went back to China in 416 A.D.). As he took residence in Nanking and devoted himself to the translation of Sanskrit manuscripts into Chinese, especially Vinaya literature, we think he had a large share in bringing about this mission of Sinhalese nuns to renovate the Bhikṣuṇī Sangha there, although his biographers were silent on this point.

With regard to Nandi, the captain of the foreign vessel, we presume that he might be a Ceylonese. How far the statement made by Tennent : 'the Sinhalese, though most expert as fishers and boatmen, never embark in foreign vessels[4]', is justifiable, we cannot say yet. But in this case it might be a Sinhalese captain. If he were an Indian, why should not he bring Bhikṣuṇīs to China from India on both the occasions ?

III. The Visit of Amoghavajra and Tantrism in Ceylon

Buddhism in the 8th century A.D. began to drift towards Tantrism. This is proved by the practices among the Buddhists in India in general and the Tantric works of that period translated into Chinese in particular. Among the prominent teachers of the Tantric cult who went to China from India in the 8th century A.D. the names of Vajrabodhi,[5] a graduate of Nālanda University and Amoghavajra may be specially mentioned here. The relation between these two is that of a Guru and a pupil and both had been to Ceylon. While in Ceylon Vajrabodhi climbed Adam's Peak, and from there he went to China sometime after 713 A.D. The case with Amoghavajra is a little different. He was a Brahmin from Northern India and had become a disciple of Vajrabodhi when he was fifteen years of age. In all probability he proceeded with his teacher to China. And when Vajrabodhi was about to pass away in 733 A.D. he had been instructed to pay a visit to Ceylon and India for the purpose of collecting Tantric scriptures.

Amoghavajra reached the Siṃhala-Kingdom in 742 A.D. and was accorded a royal reception, including a guard-of-honour by the royal forces. The King,

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4. Tennent : *Ceylon*, Vol. I, p. 441.

5. *Sung-Kao-Sheng-Chuan*, Ch. 1. The life of Chin-Kang-Chih and the life of Pu-K'ung, Nanjio, No. 1495.

Śilāmegha by name, saluted him by[6] touching his feet and invited him to stay in the palace for seven days. To express his deep veneration, the King bathed Amoghavajra everyday with scented water pouring from a golden Hu or can.[7] From the crown prince downwards—namely the Queen, the ladies in the harem and the ministers—all showered on him great respect in exactly the same degree as the King did.

During his sojourn in Ceylon Amoghavajra met Samantabhadra Ācārya, a great master of the Tantric cult, for the first time. He requested this master to perform the ceremony of the two Maṇḍalas, viz., the Vajradhātu and Garbhadhātu, which consist of the 18 central objects of worship. When the request was granted he gave permission to two of his Chinese disciples namely Han Kuang and Hui Kung to join him in learning the secrets of the five Abhiṣecanī baptisms from the great Ācārya. Later, he collected more than 500 volumes of Tantric texts, Sūtras and Śāstras in addition to the detailed information concerning the mudras, images, colours, and flags of the guardian deities in a Maṇḍala. To prove his mastery over the esoteric art he gave a demonstration of his power by subduing a number of mad elephants in the presence of the King. He also visited India and returned to China in 746 A.D. He presented to the Emperor the official message sent by King Śilāmegha of Ceylon along with jewels, pearls, white[8] fine muslin, Sanskrit manuscripts and other valuable presents.

We find in the Nikāya Saṅgraha, a book written in the 14th century A.D. dealing with the history of the Buddhist Saṅgha, a reference to the introduction of Tantric Buddhism in Ceylon in the form of Vajiriya Vāda or Vajrayāna[9] in the 10th century A.D. by King Matvala Sena. However, judging by the above-mentioned evidences and the Dharaṇi 'Om tare, tu tare, ture svāhaḥ' discovered near the Vijayārāma monastery at Anuradhapura[10] as well as the Tisā Veva lithic Diagram which was also found in that ancient capital,[11] we have reason to believe that Tantrism was introduced to Ceylon in 8th century A.D. if not earlier. Moreover, the names known as Nīlapaṭa, or Nīla Sādhana

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6. There is no mention of a King bearing this name in the Sinhalese Chronicles. From 729 to 769 A.D. the King who ruled the Island was Agrabodhi III or Akbo whose capital was at Pollonnaruwa. See Tennent : *Ceylon*, Vol. I, p. 322.

In *Cūlavaṃsam*, Ch. 44.63, we have 'Silāmeghavaṇṇa' who was King of Ceylon and Anuradhapura was his capital, though the author was silent on this point.

