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'If you cannot feed the Body of a Child you cannot feed the Brain': Education and Nutrition in late colonial Madras

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Catriona Ellis: 'If you cannot feed the Body of a Child you cannot feed the Brain':

Education and Nutrition in late colonial Madras

Abstract:

In 1925 the Madras Municipal Corporation introduced an innovative scheme to provide free midday meals for poor schoolchildren in the city. These meals were designed to improve both the physical health of schoolchildren and contribute to their educational attainment. This paper examines the advice of nutritional experts at the Coonoor Centre for Nutritional Research and the new scientific emphasis on diet and malnutrition in South India. It then considers the debates between elected councillors in the Corporation regarding the particular nutritional needs of the Indian schoolchild. These negotiations contributed to wider debates about nutrition and colonial science and reflected changing discourses surrounding the relationship between the state, experts and parents. Although the scheme was limited in funds and in scale, I suggest that the political commitment to feeding hungry children was a significant departure in the history of children and the Indian welfare state.

Keywords: colonial childhoods, malnutrition, education, school meals, colonial science

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At a meeting in 1930 the councillors of the Madras City Corporation agreed that 'if you cannot feed the body of a child you cannot feed the brain'.¹ The intimate link between the body of the child and its intellectual development became a key aspect of the expanding educational concerns within Madras city in the 1920s and 1930s. Accordingly, rather than merely seeing malnutrition as a public health concern, this paper explores the connections between health, nutrition and education and the expansion of the authority of the State over the body of the schoolchild.² The paper will compare two distinctive approaches occurring in interwar south India. The first, which has attracted the most scholarly attention to date, was an analysis of the health of the Indian schoolchild based on the research of nutritional experts such as W.R. Aykroyd and B.G. Krishnan, largely emanating from the Coonoor Centre for Nutritional Research. The second approach was an innovative scheme initiated by politicians concerned with the mass feeding of poor children, the first attempt to practically apply the new ideas about nutrition on the subcontinent. A plan was introduced in 1925, long before the scientists arrived, which provided free midday meals for impoverished schoolchildren within Madras City. The consequent debates between elected councillors in the Madras Corporation regarding the particular nutritional needs of the Indian schoolchild and the logistical issues surrounding the provision of food reveal much about the ways in which child health was viewed by civil society. This was a radical new departure in state intervention in children's health, which reflected the British Education (Provision of Meals) Act 1906, but was not introduced more widely in India until the

1 Corporation Proceedings, 11 Mar. 1930, Madras Corporation Archives (henceforth MCA).

2 For other works which link malnutrition to public health, see V.R. Muraleedharan 'Diet, Disease and Death in Colonial South India', in *Economic and Political Weekly*, Vol.29, No.1 (Jan. 1994), pp.55-63, D. Arnold 'Discovery of Malnutrition and Diet in Colonial India', in *Indian Economic and Social Review*, Vol. 31, No.1 (1994), pp.1-26.

1980s.³

Both the Coonoor research and Madras Midday Meals Scheme provide an opportunity to reflect on familiar colonial anxieties surrounding race, science and the regulation of bodies. In particular they provide an insight into new claims to authority to intervene in the basic functions of the Indian family, claims based on scientific modernity, a scientific modernity which included a rejection of traditional Ayurvedic and Unani medical and dietary practices and was firmly based in the emerging discipline of nutritional science.⁴ Recent historiographical work has emphasised the extent to which the scientists at Coonoor were part of a wider international network of exchange, reflecting the internationalisation of public health and the globalisation of modern medicine.⁵ In addition, interventions in health were, as they are today, often couched in new terms of ‘development’, in which improving the population’s health was a further justification of colonial rule.⁶ While acknowledging these trends, this article focuses much more on the actions of Indians

3 S. Amrith, ‘Food and Welfare in India, c. 1900-1950’, in *Comparative Studies in Society and History* Vol.50, No.4 (2008) pp.1010-1035. For the British case see R. Cooter. *In the Name of the Child* (Abingdon: Routledge, 2013).

4 The relationship between Western and Indian medicine was a complicated one, and the nationalist movement in the 1920s and 1930s both championed Indian medicine and was deeply ambivalent about it. P. Chakrabarti, *Western Science in Modern India: Metropolitan Methods, Colonial Practices* (Delhi: Permanent Black, 2004), D. Arnold *Science, technology and medicine in Colonial India* (Cambridge: CUP, 2000), P. Bala (ed.) *Medicine and colonialism: historical perspectives in India and South Africa* (London: Pickering and Chatto, 2014). Of particular note is the argument that Western medicine only really reached ‘colonial enclaves’ and the big cities, not the whole population P. Bala *Medicine and Medical Policies in India: social and historical perspectives* (Lanham: Lexington Books, 2007).

5 Excellent works on this include S. Amrith *Decolonizing International Health: India and Southeast Asia, 1930-65* (Basingstoke: Palgrave Macmillan, 2006), S. Amrith & P. Clavin ‘Feeding the World: Connecting Europe and Asia, 1930-1945’ in *Past & Present* Vol. 218, suppl 8. (Jan. 2013), J.L. Barona ‘Nutrition and Health. The International Context during the Interwar Crisis’ in *Social History of Medicine*, Vol.1 (2008), pp.87-105, H. Kamminga and A. Cunningham (eds) *The science and culture of nutrition* (Amsterdam: Rodopi, 1995)

6 S. Hodges, *Contraception, Colonialism and Commerce: birth control in South India, 1920-1940* (Aldershot: Ashgate Publishing, 2008) p.9, M. Harrison *Public Health in British India: Anglo-Indian preventative medicine, 1859-1914* (Cambridge: CUP, 1994), p.228; B.R. Siegel, *Hungry Nation: Food, Famine and the Making of Modern India*, (Cambridge; CUP, 2018).

themselves, revealing the complicated nature of late colonial governance and re-situating scientific research and government intervention in the local conditions of South India. It reveals the extent of authority given to local authorities within the context of dyarchy, and focuses on the actions of Indians as state actors arguing that they were crucial in the development of a fledgling Indian welfare state during the 1920s and 1930s.⁷

The new nutritional endeavours allow us to interrogate the way childhood itself was socially and culturally constructed in the 1920s and 1930s in the context of emerging global discourses about child development, child rights and the child body as universally distinct from the adult body. This paper asks questions about the differing ways in which childhood was imagined by policy makers and scientists, and the link between the physical and intellectual development of the child, particularly in the context of the growing interest in universalising narratives of the child's right to health and to education. Additionally, the assumption of the child as 'becoming' fitted a wider conceptualisation of the child as a future citizen and contributed to new understandings of the child as the object of investment in the future independent nation.⁸ It provides an opportunity to trace new approaches to local authority involvement in children's lives, and the impact of scientific authority as bolstering the legitimacy of state intervention in the family, thereby changing the relationship between the state, the parent and the child. Although the schemes were limited in funds and in scale, by looking at the detail of first the nutritional research and then at the

⁷ Dyarchy was instituted after the Government of India Act 1919. It involved the devolution of power over non-important areas of government to Indian provincial governments.