7. Hu, a Chinese corn measure, nominally holding ten pecks. In this case, it may be a kind of big can for pouring water.

8. *Sung-Kao-Sheng-Chuan*, Ch. 1. The life of Pu K'ung.

9. *The Ceylon Historical Journal*, Vol. I, No. 4, p. 288.

10. *The Buddhist Studies*, ed. by B. C. Law, p. 486.

11. *The Ceylon Historical Journal*, Vol. I, No. 4, p. 287.

and Vajrayāna or Vajiriya Vāda[12] mentioned in the Nikāya Saṅgraha invariably indicate that Tantrism was popular and prevalent in the Island in its various forms. We are sure that it had some influence on Chinese Buddhism when Amoghavajra returned to China.

IV. The Mission of Cheng Ho and its Political Consequence in Ceylon

Judging by the fact that Fa Hien went home by sea from Ceylon via Java, we may assume that sea communication between different countries in South-East Asia and the Far East in ancient times must have been well-established. Presumably the regular service was maintained by merchants for their commercial purposes. Any official expedition armed with huge marine corps from China was never heard of until the Ming Dynasty (1368-1628 A.D.). General Cheng Ho at the command of Emperor Cheng Tsu led expedition forces to the ports in the region of the South Seas and the Indian Ocean including Ceylon on several occasions.[13] The motive behind this was threefold: Firstly, it served as a good-will mission from the Emperor so that friendship and closer contact between China and her neighbouring countries may be brought about. Of course, this did not mean any ambitious imperialism. Secondly, Emperor Cheng Tsu suspected that his opponent Hui Ti (ex-Emperor) from whom he had snatched the throne had escaped and taken asylum in one of the countries in these regions.[14] To satisfy himself, he directed Cheng Ho to keep this matter in mind during his missions abroad. Thirdly—probably this is a more reasonable explanation—the founder[15] of the Ming Dynasty, that is the father of Emperor Cheng Tsu, had cherished the idea of developing sea communications and making contact with foreign nations. This is consequently proved by the fact that he had established a Royal institute for foreign languages and had ordered government agents to collect materials for ship-building including large scale plantation of Tung-oil trees, the oil of which is usually used for varnishing. He could not realise this dream during his life time. What Cheng Tsu did was just to pick up the thread where his father had left. We believe these were the essential factors which prompted Cheng Ho to undertake the journey abroad.

The official position of Cheng Ho, according to *Ming Shih*, or the *History of the Ming Dynasty*, was that of an eunuch in the palace. This does not sound

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12. *Ceylon Journal of Science*, Vol. II, pp. 53-54. *The Ceylon Historical Journal*, Vol. I No. 4, p. 289.

13. *Visva-Bhārati Annals*, Vol. I, p. 103.

14. *Ming Shih* or *History of the Ming Dynasty*, Ch. 304.

15. Ibid.

attractive, but he was the right-hand man of the Emperor. It was through his ability, sagacity, courage and judgement he helped his master to the throne and achieved great success in his hazardous missions abroad. From 1405 to 1430 A.D. he had seven voyages to his credit. It was in his second voyage in 1408 that he landed in Ceylon and shortly afterwards an encounter took place between Alagakkonāra (A-lee-ku-nai-erh) or Vijaya Bāhu VI, the Ruler of Ceylon[16] and his armed forces. The cause for this unpleasant incident according to one version was that earlier in 1405 A.D. there was a group of Chinese Buddhist pilgrims who went to Ceylon to pay homage to the Tooth-Relic of the Buddha.[17] They were ill-treated by King Vijaya Bāhu VI. Taking it to be an insult and desirous of righting the wrong, the expedition force was sent. The other version[18] was that earlier during his first voyage in 1405 Cheng Ho brought with him incense and flowers to be offered to the Buddhist shrines in Ceylon and called on the King requesting him to show respect to Buddhism and its followers. The King was apparently a Hindu.[19] He not merely rejected the visitor's advice but threatened him with dire consequence. Cheng Ho did not wish to pick a quarrel with him but quietly went away. In the second voyage in 1408 Cheng Ho had 27,000 well-equipped soldiers with him who were conveyed by 48 big vessels. Being aware of the fact that he was discourteous to the Chinese envoy on his previous visit he feared that the visitor's army might bring him destruction. Therefore, he conspired with his ministers to entrap Cheng Ho by trickery. This is how it was worked out. In the beginning, the King pretended to be friendly with him and his party was decoyed to the interior. While the envoy and his party were well on their way to the capital, the King secretly despatched an army of 50,000 strong to welcome the main body of Chinese forces at the port with a surprise attack, and at the same

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16. Tennent : *Ceylon*, Vol. I, p. 599.

17. Yule : *Cathay*, I, p. 76.

18. A later insertion printed at the end of the 11th chapter of Hsuan Tsang's *Si-yu-ki* in the Chinese Tripiṭaka.

19. This is proved by the following evidences :

(*a*) At the beginning of the 15th century A.D., 'the glory of Buddhism had declined, and the political ascendency of the Tamil had enabled the Brahmans to taint the national worship by an infusion of Hindu Observances'. Tennent : *Ceylon*, Vol. I, p. 598.

(*b*) According to *Se-yih-ke-foo-choo* or *Description of Western Countries* that Vijaya Bāhu VI was a native of Sollee (Soli) in South India and an adherent of the heterodox faith . . . tyrannised over his followers.

(*c*) In *Yin-ya-sheng-lan*, it is said that King Vijaya Bāhu VI used to burn cow-dung and smear his body with it . . .

All these sources indicate that he was a Hindu and was not very friendly towards Buddhism.

time stockades were thrown up with a view to their capture so that a ransom might be obtained from them.[20] This plan was, however, revealed to the envoy, and by a dexterous movement, Cheng Ho led an infantry of 2,000 strong and captured the Capital. After the fall of the city, the King was made a prisoner, and the members of his family including officials were taken to China. Later on they were released and sent back to their home land.

From 1410 till 1459 A.D. the relationship[21] between China and Ceylon became very cordial. The reason for this is that King Parākrama Bāhu VI, known in Chinese as Seay-pa-nai-na,[22] was recommended for the throne by the Chinese Emperor. As a sequel, the new King sent envoys and gifts to China on three occasions in 1433, 1435 and 1459 A.D. After 1459 there was no official communication between the two countries because King Parākrama Bāhu VI passed away in 1462 on the one hand, and on the other, the Portuguese appeared on the scene by showing their presence in Goa in 1496. Finally they had the monopoly of sea trade and the Eastern nations were no longer able to maintain their former contact.

Regarding the hostility between Cheng Ho and King Vijaya Bāhu VI, we would like to quote a passage from the Rājāvali, a Sinhalese historical record which presents a different picture.[23] The relevant passage runs as follows :—

> ' In the reign of King Vijaya Bāhu, the King of Mahā Chīna landed in Ceylon with an army pretending that he was bringing tribute ; King Vijaya Bāhu, believing his professions, acted incautiously, and he was treacherously taken prisoner by the foreign King. His four brothers were killed, and with them fell many people, and the King himself was carried captive to China '.

This is another version of the story. Of course it is not our intention to investigate the original cause of the unhappy event and deliver judgement as to who was right or wrong. From the standpoint of a student of history, this piece of information is very important because it confirms that this event

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20. Tennent : *Ceylon*, Vol. I, p. 599.

21. The view expressed by J. E. Tennent in his work *Ceylon*, Vol. I, pp. 600-601 appears to be misleading and partial. Because the exchange of gifts between China and other countries does not necessarily mean humiliation to a country which is less powerful. It was the policy of the Chinese emperors to maintain close contact by meeting or sending envoys from or to other lands and exchange presents with them.

22. Ibid., p. 600.

23. The 1459 mission was sent by Ko-li-sheng-hsia-la-hsi-li-pa-hu-ra-ja, its original form may be ' Kulīna Siṃhala Sri Bāhu Rāja '.

really occurred, as historical annals of both the countries agree[24] on this point.[24a]