⁸ See Sarada Balagopalan, *Inhabiting Childhood: children, labour and schooling in postcolonial India*, (Basingstoke: PalgraveMacMillan, 2014). Vijayalakshmi Balakrishnan, *Growing Up and Away: Narratives of Indian Childhoods, Memory, History and Identity* (Delhi: OUP, 2011). In Western context see C. Heywood, *Children and childhood in the West from medieval to modern times* (Cambridge: Polity Press, 2001).

provision of school meals, I suggest that the political commitment to feeding hungry children was a significant departure in the history of children and the Indian welfare state.

Food took on new symbolic and actual value in South Asia in the 1930s. This reflected Gandhi's politicisation of dietary practices such as vegetarianism or the use of salt as part of his wider adherence to non-violent protest within the anti-colonial movement, encouraging bodily abstinence as a form of individual self-control; using food practices as part of his campaign to reinvigorate Indian society and advocating a plant-based diet as a practical response to rural poverty.⁹ It also revealed the increased global interest in the relationship between poverty and malnutrition, which became a key focus of scientific concern within the field of public health in the 1930s. This was linked to wider development discourses which had become an important part of the justification for colonial rule in the interwar period, often reflecting underlying perceptions of 'native ignorance'.¹⁰ Death from starvation was assumed to be a part of the non-modern past, and there was a new global interest in the long-term impact of childhood malnourishment and the possibility of preventative measures, led in part by the League of Nations. In 1936 Robert McCarrison was replaced as head of the Nutrition Research Laboratories at Coonoor by Wallace Aykroyd, a League of Nations nutritionist well known in international scientific circles. Rejecting the earlier race-based analysis of McCarrison, Aykroyd and his team carried out extensive research into the eating habits of South Indian

9 For a wider discussion of Gandhi and food see Amrith & Clavin 'Feeding the World' p.43; J.Vernon *Hunger: a modern history*, (Cambridge, Mass: Belknap Press, 2007), p.115, N. Slate *Gandhi's search or the Perfect Diet* (Washington: University of Washington Press, 2019).

10 B. Siegel, "'Self-Help which Ennobles a Nation' Development, Citizenship, and the Obligations of Eating in India's Austerity Years" in *Modern Asian Studies*, Vol.50, No.3 (May: 2016), 975-108, Siegel, *Hungry Nation*, R.M. Packard *History of Global Health: Interventions into the Lives of Other Peoples* (Baltimore: JHU Press, 2018), p.84.

schoolchildren.¹¹ The team concluded that the usual South Indian diet contained excessive carbohydrates, being 'extremely deficient' in 'protective foods' such as milk, eggs or meat as well as leafy vegetables and fresh or dried fruit.¹² They criticised the methods of rice preparation and worried about the lack of Vitamin A.¹³ This research continued to bring Aykroyd to international attention, and he became the chair of the Bengal Famine Inquiry Commission in 1945, before going to work for the Food and Agriculture Organisation of the United Nations and World Health Organisation.¹⁴ However, while Aykroyd was the research director and key figurehead his work was usually collaborative and Coonoor became the centre of a vibrant Indian research community, including B.G. Krishnan, K. Rajagopal and K.B. Madhava. Much of research was carried out by these highly trained Indian scientists, many of whom published independently of Aykroyd himself. This paper therefore moves away from the accepted historiography which discusses 'Aykroyd and his [nameless Indian] colleagues' to a model which decentres Aykroyd and considers the work of the Coonoor scientists as a whole, although encompassing a number of colleagues working across the whole subcontinent.¹⁵ Much of this research was published in journals such as the *Indian Journal of Medical Research (IJMR)* which reveal the extent of cutting-edge nutritional research across British India.

11 McCarrison's research is discussed in another article of this theme issue (Malhotra).

12 W. Aykroyd quoted in Nagendranath Gangulee, *Health and Nutrition in India* (London, 1939), p.213.

13 B.G. Krishnan & W.R. Aykroyd, 'The state of nutrition of schoolchildren in South India: Part 2 Diet and Deficiency disease in residential hostels' *Indian Journal of Medical Research (IJMR)*, Vol.24, No.3 (Jan. 1937), p.712.

14 For a biography see K. Carpenter, 'The Work of Wallace Aykroyd: International Nutritionist and Author.' in *Journal of Nutrition* Vol.137 (2007), pp.873-78.

15 W. R. Aykroyd and K. Rajagopal, 'The State of Nutrition in Schoolchildren in South India,' *IJMR* Vol.24, No.2 (1936), pp.419-38; Krishnan & Aykroyd, 'The State of Nutrition'. For other nutritionists, see K.L. Shourie 'Dental Caries in Children in Madras City in relation to economic and nutritional status' *IJMR*, Vol.30 (4 Oct. 1942), pp. 561-573; K. Mitr 'Observations on the diet and nutritional state of an aboriginal (Hos) tribe' *IJMR*, Vol.30, No.1 (Jan. 1942), pp.91-97; B. Ahmad, D. Das, H. Mitra, C. W. Ellis 'Nutritional survey of schoolboys in Calcutta and the Punjab by means of clinical observations, ACH index of nutrition and other measurements', *IJMR* Vol., (Jan. 1937).

The Coonoor nutritionists argued that malnutrition was primarily a result of dietary deficiencies rather than the quantity of food consumed, and that this stemmed from ‘incompetence’ on the part of parents and school authorities.¹⁶ The research was not merely designed to gather detailed statistical information, but was intended to be a scientifically informed attempt to cause change, particularly through the introduction of supplements. This can be read as a paternalistic attempt by well-educated middle-class scientists, self-designated ‘dietary reformers’, to improve the diets of the poor, fitting into what Balogh argues was a ‘new era of colonial governmentality’ based on newly fashionable ideas of welfare and development.¹⁷ It also reflected the participation of Indian nutritionists in international scientific networks of exchange and information centred round the League of Nations.¹⁸ At the same time, they were very aware of the limitations of an internationalist approach, and argued a ‘knowledge of how people, and particularly poor people, really do live and behave is essential in this field of work’ being particularly eager that any change should reflect ‘the food habits of the country concerned’.¹⁹ While, for instance, Krishnan and Aykroyd investigated the nutritional value of soya beans, they remained concerned that they were unlikely to be acceptable in an Indian context.²⁰ This need for cheap well-

16 W.R. Aykroyd *Human nutrition and diet*, (London: Thornton Butterworth Ltd, 1937) pp.9, 208. Vernon *Hunger*: p.87.

17 R. Balogh 'Feeding workers in colonial India 1920-1945' [pdf academia.edu accessed 22/01/2019] p.4. For a wider discussion of ‘colonial governmentality’ see D. Scott, ‘Colonial governmentality.’ *Social text* 43 (1995), pp.191-220. In the context of health, see S. Sehrawat, *Colonial Medical Care in North India: Gender, State, and Society c 1830-1920* (Oxford Scholarship Online, 2013).