V. Other Interchange of Arts and Culture

Ever since the beginning of the 1st century A.D. Chinese ships and merchants have been calling on the ports of Ceylon, especially Galle where, it is said ' Ships anchor and people land '.[25] It is obvious that the relation between the two countries in the initial stage was through commerce and gradually it rose to a diplomatic level. Envoys were sent to China by the Rulers of Ceylon and return visits were paid by the Chinese ambassadors. According to Chinese historical annals, from 97 to 762 A.D. there were altogether sixteen trips[26] of Ceylonese missions to China carrying with them presents and commercial commodities for trade. Among the articles known to have been imported from Ceylon were : gold ornaments, jewelry, pearls, coral, crystal, rubies, sapphires, amethysts, carbuncles, topazes of four distinct tints, models of the shrines in which were deposited the sacred relics of the Buddha and other valuables.[27] In return, the Chinese merchants brought to the shores of Laṅkā silk, variegated lute strings, blue porcelain, enamelled dishes and cups, and large quantities of copper cash wanted for adjusting the balances of trade.[28] As of particular interest it should be mentioned here that a Ceylonese artist of the highest rank was deputed to produce a Buddha-image in China. It is recorded in the *History of the Wai Dynasty*, 386-556 A.D. that Kings in Central Asia were requested to send sculptors to China to make images of the Buddha. Many artists came from that region but none could rival the productions of Nandi,[29] a Bhikṣu from Laṅkā in 456 A.D. His unique skill was exhibited in the fact that the images made by him appeared truly brilliant when placed at a distance of about ten paces, but the lineaments gradually disappeared on a nearer approach. On another occasion, we are told by *Liang Shu*, or the *History of the Liang Dynasty*, 502-556 A.D. that the King of Ceylon sent an ambassador carrying a jade image of Buddha to China which was unique in workmanship

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24. Tennent : *Ceylon*, Vol. I, p. 600 f.n.

24a. According to the statement of Fee Hsin, author of *Hsin-chia-sheng-lan*, in 1409 Cheng Ho set up an inscription in Ceylon. In 1912, this inscription was found in Galle. It is inscribed in three languages, viz., Chinese, Tamil and Persian. All of them recorded the event of Cheng Ho's second visit to Ceylon. *J.R.A.S.* (North China Branch), 1914, pp. 171-2.

25. *Shu-wen-hsien-tung-kau*, b, ccxxxvi, p. 19.

26. *J.R.A.S.* (Ceylon Branch), Vol. 24, No. 68, 1915-16, p. 106ff. Also *Ceylon Historical Journal*, Vol. I, No. 4, pp. 306-7.

27. Tennent : *Ceylon*, Vol. I, pp. 590-591.

28. *Sung Shu*, b, lxxx, p. 3. Tennent : *Ceylon*, Vol. I, p. 592.

29. *Chieh-fu-yuan-kuei*, b, li, p. 7.

and appeared to be a work of super-human skill. Thus the art of image-making in Ceylon seems to have reached a very high standard in the 5th century A.D. It is no wonder that the Chinese historians paid glowing tributes to the creators of this art.[30]

Later in the early part of the Yuan Dynasty, 1260-1341 A.D. we are informed that Kublai Khan sent three successive envoys to Ceylon who were empowered to negotiate the purchase of the sacred alms bowl of the Buddha. This was confirmed by Marco Polo in his *Travels*.[31] The compliment paid to the craftsmanship of that piece of art is as follows :—

> ' In front of the image of the Buddha is a sacred bowl which is neither made of jade, nor copper, nor iron ; it is of a purple colour and glossy, and when struck it sounds like glass '.
>
> Tao-yi-chih-lueh.[32]

The Grand Khan's desire in obtaining the bowl may have been inspired by religious sentiments. If that article was also produced in Ceylon (though we are not sure), then it is a further proof of the great achievement attained by Ceylonese artists.

However, besides commercial exports, China made certain contributions to the cultural life of the people in the Island, namely, in 1266 A.D. Chinese musical instruments were imported into Ceylon and some Chinese soldiers took service in the army of Parākrama III. A description concerning this point is found in *Kāvya-Sekara*, a work[33] in Sinhalese written about 1410 A.D.

The details enumerated in the foregoing paragraphs would convince one of the close cultural relationship which China and Ceylon have had for over 1,500 years since the beginning of the first century A.D. The cultural ambassadors of both the countries came and went not so much for material gains as for carrying incense and offerings to the shrines of the Tooth-Relic, paying homage to the Buddhist sanctuaries and copying the Sanskrit Sūtras for the sake of propagating the religion of the Blessed One. This cultural interchange was naturally turning round the pivot of Buddhism. It is because of co-reli-

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30. Tennent : *Ceylon*, p. 596.

31. Marco Polo : *Travels*, Ch. xix.

32. This means : ' A brief record of the Island foreigners '. See Tennent : *Ceylon*, Vol. I, p. 598.

33. Tennent : *Ceylon*, Vol. I, p. 597.

gionist feelings that the Buddhists in China, from the Emperor downwards, used to send greetings to the Buddhists in this Island. They have sincerely regarded Laṅkā as sacred a sanctum as that of Buddha-gaya or Sarnath in India. This crystallization of cordial friendship and sympathetic sentiments between these two countries is a phenomenon which had no antecedence, except perhaps in the ancient Sino-Indian relations.

W. PACHOW

Reviews

The Sinhalese Folk Play. By E. R. Sarathchandra; pp. v + 139 with XLV plates. (Publ. Ceylon University Press Board, Colombo. Price Rs. 15/-).

This is an extremely instructive book about the development of the Sinhalese Play. As the title suggests, the main emphasis of the book is on the folk-play rather than on the modern stage, though this has been briefly discussed at the end to show its relation to the folk-play.

The Folk-Play has been traced to its beginnings in rituals of demon-appeasement and fertility rites. These ancient practices have continued as part of folk-religion in spite of the Buddhist influence in Ceylon. These ceremonies last throughout a night and sometimes may take a few days. A short account is given of the demonology of this folk-religion. The demons have each an individuality, a special task and also a special conventional mask at such ceremonies. The serious business of demon-driving is interspersed with short passages where jokes are made and where sometimes lighter *motifs* are introduced. Out of these undoubtedly has grown up the masked variety of folk-play called Kolam. The varieties of Kolam masks and Kolam stories as also the mode of performance of Kolam or masked plays is described in detail and makes fascinating reading. Then come the Sokari, the Nadagam, the Puppet-plays and the Catholic Pasu plays with a short account of the modern drama.

The above résumé shows the wide range of the subjects treated in the small compass of 139 pages. At the end notations for some songs are given and also excellent photographs which give the reader an idea of the folk-plays and the players. The margin of the book has delightful miniature black and white sketches showing the dancers, the masks, the stage, the carved dolls and many other subjects. The book is indeed a delight to the reader and yet not one illustration or photograph is redundant or unconnected with the subject-matter in hand. The author, the illustrator and the publisher deserve our congratulations for bringing out a book which, while preserving all the integrity of a serious piece of research, also presents it with so much aesthetic sense.

This book makes one want to know more about the Sinhalese Folk-play and its cultural connections with Indonesia and India, and especially with Dravidian India. Dravidian India has influenced Ceylon and its culture for two thousand years and it is possible that the pre-Aryan tradition of these regions may be a common one. If this were so one would want a student to study in great detail and trace the pre-Buddhist cultural tradition of this island, certain glimpses of which are found in both *Mahavamsa* and *Chulavamsa* and parts of the Sangam literature of the South. Folk-play arising out of folk-ritual is an excellent beginning for such studies and the author deserves our thanks for having given us the present analysis.

IRAWATI KARVÉ

Social Studies in the School. By K. Nesiah. (Oxford University Press, 1954. Rs. 3/4).

Educationists have recently presented a strong case for social studies in secondary schools. This book, besides reiterating that plea, suggests appropriate teaching methods, laying particular stress on audio-visual aids. The most difficult problem facing school teachers concerns the content of social studies. Certainly, the inclusion of a course on

' the great religions of the world ', (p. 43) seems hardly appropriate at the secondary school level, while ' good manners' may more effectively be taught at home. Mr. Nesiah's book will however serve as an useful basis for further discussion on the planning of school syllabi.

Mr. Nesiah's thesis that social studies aim at 'social initiation' which should develop into 'social identification' (p. 12), if carried to its logical conclusion, would pervert education into an instrument of indoctrination and state-worship, and negate his own ' democratic ' convictions. For if it were the goal of education to develop a supine sense of social identification, the most deplorable aspects of public life would have to be sanctioned. It is in an attempt to avoid such a philosophy that the teaching of civics is intentionally made misleading. Children are taught an idealized, copy-book account of how public affairs are supposed to be conducted, leaving them in blissful ignorance of evils such as bribery which clog the democratic process. When in time they discover the truth, they often develop a complete cynicism, and all values are thrown to the winds. Bertrand Russell rightly suggests that the truth be taught with proper comment, so that the young might be able to recognise and combat evils in which they would otherwise acquiesce with a shrug.

R. P.

Buddhist Texts—through the Ages. By Edward Conze, in collaboration with I. B. Horner, D. Snellgrove, A. Waley. Under the auspices of the Royal India, Pakistan and Ceylon Society; Bruno Cassirer, Oxford 1954; pp. 322. 16 shillings.