18 League of Nations, *The Problem of Nutrition*: pp.3, 21; E. Burnet, W.R. Aykroyd ‘Nutrition and public health’ *League of Nations Health Organization Quart Bull.* (1935) pp.323–474; Vernon, *Hunger*, p.105.

19 B.G. Krishnan & W.R. Aykroyd ‘An investigation of cheap well-balanced diets’ *IJMR* Vol.23, No.3 (Jan. 1936), pp.731-739.

20 B.G. Krishnan & W.R. Aykroyd ‘The effect of skimmed milk, soya bean, and other foods in supplementing typical Indian diets’, *IJMR*, Vol.24, No.4 (April 1937), pp.1104.

balanced diets remained a consistent theme, a pragmatic, if somewhat paternalistic, approach which balanced cost, nutrition and the limitations imposed by people's cultural dietary expectations: 'no one lives on a diet of oatmeal and skimmed milk, or is likely to, no matter how enthusiastically such as diet is recommended by nutrition experts'.²¹ Given the scientific nature of the journal, there was no engagement with popular discourses on diet and abstinence expounded by politicians such as Gandhi, although there was a recognition that a minority practiced vegetarianism.

The research directed by Aykroyd took a very different methodological approach to the one taken by McCarrison. Rats continued to be used as a means of comparing diets and comparing the impact of food supplements such as soya beans, whole or skimmed milk and eggs.²² However the research teams moved outside the laboratory and into the schoolroom, and children became a key focus of research. One method was to carry out a dietary survey of the eating habits of a village, and then to look specifically at the rates of malnutrition in schoolchildren.²³ Of the two most commonly cited articles W.R.Aykroyd and K. Rajagopal's 'The State of Nutrition in Schoolchildren in South India,' (1936) was a comparative review of the biometrics of children in three towns and the prevalence of deficiency diseases. Part 2, written by B.G. Krishnan & W.R. Aykroyd, assessed the nutritive value of the food given daily to children in hostels.²⁴ This provided a consistent approach and a controlled space, and while 'Their diet may in many instances be poor in

21 Aykroyd *Human nutrition* p.170.

22 B.G. Krishnan & W.R. Aykroyd 'The deficiencies of the South Indian Diet' *IJMR*, Vol.25, No.2 (October 1937), pp.367-372; Krishnan & Aykroyd 'The effect of skimmed milk' p.1106.

23 B.G. Krishnan & W.R. Aykroyd 'Diet surveys in South Indian Villages' *IJMR*, Vol.24, No.3 (Jan 1937), pp. 667-688.

24 Krishnan & Aykroyd, The state of nutrition: Part 2' p.717.

quality, but at least they regularly consumed three meals per day, while children of the poorer classes in the general population may be less fortunate in this respect.²⁵ This became a key element of the research methodology, enabling the impact of supplements to be monitored over a significant period of time within clearly defined boundaries. A number of collaborators were required, often the teaching and managerial staff running mission schools, but also student health visitors from the Madras Red Cross School, village nurses and teachers attached to the Servants of India Society Rural Reconstruction projects.²⁶ The use of institutionalised children, therefore, mirrored the caged rats of the laboratories, providing conditions which could include a control group and scientifically acknowledged methodologies. However altruistic the intention, this was also a group outside parental control and with limited opportunity to contest their participation in these experiments.²⁷ The content and structures surrounding the food and the routines of its consumption also served to reinforce the disciplinary norms of the institution.²⁸

There is little evidence of the children's reactions to these attempts to weigh, measure and assess their bodies, and the power structures inherent within that relationship. The only hint of children's perspectives was a 1938 experiment on providing milk supplements to 150 nursery children. The boys were divided into three groups, the first given a peppermint sweet, the second a peppermint sweet with 1 gram of calcium lactate and the third 8oz of liquid skimmed milk, reconstituted from 30g milk powder. Reflecting both the belief in

25 Ibid p.719.

26 Ibid; Krishnan & Aykroyd 'The effect of skimmed milk', Krishnan & Aykroyd, 'Diet Surveys' p.680.

27 For a wider history of experimentation on children in institutions, see J. Goodman, A. McElligot and L. Marks, *Useful Bodies: Humans in the Service of Medical Science in the Twentieth Century* (Baltimore: John Hopkins University Press, 2003).

28 Vernon, *Hunger*, p160.

the child's innate sense of fairness and their inability to understand adult experiments, it was explicitly stated in the research methodology:

The peppermints were given for psychological reasons. Considerable experience has taught us that it is advisable, in carrying out school feeding experiments, to give all the children, including the control groups, some supplements. Otherwise the controls will feel neglected.²⁹

Similarly, there was a recognition that children were unwilling to try new foodstuffs, *ragi* (finger millet) being the most common example because of its association with prison food.³⁰ Milled rice also encapsulated the aspirational endeavours of 'adolescent country boys and girls' who felt that their newly acquired educational status 'entitled' them to consume the more prestigious, albeit less nutritious, food of the urban, educated middle classes. More prosaically, it was noted that *ragi* raised considerable opposition, being 'often prepared in an unpalatable form.' This mirrors Vernon's argument that the free school meals provided in British schools in the 1950s were so unappetising they were viewed by the children as 'social punishment' rather than 'entitlement'.³¹

The collection of quantitative statistics was central to the work of both scientists and government in the 1930s. The statistics published in the *Annual Reports of the Health Department of the Corporation of Madras* provided a benchmark for researchers, but also facilitated the monitoring of diseases of children in school. This emulated earlier developments in Britain in which a statistical 'knowing' of the child helped to radically

29 B.G. Krishnan & W.R. Aykroyd 'A further experiment on the value of calcium lactate for Indian children' *IJMR* Vol. 27, No.2 (Oct 1939), p.410.