This ' comprehensive Anthology of Buddhist texts ' contains selections from Pali, Sanskrit, Chinese, Tibetan, Japanese and Apabhramsa, newly translated from their originals. As the editors claim, a task such as this of collecting together Buddhist texts from so wide a field has never been attempted before. One may further concede that even where English translations of some of these are available, as in the case of the Mahāyāna texts, they fall far short of the standards required by modern scholarship. The present reviewer would add that even with regard to the Pali sources which are more popular the present attempt indicates a marked progress. For, Miss Horner's rendering of many passages from the Pali constitutes a definite improvement on previous translations of these. This, however, should not be taken to mean that all the newly proposed English equivalents will be universally accepted. For instance, the neologisms such as ' unskill ' for *akusala* and ' cognition ' for *jñāna* may be debatable in the opinion of many. Nevertheless, it would be unfair to deny the excellence, generally speaking, of these translations.

The first section deals with Pali Buddhism, the second with Mahāyāna (Sanskrit, Chinese and Tibetan), and the third part is devoted to the Tantras. Apart from the question of the merits of translation, the very heterogeneousness of this collection, dealing as it does with doctrines derived from sources differing so widely in time and space, is bound to give rise to various misapprehensions in the minds of those who would read it to gain an insight into the philosophy and ethics of this religion. To avert such a danger it was obligatory on the part of the editors to have provided the students with a sketch, however brief, of the history of doctrinal and institutional Buddhism. The gradual decline of the meditational or psychological aspect of Buddhism, found in all its pristine purity and vigour in the Pali books, till it degenerated into that low sexualism and emotionalism of the Tantras needs to have been clearly outlined. How did Tantrism develop this changed sense of values ? What were the exotic factors that were responsible for this metamorphosis ? The editors should have offered an explanation without which the materials here presented would lead to confusion and contradiction.

Here are a few instances of such contradiction. The Majjhima Nikāya extract on p. 58 describes the monk striving for perfection as follows: 'He comprehends that he either has or has not an inward desire for sense-pleasures; also any desire that he has not had for them before; likewise the getting rid of a desire for them that has arisen; and if there is no future uprising of desire for them, he comprehends that . . .'. But the passage cited from the Guhyasamājatantra on p. 222 gives the admonition: 'By the enjoyment of all desires, to which one devotes oneself as one pleases, it is by such practice as this that one may speedily gain Buddhahood'. By way of defining the state of Ultimate Realization the Saṃyutta Nikāya states: 'The stopping of becoming is Nirvāṇa'; 'It is called Nirvāṇa because of the getting rid of craving' (p. 92). On the other hand, the very first extract from the Tantras says: 'Those who do not perceive the truth think in terms of Saṃsāra and Nirvāṇa' (p. 221). Or, 'As is Nirvāṇa so is Saṃsāra. Do not think there is any distinction . . .' (p. 238). Now what may the student of ethics or philosophy make of these contradictions? It is idle to say that Tantrism is mystical and Theravāda is not. The problem is one of sound historical analysis. And it is precisely the absence of such an analytical aid that makes this volume so dangerous to the student and the general reader. Many more instances of such conflicting moral and philosophical ideas from these two sections can be quoted, even if the flagrant sexualism of Tantric practice, amply documented in these extracts, be utterly ignored.

It is well if this volume be confined to advanced students or specialists in Buddhism. The editors certainly have taken much pains to bring out this collection, although they have not been warned of the dangers of such an attempt.

The book is well printed and priced low for its size.

O. H. de A. W.

OTHER BOOKS RECEIVED

Ratnāvalī Nāṭakaya. By D. Paññāsāra Nāyaka Thera. Anula Press, Colombo, 1953. Rs. 1/25.

This is the first Sinhalese translation of the famous Sanskrit drama *Ratnāvalī* of Srī Harṣadeva who lived in the seventh century A.D. The language employed is lucid, simple and accurate. The work is suitable for students in the upper forms and is bound to create an interest in Sanskrit literature among the Sinhalese reading public.

Padya Rasaya. Edited by D. F. E. Panagoda and K. G. Perera The Associated News Papers of Ceylon Ltd., Colombo.

Meant as a general reader for Standard VI, this is an anthology of Sinhalese poetry culled from various sources, past and present. The editors have been successful in the choice of their selections and most of the verses are lively and instructive. The exercises at the end of the work are meant to develop appreciation and criticism, which is so badly needed in Sinhalese literary studies today.

The New Law Reports. Vol. LV, Part 16. Edited by E. B. Wikramanayake and C. T. Olegasegarem. Government Press, Ceylon, 1954; pp. 361-384.

This part contains cases decided by the Supreme Court of Ceylon, Court of Criminal Appeal, and Her Majesty the Queen in Her Privy Council on appeal from the Supreme Court of Ceylon.