30 Krishnan & Aykroyd, 'The state of nutrition: Part 2' p.723.

31 Vernon, *Hunger* p.180.

redefine the state's role in relation to children, facilitating interventions in their lives.³² Measuring height, weight and illness also contributed to the formation of a normative discourse surrounding the child, as healthy, male and in school. The Coonoor researchers based their research on the American A.C.H. index of nutrition, which diagnosed malnutrition by measuring arm girth, chest depth and hip width. Aykroyd and Rajagopal, for example, situated measurements from three South Indian village (Mettupalayam, Coonoor, Calicut) in contrast to groups of Sinhalese, British and American boys to demonstrate the inadequacies of the South Indian diet.³³ They found that while there was some correlation between the children identified in the index and those with symptoms of deficiency diseases, merely basing diagnosis on the index alone missed considerable numbers of Indian children.³⁴ Furthermore, if the American method of diagnosing malnutrition if a child fell 7% below the average weight for height was applied, it would encompass 83% of the Indian boys measured.³⁵ Accordingly, Madhava, Rajagopal and Aykroyd devoted considerable effort to modifying the supposedly universal A.C.H. index and after measuring 4,600 schoolchildren, concluded that if a researcher assumed Indian hip sizes were always smaller, the A.C.H index was as useful as a 'supplemental method'.³⁶ This focus on the production of quantitative evidence to define the healthy child reflected wider emerging discourses surrounding the body of the normal child, which were paralleled

32 L. Mahood *Policing Gender, Class And Family In Britain, 1800-1945* (Abingdon: Routledge, 2005); K. Rajagopal, W.R. Aykroyd, 'The state of nutrition of schoolchildren in South India', *IJMR*, Vol.24, No.2 (Oct 1936), p.419; A.R. Ruis 'The Penny Lunch Has Spread Faster than the Measles' Children's Health and the Debate over School Lunches in New York City, 1908-1930' *History of Education Quarterly*, Vol.55, No.2 (May 2015).

33 Rajagopal & Aykroyd, 'The state of nutrition' pp.426-430.

34 Ibid pp.423-4.

35 Ibid pp.430.

36 K.D. Madhava, K. Rajagopal, W.R. Aykroyd 'The detection of malnutrition by measurements of arm, chest and hip' *IJMR*, Vol.26, No.1 (July 1938) p.55.

in the rise of paediatrics as a medical discipline in India in the 1930s; the emerging view of the American child as the pinnacle of true childhood and the focus on purportedly neutral statistics to facilitate the state knowledge of a population, and ultimately enable intervention. It also demonstrates that the scientists themselves were aware of the limitations of what Amrith and Clavin designate an ‘explicitly comparative framework of nutritional discourse.’³⁷ At the same time, the research included an implicit warning that statistics could sanitise the policy makers from the realities of life, the ‘poverty and misery, which we saw at close quarters’.³⁸

The research focused on the impact of food and diet on improving health outcomes for children. Much of the work centred round diagnosis through the external symptoms of deficiency diseases such as xerophthalmia, stomatitis, keratomalacia, dental caries, beri beri and phrynoderma.³⁹ Supplements were added to the regular diet, the result being a decline in minor illness and ‘the enhancement of growth’ as well as ‘a remarkable transformation in the appearance of these children’ and even ‘higher spirits and enhanced vitality’.⁴⁰ This suggests a number of conclusions. While there may have been a moral or humanitarian duty to prevent poverty, it seems linked primarily to the construction of a happier, healthier, more productive and perhaps less restive workforce in the rural areas.⁴¹ In his 1937 book *Human nutrition and diet*, Aykroyd highlighted the public health worker’s

37 Amrith & Clavin ‘Feeding the World’ p.42.

38 Krishnan & Aykroyd, ‘Diet Surveys’ p.669.

39 Shourie, ‘Dental Caries’; W.R. Aykroyd ‘Rice Diets and Beri Beri’ *IJMR*, Vol.29, No.4 pp.551-555; Rajagopal & Aykroyd, ‘The state of nutrition’ p.419; Aykroyd *Human nutrition* p.148.

40 Rajagopal & Aykroyd, ‘The state of nutrition’ p.425, B.G. Krishnan, W.R. Aykroyd ‘Stomatitis due to Vitamin B2 deficiency’ *IJMR*, Vol.24, No.2 (Oct. 1936), pp.411-417; Krishnan & Aykroyd ‘The effect of skimmed milk’ p.1098.

41 Vernon, *Hunger* p.161.

role in building ‘a strong and healthy nation’ and creating ‘stalwart citizens’ through correcting ‘the ravages of parental mismanagement’.⁴² Furthermore, similar to the provision of school meals in Britain, there was an attempt to discipline children into the correct norms of civilised behaviour, in which meals were quiet domestic rituals, reflective of the accepted gender hierarchies of the nuclear family.⁴³ These ideas built on a longer heritage of collective feeding, which can be traced back to paternalist famine relief measures in which food and work remained inseparable, and were connected to the wider social responsibilities of citizenship.⁴⁴ There was also a recognition that children had particular dietary needs, particularly milk and more protein per kilo of body-weight but also that families were prepared to spend less on children’s food, presumably because they were not current contributors to the family economy but perhaps also suggesting the more limited value of children’s lives given the high rates of infant mortality.⁴⁵ This gave a particular role for the school as the provider of supplements, particularly milk, although it is also difficult to assess the extent to which the fetishisation of milk, especially the use of powdered milk, reflected the scientific research, or was driven by the needs of the Australian and New Zealand butter industries to export milk as part of the wider colonial economy.⁴⁶

Later in his book Aykroyd revealed the short-term educational impact of malnutrition,

42 Aykroyd *Human nutrition* p.204.

43 Ibid p.210.

44 Vernon, *Hunger* p.160.

45 Krishnan & Aykroyd ‘An investigation’ pp.738-39.

46 Krishnan & Aykroyd ‘The effect of skimmed milk’ p.1104, B.G. Krishnan & K. Mitra ‘Skimmed milk and the growth of school children’ *IJMR*, Vol.25, No.3 (Jan 1938), pp 647-654; Central Advisory Board of Health *Medical Inspection of School Children and Teaching of Hygiene in Schools Joint (Jolly) Committee or Jolly Report* 1941 (New Delhi, 1942) p.2, India Office Records, British Library (henceforth IOR), V/26/845/2.

arguing that malnourished children were ‘very stupid and difficult to teach, their brains are working with the wrong sort of fuel or without enough fuel’.⁴⁷ This meant that ‘school feeding is educational in character, and not in the nature of relief’. Malnutrition impacted the child’s ability to learn and intervention was not only a response to poverty or a ‘new’ site of colonial governmentality but rather was framed as an ‘investment’ in the future adult, a recognition that future citizens would be more productive with educated minds as well as healthy bodies.⁴⁸ In a later submission, Aykroyd also noted about children who received milk supplements:

In practically every case, they showed that sleekness peculiar to a well fed animal; their hair was glossy and bright, their nails smooth, resilient and polished. General alertness was common to all, and they were also more difficult to control. Their joie de vivre runs away with them. Undernourished children are apathetic, do what they are told, and are generally all that an adults can desire of them!’⁴⁹

Again, this highlighted his paradoxical interaction with emerging discourses around ‘normal childhood’, which both reflected the increasingly universal view of the child as playful, joyful and ready for adventure and challenge and simultaneously likened children to lab rats, of less economic value than adults and in need of strictly enforced boundaries.⁵⁰ It is interesting that this wider educational context is mentioned by Aykroyd in his published books for an international audience, but that this forms no part of his research methodology or his findings in the scientific/Coonoor context.

47 Aykroyd *Human nutrition* p.208.

48 Arnold ‘Discovery of Malnutrition’, Balogh ‘Feeding workers in colonial India 1920-45’ p.3, Corporation Proceedings, 11 Feb. 1930, 26 Mar. 1930, MCA.

49 W.R. Aykroyd, *Notes on Food and Nutrition Policy in India* (New Delhi: Government of India, 1944).

50 K. Vallgård, *Imperial childhoods and Christian mission: Education and emotions in South India and Denmark* (London: Palgrave, 2014).

Many of these concerns were anticipated in an earlier, less well-known scheme by the Madras Corporation to provide free midday meals for young children.⁵¹ It is remarkable that while Aykroyd referenced the milk supplement scheme initiated by Viceroy Linlithgow in Simla in May 1936, he and his colleagues appeared oblivious to a much more innovative scheme which was implemented not far from Coonoor ten years earlier.⁵²

The Midday Meals Scheme of the Madras Corporation has received insufficient historiographical attention to date and the rest of the paper will reflect on this pioneering programme as a political response to malnutrition at the level of the local authority.⁵³ The Madras Corporation was to some extent typical of many Indian local authorities, a largely autonomous space which provided an arena where educated Indian representatives could initiate discuss issues of local governance with limited colonial interference. However, the Madras Corporation was associated with a number of radical measures, including the introduction of compulsory education for all children in 1924. This may have reflected the particular political make-up of the Presidency where the Justice party with its anti-Brahmin agenda was dominant for most of the interwar period and where the councillors had extensive links with social reform organisations such as the Madras-based Women's India Association. Although there were extensive personal and political connections with the all-India anti-colonial movement, political decision-making in the Presidency was characterised by a distinctive regional identity increasingly linked to Tamil language

51 Corporation of Madras Health Report 1926 p.98, MCA.

52 Aykroyd *Human nutrition*, p.212.

53 Notable exception of Arnold 'Discovery of Malnutrition'.

politics and was increasingly anti-Congress in tone.⁵⁴ The diversity of councillors and their reluctance to follow established all-India party political agendas was also noteworthy, these included C. Basudev as Labour representative, Congressman J. Shivashanmugam Pillai as the first *Dalit* mayor and Mrs Ammu Swaminathan as Chair of the Education Committee for most of the 1930s. Public debate in the interwar years was also characterised by the emergence of the radically egalitarian and anti-caste Self-Respect Movement and the extensive interpersonal global contacts of individuals such as Dr Muthlakshmi Reddi, often based around the Theosophical Society in Adyar and League of Nations in Geneva. This intensely local but also globally networked civil society operated with very limited reference to the all-Indian political sphere.

The medical inspection of schoolchildren allowed policy makers to ‘know’ the child statistically and to chart the health of the school population. The statistics reveal that in 1933 only 33% of the number of children categorised as ages 5-10 years were in school.⁵⁵ Of these children, the medical inspectors found that 59% were ‘defective,’ with 45% suffering from malnutrition.⁵⁶ This was attributed to the ‘lack of balanced diet and vitamins necessary for proper growth and development.’⁵⁷ It convinced the city councillors of the need to act.⁵⁸ This paralleled developments in other provinces leading eventually to a Joint

54 S. Ramaswamy, *Passions of the Tongue: Language Development in Tamil India, 1891-1970* (Berkeley: Cambridge University Press, 1997), E. Irschick, *Dialogue and History: Constructing South India, 1795-1895*, (Berkeley: University of California Press, 1994).

55 Quinquennial Report of Director of Public Instruction Madras Presidency 1927-28 – 1931-32, p.83, National Library of Scotland (henceforth NLS): IP/25/PJ.3.

56 Corporation Proceedings, 11 April 1933, p.12, MCA.

57 Corporation of Madras Health Report 1937 p.33, MCA.

58 Corporation of Madras Health Report 1920 p.15, inc. Report of Child Welfare Scheme 1919 –1920, NLS, IP/26/HB.3. Annual report of the Public Health Commissioner with the Government of India 1928, pp. 66,116, 178, NLS, IP/QA.7. Madras Legislative Council Debates 31 Mar. 1927 p.1417, Tamil Nadu State Archives Library (henceforth TNSAL). S. Mukherjee ‘Disciplining the Body? Healthcare for Women

Committee of the Central Advisory Board of Education and Central Advisory Board of Health in 1941 to provide ‘systematic attention to the health of children’ at all-India level. However, the Madras scheme is significant because it was the only one of its kind and because it was initiated with support from all political factions by an Indian-led local authority more than ten years before any others – whether scientists or policy makers – demonstrated any interest in the issue.

The motivations of the local councillors in Madras foreshadowed those espoused later by the Coonoor nutritionists. The councillors viewed the state as subject to ‘a moral code, a code of conduct’ which required them to provide sanitation and healthcare for the people of Madras and to facilitate the entry and retention of poor children in school.⁵⁹ The Health Officer argued that ‘any scheme for national well-being and prosperity’ needed to start with children for ‘the child of today is the citizen of tomorrow, and would be a useful asset or a drag on the nation according to its health.’⁶⁰ Furthermore, ‘the welfare of the child is the welfare of the nation’ and the child as both an investment in the future nation and a responsibility of the modern state was reflected in the Director of Public Health’s argument that ‘civilised humanity has come to realise, more particularly during the last 25 to 30 years, that the child problem is the greatest social question of the day’.⁶¹ This mirrored wider nationalist discourses which sought to foreground the ‘harmony between body, mind and spirit’ as central to the cause of regenerating the Indian nation.⁶² As with the 1906 Act in

and Children in early C20 Bengal’ in D. Kumar (ed.) *Disease and Medicine in India: a historical overview* (New Delhi: Columbia University Press, 2001).

59 Corporation of Madras Health Report 1919 p.5, NLS: IP/26/HB.3.

60 Corporation of Madras Health Report 1926 p.87, MCA.

61 Report of the Director of Public Health 1927 p.36, IOR, V/24/3705.

62 Nagendranath Gangulee, *Health and Nutrition in India* (London: Faber & Faber, 1939) p.33. See also H. Fischer-Tiné ‘Fitness for Modernity? The YMCA and physical-education schemes in late-colonial South

Britain, these claims represented both a political investment in national regeneration, and more nuanced contribution to, and participation in, wider socio-economic and cultural change, including ideas about bio-medicine, state intervention and the normal child.⁶³ Additionally, the emergence of new discourses of global rights, manifested most clearly in the League of Nations' Declaration of Children's Rights in 1924, contributed to normalising these discourses, reinforcing the belief articulated by the Director of Public Health in Madras:

Every child has the right to a fair chance of enjoying its heritage of life, and if the individuals primarily responsible for his birth are lacking in the knowledge essential for the fulfilment of their obligations to the child, it becomes the duty of the state and of society at large to interfere on behalf of those.⁶⁴

The Madras Corporation's free Midday Meals Scheme heralded a radical change in state intervention in the family.⁶⁵ A unique project, the scheme grew out of earlier initiatives to provide milk for undernourished infants such as Rao Bahadur Cunnan Chettiar's Feeding Home and the Triplicane Milk Depot.⁶⁶ The Scheme started as an 'experimental measure' in a particularly poor community and very quickly drastically improved school attendance.⁶⁷ The idea of providing free school meals on a wider basis was raised formally in 1924 at the Special Meeting of the Council for the introduction of compulsory education

Asia (circa 1900–40).’ *Modern Asian Studies*, Vol. 53, No.2 (March 2019), pp.512-559.

63 Cooter *Name of the Child*

64 Report of the Director of Public Health 1927 p.36, IOR, V/24/3705.

65 H. Hendrick *Children, childhood and English society, 1880-1990* (Cambridge: CUP, 1997).

66 Corporation of Madras Health Report 1920 p.15, Report of Child Welfare Scheme 1919 –1920, NLS: IP/26/HB.3.

67 Corporation Proceedings, 29 June 1923, 13 Nov. 1931, 19 Sept. 1939 p.8, MCA.

as part of a package of ideas, including night and part-time schools, to discourage child labour and counter the argument that school attendance would cause a drop in living standards.⁶⁸ The scheme was started by the Education Committee in two divisions of Madras in 1925.⁶⁹ Provision was gradually expanded and in 1930 two centres, at Chintradripet and Peters Road, were established as a temporary measure to coordinate the preparation and distribution of food during term time.⁷⁰ Eight cooks worked from 3am until 1:30 pm to prepare food which was circulated to all relevant schools and then distributed by the head teacher. In 1937 4,500 children from 84 schools received midday meals provided for by the Corporation. This was expanded in 1939 to include 96 schools comprising 6,000 children and ran until 1973 when 5,750 pupils received free school meals.⁷¹

The Midday Meals scheme profoundly redefined the role of the state in relation to the child.⁷² The councillors may have drawn inspiration from previous schemes in Britain in 1906 or New York City from 1909 but these global connections were not mentioned. However, as in both these cases, the scheme was not merely the collection of statistics but active intervention in an area of life which was usually assumed to be the responsibility of the family.⁷³ The scheme thus eroded the boundaries between the public and private worlds

68 Corporation Proceedings, 28 Mar. 1924 p.477, MCA.

69 Joint Conference Tax & Finance Committee, Education Committee 11 Mar. 1925; Corporation Proceedings, 28 Mar. 1924 p.477, 25 Mar. 1925, 30 April 1925, 24 Aug.1926, MCA.

70 Corporation Proceedings, 3 May 1935 p.4, MCA.

71 Corporation Proceedings, 4 Jan. 1938 p.5, 24 Nov. 1943 p.2; Corporation of Madras Health Report 1937 p.38, MCA.

72 Bernard Harris, *Health of the Schoolchild: A History of the School Medical Service in England and Wales, 1908-74*. (Buckingham: Open University Press, 1995) p.6.

73 C. Piper 'Moral campaigns for children's welfare in the Nineteenth Century' in H. Hendrick (ed.) *Child Welfare and social policy: an essential reader*, (Bristol: Policy Press, 2005) p.20.

of children.⁷⁴ The move was also indicative of a ‘radical redefinition’ of the modern’s state’s role in preventing disease.⁷⁵ Intervening to provide nutrition, in what was an everyday rather than exceptional occurrence, was therefore something entirely new both in practical application and in claim. While this claim was perhaps more important in rhetoric than in practice given the relatively low number of children involved, it was also significant that food was provided not within the rubric of Public Health but as an educational endeavour. Food was only to be provided within the context of the school, administered by teaching staff, for children of school age. This again bolstered the emerging idea that the defining place of childhood was the school.⁷⁶

The scheme received support across the political divide and revealed the growing symbolic value of the vulnerable child. Councillors from both Justice and Congress parties claimed ‘responsibility for the welfare of the children’, although both accused the other of ‘crocodile tears’ for ‘the unfortunate children’. The debates sentimentalised the ‘poor child’, who was endlessly ‘to be pitied’.⁷⁷ The consistent, and often emotional, appeal for better resources for ‘poor children’ received widespread support.⁷⁸ This reflected the claim by all parties to a new responsibility to protect the hungry child, which in turn strengthened the claims of the Indian political elites to participation in a global modernity based on care for the vulnerable and a scientific approach to the development of the population. Midday meals were provided in response to ‘the duty of the Government to encourage the

74 Ruis ‘The Penny Lunch’ p.195.

75 Harris *Health of the Schoolchild* p25.

76 For example, question K.V.R. Swami to Law (Education) Department 1 Aug 1927, TNSA: Tamil Nadu State Archives (henceforth TNSA), Question 763. See also Balagopalan, *Inhabiting Childhoods*

77 Corporation Proceedings, 26 Mar. 1928, 25 Feb. 1931 pp.44-46, MCA.

78 Corporation Proceedings, 29 Mar. 1930, 6 Oct. 1938, 23 April 1939 p.42, 29 Nov. 1939 p.10, MCA.

backward, the helpless and the forlorn,' a particularly emotive representation of children.⁷⁹ The recipients were almost exclusively *Dalits*, but caste was very rarely mentioned explicitly, although there was some awareness that the *Dalit* community lacked 'the wherewithal to organise their own *sangams* and funds to educate the poor' and that 'the scale of poverty is different'. The reluctance to define modern intervention through caste demonstrates both the complexities of the political alignments in the South of India and the desire to integrate *Dalits* from Labour Schools into mainstream education.⁸⁰ The provision was, however, framed as an answer to 'the poverty of the students', with no public recognition of caste difference and extending provision of free meals was further recommended in early 1932 explicitly 'irrespective of caste or creed'.⁸¹

Childhood poverty does not in itself explain why the Education Department of the Municipal Corporation found it necessary to usurp the responsibility of the family in providing food for children. At a time when food interventions were primarily designed to prevent starvation intervening to prevent malnutrition was a significant change.⁸² Free school meals were initially introduced as a way to boost attendance and to compensate families for a potential loss of earnings for previously employed children.⁸³ This reflected the decision of the Madras Presidency to attract pupils to education rather than prosecute non-attendance, in contrast to other areas under British rule. When compulsory education

79 Department of Education, Health and Lands, *Memorandum on the progress of education in British India*, 1928, IOR, L/PJ/6/1796, File 1677.

80 For more detail, see R. Viswanath, 'Rethinking Caste and Class: 'Labour', the 'Depressed Classes', and the Politics of Distinctions, Madras 1911-1924' *International Review of Social History* No.59 (2014,) pp.1-37.

81 Department of Education, *Memorandum on the progress of education*, IOR, L/PJ/6/1796, File 1677.

82 Amrith, 'Food and Welfare in India' p.1024.

83 Corporation Proceedings, 11 Mar. 1930, 15 July 1930, 26 Mar. 1930, MCA.

was extended in 1926 to a further three of the poorest divisions in the city, an extension to the Midday Meals Scheme was an important part of the package. The Chair of the Education Committee cited a 90% attendance rate in areas ‘where food is given’ insisting that without it, attendance was ‘a mere farce and the compulsion is merely illusive’.⁸⁴ Attendance was claimed to have fallen by 50% when the scheme was briefly discontinued in 1927, and even when budget restrictions meant teacher salaries were reduced, there was little appetite to take ‘the retrograde step’ to ‘deprive these poor children of their midday meal’ which was ‘an incentive’ for the pupils to attend and which fulfilled the ‘primary duty’ of the Corporation to encourage education.⁸⁵ To have this level of consensus for a scheme not widely recognised as an educational tool in the rest of India was remarkable.

The provision of food was intended to retain pupils and improve the quality of learning based on the ‘elementary fact that hungry children are not able to absorb teaching as readily as children whose stomachs have been attended to by the midday meal’.⁸⁶ The provision of food at school was thus part of a medical discourse, which connected the strength of the child’s physical body to its intellectual capacity. This had links to the eugenics movement, but also an increased understanding of the educational impact of malnutrition, particularly on concentration levels. The Health Officer argued that ‘ill-fed’ children ‘are listless and pine away in some corner of the classroom, taking little or no interest in what is going on in the School.’⁸⁷ The Commissioner for Labour in Madras, who had responsibility for the

84 Corporation Proceedings, 24 Aug. 1926 p.41, MCA.

85 Corporation Proceedings, 18 Mar. 1935 p.20, MCA.

86 Dr S. Swaminadhan, District Educational Council to Education Secretary, Government of Madras, 17 Jan. 1927, TNSA GO 244 Law & Education 18 July 1924.

87 Corporation of Madras Health Report 1926 p.82, MCA.

uplift of the *Dalit* population, insisted that children who missed meals were ‘thus half-starved and unable to apply themselves to anything.’⁸⁸ The connection between nourishment and education was cited as a reason for Local Authorities to ‘accept an increasing burden of responsibility for the physical health, nourishment, and protection of children as well as for their mental training,’ as an educational endeavour, with childhood malnutrition impacting learning ability and ultimately school results.⁸⁹ As indicated above, this was primarily formulated in terms of capitalising on the investment in education as a means ‘of endeavouring to secure to every citizen of the future that moral, mental and physical training’ which would ‘open to all the chance of realising their full citizenship’. The emerging realisation that free meals ‘contribute to a child’s readiness to learn and ability to participate in his or her own educational process’ was familiar to policy makers in the Madras Presidency, long before the Coonoor nutritionists proved its scientific validity.⁹⁰

The type and quality of food was the subject of more debate than any other aspect of the Midday Meals Scheme. In 1930 a local Councillor wrote to the Commissioner ‘complaining bitterly’ that the food provided was ‘making them sick instead of making them healthy’ and calling for provision to be stopped until an adequate system of funding

88 Slater, Growth of education in Madras: memoranda and answers to the questionnaire, Hartog Education Commission, 1928, IOR MssEur E221/44.

89 Central Advisory Board of Health *Jolly Report*, p.7, Corporation Proceedings, 11 Mar. 1930, 26 Mar. /3/1930, 1 Dec. 1936 p.26, 30 Mar. 1938 p.4, 28 Mar. 1939 p.38, MCA. Madras Legislative Council Debate 18 Mar. 1927, TNSAL, Gangulee *Health and Nutrition in India* p.7. This contrasts with other works which focus on the context of physical education and the production of the masculine body, see James Mills & Satadru Sen. *Confronting the body: the politics of physicality in colonial and post-colonial India*, (London: Anthem Press, 2004).

90 Corporation Proceedings, 30 Mar. 1938 pp.2-7, MCA.

and inspection had been established.⁹¹ Guaranteeing the quality remained a challenge, variously described as food ‘which even the crows will not touch’ and not even suitable for beggars.⁹² Alleged corruption and adulteration was a frequent source of concern, fitting into the rhetoric of the vulnerable child, exploited by adults even in the provision of basic nourishment. It also reflected the administrative difficulties of cooking and distributing the food.⁹³

The members of the Corporation engaged with the debates on the provision of food to children through the language of nutritional science which complemented the work of the scientists at Coonoor. The Justice Party Member Dr U. Krishna Rao proposed a series of experiments to prescribe food which was both appropriate to the ‘various communities’ and scientifically proven to be cost effective ‘wholesome and nutritive’.⁹⁴ The idea was opposed because of funding concerns, and because conducting an ‘experiment upon the stomachs of these unfortunate children’ was rejected.⁹⁵ Congress Leader Satyamurthi was worried that children should not be experimented on ‘simply because they come under your guardianship’ while a further councillor Gopala Menon feared the introduction of foodstuffs that were ‘revolting to the sentiments of the people’, such as beef, ham, oranges or apples.⁹⁶ He also argued that it was ‘wrong to experiment on the diet of the children’, fearing science without an ethical context, citing the experience of women in America being fed cotton seeds to increase lactation. Ultimately it was agreed that food had to be

91 Corporation Proceedings, 26 Mar. 1930, MCA.

92 Corporation Proceedings, 19 Sept. 1939 pp.9, 14; 29 Sept. 1931 p.48, 22 Sept. 1931, MCA.

93 Corporation Proceedings, 3 Dec. 1935 p.20, MCA.

94 Corporation Proceedings, 7 Mar. 1939, 28 Mar. 1939, MCA.

95 Corporation Proceedings, 14 Mar. 1939, 28 Mar. 1939, p.38, MCA.

96 Corporation Proceedings, 28 Mar. 1939 p.40, MCA.

of 'a higher nutritional value' but also 'be liked by all the children in our schools' thereby limiting the imposition of adult authority on children and demonstrating the pragmatic realities of intervention.⁹⁷ It is difficult to assess whether this reflected different ethical concerns about informed consent and the need to consider children's opinions than displayed by the Coonoor nutritionists, or whether it merely reflects the difference between those who claimed authority through science, and those who were democratically accountable.

The opposition to nutritional experiments reflected an earlier discussion in 1930 when the Commissioner of the Corporation proposed a scheme to feed children bread and milk despite the added cost. Anonymous 'nutritional experts' had suggested these foodstuffs were more effective in reducing deficiency diseases than the typical diet of rice and curds.⁹⁸ This again reflected the assumptions surrounding the nutritional value of 'the ordinary diet of Madras Presidency'.⁹⁹ It also reflected international trials, both the provision of midday meals in London schools and an experiment in Edinburgh which had demonstrated the particular nutritional value of bread and milk.¹⁰⁰ The suggestion that the child's body required different nutrition to the adult body and that Tamil children had an equal need of and right to this food as Scottish children, revealed changing perceptions of the bodies of all children as distinct from fully grown adults.

As a foodstuff, *sambar* received particular support, both for its nutritive value and because

97 Corporation Proceedings, 28 Mar. 1939 pp.40-41, MCA.

98 Corporation Proceedings, 15 July 1930, MCA.

99 Corporation Proceedings, 16 July 1930, MCA.

100 Corporation Proceedings, 26 Mar 1930, 15 July 1930, MCA.

many children were too poor to be given it at home.¹⁰¹ In addition, *sambar* was cited as ‘the best of kind of food’ because it was ‘more palatable to these children’ and would thereby encourage attendance.¹⁰² As the nutritionists were also later to discover, *ragi* was not considered of sufficient nutritional value to be worthy of causing opposition by parents and children.¹⁰³ Attempts were made to introduce variety, and there was concern that diet should include rice, curds and sambar, varied either according to season, on alternate days or even the occasional addition of wheat cakes, *ragi* flour *chapatis* or even bananas.¹⁰⁴ This was not formulated on the basis of nutritional science but because ‘poor children will not like a monotonous diet’ and ‘prefer a variety’, a further recognition of children’s opinions which indicated the limits of the imposition of adult will upon children’s bodies.¹⁰⁵ In practice cost seems to have been the deciding factor and there seems only to be records for tenders for the provision of rice.¹⁰⁶ Supplements, usually ‘cod liver oil and tonics’ or buttermilk, were also provided as a cost-effective addition for children who were diagnosed as ‘undernourished’.¹⁰⁷ The debates around appropriate food reflected the tastes of a particular region of India but also the growing acceptance that the child’s body was physically, as well as intellectually, distinct from that of the adult body. The policy makers thus appear to have been impacted by the emerging scientific discourses surrounding the child’s body and emerging global political discourses regarding children’s

101 Corporation Proceedings, 15 July 1930, 14 Mar. 1939, MCA.

102 Corporation Proceedings, 15 July 1930, 14 March 1939, 28 March 1939 p.42, MCA.

103 Corporation Proceedings, 15 July 1930 p.17, 19 Sept. 1939 p.7, 12, 16, MCA. See discussion Muraleedharan ‘Diet, Disease and Death’ p.60.

104 Corporation Proceedings, 15 July 1930, 19 Sept 1939, MCA.

105 Corporation Proceedings, 15 July 1930, MCA; Hendrick, *Children, Childhood*.

106 Corporation Proceedings, 14 Mar. 1932, 18 May 1932, 29 Jan. 1943, 19 Jan. 1943, 10 Aug. 1942, 31 Aug. 1942, 12 Nov 1942, pp.3-4, MCA.

107 Corporation of Madras Health Reports 1926 p.62; 1937 p.4; 1938 p.41; 1939; Corporation Proceedings, 15 July 1930, MCA.

rights, and perhaps also with their interaction with real children.¹⁰⁸

It appears that the Midday Meals Scheme ended when compulsory elementary education ended in Madras in 1943 as the city recovered from the threat of Japanese invasion. Twenty years later (1962-63) the Tamil Nadu state government introduced a midday meal programme in primary schools, first in Chennai and then throughout Tamil Nadu in an attempt to combat malnutrition. This was extended in 1982 to a 'Nutritious Food Scheme', which was then expanded across India in 1995. The Madras Scheme was a clear precursor to these measures and significantly ahead even of the scientific research at the time.

By the end of the 1920s there was an emerging consensus that the state had both the right and the duty to intervene in the health of the schoolchild. This reflected wider universalising narratives which characterised the normal child as a pupil and which situated the school as the key site of state interaction, a measure which excluded the vast majority who continued to receive minimal formal education. South Indian politicians participated in an emerging construction of the child's body as distinct from adults, viewed through the collection of normative statistics; continued comparison with the bodies of American children and a growing awareness of the specific nutritional requirements of children. The interest in nutritional science reinforced medical reliance on the universalising ideals of Western allopathic medicine, and enhanced the claims of Indian scientists and policy makers to participate as equals in an 'internationally recognisable brand of scientific and technological modernity' based on international networks of information exchange, while

108 Corporation Proceedings, 15 July 1930, MCA. See also the discussion about a paediatric hospital Madras Legislative Council Debate 31 Mar. 1927 pp.1414-1417, TNSAL.

also contributing to British justifications of remaining in India as part of a developmental state.¹⁰⁹ Yet while the scientists at Coonoor dominate the historiography both the most pioneering ideas and the political will to implement them came at the level of the local authority councillors in the Madras Corporation. While nutritional science contributed to medical and educational justifications for intervention the scheme was largely grounded on a new understanding of the child as future citizen. This reflected the participation of the educated classes in networks which appear not to be based on scientific exchange but more linked to the ideas and concepts about childhood being shared at the League of Nations, and being publicised in Madras by individuals such as Dr Muthulakshmi Reddi who worked through institutions such as the Women's India Association. Moreover, this appears as clear evidence that at least some Indians were prepared to work within the confines of limited constitutional reforms to make significant changes to social policy and to the way in which the welfare state was conceptualised and actuated in the period before independence.

Increased intervention in children's lives also had implications for the way in which Indian childhoods were constructed. The corporality of the child was important in the educational endeavour. As a result, personal hygiene, physical vulnerability and educational achievement became linked to the production of the healthy body. In turn, the child was to become a virile and strong citizen contributing to the future health of the nation and as such the cost of intervention and growth of preventative medicine was justified as an investment in the nation's future. Yet within this overarching discourse, there was growing

109 Arnold, *Science, technology and medicine* p.18.

acceptance that children not only deserved both rights and protection as a result of their age and vulnerability, but had opinions on the forms of intervention, and particularly food, which they considered acceptable. Thus while the provision of food by the local authority in Madras was an idea ahead of its time, so too were the conceptions of childhood upon which these initiatives were based.